

Final Report

Nursery Industry Statistics 2017-18 to 2019-20

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Project:

Nursery Industry Statistics 2017-18 to 2019-20 (NY17008)

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Summary

In 2017, the nursery industry undertook a renewed approach to data collection. The then Project Leader, Nursery & Garden Industry Australia (NGIA) (now Greenlife Industry Australia (GIA)), brought together the project team of Down to Earth Research (DTER) and ACIL Allen; and with advice and guidance of the Project Reference Group (PRG), successfully captured the first representative sample of nursery production businesses in twenty years, for the 2015/16 financial year.

This project, NY17008 Nursery Industry Statistics was a three-year data collection and research project which brought together the same team of organisations to follow the approach of the previous project (NY16004) to achieve the following objectives:

- Enable nursery industry stakeholders to make more strategic and informed decisions through the availability of accurate and verified baseline industry data.
- Continue to identify attitudes of nursery industry representatives and stakeholders towards data sharing and capability to provide information required for industry data needs.
- Refine the methodology for accurate survey design, data collection methodology and delivery of outputs.
- Validate nursery industry greenlife production by working with and surveying customers.
- Review, refine and deliver an updated nursery business benchmarking data tool/s for data users based on their needs and priorities.
- Evaluate industry and past performance including key trends and issues, insights into industry sentiment; and commentary on future development and growth opportunities using primary and secondary data sources over the life of the project.
- To ensure the PRG provided the oversight and governance to the project and maintaining trajectory for milestone achievement criteria and decision making.

Under NY17008, and adopting a similar approach to the ‘pilot’ project (NY16004), GIA managed and administered the project facilitating regular consultation of the Project Team and PRG which consisted of the project team, Hort Innovation, a Nursery Industry Strategic Investment Advisory Panel (SIAP) representative and two industry representatives. GIA prepared communications and facilitated extension of project outputs for levy payers through the project and in conjunction with the Levy Communication team at Cox Inall Communications (NY18001).

DTER continued to manage the collection of primary data ensuring appropriate and consistent collection methodology contributed to continuity of longitudinal data collection and increased survey response rate, while also capturing the metrics in a credible and robust way.

ACIL Allen undertook annual stakeholder interviews, and critically analysed the new and updated data sources on nursery industry performance and sentiment to inform the project’s data collection/analysis and data validation and the development of the benchmarking tool.

Each year, the Project Team and PRG monitored and reviewed the collections in two distinct stages:

- Stage 1 – data source priorities, data collection and validation (1st and 3rd years); and
- Stage 2 – benchmarking data tool development/refinement

The project has successfully captured the value and volume of greenlife production in Australia for the 2017/2018, 2018/2019 and 2019/2020 financial years as well as completing validation surveys of the two largest channels in the greenlife supply chain of retailers and landscapers for the 17/18 and 19/20 financial years. The validation process supported the methodology of the greenlife farmgate collection

achieving results within an acceptable confidence range and captured retailer and landscaper industry sentiment and greenlife purchase predictions.

During Stage 2 of the project each year, the Team engaged with industry representatives seeking feedback to make improvements to the industry benchmarking tool, delivering a new version of the tool in each year of the project.

Outputs developed to communicate both the collection results and benchmarking tool to industry supported an increase in survey participation which peaked at 305 surveys. In 2020 when fulfilling greenlife demand became the priority for industry, survey participation dipped slightly to 292.

With the onset of COVID-19, the PRG recommended a political, economic, social, technological, legislative and environmental (PESTLE) scan of the greenlife industry operating environment. The resulting Greenlife Market Report has proven to be a valuable information source for industry with it being referenced on multiple occasions since its release in March 2021.

The project has achieved its objectives by delivering timely and relevant industry statistics each year of the project; providing businesses with a valuable benchmarking tool; delivering the industry's first Greenlife Market Report since 2010 and completing the delivery of a comprehensive communications program focused on extension and adoption.

It is recommended that this project continue in 2021, particularly as it is a Census year. Capturing industry data in a census year will provide many opportunities to align industry data with the Australian population. Additionally, capturing greenlife sales data in 2021-22 ensures the impact of COVID-19 disruptions can be tracked and analysed to provide industry and future Projects more robust trend data.

Keywords

Nursery statistics, market report, supply chain validation, greenlife production research, greenlife market analysis, insights, sentiment, confidence, longitudinal, discussions, strategic, verified, trends

Introduction

NY17008 Nursery Industry Statistics is a three-year data collection project to capture the value and volume of greenlife production in Australia and provide growers with an interactive business benchmarking tool for each year of the project.

This project follows on from an earlier successful project NY16004 which captured value and volume for the financial year of 2015/2016 and provided industry with the prototype business benchmarking data tool.

NY16004 sought to address challenges in data collection by identifying methodology which addressed product diversity and double counting of project however, industry capacity and reluctance to participate remained, with the only option to improve the data culture being to educate the growers by demonstrating the benefits of data for business and industry growth.

NY17008 has continued to overcome and address the identified barriers and challenges and has delivered meaningful data through the collaboration of the Project Team's skills and experience, and learnings from NY16004 which continued to build on the pilot program's methodology.

Using the same foundational methodology and addressing the key recommendations from NY16004, this project has successfully captured data and information for the 2017/2018, 2018/2019 and 2019/2020 financial years and provided national nursery industry production statistics, validated the collections through the supply chain, develop an updated interactive business benchmarking tool for growers each year and delivered the first Greenlife Market Analysis report to identify the current issues having the greatest impact on the industry.

Importantly, the project has also engaged greenlife producers and key stakeholders in the process of collection. This has enabled the project team to improve the collection and benchmarking tool each year by incorporating feedback and ensuring data priorities are captured. This process has also enabled education of the industry, which prior to 2017 was reluctant to any sharing of data, transforming it into an industry willing to share and able to reap the benefits of strategic levy investment, association advocacy and an improved industry profile.

Methodology

GIA managed and administered the project facilitating regular consultation of the project team which GIA, DTER and ACIL Allen and the PRG which consisted of the project team, Hort Innovation, a Nursery Industry Strategic Investment Advisory Panel (SIAP) representative and two industry representatives. GIA prepared communications and facilitated extension for levy payers through the project outputs and liaison with the Levy Communication team at Cox Inall Communications under the levy project NY18001.

DTER managed the collection of primary data and validation data under this project ensuring appropriate and consistent collection methodology contributed to increase the response survey rate, while also capturing the metrics in a credible and robust way.

ACIL Allen undertook annual stakeholder interviews, and critically analysed the new and updated data sources on nursery industry performance and sentiment to inform the project's data collection/analysis, data validation and the development of the benchmarking tool.

Each year the project operated in two distinct stages being:

- Stage 1 – data source priorities, data collection and validation (1st and 3rd years); and
- Stage 2 – data tool development/refinement

The Project Team and PRG monitored and reviewed each stage of data collection which were an important part of project monitoring and evaluation.

Stage 1 – Data source priorities, data collection, data validation

At the commencement of the project and for each year of the project ACIL Allen conducted interviews with participants and key industry stakeholder to analyse the validation data, the data tool and to reassess data collection priorities. Information collected during this process was provided to the PRG. The PRG then met to discuss the results of the interviews, the previous survey (initially NY16004 final report recommendations) and finalise the survey methodology and questionnaire. Each year the questionnaire sought to capture:

- Volume of nursery greenlife products sold
- Farm gate value of greenlife
- Production area
- Employees
- Business turnover
- Operating costs including wages
- Business investment
- Industry sentiment
- Longitudinal trends and insights

Further, each year the survey was modified to capture important measures for example, the number of trained horticulturalists, the industry gender ratio and most recently, the impact of COVID-19 on greenlife sales.

A series of Computer Assisted Telephone Interviews (CATI) were conducted between October and

December each year with a random sample of greenlife production businesses. Each year the project sought to capture 300 completed surveys to achieve a target margin for error of approximately $\pm 5\%$ at the 95% confidence level. Market Metrics conducted the interviews, either from a call centre located in Frankston, Victoria or remotely when locked down by COVID-19 restrictions.

Market Metrics contacted possible participants identified through the CATI process to schedule a telephone appointment. Appointment setting was followed up by an email attaching the questionnaire and the previous year's statistics summary in advance. This process provided growers with early advice of the survey expectations, provided the opportunity of more time to collate the information, and also provided a template for them to email their data in response. It is worth noting that both telephone and email survey completions occur only after a project average of 9 call backs from the call centre¹.

In 2018 and 2020 a validation of the primary greenlife data collection was conducted simultaneously through a series of 200 Computer Assisted Telephone Interviews (CATI) conducted with a random sample of the retail and landscape supply channels. To be able to reliably verify sales data by collecting purchase data, the same methodology was applied to both wholesale nursery and supply chain data collection. In both validation collections, the supply chain data closely matched wholesale nursery data for the corresponding year, confirming the data collection methodology is reliable.

Following collation of the data, the PRG reviewed the data and provided comment on any statistical variation in results by year or category. Appropriate statistical methods were applied to the data each year including chi-square tests and derivatives where proportions are compared longitudinally and t-testing where means and numeric data are compared, also longitudinally. The standard sampling error was identified each year and highlighted with response rates for transparency.

Stage 2 – Data tool development and extension.

Each year an Excel based production nursery business benchmarking tool was developed for use by levy payers to benchmark their businesses against industry averages on metrics such as sales, employees and wages. The tool was reviewed by the PRG and tested with industry representatives before launch.

The tool is used as an incentive to encourage participation in the survey and was automatically provided to survey participants by email, which also encouraged participation in the demonstration webinar. All levy payers can access the current tool by emailing a request to GIA via the website here:

<https://www.greenlifeindustry.com.au/about/projects-programs/greenlife-statistics-and-research>.

Communication of the data and the tool is considered critical to the success of the project. As such each year an industry summary sheet reporting the cumulative results for the 2017/2018, 2018/19, 2019/20 financial years was prepared and engagement activities were delivered in accordance with a project communications strategy and in collaboration with NY18001 Nursery Levy Communications.

Over the course of the three years, continuity in the process and extension approach supported increased awareness and participation in the project. So while the project technically returned to Stage

¹ Call backs recorded in 2017/2018 and 2018/2019 surveys. New technology deployed in 2020 for remote surveying did not capture this metric.

1 each year, the appearance to industry was a sustained extension program across each twelve month period.

Greenlife Market Report – PESTLE analysis

In the final year of the project, following a variation to the contract, ACIL Allen developed the Greenlife Market Report. The Market Analysis Report was developed alongside the 2019/2020 greenlife data collection and ACIL Allen applied the PESTLE technique to nursery value chain to identify the key drivers and barriers for the industry. Each component of the value chain was analysed to identify the key political, economic, social, technological, legislative and environmental themes through:

- desktop analysis (including identifying current R&D projects underway).
- analysis of the data initiative results across all years.
- engaging industry/key informants in developing the report using a modified Delphi approach. Delphi is a technique that allows people who will use the results and/or have specific insights and expertise to be actively involved in analysis. It involves developing numerous versions of the report with feedback from the users/experts in between each one.

Outputs

Table 1 below provide a comprehensive list of NY17008 outputs for each year of the project with great detail offered in support through appendices.

Work conducted	July 2018-May 2019	July 2019-May 2020	July 2020-May 2021
Financial year collection	2017/2018	2018/2019	2019/2020
Program logic and M&E plan Appendix A	Developed by GIA and approved by Hort Innovation.	Reviewed with dates amended.	Reviewed and unchanged.
Risk management plan Appendix B	Developed by GIA and approved by Hort Innovation.	Reviewed and unchanged.	Reviewed and unchanged.
Stakeholder engagement and communications plan	Developed in conjunction with NY15006 comms project and approved by PRG. Appendix C	Developed in conjunction with NY18001 comms project and approved by PRG. Appendix D	Developed in conjunction with NY18001 comms project and approved by PRG. Appendix E
Consultation feedback report on data tool and data priorities.	12 interviews conducted for feedback on NY16004; report received. Appendix F	12 interviews conducted for feedback on 17/18 collection; report received. Appendix G	12 interviews conducted for feedback on 18/19 collection; report received. Appendix H
Survey collection methodology	Methodology & questionnaires	Methodology & questionnaires	Methodology & questionnaires

<i>Note: final questionnaires are available in each Greenlife Collection Report.</i>	finalised for greenlife and supply chain.	finalised for greenlife survey.	finalised for greenlife and supply chain.
Greenlife collection Report	292 surveys completed; all metrics obtained at 95% confidence level $\pm 4.8\%$. Appendix I	305 surveys completed; all metrics obtained at 95% confidence level $\pm 5.1\%$. Appendix J	292 surveys completed; all metrics obtained at 95% confidence level $\pm 5.2\%$. (Note: COVID-19 interruption) Appendix K
Purchasers (validation) collection survey	Greenlife validation successful with results within confidence ranges. Appendix L	N/A	Greenlife validation successful with results within confidence ranges. Appendix M
Benchmarking tool <i>Note: The most recent benchmarking tool is provided in this report however a tool has been delivered each year of the project.</i>	Tool developed and tested with industry; circulated to all contributors and levy payer requests.	Tool developed and tested with industry; circulated to all contributors and levy payer requests.	Tool developed and tested with industry; circulated to all contributors and levy payer requests. Appendix N
Engagement activities delivered	Activities delivered in accordance with engagement plan. Appendix O	Activities delivered in accordance with engagement plan. Appendix P	Activities delivered in accordance with engagement plan. Appendix Q
PESTLE Analysis	N/A	N/A	Delphi groups conducted. Final PESTLE received. Appendix R
Project Team & Project Reference Group Meetings	31 July 2018 27 August 2018 18 October 2018 19 February 2019 Appendix S	15 August 2019 5 February 2020 Appendix T	18 August 2020 25 August 2020 9 February 2020 5 May 2020 Appendix U

TABLE 1: NY17008 Outputs

Outcomes

The primary outcome sought by the project was to enable nursery industry stakeholders to make more strategic and informed decisions through the availability of accurate and verified baseline industry data. This aligns to outcome 2 of the 2017-2021 Nursery Industry Strategic Investment Plan: Increased marketing effectiveness and efficiency and better decision-making based on increased industry knowledge. It also aligns the current GIA Strategic Plan 2020-2023 for advocacy and promotion to ensure that credible data informs strategy and policy planning and to raise awareness of the importance

of the industry using an evidenced based approach.

Other outcomes this project sought to achieve were to:

- Continue to identify attitudes of nursery industry representatives and stakeholders towards data sharing and capability to provide information required for industry data needs.
- Refine the methodology for accurate survey design, data collection methodology and delivery of outputs.
- Validate nursery industry greenlife production by working with and surveying customers.
- Review, refine and deliver an updated data tool/s for data users based on their needs and priorities.
- Evaluate industry and past performance including key trends and issues, insights into industry sentiment; and commentary on future development and growth opportunities using primary and secondary data sources over the life of the project.
- To ensure the PRG provided the oversight and governance to the project and maintaining trajectory for milestone achievement criteria and decision making.

Industry consultation and feedback mechanisms

Through the project we continued to identify attitudes of nursery industry representatives and stakeholders towards data sharing and to glean more information about business capability to respond to the survey. Prior to each survey ACIL Allen conducted interviews with stakeholders to understand what was needed from the data collection each year. This provided an opportunity for feedback to be captured on the project and for recommendations to be implemented ahead of each collection year.

Opportunities to capture feedback from data contributors have been incorporated at every 'touch point' in the collection process. Whether this has been through formal engagement activities such as webinars, documented stakeholder interviews, via the collection team at Market Metrics or in general conversations, feedback has been captured and reported into the project via the PRG Meetings.

Over the three years of the project the Project Team has worked hard to educate the industry around the need for data, the type of data sought for capture and how data can help support their business. DTER reports that in each year, while it takes several calls to achieve completion of interviews, following the initial call to set an appointment, an average of 673 organisations requested information about the survey be emailed to them each year. The number of appointments set has increased each year with 568 in 2018, 691 in 2019 and 761 in 2020.

This interest in participation is evidence of a 'data interested audience' who have been educated through the extension program each year.

Reliable industry data

Accurate and reliable industry data is fundamental for effective strategic industry planning, resource allocation and tracking of industry performance over time. It is also critical for informing decision making, particularly at the highest levels of government.

This project has enhanced the collection made under NY16004 through refined practices in data capture, an efficient and streamlined consultation process, additional market analysis reporting and refined benchmarking attributes in the data tool. The ability to enhance the value of the information

year on year has been achieved through structured and consistent extension activities including peer to peer learning opportunities; regular opportunities for feedback from production nurseries and other stakeholders; and importantly, incorporation of feedback where possible into each new year of the collection.

In 2020, the collection also assisted stakeholders in understanding the impact of COVID-19 on the industry between March and June 2020 with 64% of businesses nationally indicating a disruption and 49% reporting that sales had increased on average 26%. However, 15% of businesses reported that sales had decreased on average 24% because of COVID-19 to 30 June 2020.

Table 2 details the key metrics which were sought by the project and captured each year of the project.

	NY16004 2015/2016²	NY17008 2017/2018	NY17008 2018/2019	NY17008 2019/2020³
Confidence	95%	95%	95%	95%
Margin for Error	±5.7%	±4.8%	±5.1%	±5.2%
Number of contributors	221	292	305	292
Volume (# of plants) ⁴	764,917,832	959,210,286	1,337,169,824	1,573,460,894
Value ⁵	\$2,287,028,934	\$2,414,263,57	\$2,437,642,447	\$2,585,634,527
Total outdoor production (Ha)	6,229	6,616	6,460	6,278
National avg turnover p/Ha	\$385,000	\$392,000	\$408,000	\$441,000
Employees (greenlife production only)	27,032 or 18,943 FTE	24,060 or 19,485 FTE	23,259 or 19,055 FTE	23,880 or 19,701 FTE
Business investment	58%	59%	63%	67%
Industry sentiment (fairly to very positive)	76%	81%	76%	90%

TABLE 2: NY17008 Greenlife collection primary metrics

Recent examples of NY17008 statistics supporting the industry include:

- Supported the restructure of the peak industry body in 2019.
- Communicating the importance of the industry as an 'essential service' directly to the Department of Agriculture, Water and Environment and the Department of Industry, Science, Energy and Resources during COVID-19 lockdowns in April 2020.
- Supporting the Hort Council and the National Farmers Federation to represent the industry in advocacy efforts with the Federal Government during COVID-19 lockdowns in April 2020.
- Supporting the successful application between GIA with the Australia Packaging Covenant Organisation (APCO) for \$546,000 in National Product Stewardship Investment Funding to establish a national recycling program for horticultural plant packaging.
- Inclusion of the survey results in the Horticulture Statistics Handbook for 2017/2018, 2018/2019 and 2019/2020 editions.

Validated collection

Testing the validity of the data captured across the course of the project has ensured the credibility and

² 2015-2016 results were collected in 2017 under NY16004 and are provide here for reference only.

³ The 2019/2020 survey was conducted during an unprecedented community response to greenlife under COVID-19. Anecdotally, growers were operating at capacity to meet customer demand. The Project Team believes operating conditions impacted the survey response.

⁴ Figure excludes plants sold to production business. In 2019/2020 the total volume of plants sold total 2,182,023,407.

⁵ Figure excludes plants sold to production business. In 2019/2020 the total value of plants sold total \$3,328,548,546.

integrity of statistics collected.

Validation collections were conducted in 2017/2018 and 2019/2020 where 100 businesses in each of the two largest markets for greenlife supply, landscape and retail, were surveyed across Queensland, New South Wales and Victoria. In each instance the greenlife collection was validated on the basis that number of plants purchased through independent retail garden centres and landscape businesses was within acceptable confidence ranges of the greenlife sales data.

The validation survey opportunities have also fostered better relationships between NGIA/GIA and the different retail and landscape associations. The capture of this information has supported each State Landscape Associations by providing them with important data which they can use on behalf of their stakeholders.

In 2020, the validation collection continued to provide insights into the greenlife purchasing intentions of independent retail and landscape businesses. The validation process also assisted retail and landscape stakeholders to understanding the impact of COVID-19 on their industry between March and June 2020.

Table 3 below provided an overview of the metrics which supported the greenlife validation.

QLD, NSW, VIC (sample)	Independent Retail 2017/2018	Independent Retail 2018/2019		Landscape 2017/2018	Landscape 2018/2019
Volume (# of plants purchased)	131,214,245	217,892,757		59,482,513	76,384,440
Value (of plants purchased)	\$470,481,534	\$505,873,685		358,745,445	\$425,837,815
Confidence range	\$446 - \$511 million	\$456-521 million		\$352-397 million	\$369-\$431 million
Greenlife reported channel sales	\$478,656,923	\$487,813,580		\$374,445,003	\$399,823.801

TABLE 3: Primary validation metrics

Industry Business Benchmarking Tool (data tool)

The production nursery benchmarking business tool has continued to evolve since 2017. Greenlife production businesses continue to have access to an excel based data tool which is interactive, allowing input of data to make comparisons with broader industry performance.

While the Project Team continue to receive requests from growers for greater granularity in the tool (not possible under the current methodology and collection parameters), the Tool continues to have a user-friendly interface and can be used to compare business performance across a different market segments and/or product mix.

The data tool is a valuable asset for all production businesses containing multiple years of consecutive, comparable data. The 2020 version of the benchmarking tool was launched with a new interface and is the result of four years of data collection enabling growers to measure their performance against comparable businesses across a range of different data sets including sales value, employment, wages, productivity, and cost metrics.

Producers can also gauge business sentiment about profitability and the future of the industry. For the first time, the tool displays data across each of the turnover ranges surveyed, so growers can benchmark their business against those of similar sizes and to test where they see themselves in the future.

When considering the original intent of this output was to combine a useful attractive product which also minimized data provision efforts by contributors, this outcome has been achieved.

Access to the tool continues to be available to greenlife nursery levy payers by request from the GIA website at <https://www.greenlifeindustry.com.au/about/projects-programs/greenlife-statistics-and-research>.

Greenlife Market Report - PESTLE Analysis

Following the variation to the project in 2020, a greenlife market report was produced under the project to support strategic decision-making for the industry. The report was developed by ACIL Allen and the analysis pulls together insights from a range of stakeholders, including production and retail nurseries, government bodies, industry associations and Hort Innovation.

The report covers six key industry issues including: demand trends, productive workforce, plant biosecurity and water/climate. The issues of government support and technology were also covered as lower priority. Having the issues identified through the political, environmental, social, technological, legislative and economic (PESTLE) framework has enabled a broad assessment of the influences on industry.

Production businesses can also use the report to inform strategic decision making, while providing direction for the broader greenlife industry.

Since release in March 2021, the market analysis report has been used in the following discussions:

- Hort Innovation Strategic Investment Advisory Panel meeting to discuss the review of the Strategic Investment Plan for the nursery levy.
- NY18001 annual Communications Strategy workshop between GIA and Cox Inall Communication to assist in supporting the industry with extension activities to address the industry's challenges.
- The Australian Bureau of Statistics has reported to ACIL Allen they found the process valuable from their perspective to better understand the sector and to inform relevant debates within the industry.

Communications & Engagement

Supporting the project for the last three years has been a comprehensive and responsive communications strategy which intended to:

1. Maintain an industry participation rate in the collection at 300 or over.
2. Achieve 100 completed survey in each supply sector of landscape and retail in validation years.
3. Continue to educate and inform the greenlife industry of the business benefits of industry data and as well as communicate COVID-19 drivers for participation.
4. Encourage adoption of NY17008 project outputs including benchmarking data and market commentary developed out of the project.

Specific metrics for these activities are reported under NY18001 however an overview of all activities undertaken by or on behalf of this project is available at Appendices O, P and Q.

The communications that have underpinned the data collection of this project have been integral to its success. The compounding benefit of three years of consistent messaging, technical information, peer-to-peer education and an accessible project team has helped achieve the goals of the communications strategy and the overall project. This is particularly true of the education of the industry with DTER anecdotally reporting more businesses are indicating a willingness to be involved (see comments above). When comparing this result to the first attempt to capture data under NY11007, where only 36 businesses signed up to participate, this project has far exceeded the early participation benchmarks.

Project Management & Administration

Over the course of the three-year project ten meetings of the Project Team and PRG have been held. The participation of industry representatives in the project has been consistent and this has given the project continuity in thinking, action, revision and has ultimately led to the delivery of a successful project and data outcomes for the industry.

Monitoring and evaluation

The performance of the project is measured against the key evaluation questions identified in the Monitoring and Evaluation Plan.

Aligning to Outcome 2 of the 2017-2021 Nursery Industry Strategic Investment Plan, *Increased marketing effectiveness and efficiency and better decision-making based on increased industry knowledge*, the primary goal of the project was ‘to enable nursery industry stakeholders to make more informed decisions through having access to accurate and verified baseline industry data’.

Embracing good governance and industry oversight, the project sought to achieve this goal through:

- Understanding the needs, attitudes, and capability of greenlife producers around sharing information required to support the industry data needs.
- Refining the collection methodology and instruments in continued support of an accurate greenlife collection that captured the important data points for industry.
- Ensuring excellent survey participation rates were maintained to achieve a reliable dataset.
- Implementing a process of validation to support the greenlife collection established under NY16004 while also creating a demand model link between growers and the supply chain.
- Obtaining feedback on the business benchmarking data tool for greenlife producers based on their needs and priorities, and to review, refine and deliver an updated tool.
- Evaluating the industry including key trends and issues, insights into industry sentiment; and commentary on future development and growth opportunities using primary and secondary data sources over the life of the project.

Effectiveness

Following the pilot project in 2017, it was anticipated this project would capture timely, relevant and reliable industry data from greenlife producers, building an economic picture from which to inform effective strategic industry planning, resource allocation and tracking industry performance over time.

Each year of the project the greenlife collection successfully achieved national results with a 95% confidence level for greenlife volume, value, product type, supply channel, number of businesses and employee including employment type. The collection also achieved results on industry confidence, current business phase and future business intentions and other relevant key indicators each year such as gender ratios; horticultural qualifications and in 2020, the impact of COVID-19 on greenlife production.

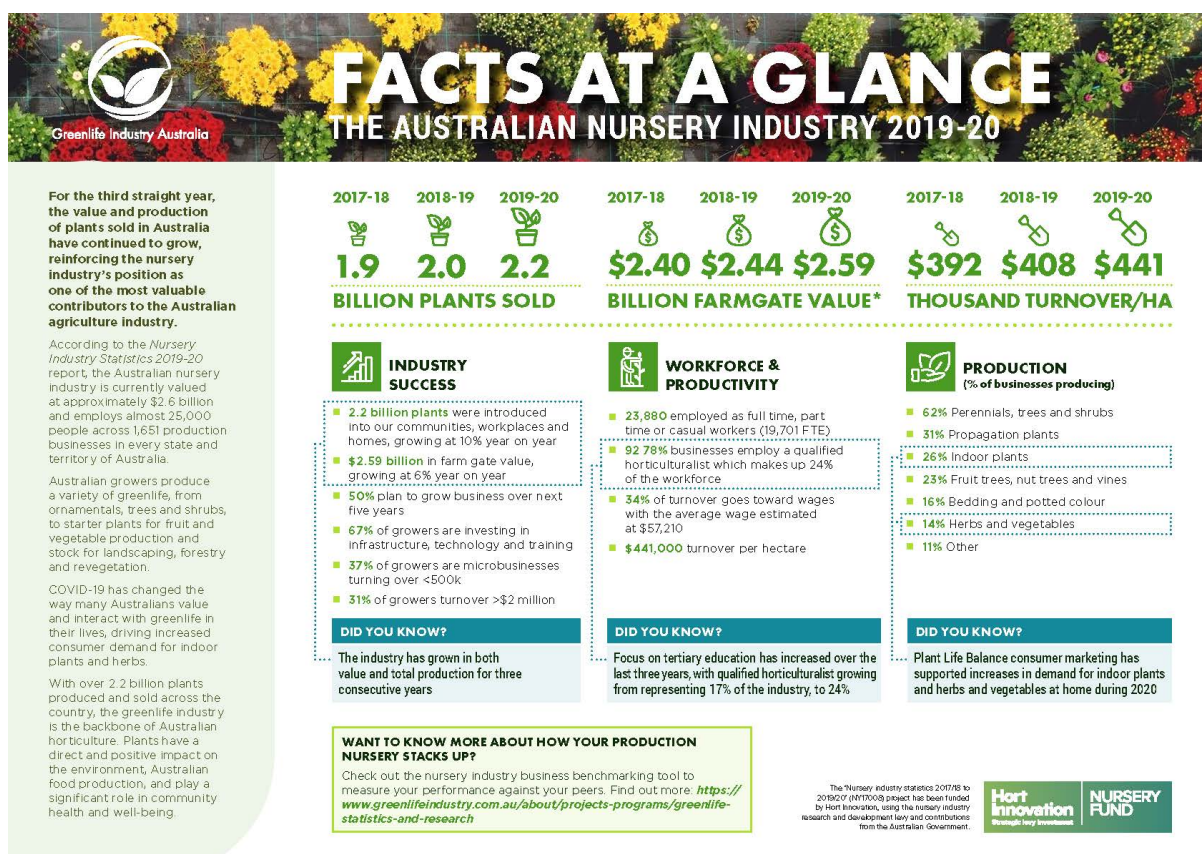
Appendices I, J and K are the Greenlife Industry Statistics reports for the financial years 2017/2018, 2018/2019 and 2019/2020 demonstrating the effectiveness of the project in achieving the critical metrics.

In 2018 and 2020, the project undertook validation collections of the two largest greenlife supply channels of retail and landscape. On both occasions, the greenlife collection was validated when the number of plants purchased through independent retail garden centres and landscape businesses was

within the confidence ranges of the corresponding greenlife sales data. Appendices L and M are the Supply Chain Validation Reports for 2017/2018 and 2019/2020 which confirm the effectiveness of the methodology in accurate capturing the greenlife statistics.

Relevance

As a result of the three collections in the report, greenlife producers and stakeholders have access to recent, reliable statistics on the nursery industry and greenlife produced in Australia. The easy to read and understand collection report is available to all levy payers on request.



The statistics are also presented to growers in a useable format through outputs including the annual Facts at a Glance communications output and business benchmarking tool for growers.

The project makes it easy for businesses to access and use the tool in the first instance, by simply ensuring all contributors to the project receive the benchmarking tool via email. With the tool design being an easy to use, locally stored, and excel based, immediately barriers for use around software literacy and privacy and confidentiality are overcome. Removing these immediate challenges helps encourage use of the tool, which demonstrates the relevance of data to growers. Non-contributing businesses can request the tool easily by emailing hello@greenlifeindustry.com.au.

Other opportunities to demonstrate relevance to levy payers has been through the Project Team's attendance at the Greenlife Industry National Conference and through the annual webinar which provides a practical demonstration of the tool for businesses.

The tool is reviewed each year and over the life of the project the benchmarking information delivered in the tool has become more relevant to growers with time series graphs and tables in the data tool highlighting industry trends and sentiment across different turnover categories.

Key greenlife data stakeholders have had multiple opportunities to provide feedback to the project in

the following ways:

- It is first obtained through a stakeholder interview process conducted by ACIL Allen which assists in understanding the data priorities of stakeholders and how greenlife statistics are used differently.
- When surveyed, the growers have the opportunity to provide comments through the market research call centre staff, who are comprehensively briefed by DTER to capture grower feedback.
- The Project Team of GIA, DTER and ACIL Allen are always available and accessible to levy payers to obtain additional support on any aspect of the project and to capture feedback on areas for improvements. Feedback has been captured via email and through face-to-face opportunities such as the Benchmarking Tool Booth at the Conference, where delegates were invited to make a time to meet with tool developer, Rebecca Moriarty.
- Growers have opportunity to provide feedback on the relevance and useability of the statistics at any time during the project. In addition to interviews at the commencement of each collection year, the beta version of the data tool is tested with growers and feedback is incorporated before launch.

All the feedback received is tabled through regular PRG meetings.

Process Appropriateness

Each year of the project a comprehensive engagement plan was delivered under both NY17008 and NY18001 Levy Communications. The PRG is also fully aware that engagement on the project happens through every element of each year's collection.

An example of the project using every opportunity to improve the data literacy of the industry and to encourage survey participation, is at the start of each collection businesses are randomly selected for an appointment - in 2020, 761 appointments were made. Each one of those contacts received a copy of the questionnaire and the previous year's statistics summary.

From the scripting delivered by the market researchers through to the face-to-face conversations the PRG are conscious that every 'touch point' is an opportunity to educate the industry about the relevance of data in their business.

As highlighted in Table 2 above, in 2018 and 2019 the project saw an increase in grower participation the survey reaching a peak of 305 survey completions. Feedback around non-completion was captured by researchers, and outlined in Appendix K included:

- Excessively busy due to increased plant demand through COVID-19 and challenges meeting Government requirements.
- Challenges obtaining staff to accommodate increased demands.
- Sensitive nature of the data required and confidentiality concerns.
- Complexity of information required/data required not captured.
- Busy time of year (preference for survey to run in winter months).

2020 was a challenging year for growers working to meet the demand of their customers.

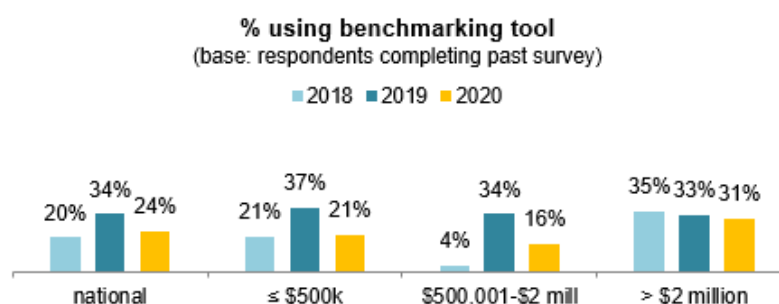
Nevertheless, Market Monitors achieved 292 responses ensuring a 95% confidence level $\pm 5.2\%$ for the 2020 collection.

The process of data education has been supported each year through the preparedness of growers to be profiled in case studies. The case studies delivered under this project are outlined in the Appendices O, P and Q which detail the engagement activities delivered across the project.

Efficiencies

Efficiency in data tool adoption relates to the removal of barriers to participate as discussed under *Relevance* above. This has been a valuable tool for business and exposure to the resource continues to grow through the extension and adoption activities.

It should be noted however, as outlined in Recommendation 9 below, over the course of the project the PRG have come to the belief that adoption of the tool should not be a measure of the project's success on the basis that variability in business capability impacts the result. This thinking is evidenced in the graph below, taken from the 2019/2020 report (Appendix K) which highlights the adoption of tool for larger, well resourced businesses, compared to businesses with fewer human resources in the smaller turnover categories.



Survey completion continues to be a challenge with large proportions of appointments being rescheduled on multiple occasions.

This project introduced the option for the survey to be emailed back to researchers to reduce the 'rescheduling' burden and to improve efficiency. Table 4 details the increasing trend in email survey completions. It should be noted however that concurrently, the market researchers continue to follow up businesses for both telephone and email survey responses. As reported each year of the project (see appendices I, J and K), when Market Metrics concludes follow up, the email responses also stop.

	NY16004 2015/2016 ⁶	NY17008 2017/2018	NY17008 2018/2019	NY17008 2019/2020 ⁷
Number of completed surveys	221	292	305	292
Telephone completes	221	266	249	195
Interview length		22 minutes	22 minutes	22 minutes
Email completes		26	56	97

Recommendations

On 5 May 2021, the PRG met to identify recommendations for future data collection project. The following recommendations are made:

Future project - Generally

⁶ 2015-2016 results were collected in 2017 under NY16004 and are provide here for reference only.

⁷ The 2019/2020 survey was conducted during an unprecedented community response to greenlife under COVID-19.

Anecdotally, growers were operating at capacity to meet customer demand. The Project Team believes operating conditions impacted the survey response.

1. Continued levy funding for the regular collection greenlife/nursery industry statistics and research.
2. Must continue collection in a census year (2021). This is a year that the nation has the best collection of data available for analysis alongside the industry statistics and research results to generate deeper insights.
3. Use the data gaps identified in the Greenlife Market Report to inform the project objectives.
4. Continued need for a phone/in person survey to ensure that a representative sample is captured.
5. Validation of the data should be conducted every two years.
6. Consider reducing survey length to mitigate survey fatigue.
7. Consider the representation of primary production nurseries in the data. How can we access those business and what will be the implications on the data? The capture of the nursery component from orchards/vegetable producers should be considered.

Data Tool

8. Continue to develop an annual benchmarking tool. The tool helps educate the industry, elevate professionalism, encourage survey participation. However, the tool should not be used as part of the measurement of the success because of the variability in business capability.
9. Enhance data tool support using case study videos. Incorporate the budget for this into the extension. Videos will create FOMO and enhance peer to peer learning and to drive strategic thinking in production nurseries.
10. We have reached the maximum capability of Excel. Excel is practical and addresses confidentiality and privacy issues. This is scope to consider alternative platforms for the data tool in the future to improve usability in a manner that also address industry requirements for confidentiality.

Questionnaire & Data Analysis

11. Consider breaking up the perennials trees and shrubs category to help make the data more meaningful to businesses.
12. Consider opportunities to enhance the granularity of data.
13. Consider methods to support continuity of data to support prediction and forecasting into the analysis.
14. Consider opportunity to provide the businesses with a 'template' or 'spreadsheet' of expectations for the collection. This would enable growers to capture the information as they go and have it ready for the annual collection, should they be called upon.
15. Review the definitions of categories and sub-groups to enhance segmentation understanding.
16. Consider opportunities for mixed-mode, randomised sample to support streamlining and efficiency of the collection. *Note: DTER's advice of the need to follow up businesses and to secure survey completion and to maintain random nature to ensure robust collection of data. This will require a strategic decision on whether to prioritise data robustness or survey efficiency.*
17. Consider the scripting of the data collection agency to assess business interest in participating in future collections. Also consider the collection scripting for how language affects perception of project.
18. Prepare for increased data collection agency costs.

Communication – extension & adoption

19. Enhance the communication on the project to consider all touchpoints with levy payers, from first contact with researcher through to extension of peer-to-peer learning.
20. Intensify communication around the benefits of the industry collection prior to launch.
21. Enhance data tool support using video case study videos and incorporate the budget for this into the extension.
22. Increase the proportion of the budget allocated to engagement and education to be in line with other data projects such as Native Seed Project which is implementing 14 face to face workshops.

Additional Research for industry

23. Research the value of greenlife post farm gate and in the whole supply chain:
 - a. All plant industries should be examined to understand the risks to food production or export should the greenlife nursery industry not be able to meet the needs of primary production.
 - b. Begin to consider the socio-economic value of plants in retail and landscape nationally, (ie expanding the current validation survey and extending its reach nationally).
24. Conduct a deep dive into external market factors affecting industry businesses and supply chain and provide a commentary for businesses. This concept has potential to value add to the data tool and engage more businesses in the survey.

Intellectual property, commercialisation and confidentiality

The project has continued to build confidence of data contributors and data users through delivery of timely, accurate and robust research and data usability. As with the previous project, critical to the success of the project has been the processes established around data confidentiality and report access.

Raw data collected during the project continues to be anonymised for the privacy of data and data contributors. Any raw data that remained identifiable irrespective of anonymity has been/will be destroyed after three months of data tool development. This is to ensure compliance with confidentiality agreements entered between DTER and data contributors.

The PRG continue to be highly sensitive and vigilant to maintaining the confidentiality of individual contributors, and in the release of collated industry data. The PRG has maintained the view that the outcomes of the project are critically necessary for the industry to raise its profile and to inform appropriate investment of the Nursery R&D and Marketing Levy. However, the PRG is also firm in its opinion that the reporting of industry data through the collection reports and benchmarking tools, *must not have an adverse effect on commercial negotiations between greenlife producers and the supply chain*. It is for this reason the Committee has always recommended the data collection report and benchmarking tool only be provided to levy paying businesses.

GIA (formerly NGIA) has provided information of key contact information of potential data contributors and data users to the project team as required. This information and the database where the information is stored remains the IP of GIA and use of this information outside of this project is not permitted without the prior written consent of GIA.

IP has been created in the development of data tools which draw on the data ACIL Allen and DTER are required to hold in confidence. Commercialisation is not considered at this stage.

Acknowledgements

The Project Team of Peter Vaughan and Kobie Keenan of GIA, Daniel Watson of DTER and Jan Paul van Moort and Rebecca Moriarty of ACIL Allen would like to thank the many greenlife producers, independent retailers and landscape businesses who contributed data to the project over the last three years. Without their willingness to share data this project would not have been possible.

The Project Team gratefully acknowledges the support of the PRG and particularly, the nursery industry representatives of David Jakobs, Josh Kyne, Hamish Mitchell and Emily White who informed the project and provided a real-world view of the greenlife production businesses in relation to data collection.

We also acknowledge the great volume of industry market intelligence provided by the Delphi group participants which supported the PESTLE analysis of the industry including Karen Connaughton, Colin Groom, Brett Sargeant, Mark Jackson, Alex Newman, Brendan O’Keefe, Michael Rogers, Craig Taberner and Peter Vaughan.

GIA would like to acknowledge and thank the project partners of DTER and ACIL Allen for providing their expertise and advice which were instrumental in overcoming the challenges of past projects of this nature.

Finally, we would like to acknowledge the persistence of the Strategic Investment Advisory Panel and Hort Innovation in working to rectify the gaps in greenlife industry data and recognise their continued support and input into this project.

Appendices

- A. Program Logic and M & E Plan
- B. Risk Management Plan
- C. Communications & Engagement Plan (2017/2018)
- D. Communications & Engagement Plan (2018/2019)
- E. Communications & Engagement Plan (2019/2020)
- F. Consultation and feedback report prepared by ACIL Allen Consulting (2018)
- G. Consultation and feedback report prepared by ACIL Allen Consulting (2019)
- H. Consultation and feedback report prepared by ACIL Allen Consulting (2020)
- I. Nursery Industry Statistics Report (Greenlife) (2017/2018)
- J. Nursery Industry Statistics Report (Greenlife) (2018/2019)
- K. Nursery Industry Statistics Report (Greenlife) (2019/2020)
- L. Purchasers Report (Validation) (2017/2018)
- M. Purchasers Report (Validation) (2019/2020)
- N. Business Benchmarking Tool (2019/2020)
- O. Engagement activities delivered (2017/2018)
- P. Engagement activities delivered (2018/2019)
- Q. Engagement activities delivered (2019/2020)
- R. Greenlife Market Report (PESTLE Analysis)
- S. Minutes of Project Team and PRG Meetings (2018/2019)
- T. Minutes of Project Team and PRG Meetings (2019/2020)
- U. Minutes of Project Team and PRG Meetings (2020/2021)

Appendix A

Program Logic and M & E Plan

2018/2021
Program Logic and
Monitoring &
Evaluation Plan

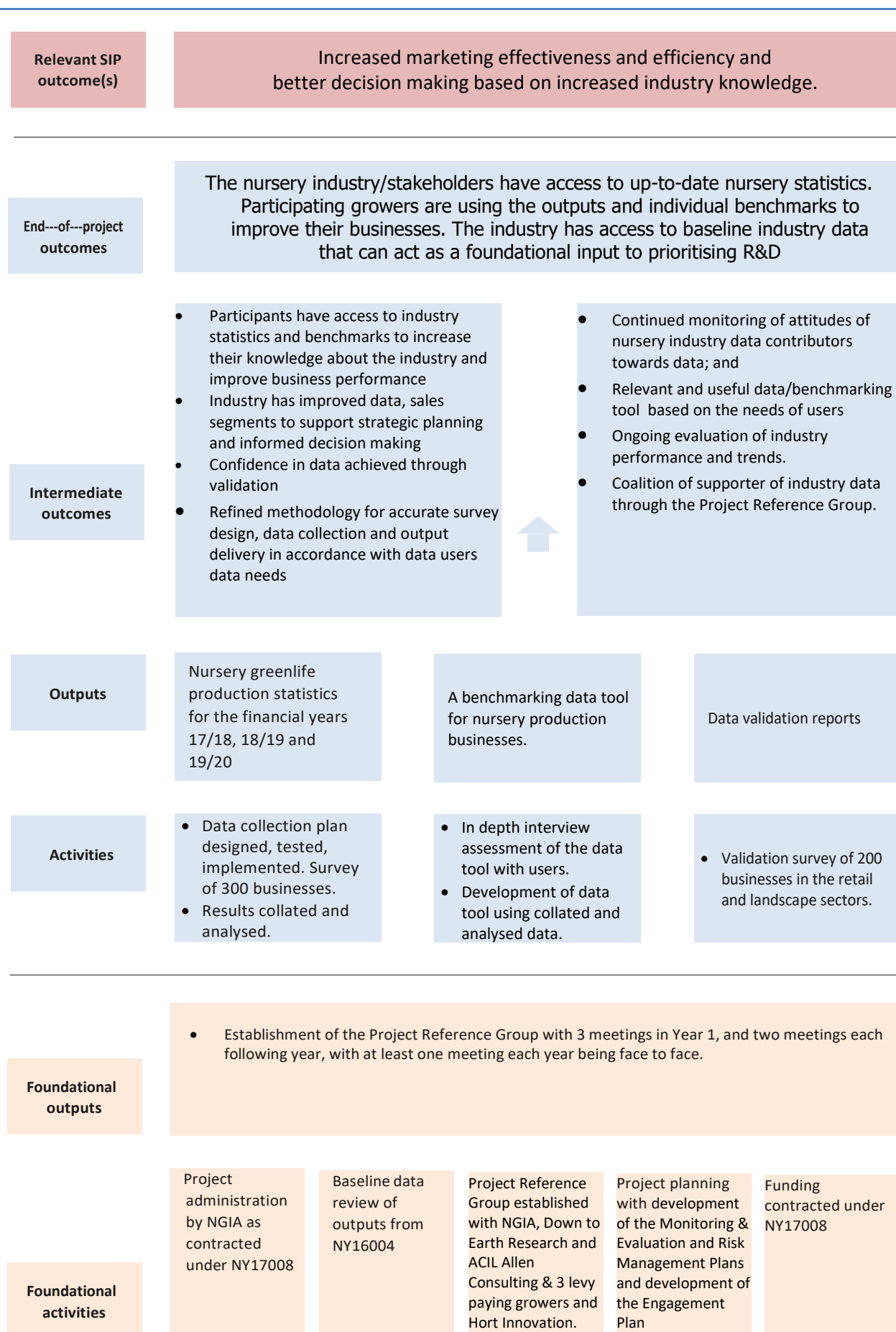
NY17008 Nursery
Industry Statistics
& Research

Nursery & Garden Industry Australia

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M&E budget.....	15
Performance expectations, data collection and analysis	16
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Program logic



Project M&E scope

NY17008 Nursery Industry Statistics is a three year project being conducted in partnership by Nursery & Garden Industry Australia, Down to Earth Research and ACIL Allen Consulting which seeks to build on the success of the data collection conducted under in NY16004.

The project will again seek to collect data from greenlife producers to capture volume, type and value of greenlife produced by the nursery industry. Further, the project will also seek to validate information captured in the greenlife collection through surveying and desk research of sectors along the supply chain. Each year of the project, the data collected will be collated, analysed and formatted into a data benchmarking tool for nursery industry levy payers to use practically within their businesses. The information will also be provided to key industry stakeholders including Hort Innovation and government organisations such as the Australian Bureau of Statistics.

Audience

Table 1: M&E audience and their information needs

Audience	Information need
Primary	
Project Reference Group	- In-depth feedback on data tool developed under NY16004 - Greenlife producers database - Supply chain (nominated sectors) database - Collection plan – greenlife - Collection plan – supply chain - PRG feedback on collection plans - Primary data report for greenlife and supply chain collections outlining number of participants and key metrics. - PRG feedback on metrics in the collection report each year - Collection report for benchmarking data tool development - Committee feedback on draft benchmarking data tool each year - In-depth feedback on data tool developed for each year - Validation process (nominated sectors) for years 2 and 3 - PRG feedback on validation process for years 2 and 3 - PRG feedback on metrics in the collection report. - Collection report for benchmarking data tool development
Hort Innovation	- Collection methodology and collection plans - Details of participation rates in collections - Collection reports containing key metrics - Data tool and extension process - Results of industry engagement activities each year
Secondary	
Contributors	- Incentive to support and supply data (access to tool) - Confidence in privacy and data de-identification guarantees - Understanding of survey requirements - Time to collate and provide information - Support to interpret the tool
Industry Stakeholders	- Understanding of methodology - Understanding of data reliability - Access to key statistics

Key evaluation questions

Key evaluation questions	Relevant?	Project---specific questions
Effectiveness		
1. To what extent has the project achieved its expected outcomes?		Did the greenlife collection achieve results for greenlife volume, value, product type, supply channel, number of businesses and employee including employment type etc each year? Did the greenlife collection achieve results for attitudes of the industry? Did the validation collection, validate the greenlife collection?
Relevance		
2. How relevant was the project to the needs of intended beneficiaries?		Do nursery industry growers and stakeholders have access to recent, reliable statistics on the nursery industry and greenlife produced in Australia including volume and value? Are the statistics presented to growers in a useable format? Did growers have opportunity to provide feedback on the relevance and useability of the statistics? Do greenlife producers in Australia have access to a data/benchmarking tool on greenlife data?
Process appropriateness		
3. How well have intended beneficiaries been engaged in the project?		Was the Industry Engagement Plan delivered as proposed each year? Did the greenlife collection achieve an increase in contributor participation each year? Did the greenlife collection achieve 300 or more completed contributor interviews each year? Is the data/benchmarking tool easily accessible to industry levy payers?
4. To what extent were engagement activities appropriate to the target audience/s of the project?		Did survey respondents provide feedback on the survey process to DTER during the survey? Did survey respondents provide feedback on the survey process via Hort Innovation data tool extension process? Did data tool users provide feedback via the in-depth review each year? Are extension workshops for the data/benchmarking tool easily accessible to industry levy payers?
Efficiency		
5. What efforts did the project make to improve efficiency?		What efforts did the project make to improve efficiency in survey completion? What efforts did the project make to streamline adoption of the Data/Benchmarking tool to industry?
Other (if any)		
		Has the project contributed industry understanding of the value of industry statistics and research? Has the project demonstrated to industry the need for ongoing industry participation in future industry data collections?

M&E budget

NY17008 is a three year project to capture nursery industry statistics and research and many of the performance of the project will be captured within the project outputs.

In this way the M&E for this project will be undertaken by the project team of NGIA, DTER and AAC. M&E support will also be sought from Cox Inall Communications via engagement activities and metrics.

M&E activities are financially supported by NY17008 and NY18001 and therefore no additional budget is required.

Performance expectations, data collection and analysis

Performance monitoring plan

Program Logic Level	What do monitor	Performance Expectation	How to Monitor & Data Source	When	Responsibility
Foundational Activities/ Outputs	Project administration Baseline data Project planning complete	Research agreement signed. Availability of NY16004 data Program logic, monitoring and evaluation plan, risk management plan finalised. Stakeholder engagement and communication plan finalised	Copy of Signed Agreement (Hort Innovation) Access to data set of NY16004 (Project Team) Project record keeping (NGIA) Documents finalised and approved (PRG)	Project commencement	NGIA Project Team PRG
Activities/ Outputs	Review of NY16004 data tool Stakeholders identified Greenlife data collection Validation data collection Benchmarking data tool Project communications	Results of 12 in depth data tool user interviews completed Access to stakeholder databases. Relationships established to facilitate supplier databases. Data collection plans designed, tested, implemented. Survey of 300 Greenlife production businesses. Survey of 100 Retailers and survey of 100 Landscape installers Communications and engagement plan implemented in conjunction with NY15009/NY18001.	Feedback report from data tool users and data stakeholders (ACIL Allen) Feedback from PRG on data collection implementation plan. (PRG) Greenlife collection reports and validation collection report. (Down to Earth Research) Communications activities recorded and reported under NY17008/NY18001 (NGIA)	Annually for each contracted collection period. Ongoing for milestone reports (Project Team) For Final Report (Feb 2021) Ongoing at Project Reference Group Meetings (PRG)	Project Team NGIA PRG

Program Logic Level	What to monitor	Performance Expectation	How to Monitor & Data Source	When	Responsibility
Intermediate Outcomes	Refined methodology for accurate survey design, data collection and output delivery in accordance with data users data needs Continued monitoring of attitudes of nursery industry data contributors towards data; and Ongoing evaluation of industry performance and trends. Confidence in data achieved through validation Participants have access to industry statistics and benchmarks to increase their knowledge about the industry and improve business performance Industry has improved data, sales segments to support strategic planning and informed decision making Coalition of supporters of industry data through the Project Reference Group and stakeholder relationships.	Analysis reports on greenlife collection reporting value, volume, production area, business turnover, employees, operating costs, attitudes and sentiment Comparative analysis reports from previous collections providing longitudinal trends and insights (ACIL Allen) Benchmarking data tool for nursery production growers (levy payers) (ACIL Allen) Growing share of participating growers and industry use data to improve business and industry activity	Results of reports communicated to industry and stakeholders. (Project Team & Hort Innovation) Industry has access to data tool via Hort Innovation. (Hort Innovation). Supplier validation research shared with value supply chain stakeholders (database supply) Survey responses on grower use of data tool in year 2 and 3 surveys. Announcements/Media Releases circulated (NGIA/NY18001) Tool circulated by researcher (Down to Earth Research) Evidence of industry adapting initiatives and engagement based off research findings.	Annually for each contracted collection period. For milestone reports (Project Team) For Final Report (Feb 2021)	Project Team NGIA PRG
End of Project Outcomes	The nursery industry stake holders have access to up to date nursery statistics. Participating growers are using the outputs and individual benchmarks to improve their businesses. The industry has access to baseline industry data that can act as a foundational input to prioritising R&D	Annual summary reports for 17/18, 18/19, 19/20. Data tool shared with all greenlife data contributors and promoted to growers Data tool communicated and demonstrated to industry through workshops. Participating growers and industry use data to improve business and industry activity	Announcements/Media Releases circulated (NGIA/NY18001) Tool circulated by researcher (Down to Earth Research) Engagement activities delivered, workshops attended by growers (NY18001 and ACIL Allen)	Annually for each contracted collection period. Ongoing for milestone reports (Project Team) For Final Report (Feb 2021)	Project Team

Evaluation

Table 4: Additional evaluation data requirements

KEQ	Data collection requirement	Source and method
Did the greenlife collection achieve results for greenlife volume, value, product type, supply channel, number of businesses and employee including employment type etc each year?	N/A	Interim Report greenlife collection
Did the greenlife collection achieve results for attitudes of the industry?	N/A	Interim Report greenlife collection
Did the validation collection, validate the greenlife collection?	N/A	Interim Report validation collection
Do nursery industry growers and stakeholders have access to recent, reliable statistics on the nursery industry and greenlife produced in Australia including	N/A	Interim Report greenlife collection
Are the statistics presented to growers in a useable format?	N/A	Interim Report greenlife collection, summary page, data tool
Do greenlife producers in Australia have access to a data/benchmarking tool on	N/A	Data tool. Clear process for obtaining outputs
Did growers have opportunity to provide feedback on the relevance and usability of the statistics?	N/A	Survey Comments, Hort Innovation Tool extension, In-depth interviews
Was the Industry Engagement Plan delivered as proposed each year?	N/A	Engagement Plan Activities
Did the greenlife collection achieve an increase in contributor participation each	N/A	Engagement plan metrics
Did the greenlife collection achieve 300 or more completed contributor interviews	N/A	Interim Report greenlife collection
Is the data/benchmarking tool easily accessible to industry levy payers?	Number of additional requests	Hort Innovation Tool extension
Did survey respondents provide feedback on the survey process to DTER during the	N/A	Interim Report greenlife collection
Did survey respondents provide feedback on the survey process via Hort Innovation data tool extension process?	Number of feedback items received	Hort Innovation. Provided to project team for action.
Did data tool users provide feedback via the in-depth review each year?		ACIL Allen in depth interviews.

Are extension workshops for the data/benchmarking tool easily accessible to industry levy payers?	Number of attendees	Workshops, Engagement Activities
What efforts did the project make to improve efficiency in survey completion?	N/A	DTER advise on interview strategy with Market Metrics - Interim Report 17/18
What efforts did the project make to streamline adoption of the Data/Benchmarking tool to industry?	Number of additional requests	ACIL Allen to advise user feedback; Hort Innovation to confirm process; other access
Has the project contributed to industry understanding of the value of industry statistics and research?	N/A	Engagement metrics. Survey results on use of data if prior participation.
Has the project demonstrated to industry the need for ongoing industry participation in future industry data collections?	N/A	Engagement metrics

Table 5: Independent evaluation studies (as required by Hort Innovation)

Type of evaluation	When (start and finish)
Mid-term evaluation	Not Applicable
Final evaluation	Not Applicable

Reporting and continuous improvement

Table 6: Project progress reporting

Report type	To whom	Timing
Milestone Reports	Hort Innovation	Six-monthly
Nursery Paper	Industry magazine & Your Levy @ Work	Annual
Case Study	Your Levy @ Work	Annual
Media Release	Industry & General Media	Annual

Table 7: Project continuous improvement activities

Continuous improvement process	Details	Timing
Project Team Meetings	Meetings between NGIA, DTER, AAC to discuss project achievements and strategy management and modifications.	Annually (formal), but regularly ongoing

Project Reference Group Meetings	Meetings of the PRG to obtain levy payer feedback and input into needs of industry and to capture industry intelligence. Further, onsite (at nursery) meetings to educate Project Team and Hort Innovation on the complexities of nursery industry data.	Six monthly

Appendix B

Risk Management Plan

Risk Management Plan

NY17008 Nursery Industry
Statistics & Research

Nursery & Garden Industry Australia

Risk Management Plan

A risk assessment has been completed and documented in the Risk Management Plan below. The Risk Management Plan has adopted the scales¹ for the plan as detailed below.

Risk Likelihood Scale

Descriptor	Definition
Remote	May occur only in exceptional circumstances during the project; < 10% probability
Unlikely	Could occur in some circumstances during the project; 10 – 20% probability
Possible	Should occur at some time during the project; 20 – 50% probability
Likely	Will probably occur in most circumstances during the project; 50 – 80% probability
Almost Certain	Expected to occur in most circumstances during the project; > 80% probability

Risk Consequence Scale

Descriptor	Definition
Insignificant	All project outputs delivered and outcomes achieved; No loss of reputation of organisation/s; No loss of work time (e.g. due to availability of staff or weather interruptions); Minimal loss/damage to assets; Loss or impairment of a small amount of non-critical information
Minor	Outputs delivered but some quality reduction; Some reputational damage to organisation/s; Temporary loss of work time; Temporary corruption/loss of services/resources or non-critical information; Some loss of opportunity
Moderate	Failure to deliver some outputs and/or significant quality reduction in some outputs; Moderate reputational damage to organisation/s; Medium-term loss of work time; Corruption/loss of non-critical information resources
Major	Failure to deliver most outputs; Significant reputational damage to organisation/s; Long-term loss of work time; Loss/irrecoverable corruption of critical information resources; Major loss of opportunity
Catastrophic	Outcomes unable to be achieved and failure of delivery of all outputs; Irreparable damage to reputation of organisation/s; Loss of irreplaceable key staff or work time completely disrupted; Total loss/corruption of all information services/resources

Risk Assessment Matrix

Likelihood	Consequence					
	Scale	Insignificant	Minor	Moderate	Major	Catastrophic
	Remote	Low	Low	Low	Medium	Medium
	Unlikely	Low	Medium	Medium	Medium	High
	Possible	Low	Medium	High	High	High
	Likely	Medium	Medium	High	High	Extreme
	Almost Certain	Medium	High	High	Extreme	Extreme

^{1 4} Adapted from guidance notes for ‘Project Risk Management – Risk Identification, Analysis and Assessment’ provided by the Australian Government for Extension and Outreach Grants Funding and Australian Government Rural R&D for Profit Programme Risk Matrix.

Risk Management Plan – NY17008 – Nursery Industry Statistics and Research

The risk What could happen?	Potential causes/sources What could happen? What would cause it?	Potential impacts How would the risk impact on delivery of project?	Controls What controls are in place, or will be in place, to manage the risk	Likelihood with controls in place From <i>Risk Likelihood Scale</i>	Consequence with controls in place From <i>Risk Consequence Scale</i>	Treated risk assessment From <i>Risk Assessment Matrix</i>	Risk evaluation Could you defend this level of risk is acceptable?	Responsible person Who is the person/s responsible for monitoring and managing the risk?
Not achieving the social goal for industry and private goal for contributors – relevant data for each.	Inappropriate research methodology	No useful, reliable data for stakeholders. No relevant and useful data for contributors	Employ a top down/bottom up approach as successfully tested under NY16004. Familiarity with collectors.	Unlikely	Minor	Medium	Yes	NGIA/DTER/AAC
Not attaining 300 completed surveys in the greenlife collection by nursery production businesses	Timing Volume of information requested Fear	Limitations in the depth of analysis Data accuracy compromised	Comms & Engagement plan in progress Experienced & patient researcher and interviewers Familiarity with collectors. Professionally managed, appropriate weighting. Management of data reporting	Possible	Moderate	High	Yes	NGIA - communications DTER - surveys
Not attaining sufficient completed surveys in the greenlife collection geographically or by turnover	Timing Volume of information requested Fear	Limitations in the depth of analysis Data accuracy compromised	Monitoring Sample 'top up' practices incl quarantining data for analysis Familiarity with collectors. Professionally managed, appropriate weighting. Management of data reporting	Possible	Moderate	High	Yes	DTER
Validation survey databases not acquired	Privacy and confidentiality of landscape ass'ns	Time delay for validation process	Relationships with Landscape Ass'ns Option to purchase landscape database	Remote	Insignificant	Low	Yes	NGIA

Validation survey reliability	Thin spread of businesses won't support validation by State also (in support of landscape ass'ns	Inability to analyse in depth and by State	Limit the validation survey to three States Sample 'top up' practices incl quarantining data for analysis Professionally managed, appropriate weighting. Management of data reporting	Possible	Moderate	High	Yes	NGIA - communications DTER
Access to identifiable data outside the collectors/analysts	Carelessness or mismanagement of raw data and/or collated data	All future collections are compromised. Loss of confidence from industry. Low participation rates for future collections.	All collections occur in accordance with strict privacy rules. Raw data is anonymised. Raw data is shared only with DTER and AAC as the research and analysts for the project. Data reviewed before sharing to ensure anonymised, data remains unidentifiable when reviewed with other factors. Eg geography	Unlikely	Insignificant	Low	Yes	DTER/AAC
Results of the data detrimentally influencing commercial agreement for growers.	Access to commercially sensitive elements of the data being shared inappropriately.	All future collections are compromised. Loss of confidence from industry. Low participation rates for future collections. Industry/Project Team relationships impaired.	Data reviewed before sharing to ensure commercially sensitive data is not publically reported.	Unlikely	Moderate	Medium	Yes	NGIA/DTER/AAC
Contributors not being able to respond to survey completely.	Assessment of data without consideration for empty cells	Inaccurate reporting	Researchers account for empty cells using a management process identified under NY16004.	Possible	Insignificant	Low	Yes	DTER
Loss of project team or PRG members	Resignation or retirement	Loss of key knowledge and experience	Regular project team meetings to share information on progress; Central storage of project data/information	Possible	Insignificant	Low	Yes	NGIA

Appendix C

Communications & Engagement Plan
(2017/2018)

17/18 Engagement Plan

NY17008 Nursery Industry Statistics

Introduction

NY17008 Nursery Industry Statistics is a three year project collecting nursery industry statistics which follows on from the success of NY16004.

Timely, accurate and regular data on the Australian nursery and garden industry is needed to inform industry decision making, resource prioritisation, investment evaluation, strategic planning activities, market trends and tracking industry performance over time.

The project will complete a random sample survey of nursery production businesses each year across three years. Further, the project will undertake a validation exercise to help inform and analyse the nursery data collected. All data collected will be collated and structured to provide a benchmarking tool for industry.

A major component of the project is to continue to educate, inform and engage industry on the benefits of data to both to their businesses through the benchmarking tool and for the nursery and garden community.

This engagement plan outlines communication and engagement the objectives and activities for the 17/18 collection.

Objectives

The industry communication objectives of this project are:

1. To increase nursery production business participation in the greenlife collection from the 2017 collection.
2. To educate and inform the nursery and garden industry of the benefits of timely and regular data (in general) for their businesses and industry; and of the project NY17008 and provide a feedback mechanism to support the project through between July 2018 to June 2019 to ensure relevance to end users
3. To encourage use of and seek feedback on the benchmarking data tool developed out of the project.

Audience

Primary Audience 1 (greenlife collection): Data contributors being greenlife producers

Primary Audience 2 (validation collection): Retailers, landscapers, growing media suppliers and importers of controlled release fertiliser.

Secondary Audience: Data End Users being nursery and garden industry businesses, Horticulture Innovation Australia, Plant Health Australia, Government Departments (inc DAFF, ABS, ABARES) , External Analysts.

Project Communication Activities

Project communication activities will be conducted under two different projects being:

1. *NY17008 Nursery Industry Data 17/18-19/20*

2. *NY15006 Communication Program for the Australian Nursery Industry 2015-2018.*¹

To address all three communications objectives the following activities are proposed to be achieved by March 2019.

Social Media

- 23 posts across Facebook, Twitter and LinkedIn:
 - o 18 posts NY15006/NY18001 (9 Facebook, 9 Twitter),
 - o 5 posts NY17008

Blog posts

- 4 blog posts NY15006/NY18001, 2 blog posts NY17008
- Dependent on the source of project extension, blog posts will be shared on NGIA website, NNN e-newsletter and Your Levy @ Work website and e-newsletter during the course of the project.

Case Study – Written

- 1 written, NY15006/NY18001 – Jong Nursery
- 1 digital, NY15006/NY18001. – Tall Trees
- Focuses on businesses who both contributed to the 15/16 collection and utilised the data tool

Digital Asset development

- 1 infographic NY17008
- An infographic on nursery industry data (perhaps update the last version) including trends from 15/16 and data validation.

Media Releases

- 1 release NY18001
- Announcement of the results of the 17/18 data collection with snapshot of national statistics

Webinar

- 2 webinars NY17008
- outlining the results of the 17/18 collection and demonstrating the benchmarking tool featuring Jan Paul van Moort of ACIL Allen Consulting.

Nursery Papers

- 1 paper NY18001
- focusing on the results of the 17/18 collection and demonstrating the benchmarking tool; and translating the results of the research into industry commentary.

State Association Liaison

- Ongoing NY17008

¹ NY15006 is a project managed by Cox Inall Communications which is scheduled to conclude in November 2018. A new project, NY18001 Australian Nursery Industry Communications, is due for commencement on 23 November 2018. This engagement plan will be amended to reflect the new project once contracted.

- Regular liaison with State Associations on status of the project and survey collection periods.
Encouragement for promotion.

The outputs for this project are detailed in Appendix A below.

Evaluation

The results of the engagement campaign will be measured through the following means and the outputs detailed in the final report:

- Social media and digital asset engagement: being the number of Likes, Comments, Shares, Views
- Nursery Papers: print distribution, social responses, website downloads
- Blog Posts: unique views, clicks on post, click on links, post downloads
- Case Study: clicks on post, click on links, post downloads, time online
- Media Releases: number of stories published (print and online).
- Webinar: attendance

Reporting

All communication activities being conducted under NY15006/NY18001 will be reported with that project.

NY17008 will report on the following:

- Social Media	5 LinkedIn posts
- Blog posts	2 blog posts
- Digital Asset Development	Infographic on nursery industry data.
- Webinars	2 webinars

Communication activities will be extended across both projects and so a cross over may be seen in reporting of results. For example, NY17008 will host and promote the webinars. NY15006/NY18001 will also promote them. Each project promotes through different channels and so this is seen as a benefit.

APPENDIX A – Communication Outputs (NY17008) for Nursery Industry Statistics – 2017-2018 Collection

Content Type	Project	Purpose	Target Audience	Date	Channels
Blog	NY17008	Re-introduce the NY16004 Nursery Data Tool and encourage requests from Hort Innovation.	Growers and industry stakeholders	Aug 2018	NGIA website, NNN social media (Facebook and Twitter, LinkedIn)
Blog	NY15006	Announcement of contracted project detailing relevance to retailers, landscapers (validation); also greenlife collection.	Growers, retailers, landscapers and other industry stakeholders, Government	Oct 18	Promote article via Your Levy @ Work e-newsletter and through NGIA social media, send email to State NGIs. Landscape publications (TBC)
Case Study (Written & Digital)	NY15006	Digital – Video of Joel Vanderruit, Tall Trees VIC Written – Peter Jong, Jongs Nursery, SA	Growers	October 18 Nov 18	Promote article via Your Levy @ Work e-newsletter and through NGIA social media, send email to State NGIs.
Blog	NY15006/ NY18001	Overview blog that announces greenlife collection survey is underway. Encourage greater participation from businesses.	Growers	Oct 18	State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (promoted post on Facebook)
Blog	NY17008	Overview blog that announces greenlife collection survey is underway.	Retailers & Landscapers	Oct 18	NGIA website, NNN social media (Facebook and Twitter, LinkedIn)
Blog	NY15006/ NY18001	Overview blog that announces validation survey is underway. Encourage participation by retailers and landscapers and advise benefits (TBA).	Retailers & Landscapers	Nov 18	State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter), Landscape publications
Article	NY15006/ NY18001	Surveys concluded, thank you for participation, benchmarking tool is due for release (TBC)	Growers and industry stakeholders	Dec 18	Your Levy @ Work e-newsletter.
Infographic	NY17008 & NY15006/ NY18001	Development of an infographic on nursery industry data including trends and data validation	Growers and industry stakeholders Retailers & Landscapers	Jan 19	NGIA website, NNN State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter, LinkedIn)
Release	NY15006/ NY18001	Announcement of the results of the 17/18 data collection with snapshot of national statistics	Growers and industry stakeholders Retailers & Landscapers	Jan 19	Your Levy @ Work, Your Levy @ Work E-Newsletter, Social Media
Webinar	NY17008 & NY15006/ NY18001	Online workshops outlining the results of the 17/18 collection and demonstrating use of the benchmarking tool, featuring ACIL Allen Consulting.	Growers	Feb-Mar 19	NGIA website, NNN State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter, LinkedIn)
Nursery Paper	NY15006/ NY18001	Four-page insert providing snapshot of 17/18 collection and demonstrating the benchmarking tool. Also translating the results into usable commentary.	Growers and industry stakeholders Retailers & Landscapers	Feb-Mar 19	Hort Journal, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter)

Appendix D

Communications & Engagement Plan
(2018/2019)

18/19 Engagement Plan

NY17008 Nursery Industry Statistics

Introduction

NY17008 Nursery Industry Statistics is a three-year project collecting nursery industry statistics which follows on from the success of NY16004.

The first year of the project successfully collected nursery industry statistics for 2017/18 and the collection saw a 32% increase in grower participation which is an indication that the communications and engagement plan for the project has been successful.

Currently in its second year, the project continues to seek timely, accurate and regular data on the Australian nursery and garden industry to inform industry decision making, resource prioritisation, investment evaluation, strategic planning activities, market trends and tracking industry performance over time.

The second year of the project will again complete a random sample survey of nursery production businesses. All data collected will be collated and structured to provide a benchmarking tool for industry.

A major component of the project is to continue to educate, inform and engage industry on the benefits of data to both to their businesses through the benchmarking tool and for the nursery and garden community.

This engagement plan outlines communication and engagement the objectives and activities for the 18/19 collection.

Objectives

The industry communication objectives of this project are:

1. To increase nursery production business participation in the greenlife collection from the 2018 collection.
2. To educate and inform the nursery and garden industry of the benefits of timely and regular data (in general) for their businesses and industry; and of the project NY17008 and provide a feedback mechanism to support the project between July 2019 to June 2020 to ensure relevance to end users
3. To encourage use of and seek feedback on the benchmarking data tool developed out of the project.

Audience

Primary Audience 1 (greenlife collection): Data contributors being greenlife producers

Primary Audience 2 (validation collection): Retailers, landscapers, growing media suppliers and importers of controlled release fertiliser.

Secondary Audience: Data End Users being nursery and garden industry businesses, Horticulture Innovation Australia, Plant Health Australia, Government Departments (inc DAFF, ABS, ABARES) , External Analysts.

Project Communication Activities

Project communication activities will be conducted under two different projects being:

1. NY17008 Nursery Industry Data 17/18-19/20
2. NY18001 Australian Nursery Industry Communications Program.¹

To address all three communications objectives the following activities are proposed to be achieved by March 2020.

Social Media

- 23 posts across Facebook, Twitter and LinkedIn:
 - o 18 posts NY18001 (9 Facebook, 9 Twitter),
 - o 5 posts NY17008

Blog posts

- 4 blog posts NY18001, 2 blog posts NY17008
- Dependent on the source of project extension, blog posts will be shared on NGIA website, NNN e-newsletter and Your Levy @ Work website and e-newsletter during the project.

Case Study – Written

- 1 written, NY18001 Grower insights re using 2018 benchmarking tool
- Focuses on businesses who both contributed to the 17/18 collection and utilised the data tool

Media Releases

- 1 release NY18001
- Announcement of the results of the 18/19 data collection with snapshot of national statistics

Webinar

- 1 webinars NY17008
- outlining the results of the 18/19 collection and demonstrating the benchmarking tool featuring Jan Paul van Moort of ACIL Allen Consulting.

Conference Presentation

- 1 concurrent conference presentation at the 2020 National Industry Conference under NY17008
- outlining the results of the 18/19 collection and demonstrating the benchmarking tool featuring Jan Paul van Moort of ACIL Allen Consulting and Daniel Watson of Down to Earth Research.

Nursery Papers

- 1 paper NY18001
- focusing on the results of the 18/19 collection and demonstrating the benchmarking tool; and translating the results of the research into industry commentary.

¹ NY18001 is a project managed by Cox Inall Communications. Activities delivered under this project are passed through an established approvals process between Nursery & Garden Industry Australia/ Greenlife Industry Australia and Hort Innovation.

Facts at a glance

- 1 page factsheet NY18001
- Snapshot of 18/19 collected aimed at general audience (media, broader hort sector)

Podcast

- 1 interview NY18001
- Interview on the 18/19 key findings, survey process and benchmarking tool

Association Liaison

- Ongoing NY17008
- Regular liaison with industry associations on status of the project and survey collection periods. Encouragement for promotion.

The outputs for this project are detailed in Appendix A below.

Evaluation

The results of the engagement campaign will be measured through the following means and the outputs detailed in the final report:

- Social media and digital asset engagement: being the number of Likes, Comments, Shares, Views
- Nursery Papers: print distribution, social responses, website downloads
- Blog Posts: unique views, clicks on post, click on links, post downloads
- Case Study: clicks on post, click on links, post downloads, time online
- Media Releases: number of stories published (print and online).
- Webinar: attendance
- Conference: attendance at the session.
- Podcast: listening statistics

Reporting

All communication activities being conducted under NY18001 will be reported with that project.

NY17008 will report on the following:

- Social Media	5 LinkedIn posts
- Blog posts	2 blog posts
- Conference presentation	1 presentation.
- Webinars	1 webinar

Communication activities will be extended across both projects and so a cross over may be seen in reporting of results. For example, NY17008 will host and promote the webinar. NY18001 will also promote them. Each project promotes through different channels and so this is seen as a benefit.

APPENDIX A – Communication Outputs (NY17008) for Nursery Industry Statistics – 2018-2019 Collection

Content Type	Project	Purpose	Target Audience	Date	Channels
Blog 1	NY17008	Re-introduce the NY17008 Nursery Data Tool and encourage requests from Hort Innovation.	Growers and industry stakeholders	Aug 2019	NGIA website, GIA News social media (Facebook and Twitter, LinkedIn)
Blog 1	NY18001	Announcement of imminent commencement of data survey- greenlife collection.	Growers and industry stakeholders, Government	Sep 19	Promote article via Your Levy @ Work e-newsletter and through NGIA social media, send email to industry associations.
Case Study 1 (Written & Digital)	NY18001	Digital – TBA (Could be early 2020) Written – TBA (2019)	Growers	TBA TBA	Promote article via Your Levy @ Work e-newsletter and through NGIA social media
Blog 2	NY18001	Overview blog that announces greenlife collection survey is underway. Encourage greater participation from businesses.	Growers	Oct 19	State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (promoted post on Facebook)
Blog 2	NY17008	Overview blog that announces greenlife collection survey is underway.	Growers	Oct 19	NGIA website, GIA News social media (Facebook and Twitter, LinkedIn)
Blog 3	NY18001	Progress blog that provides update/advises survey end date for the collection	Growers	Nov 19	State NGIS, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter),
Blurb	NY18001	Surveys concluded, thank you for participation, benchmarking tool is due for release (TBC)	Growers and industry stakeholders	Nov 19	Your Levy @ Work e-newsletter.
Blog 4	NY18001 NY17008	Promotion of conference session	Growers and industry stakeholders	Nov 19	State NGIS, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter),
Infographic	NY17008	Development of an infographic on nursery industry data including trends and data validation.	Growers and industry stakeholders	Feb 20	NGIA website, GIA News State NGIS, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter, LinkedIn)
Facts at a glance	NY18001	Development of general, industry snapshot on 18/19 data collection	General audience	Feb-Mar 20	
Media Release	NY18001	Announcement of the results of the 18/19 data collection with snapshot of national statistics	Growers and industry stakeholders Retailers & Landscapers	Feb-Mar 20	Your Levy @ Work, Your Levy @ Work E-Newsletter, Social Media
Webinar	NY17008 & NY18001	Online workshop outlining the results of the 18/19 collection and demonstrating use of the benchmarking tool, featuring ACIL Allen Consulting.	Growers	Feb-Mar 20	NGIA website, GIA News State NGIS, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter, LinkedIn)
Conference Presentation	NY17008 & NY18001	Presentation by AAC and DTER outlining the results of the 18/19 collection and demonstrating use of the benchmarking tool.	Growers and industry stakeholders	Feb-Mar 20	NGIA website, GIA News State NGIS, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter, LinkedIn)
Podcast	NY18001	Interview on 18/19 data collection and benchmarking tool	Growers and industry stakeholders		Sound Cloud, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media

APPENDIX A – Communication Outputs (NY17008) for Nursery Industry Statistics – 2018-2019 Collection

Nursery Paper	NY18001	Four-page insert providing snapshot of 17/18 collection and demonstrating the benchmarking tool. Also translating the results into usable commentary.	Growers and industry stakeholders Retailers & Landscapers	April/May 20	Hort Journal, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter)

Appendix E

Communications & Engagement Plan
(2019/2020)

19/20 Engagement Plan

NY17008 Nursery Industry Statistics

Introduction

NY17008 Nursery Industry Statistics is a three-year project collecting nursery industry statistics which follows on from the success of NY16004. This is the final year of collection under this project.

The first two years of the project have delivered successful nursery industry statistics collections with increasing grower participation across the two years in an indication that the communications and engagement plan for the project continues to be successful.

Currently in its third year and final year, the project continues to seek timely, accurate and regular data on the Australian nursery and garden industry to inform industry decision making, resource prioritisation, investment evaluation, strategic planning activities, market trends and tracking industry performance over time.

The third year of the project will again complete a random sample survey of nursery production businesses. All data collected will be collated and structured to provide a benchmarking tool for industry.

A major component of the project is to continue to educate, inform and engage industry on the benefits of data to both to their businesses through the benchmarking tool and for the nursery and garden community.

This engagement plan outlines communication and engagement the objectives and activities for the 19/20 collection.

Objectives

The industry communication objectives of this project are:

1. To maintain an industry participation rate in the collection over 300 or over.
2. To achieve 100 completed survey in each supply sector of landscape and retail.
3. To continue to educate and inform the greenlife industry of the business benefits of industry data and as well as communicate COVID-19 drivers for participation.
4. To encourage adoption of NY17008 project outputs including benchmarking data and market commentary developed out of the project.

Audience

Primary Audience 1 (greenlife collection): Data contributors being greenlife producers

Primary Audience 2 (supply chain collection): Landscapers and retailers in QLD, NSW and VIC.

Secondary Audience: Data End Users being nursery and garden industry businesses, Horticulture Innovation Australia, Plant Health Australia, Government Departments (inc DAFF, ABS, ABARES) , External Analysts.

Project Communication Activities

Project communication activities will be conducted under two different projects being:

1. NY17008 Nursery Industry Data 17/18-19/20
2. NY18001 Australian Nursery Industry Communications Program.¹

To address all three communications objectives the following activities are proposed to be achieved by June 2021.

Social Media

- 23 posts across Facebook, Twitter and LinkedIn:
 - o 18 posts NY18001 (9 Facebook, 9 Twitter),
 - o 5 posts NY17008

Social media assets

- 2 social media place holders (NY17008) attention grabbing stats featured as images for use on LinkedIn, Twitter and Facebook.

Blog posts

- 4 blog posts NY18001, 2 blog posts NY17008
- Dependent on the source of project extension, blog posts will be shared on GIA website, NNN e-newsletter and Your Levy @ Work website and e-newsletter during the project.

Case Study – Written

- 1 written, NY18001 Grower insights re using the benchmarking tool
- Focuses on businesses who both contributed to the 19/20 collection and utilised the data tool

Media Releases

- 1 release NY18001
- Announcement of the results of the 19/20 data collection with snapshot of national statistics

Webinar

- 1 webinars NY17008
- outlining the results of the 19/20 collection and demonstrating the benchmarking tool featuring Jan Paul van Moort of ACIL Allen Consulting.

Nursery Paper

- 1 paper NY18001
- focusing on the results of the 18/19 collection and demonstrating the benchmarking tool; and translating the results of the research into industry commentary.

Facts at a glance (targeted to secondary audience - data users)

- 1 page factsheet NY18001
- Snapshot of 18/19 collected aimed at general audience (government, media, broader hort sector)

¹ NY18001 is a project managed by Cox Inall Communications. Activities delivered under this project are passed through an established approvals process between Greenlife Industry Australia and Hort Innovation.

Podcast

- 1 interview NY18001
- Interview on the 18/19 key findings, survey process and benchmarking tool

Industry Market Report (Targeted to levy payers)

- NY17008
- A designed short report accompanying the benchmarking tool providing market relevant information
- Copy prepared by XXX

Association Liaison

- Ongoing NY17008
- Regular liaison with industry associations on status of the project and survey collection periods. Encouragement for promotion.

The outputs for this project are detailed in Appendix A below.

Evaluation

The results of the engagement campaign will be measured through the following means and the outputs detailed in the final report:

- Social media and digital asset engagement: being the number of Likes, Comments, Shares, Views
- Nursery Papers: print distribution, social responses, website downloads
- Blog Posts: unique views, clicks on post, click on links, post downloads
- Case Study: clicks on post, click on links, post downloads, time online
- Media Releases: number of stories published (print and online).
- Webinar: attendance
- Conference: attendance at the session.
- Podcast: listening statistics

Reporting

All communication activities being conducted under NY18001 will be reported with that project.

NY17008 will report on the following:

- Social Media	5 LinkedIn posts
- Blog posts	2 blog posts
- Conference presentation	1 presentation.
- Webinars	1 webinar

Communication activities will be extended across both projects and so a cross over may be seen in reporting of results. For example, NY17008 will host and promote the webinar. NY18001 will also promote them. Each project promotes through different channels and so this is seen as a benefit.

APPENDIX A – Communication Outputs (NY17008) for Nursery Industry Statistics – 2018-2019 Collection

Content Type	Project	Purpose	Target Audience	Date	Channels
Case Study 1 (Written & Digital)	NY18001	Scheduled for release September 2020 featuring Kris Grundy Townsville Plant Wholesalers	Growers	Sept 20	Promote article via Your Levy @ Work e-newsletter and through GIA social media
Blog 1	NY18001	Announcement of imminent commencement of data survey- greenlife collection.	Growers and industry stakeholders, Government	Sept 20	Promote article via Your Levy @ Work e-newsletter and through GIA social media, send email to industry associations.
Blog 2	NY18001	Overview blog that announces greenlife collection survey is underway. Encourage greater participation from businesses. Note covid angle could be included.	Growers	Early Oct 20	State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (promoted post on Facebook)
Blog 1	NY17008	Overview blog that announces greenlife collection survey is underway- encourage participation highlight new features. Note covid angle could be included.	Growers & Landscapers & Retail	Nov 20	GIA website, GIA News social media (Facebook and Twitter, LinkedIn)
Social Blurb	NY18001	Surveys concluded, thank you for participation, benchmarking tool is due for release (TBC)	Growers and industry stakeholders	Nov 20	Your Levy @ Work e-newsletter.
Infographic	NY17008	Development of an infographic on nursery industry data including trends and data validation.	Growers and industry stakeholders	Feb 21	GIA website, GIA News State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter, LinkedIn)
Facts at a glance	NY18001	Development of general, industry snapshot on 19/20 data collection	General audience	Feb-Mar 21	
Media Release	NY18001	Announcement of the results of the 19/20 data collection with snapshot of national statistics	Growers and industry stakeholders Retailers & Landscapers	Feb-Mar 21	Your Levy @ Work, Your Levy @ Work E-Newsletter, Social Media
Nursery Paper	NY18001	Four-page insert providing snapshot of 19/20 collection and demonstrating the benchmarking tool. Also translating the results into usable commentary.	Growers and industry stakeholders Retailers & Landscapers	April/May 21	Hort Journal, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter)
Blog 3 Blog 2	NY18001 NY17008	Webinar promotion – Output overview/Webinar promotion	Growers and industry stakeholders	May 21	State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter),
Webinar	NY17008 & NY18001	Online workshop outlining the results of the 19/20 collection and demonstrating use of the benchmarking tool, and market analysis featuring ACIL Allen Consulting.	Growers	May 21	GIA website, GIA News State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter, LinkedIn)
Podcast	NY18001	Interview on 19/20 data collection, benchmarking tool and market analysis	Growers and industry stakeholders	TBA	Sound Cloud, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media
Blog 4	NY18001	Webinar highlights and links	Growers	June 21	State NGIs, Your Levy @ Work Website, Your Levy @ Work e-newsletter, social media (Facebook and Twitter),

Commented [KK2]: To be confirmed

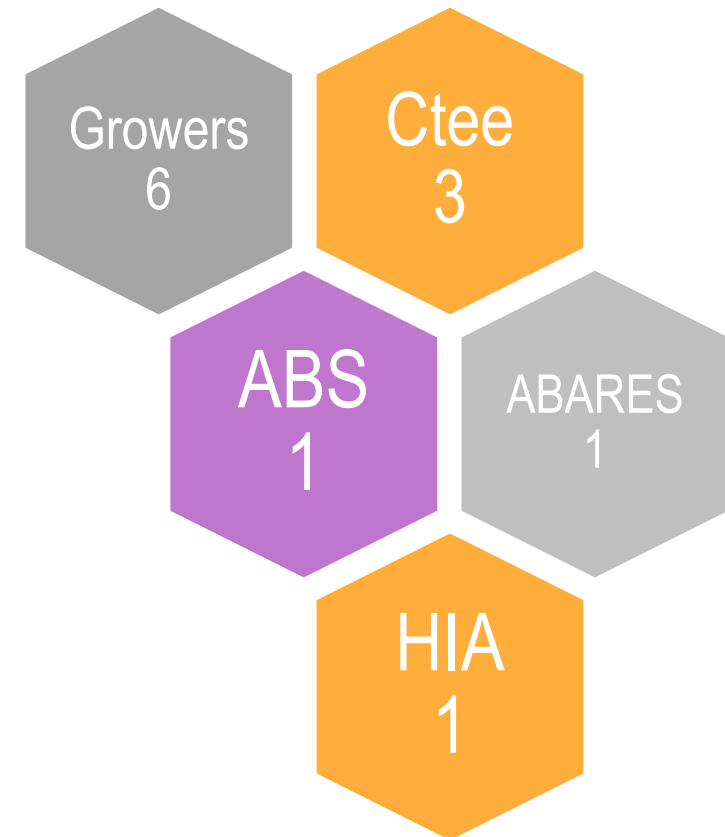
Commented [KK3]: To be confirmed

Appendix F

Consultation and feedback report
prepared by ACIL Allen (2018)

USER FEEDBACK

- 12 interviews
- Focus on tool but also interested in industry stats
- Questions
 - Usefulness
 - Useability
 - Improvements



Person 1

ABARES' Horticultural Analyst is interested if it is possible to get a more detailed breakdown regarding the **share of business sales to end market channel by business size**. For example do smaller business (<\$500K) supply into the same markets as large businesses (>\$2M). I think that this data was reported in the data tool when the user updated the size of their business in the end report. Do you have this data on hand that goes into this additional detail? If so it would be appreciated if you could send it through. The results in the final report do not currently report to this level of detail.

Person 2

My main feedback and happy to just email is that it is a good base tool but to **break the product segments** and the key types that fall under this in more detail would be better and improve the usability of the results.

Person 3

I think the tool is a step in the right direction. But like all things needs to be evolved and modified after its first release. My suggestions are:

Break Down of **Nurseries** needs to include: \$2m to \$4m \$4m to \$6m \$6m Plus

Add more **Product** Categories: Tree and Shrub Advanced Plants

Also given Bunnings is the most dominant channel for retail. Rather than I assume include them in "Sales as Retail". Ideally a break down of your current "Retail" to include:

– Retail – **Independent Garden Centres / Florists** Retail – **Big Box / Chain Stores**

Your **percentiles are also off ...**

- For example in all your results the 25% percentiles account for bugger all.
- But your 75% percentile is overly dominant.
- To my understanding this means you have to spread your \$ break down further.
- As well as maybe go to 20%/40%/Median/60%/80% so the break down is more informative.

-Obviously a **larger sample size** is paramount for accurate data. So what is the strategy to get more input for sources.

- -Need to make the next one for 2017/18 obviously.

Also what was the **total survey sample size??** Total respondents? Helps me to understand how accurate these figures where.

People do not share information because they believe it can be used against them by others and leak into the hands of competitors.

- As such **do not ask for Names/Business names and anything that can be sourced** back to them.
- You have to convince them that they are (and will be) **disadvantaged by contributing**.

The second point is that they need to **understand that the industry needs benchmarking**.

- Explain why it will help them. Given them **example** that is we get more people involved then we can give you more detail in areas like ...

Use the **state boards** to help. Use **state trade days** particularly in VIC and NSW if they make up the majority. Or I guess in QLD would have a lot so there trade day to explain.

Appendix H

Consultation and feedback report
prepared by ACIL Allen (2020)

PRESENTATION TO:

NY17008 PROJECT REFERENCE GROUP

AUGUST 2020

NURSERY INDUSTRY BENCHMARK TOOL



FEEDBACK AND FUTURE

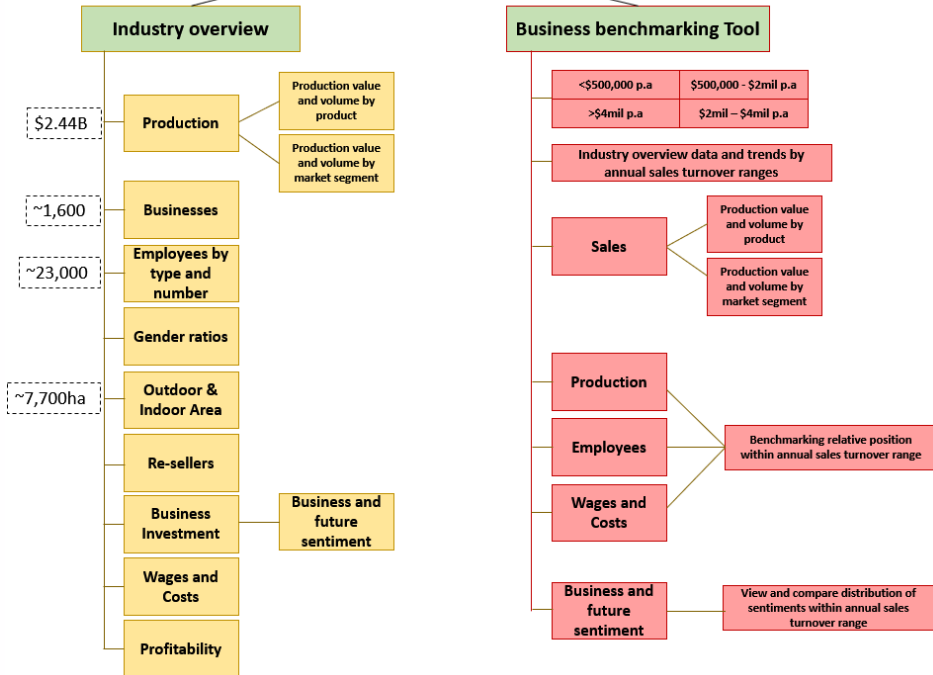
ACHIEVEMENTS AGAINST OBJECTIVES

What we have achieved

- ▲▲ Key baseline data for the Industry *(which is one of Hort's objectives for the project)*
- ▲▲ Trust
- ▲▲ People are positive about this data sharing
- ▲▲ Seeing this representative information painting the industry in good light is very positive
- ▲▲ Feasible in future to collaborate data with other providers such as ABS, ABARES and even other private companies; Cohga spatial software consultants, agnov8 agTech providers, NGIA regional managers *(one of Hort's objectives for the project)*

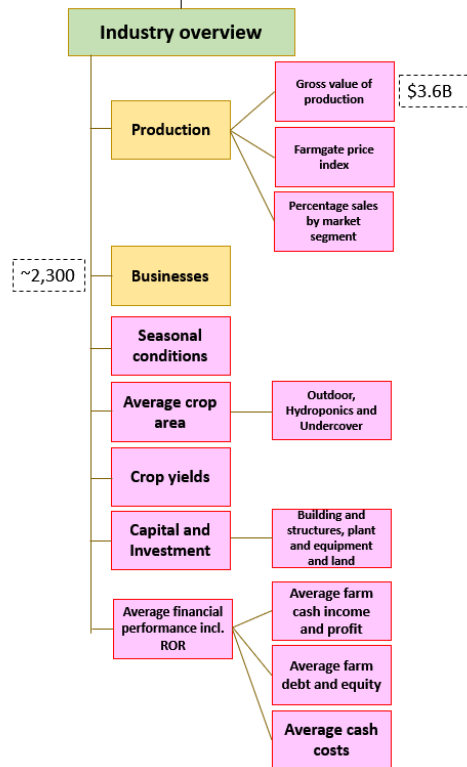
COMPARISON TO OTHER INDUSTRY BENCHMARKS

Nursery and Gardens Survey data

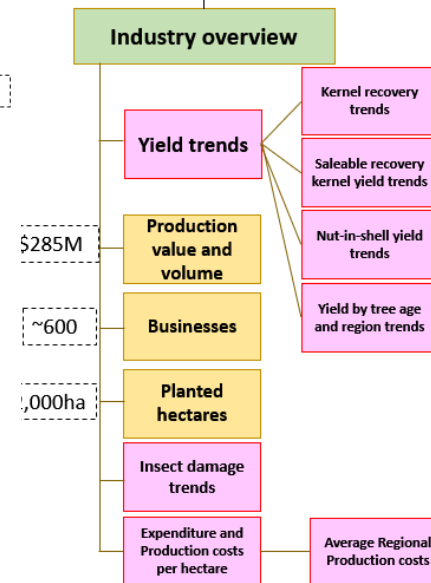


Different data compared to Nursery and Gardens

Vegetable Industry ABARES data



Macadamia Industry data



Vegetables

ABARES

Different financial performance metrics

Macadamia

Easier to benchmark because same product type

Sizeable focus on yields

Sources: Hort Innovation - Project NY17008 Nursery Industry Statistics & Research
Hort Innovation and ABARES - Australian vegetable growing farms An economic survey, 2015-16 and 2016-17
Hort Innovation - Final Report: Benchmarking the macadamia industry 2015-2018

WE ARE NEVER GOING TO GET DATA PERFECTION AND COMPLETENESS

PART 1 OF 2

They want it to answer their specific, respective questions such as

- ▲▲ I sub-contract for this job or that job –
 - ▲▲ What are the benchmarks for that?
- ▲▲ I sell in staggered amounts with progress payments over time –
 - ▲▲ How do I benchmark for that?
- ▲▲ I sell my product quickly and direct –
 - ▲▲ I want to benchmark against this only
- ▲▲ State by state differences are important –
 - ▲▲ Where's the benchmark for that?
- ▲▲ What generation are the farmers; when and where might they sell off,
 - ▲▲ What about this benchmark?
- ▲▲ My business is too large for these segments –
 - ▲▲ How do I benchmark for that?
- ▲▲ My business is in the largest sales range but we are not very large
 - ▲▲ How to interpret these benchmarks?
- ▲▲ Propagation results are huge, no surprise but that's not what I am in and
 - ▲▲ I want to just see me and others like for like,
- ▲▲ **Give me an instant, automated recommendation based on my inputs or offer to hire out an advisor/consultant**

● Data for my individual situation

WE ARE NEVER GOING TO GET DATA PERFECTION AND COMPLETENESS

PART 2 OF 2



▲▲ Further breakdown of product types	▲▲ Value-add over supply chain
▲▲ Pot size categories	▲▲ Demand drivers
▲▲ Further breakdown of market segments	▲▲ Distribution channels
▲▲ Further breakdown of sales turnover ranges	▲▲ Marketing channels
▲▲ Further breakdown of percentiles	▲▲ Transportation and storage
▲▲ Further breakdown of labour costs	▲▲ Regulatory burden and compliance costs
▲▲ Further breakdown of production and operating costs	▲▲ Impediments to growth
▲▲ Breakdown by geography	▲▲ Staff turnover,
▲▲ Chemical application costs	▲▲ Training expenses
▲▲ Biological control costs	▲▲ Wastage/Shrinkage costs
▲▲ Number of Workplace health and safety accidents in the last year, severity and nature	▲▲ Wastage/Shrinkage quantity
▲▲ Production process management	▲▲ Net Profit over Sales
▲▲ Business cycles	▲▲ Average sales price per unit

● More detailed Industry data

FINDINGS – SUMMARY (1 OF 2)

Most commonly talked about data metric



Labour cost

Most commonly talked about issue



Definitions

Most commonly talked about definitional issue



Operating cost

What this can tell us



Desire for a common language and understanding



You say a term and I know what it means. There is a glossary in the Tool but this points to a broader use of common terms in industry relating to a more general understanding of business metrics



Use of the Tool is in the state of mind: cost-focused; functionality, utilitarian, etc



Potentially analogous to the state of mind when looking up figures on an online mortgage calculator or cost comparison site

FINDINGS – SUMMARY (2 OF 2)

Are growers using the tool to inform business decisions and practise change? (*one of Hort's objectives for the project*)

This (*to the right*) is good feedback but what they're not saying tells me more

Plus the data abundance – deficiency issue

See clear opportunity to shift focus

More narrative

Take stock of the data over time now, observe trends and year on year variance, rather than on an annual basis

Perennials category: could be re-named Ornamental, Trees and Shrubs

Reason for drop in propagation: not picked up well by Users so is an opportunity to show more trends in the data presented in the Tool

The Tool is:

'interesting'

'useful'

'positive'

'to grow we need to become more efficient'... this establishes a 'base level'

'Comparing the business to industry peers helps to prioritise and focus improvement efforts and see what is more efficient or most worthwhile'

'This information can replace the 'heuristics or rules of thumb' that is being used in some businesses

WHAT IS REALLY HELPFUL TO GROWERS – AND WHAT COULD THEY GET FROM US THAT THEY CAN'T SOURCE FOR THEMSELVES? (1 OF 2)

Initial thinking



WHAT IS REALLY HELPFUL TO GROWERS – AND WHAT COULD THEY GET FROM US THAT THEY CAN'T SOURCE FOR THEMSELVES? (2 OF 2)

The arrow around the boxes signifies that growers will be just fine in making business decisions if they don't hear about or are not interested in the information the Tool offers. They are resourceful and do things the way that best suits them. So, we should aim to **meet** them along this process

Recent thinking



2 PRODUCTS: TL;DR OR SCHOLAR

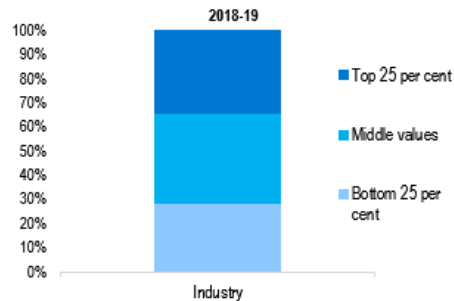
TL;DR: SIMPLE

Example

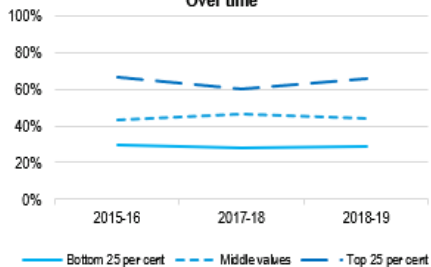
< \$500k



Wage cost as a per cent of Revenue



Over time

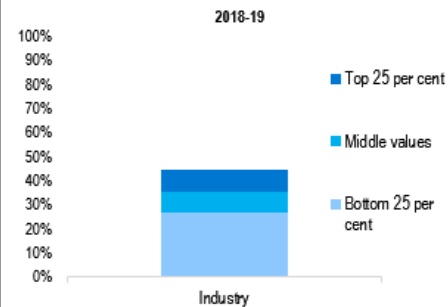


How much do you sell in \$ per year?

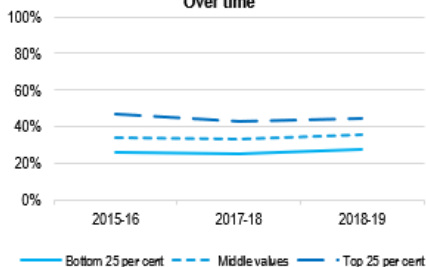
\$500k to \$2mil



Wage cost as a per cent of Revenue



Over time



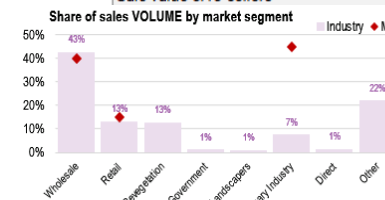
SCHOLAR: DETAILED

Example

Value of production (\$mil)	\$623
Businesses	561
Years of operation (average)	29
Outdoor Area (ha)	1,525
Indoor Area (ha)	421
Estimated turnover per ha	\$319,874
Breakdown of 'big box' retailers	
% of business that sell to 'big box' 2018-19 (2017-18 in brackets)*	36%(28%)
Median number of employees	10
Median revenue per employee	\$102,058
How are these businesses performing compared to the industry median in terms of revenue per employee?	-2%
Investment	
Infrastructure (median)	\$50,000
Technology (median)	\$15,000
Infrastructure (total)	\$23,452,816
Technology (total)	\$15,013,344
Re-sellers	
Re-sellers	28%
Median re-sale mark up	90%
Purchasing value of re-sellers	\$40,682,269
Volume of re-sale	26,447,113
Sale value of re-sellers	\$80,177,691

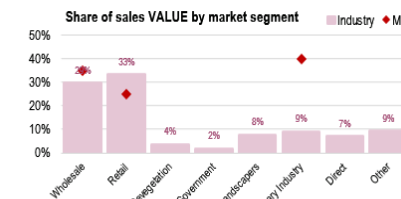
Employees (FTE)	5,612
Employees (Total)	6,283
Qualified Horticulturalists	1,132
% of businesses where women make up <u>less</u> than 50% of workforce	55%

Summary of sentiment	
State of business	Expanding
Intention over 5 years	Grow
Future of Industry	Fairly positive
Expected profit next year	Same
Profitable in 2017-18	86%
Think they will profitable next year	88%



For business within this annual turnover range, the chart to the left shows the proportion of product volumes sold into the different market segments. How do you compare to the broader industry pattern? Do you get most of your revenue where a lot of other producers do too? Or, where few do? How does your volume and value proportion by market segment compare? Which market segments could you earn a higher price for?

For business within this annual turnover range, the chart to the left shows the proportion of product volumes sold into the different market segments. How do you compare to the broader industry pattern? Do you get most of your revenue where a lot of other producers are selling? Or, where few do? Is there any market segments you could break into or feel could be sold more? What potential is there in other market segments?



Appendix I

Nursery Industry Statistics Report
(Greenlife) (2017/2018)

Nursery Industry Statistics 2017-18 to 2019-20 (NY17008)

Data capture project report 2017-18 December 2018



DTER report authors:

Daniel Watson
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Disclaimer

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Data and insights provided in this report are based on information provided by survey respondents and subsequent assumptions made. Readers should note there is a margin for error on all data provided and the report authors cannot guarantee the accuracy of information provided or assumptions made.

Acknowledgements

NGIA, DTER and AAC would like to thank all survey respondents for providing data and information for this study. We appreciate the time and effort taken to provide a considerable amount of data and information.

Summary

Background

Collecting accurate nursery and garden industry statistics has proven challenging in the past due to the industry's diversity and lack of engagement with data collection methodologies. As a result, existing data was perceived as underrepresenting the industry's worth and of limited value for decision making. Consequently, in 2017, the Nursery & Garden Industry Statistics project NY16004 was commissioned to address data gaps for the industry. The project successfully collected production, sales channel, employment and sentiment data for the 2015-16 year from a random, representative sample of production nurseries.

The NY17008 project aims to build upon NY16004 and provide accurate nursery industry data for the 2017-18, 2018-19 and 2019-20 financial years. The project focuses on production nursery sales, employment and sentiment data as well as validating 2017-18 data by conducting a separate survey capturing the value of purchases from production nurseries by independent retail nurseries and landscapers.

Methodology

To ensure data is comparable longitudinally, NY17008 largely follows NY16004's Computer Assisted Telephone Interviewing (CATI) data collection methodology and assumptions, detailed fully in section 1 of this report.

Similar difficulties to those experienced in the 2017 survey arose, namely respondents rescheduling their interview times on numerous occasions or not being available at the interview appointment they originally set. Despite this, minor alterations in appointment setting, the implementation of a more effective communication campaign and overall learnings from the NY16004 project resulted in a total of 292 production businesses participating in the 2017-18 survey, a significantly higher number than for the NY16004 project when 221 businesses responded. It will be important to repeat the measures implemented this year for future surveys to ensure maximum participation, but it is likely similar challenges will recur due to the volume of data required and time required for respondents to extract it.

Additionally, respondents received a full questionnaire prior to interviewing, ensuring awareness of the exact data required to complete the survey, rather than the summary of information required provided in NY16004. Consequently, considerably less missing data or 'empty cells' resulted and it is likely the data provided for 2017-18 captured in this year's survey is more accurate than the 2015-16 data collected through NY16004.

Survey results

Only 23% of respondents said they participated in the previous survey, including 37% of large businesses (turning over greater than \$2 million). As a result, a considerable number of different greenlife businesses selling differing products to a variety of clients are included in this year's sample. The headline results for the 2017-18 collection are comparable to the 2015-16 results collected through NY16004, suggesting that the project's methodology and random sampling provides reasonably robust data. There is however, some metrics where evidence of variation and/or 'bounce' exists, but these will become clear when additional years' data is collected.

Industry profile

Call analysis of the greenlife nursery database suggests that approximately 126 nurseries have left the industry since the survey last ran (May 2017), resulting in an estimated 1,651 production nurseries currently operating nationally.

It appears many of those exiting the industry are micro businesses (turning over less than \$500k), as the proportion of this segment interviewed has decreased significantly from 57% in 2017 to 43% in 2018.

It is possible there has been some business growth in the tail end of the industry, with a number of micro businesses now achieving higher turnover and moving into the next bracket.

In line with 2015-16 financial year results (2017 survey), businesses with turnover greater than \$2 million represent 21% of the industry but account for 72% (74% in 2015-16) of total national turnover.

Number and value of plants sold

An estimated 1.9 billion plants are sold by greenlife production businesses at a total value of approximately \$3.1 billion (between \$2.9 and \$3.2 billion when sampling error is accounted for). Approximately half these plants are sold to other production businesses (valued at approximately \$0.7 billion), resulting in sales to retail, landscape, local government, revegetation and forestry organisations, directly to consumers and primary industry equating to an estimated \$2.4 billion (between \$2.27 and \$2.56 billion when accounting for sampling error), an increase of approximately 5% since the 2015-16 financial year.

Sales to 'big box' retailers

Among greenlife businesses selling into the retail channel, 47% sell to 'big box' retailers, including 79% of businesses turning over greater than \$2 million.

In total, sales to 'big box' retailers represent 51% of respondent sales to the retail sector or approximately \$629 million.

Employment

Results for December 2018 suggest greenlife businesses employ between 25,000 and 23,000 people, considerably lower than in May 2017 (27,000 or 25,000 to 28,500 when sampling error is accounted for). Rather than a significant decrease in employee numbers, the result is likely influenced by respondents providing more accurate staff numbers by category (in 2017 2,488 staff were in 'other' category, compared to 249 in 2018).

In line with 2017 results however, approximately half these people work full time and half are employed in businesses turning over greater than \$2 million. Similarly, the Full Time Equivalent (FTE) is on par with 2017 (approximately 19,000).

Qualified horticulturalists are employed by 80% of greenlife wholesale businesses and make up approximately 17% of the total workforce.

Wages paid

The 'average' greenlife business estimates that 38% of the income derived from sales is spent on wages (slightly but not statistically significantly higher than 2017, 32%) and survey results suggest the average wage (including paid to owners) is approximately \$59,974, slightly higher than NY16004 results (\$56,021).

Confidence

Confidence in the industry's future remains widespread and the proportion of respondents saying they are fairly to very positive about the future has increased 5 points to 81% (was 76% in the 2017 survey). Belief that product demand will continue remains the key driver of positivity.

As a result, respondents are considerably more likely to anticipate business growth over the next 5 years than remain steady. However there remains a small proportion (5%) planning to exit the industry and in line with the 2017 survey results, this latter segment are more likely to be micro businesses than larger operators.

Business investment

In line with 2015-16 results (2017 survey), almost 6 in 10 businesses invested in either infrastructure (54%), new technology (33%) and/or education and training (36%). However these proportions are considerably higher among those with turnover exceeding \$2 million and/or currently expanding or planning to grow their business.

Independent retail and landscape supply chain data validation

Results for purchases from production nurseries in NSW, Vic and Qld are validated in the Independent Retail and Landscape report (under separate cover) – an encouraging finding confirming the validity of survey methodology and data extrapolation techniques implemented.

Conclusions and recommendations

The process:

- ❖ The majority of the data collected in NY17008 is comparable to NY16004, indicating the methodology is sound for this project. The considerable variation in a small number of metrics is notable, but longitudinal studies typically evolve and improve over time, providing more robust datasets and increasing confidence in results through trend data and this is likely to be the case for the Nursery Industry Statistics project.
- ❖ Additionally, the Supply Chain Survey indicates similar values of plants purchased through wholesale nurseries by landscapers and independent retailers as that sold by greenlife businesses. Positive industry sentiment, current expansion and anticipated future business growth is mirrored across each area of the industry.
- ❖ It will be important to continue to communicate how the 2015-16 and 2017-18 data is used and the benefits of future participation and more accurate record keeping. Highlighting how well confidentiality of information is upheld and the availability and value of the benchmarking tool is also important.
- ❖ In all surveys (besides an accurate census) there is a margin for error in the results and given small sample sizes and considerable variation among business types within the industry, it remains impossible to accurately analyse results at state level. Additionally, where a segment of the total sample is analysed, for example plant categories sold, the smaller sample sizes mean substantial variation in data between years is likely. For this reason as well as ease for producers completing the survey, collection of a simplified data set could be considered.

The results:

- ❖ Survey results suggest wholesale nursery sales value increased approximately 5% between 2015-16 and 2017-18 and is now worth an estimated \$2.4 billion dollars (or between \$2.27 and \$2.56 billion sampling error is accounted for). Despite extensive diversity of surveyed production businesses, random sampling and the survey's methodology has produced an overall industry value comparable to NY16004. This result, alongside the supply chain validation, confirms the nursery and garden industry contributes substantially more to the Australian economy and employment market than data collected prior to NY16004 suggested.
- ❖ Survey results also suggest that sales to 'big box' retailers may indeed be worth the anecdotally suspected 50% to 60% of all retail sales.
- ❖ A number of survey results suggests further growth in the industry is likely, including widespread confidence in the future of the industry, the large number of business anticipating growth over the next 5 years, as well as indications through the supply chain validation that independent retailers and landscapers anticipate greenlife purchases to be greater this financial year than last.

Main report

1. Background and methodology

Background

Historically, the nursery and garden industry's diversity and lack of engagement with data collection methodologies has meant accurate and credible statistical data has not been collected. In 2017, the Nursery & Garden Industry Statistics project NY16004 implemented a different methodology and largely overcame these barriers to determine a volume and production value of the industry as well as sales channel, employment and sentiment data.

Consequently, Hort Innovation commissioned NY17008, a three year program to build upon the methodology and outputs from NY16004 and provide accurate, timely and longitudinal nursery industry data to inform industry decision making, resource prioritisation, investment evaluation and strategic planning activities.

The project focuses on greenlife production businesses, however in 2018, to validate the production nursery sales data collected, a separate survey of retail and landscape businesses who purchase from wholesale nurseries was conducted.

Data collection methodology

NY17008 builds on NY16004's quantitative CATI data collection methodology, undertaking the following stages to allow for appropriate monitoring of progress and to maximise participation:

- Stage 1: Initial contact with nursery greenlife producers to confirm contact details, make an appointment to complete the survey as well as obtaining email address. As a result of feedback from NY16004, a greater amount of time was allowed between initial contact and call back appointments to ensure producers had sufficient time to gather data.
- Stage 2: DTER sent a confidentiality statement (appendix 1), snapshot of the industry from 2017 results and a full copy of the questionnaire (appendix 2) so the respondent fully understood the information required and was able to accurately compile necessary data. In comparison, only a summary of information required was provided to 2017 participants.
- Stage 3: Computer Assisted Telephone Interviews (CATI) with greenlife production businesses to collect the statistical data required.

The contact database developed in NY16004 and updated by NGIA and DTER in 2018, was fed into the CATI program set up by Market Metrics (accredited market research call centre used for the project based in Victoria). All interviewers used for the project have considerable experience working on DTER's projects in the agriculture sector and almost all worked on the NY16004 project. Prior to commencement, interviewers were thoroughly briefed on all aspects of the project by Daniel Watson, a senior consultant at DTER.

Initial contact, appointment setting and interviewing commenced on the 30th October 2018 and concluded on December 14th 2018.

Consistent with NY16004 results, completing interviews proved challenging due to many respondents rescheduling appointments times, often on multiple occasions. Additionally, some respondents initially agreeing to provide information refused to do so following receipt of the list of data requirements.

In total, 292 interviews were completed, significantly greater than the 221 achieved in 2017, providing a sampling margin for error (at the 95% confidence level) of $\pm 4.8\%$ on national results. The following list details outcomes from calls made:

- 266 interviews completed via telephone
- 26 interviews submitted via email
- 285 refusals at initial call (including 49 due to the time of year)
- 129 refusals after receiving the questionnaire and Confidentiality Statement
- An additional 126 businesses confirmed as non NGI, resulting in the size of the industry reducing from 1,777 in May 2017 to 1,651 in November to December 2018

Reasons given for non-participation in the project included the following:

- Complexity of information required
- Sensitive nature of the data required
- Busy time of year (pre-Christmas)
- Data required not captured (including overall sales value in some cases)

Data weighting and number of greenlife businesses

Due to the comprehensive number of calls made for the project, it was possible to make assumptions on the number of businesses in each State and subsequently determine weighting figures that could be applied to the interviews achieved so that statistics provided represent the entire greenlife production industry, not only the sub-set of organisations participating in the study.

number of greenlife businesses estimated	national	nsw/act	vic	qld	sa	wa	tas	nt
Early 2017	1,777	573	432	448	103	139	63	19
Late 2018	1,651	519	426	412	101	127	53	13

Confidence limits

sample base	margin for error
292	±4.8%
200	±6.0%
100	±8.7%
50	±12.5%
30	±16.3%

Handling of 'empty cells'/missing data

The data set includes a number of 'empty cells' or missing data due to respondents saying 'don't know' or unable to extract data according to the categories and supply chain options asked for.

In comparison to NY16004, the proportion of missing data across most variables is considerably lower. For example, in NY16004, 20% of respondents were unable to provide the value sold to other production nurseries compared to only 8% this year. Additionally, the greater number of total interviews completed resulted in fewer empty cells overall.

As a result, where there was a sufficient number of responses and a reasonably small proportion of missing data missing data was excluded.

However, where the total number of responses or the amount of missing data was insufficient to extrapolate data to represent the industry, NY16004 the technique for dealing with missing data in NY16004 was utilised as detailed in the next paragraph of this report.

NY16004 identified a considerable range in businesses sizes and a large variation in business data (for example selling \$1 pots through to \$1,000 pots) therefore it was deemed inappropriate to apply an overall average to each empty cell. Consequently, where respondents were able to provide the number of plants sold or the value of plants sold, the missing category was applied data based on information available (plant sales value to category, employee numbers, FTE, total turnover etc). For example, an organisation with 20 employees provided the total value of 'perennial, trees & shrubs' and 'bedding and potted colour' sold to retailers and landscapers but could not provide data on the number of plants sold in each category. In this scenario, averages for similar organisations (similar value sold to the category, size of organisation, same clients and products) was used to populate empty cells.

For the 2017-18 survey, the possibility of using Multiple Imputation by Chained Equations and K-Nearest Neighbour techniques was explored to determine whether it provided guidance on the imputed data. It was found however, that the large variation in data collected meant the technique used in 2017 was preferred and potentially more reliable.

While it is acknowledged that a margin for error exists in the data provided in this report due to sampling, assumptions made and data provided by respondents, the report authors are reasonably confident it provides useful insights into the size of the greenlife production industry as well as attitudinal data. DTER acknowledges this method may be a contributing factor in discrepancies between data collected for this project and historical data collection efforts.

2. Definitions and report notes

Due to very small sample sizes in South Australia, Western Australia, Tasmania, Northern Territory and Australian Capital Territory, it was decided to present data nationally and by business size rather than by State and Territory.

While the Australian Bureau of Statistics (ABS) splits greenlife production businesses into 3 classes (\$200,000 turnover or less; \$200,001 to \$2 million and more than \$2 million), DTER believes a 'micro' business is more appropriately defined as having turnover of \$500,000 or less. Consequently, business sizes included in this report vary from those presented by ABS in the past.

The majority of data collected for the project is based on the 2017-18 financial year, comparisons made to 2017 data (NY16004), will be based on the 2015-16 financial year for most variables.

Throughout this report, reference is made to various segments, defined in the table below:

Enterprise phase	Steady, happy	Those whose business is in status due to being at an acceptable stage
	Steady, unable	Those whose business is in status due to being unable to expand
	Expansion	Those whose business is in an expansion phase
	Winding down	Those contracting size of enterprise
business size (turnover)	Small	Turnover less than \$500,000
	Medium	Turnover between \$500,000 and \$2,000,000
	Large	Turnover greater than \$2,000,000
	Don't know (don't know t/o)	Unable to provide turnover value
Perception of industry	Positive	Those feeling very or fairly positive about the future of the nursery industry
	Negative	Those feeling very or fairly negative about the future of the nursery industry
	Neutral	Those feeling neutral or unsure about the future of the nursery industry

3. Sample demographics

demographic metric	% of sample (base: all respondents)				
	turnover				
	national (n=292)	≤ \$500k (n=116)	\$500,001 to \$2 million (n=96)	> \$2 million (n=56)	don't know t/o (n=24)*
Age:					
18 to 39 years	12%	4%	↓ 8%	32%	18%
40 to 59 years	51%	46%	59%	46%	53%
60 and older	37%	50%	33%	22%	29%
Average age	55	59	55	48	53
Average years in industry:	26	26	27	26	25
Average years business operated	30	25	30	43	25
Gender:					
Male	73%	72%	70%	79%	74%
Female	27%	28%	30%	21%	26%
Respondent role:					
Owner or joint owner of the business	78%	86%	81%	58%	72%
Manager	21%	14%	17%	40%	28%
Admin/Accounts	1%	0%	2%	2%	0%
Completed NY16004 (2017) survey	23%	21%	22%	37%	5%

↓ significant decrease since 2017

*Caution, sub sample smaller than N=30.

Key findings

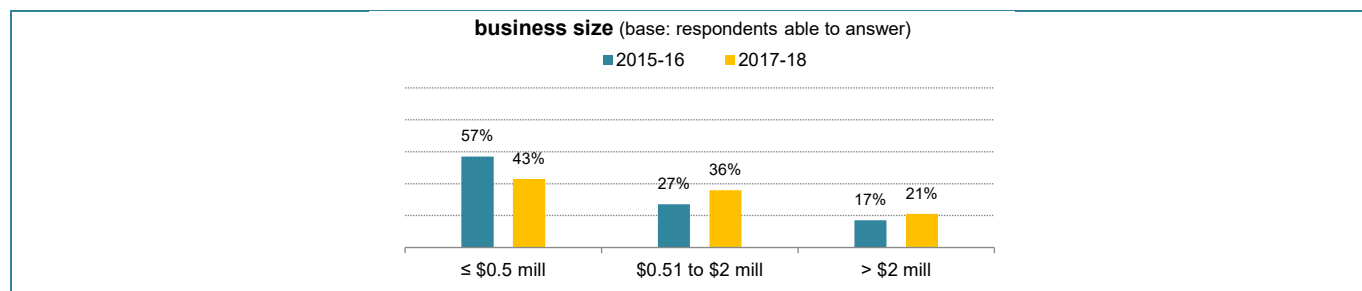
- ◆ Nationally, there is no significant variation in demographics compared to the 2017 NGI statistics survey (NY16004). The 'average' survey respondent is male, 55 years of age, with 26 years of experience in the industry.
- ◆ Only 23% of respondents recall participating in the 2017 survey, including 37% of those turning over more than \$2 million.

Implications

Results show that despite variation in businesses participating in NY16004 and the 2018 survey, random sampling has resulted in similar demographics among participating respondents in both years.

It is interesting to note that this year's survey includes a number of larger businesses in each State that did not participate in NY16004. Following NY16004, there was some concern that all the larger businesses may have participated and consequently, data extrapolation gave an unrealistic view of the industry's size and value. This year's sampling shows the data extrapolation method implemented by DTER was appropriate and consequently is suitable to use again this year.

4. Organisation size (based on survey sample)



Key findings

- ◆ Compared to the 2017 survey, considerably fewer businesses included in the sample turned over less than \$500k and a slightly but not statistically significant amount report a turnover over between \$500k and \$2 million and greater than \$2 million.
- ◆ Respondent businesses turnover in 2018 again varied considerably from \$3,500 to \$24 million.

Implications

The 2017 survey highlighted a number of small businesses were planning to exit the industry and 2018 results may confirm this has occurred in some cases. It is also likely some businesses turning over less than \$500k in the 2015-16 financial year have grown their businesses and now fall into higher turnover categories.

business turnover	% mentioning (base: respondents able to provide data)	
	2017 survey (2015-2016 year)	2018 survey (2017-2018 year)
\$500,000 or less	57%	↓ 43%
\$500,001 to \$1,000,000	15%	19%
\$1,000,001 to \$1,500,000	6%	9%
\$1,500,001 to \$2,000,000	5%	8%
\$2,000,001 to \$2,500,000	1%	4%
\$2,500,001 to \$3,000,000	3%	1%
\$3,000,001 to \$3,500,000	1%	3%
\$3,500,001 to \$4,000,000	1%	3%
\$4,000,001 to \$4,500,000	0%	↑ 3%
\$4,500,001 to \$5,000,000	2%	2%
More than \$5,000,000	8%	5%

↑ significant increase since 2015-16; ↓ significant decrease since 2015-16

5. Production area

Question asked:

Q7. What is the total farm area in each State used for nursery production – and I would like you to give me outdoor area first and then undercover including greenhouses, cold frames, cloth houses and lath houses?

Key findings

- ◆ Compared to 2015-16 results, the total amount of outdoor land used by greenlife businesses in 2017-18 is slightly greater (6,616 hectares, was 6,229), however the indoor space remains on par (1,287, was 1,237).
- ◆ The 'average' business has 4.0 hectares of outdoor land, 0.8 hectares indoor and turns over approximately \$392,000 per hectare (slightly higher than 2015-16, \$385,000)

Implications

The amount of land used by greenlife businesses as well as the turnover per hectare is similar to that in 2017.

production area (hectares) (estimated)	% mentioning (base: respondents able to provide data)				
	turnover				
	national	≤ \$500k	\$500,001 to \$2 million	> \$2 million ⁺	don't know t/o*
Outdoor area (approximate)					
Average ha per farm	4.0	1.2	3.9	9.7	3.4
Median ha per farm	1.0	0.6	1.6	4.2	1.0
Estimated total outdoor area (ha)	6,616	762	2,172	3,236	446
Indoor area (approximate)					
% of farms with indoor area	82%	86%	76%	87%	76%
Average ha per farm with indoor area	0.8	0.4	0.7	1.9	0.5
Median ha per farm with indoor area	0.3	0.1	0.4	1.1	0.2
Estimated total indoor area (ha)	1,287	233	366	626	62
Estimated turnover per hectare (outdoor + indoor)	\$391,731	\$163,774	\$273,343	\$579,788	unavailable

*Caution sub sample smaller than N=30

⁺Significance testing not conducted, small sample size in 2017

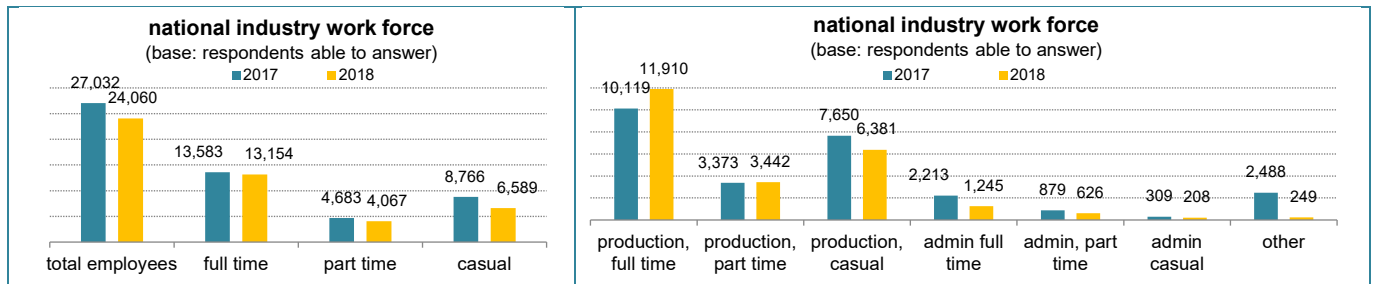
6. Industry workforce

6.1 Number of people employed and roles

Questions asked:

Q3. How many people including yourself are employed in the business in each of the States it operates in for the following categories?

Q5. And what would be the full time equivalent for each of the following in the States you operate in?



Key findings

- ◆ Compared to 2017 results, there is a significant 11% variation in the total number of greenlife employees. Rather than representing a significant decrease in employment numbers, this result is possibly due to respondents better able to provide actual numbers rather than 'guesstimates' due to receiving the full questionnaire prior to interviewing rather than a summary of information required. This is evidenced by a significant change in the proportion of 'other' staff.
- ◆ Often longitudinal studies evolve since their inception providing more reliable datasets, resulting in greater confidence in results for 2017-18 and it being fair to say the industry employs between approximately 25,000 and 23,000 people. Notably, in line with 2017 results, businesses with turnover exceeding \$2 million employ more than half the workforce.
- ◆ In future surveys, it will be important to explore whether staff numbers have increased decreased or stayed the same in respondents' businesses (questionnaire length permitting).
- ◆ Notably, despite the decrease in employment numbers it is notable that the FTE (full time equivalent) in 2018 remains on par with 2017 (19,485 was 18,943), which may be due to a greater number of hours worked, but is likely influenced by a more clear definition of FTE provided in the questionnaire.

Implications

It can be estimated production nurseries employ between 25,000 and 23,000 people, but it will be important to validate these results using the same methodology in the next survey for the 2018-19 year. Additionally, asking respondents whether staff numbers have increased, decreased or remained the same over the past 12 months could further validate changes in employment numbers.

total people employed by production greenlife nurseries 2018 (estimated)	% mentioning (base: all respondents able to answer)				
	turnover				
	national (n=292)	≤ \$500k (n=116)	\$500,001 to \$2 million (n=96)	> \$2 million (n=58) ⁺	don't know t/o*
Nursery production – full time	↑ 11,910	1,108	2,735	7,141	925
Nursery production – part time	3,442	617	628	2,016	645
Nursery production – casual	↓ 6,381	638	1,663	3,435	23
Admin – full time	↓ 1,245	74	260	888	40
Admin – part time	↓ 626	166	179	242	7
Admin – casual	↓ 208	28	84	89	0
Other	↓ 249	37	151	61	925
Total nursery production	21,732	2,363	5,026	12,592	1,751
Total admin	↓ 2,079	268	523	1,218	70
Total people employed	↓ 24,060	2,667	5,700	13,872	1,821
Full time equivalent	19,485	1,956	4,280	11,656	1,592

⁺Significance testing not conducted, small sample size in 2017

↓ significant decrease since 2017; ↑ significant increase since 2017

6.2 Number of qualified horticulturalists

Question asked:

Q4. How many of your nursery staff are qualified horticulturalists (including owners)? *New question this year*



Key findings

- ◆ Qualified horticulturalists are employed in 80% of greenlife businesses, varying from 70% of small enterprises to 91% of those turning over greater than \$2 million.
- ◆ Similarly, an arguably high proportion of businesses in each State employ qualified horticulturalists, but the variation from 75% in QLD to 88% in VIC is significant.
- ◆ Survey results suggest qualified horticulturalists make up 17% of the production nursery workforce.

Implications

Qualified horticulturalists are involved in the majority of greenlife wholesale businesses.

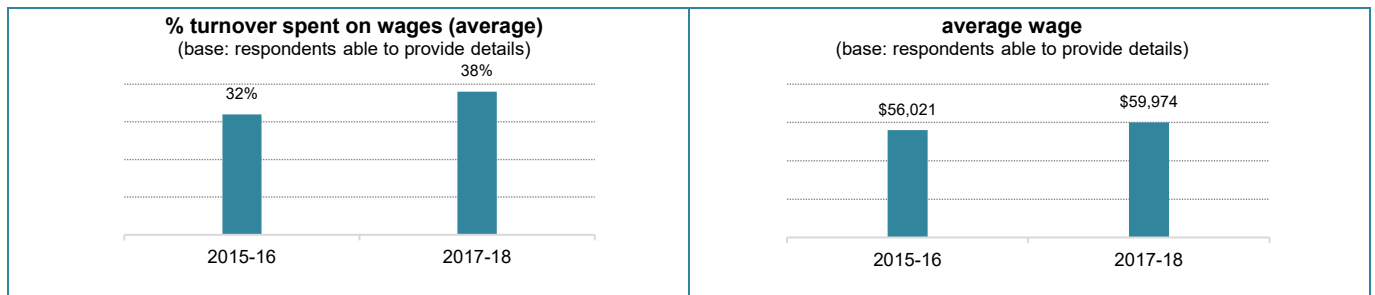
qualified horticulturalist employment (estimated)	% mentioning (base: all respondents able to answer)				
	turnover				don't know t/o*
	national (n=290)	≤ \$500k (n=114)	\$500,001-\$2 mill (n=96)	> \$2 million (n=57)+	(n=24)
Businesses with at least 1 qualified horticulturalist	80%	70%	82%	91%	100%
Total number of qualified horticulturalists in industry	4,185	888	1,183	1,792	321
% of workforce qualified horticulturalists	17%	33%	21%	13%	18%

*Significance testing not conducted, small sample size in 2017

6.3 Wages paid

Question asked:

Q6. What was the total cost of wages for the business in the 2017-18 financial year, including your own?



Key findings

- ◆ The cost of wages in 2017-18 represents an estimated 38% of turnover for the 'average' greenlife business, slightly but not statistically significantly higher than in 2015-16 (32%). Notably, results suggest businesses turning over less than \$500k spent considerably less on wages than in 2015-16, but this may also be due in part to challenges answering the question in 2015-16, as well as variation due to owners wages included in this result.
- ◆ Similarly, the average wage in 2017-18 (\$59,974) is in line with NY16004 results (\$56,021), but among those turning over less than \$500k the result is considerably lower.

Implications

Based on national results, survey results appear to confirm the accuracy of NY1004 findings.

The significant variation in wages among small businesses may be influenced by the amount owners 'pay' themselves or variable profit levels or may be a result of sampling or extrapolation margin for error and this metric should be monitored in future surveys.

cost of wages in 2017-18 (estimated)	% mentioning (base: all respondents able to answer) turnover				
	national (n=290)	≤ \$500k (n=114)	\$500,001-\$2 mill (n=96)	> \$2 million (n=57) ⁺	don't know t/o* (n=24)
Approximate total cost of wages	\$1,188,146,025	↓ \$61,748,002	\$258,690,933	\$794,866,803	\$72,840,287
Average wage based on FTE (including owners)	\$59,974	↓ \$31,040	\$59,424	\$67,089	\$42,677
% of turnover spent on wages (average, including owners)	38%	↓ 38%	37%	35%	Unable to be calculated

↓ significant decrease since 2015-16 *Caution, sub sample smaller than N=30.

⁺Significance testing not conducted, small sample size in 2017

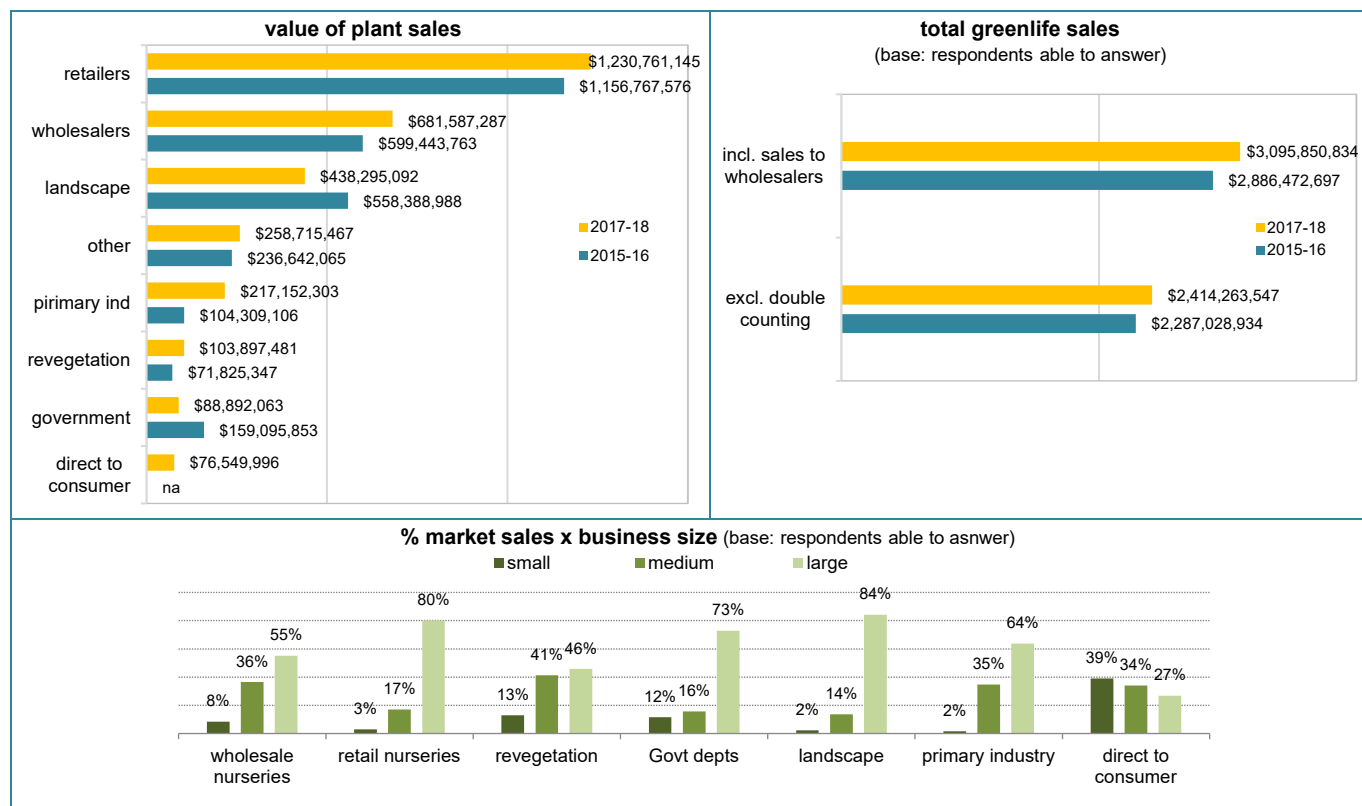
7. Number and value of plants sold

7.1 Number and value of plants sold to clients by category

Questions asked:

Q13. In the 2017-18 financial year, approximately how many plants did your business sell to ...?

Q14. And what was the total value excluding GST in the plants sold to (from Q13) in 2017-18 ...



Key findings

- ◆ Data provided by respondents suggests that approximately 1.9 billion plants were sold in 2017-18 at a total value of \$3.1 billion.
- ◆ When sales to other production businesses are excluded (ensuring no double counting), approximately \$2.4 billion worth of plants was sold, approximately 5% greater than in 2015-16 (\$2.3 billion).
- ◆ Readers should note 'other' mentions include totals for those people unable to provide breakdowns by category.
- ◆ Across some categories there is considerable variation from the 2015-16 financial year (2017 survey), which may be due to product demand changes over the past 2 years, but is more likely to be due to differences in the type of businesses included in this year's random sample.

Implications

Taking into account margin for error, it can be estimated wholesale greenlife industry sales increased approximately 5% over the past 2 years and is now worth between \$2.27 billion and \$2.56 billion.

The consistency of overall value in survey results comparing 2015-16 and 2017-18 data suggests two important things. Firstly, a random sample survey is a reliable method to collect data on the number and value of plants sold by wholesale greenlife producers regardless of the respondent sample mix of categories of plants sold, size of pots, etc. Secondly, there has been a light increase in the value of the wholesale greenlife production industry over the past two years.

client category for plants sold (estimated)	2017 survey (2015-2016 year)	2018 survey (2017-2018 year)
Production nurseries:		
% selling to sector	54%	67%
Total number of plants	853,021,438	982,863,082
Total value of plants	\$599,443,763	\$681,587,287
Retail nurseries:		
% selling to sector	59%	58%
Total number of plants	311,713,369	336,287,553
Total value of plants	\$1,156,767,576	\$1,230,761,145
Revegetation, including forestry: ⁺		
% selling to sector	16%	20%
Total number of plants	162,437,384	237,651,613
Total value of plants	\$71,825,347	\$103,897,481
Local, State and Federal Government Depts:		
% selling to sector	31%	27%
Total number of plants	101,848,063	25,829,914
Total value of plants	\$159,095,853	\$88,892,063
Landscapers, developers and builders:		
% selling to sector	40%	41%
Total number of plants	81,712,300	77,079,073
Total value of plants	\$558,388,988	\$438,295,092
Primary industry: ⁺		
% selling	14%	14%
Total number of plants	58,910,805	211,360,779
Total value of plants	\$104,309,106	\$217,152,303
Direct to consumer:		
% selling	Na	32%
Total number of plants	Na	15,324,678
Total value of plants	Na	\$76,549,996
Other (includes those unable to breakdown by category) : ⁺		
% selling to sector	31%	8%
Total number of plants	121,836,980	55,676,676
Total value of plants	\$236,642,065	\$258,715,467
Total plants sold (including those sold to wholesalers):		
Total number of plants	1,617,939,270	1,942,073,368
Total value of plants	\$2,886,472,697	\$3,095,850,834
Total plants sold (excluding double counting):		
Total number of plants	764,917,832	959,210,286
Total value of plants	\$2,287,028,934	\$2,414,263,547

Due to small sample sizes by category, only national data is provided.

NOTE: Data is for the 2017-18 year and not necessarily representative of sales in every year.

significant increase since 2015-16; significant decrease since 2015-16 ⁺Significance testing not conducted, small sample size in 2017

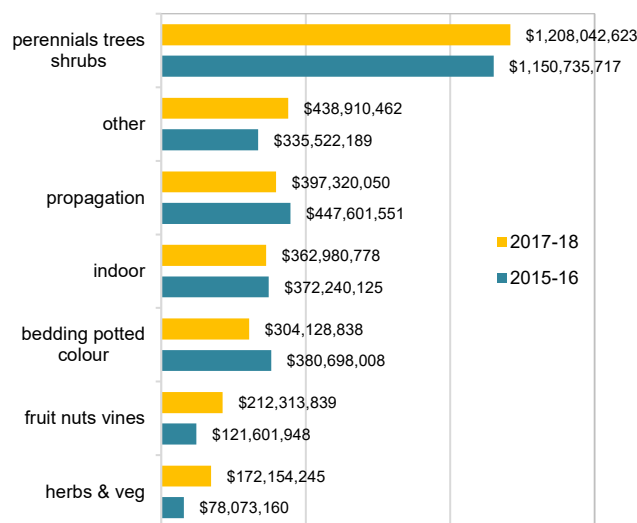
7.2 Number and value of plants sold by plant category

Questions asked:

Q15. During the 2017-18 financial year, approximately how many plants did you sell in the following categories?

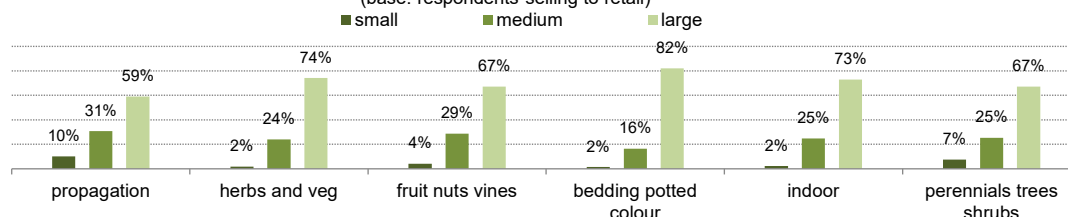
Q16. And what was the total value excluding GST of (from Q15) sold?

value of plant sales by category



% market sales by business size

(base: respondents selling to retail)



Key findings

- Survey results suggest that the NY17008 survey sample includes a significantly higher proportion of businesses that sell perennials, trees and shrubs than the 2015-16 (2017 survey) sample, however the value sold to this category is only slightly greater.
- Notably, there is considerable variation within some categories when compared to 2015-16 results. While product demand may have had some impact, smaller sample sizes within these categories as well as variation in the business types participating in the survey is likely to have had some impact.
- The considerable proportion of plant value within the 'other' category include totals for those people unable to provide breakdowns by category.

Implications

While some variation is evident in the value of sales to different categories, the overall size of industry sales remains in line with 2015-16 (2017 survey) and provides confidence in results from both studies.

client category for plants sold 2017-18 (estimated)	2017 survey (2015-2016 year)	2018 survey (2017-2018 year)
Propagation plants:		
% selling propagation plants	33%	30%
Total number of plants	868,512,751	900,159,210
Total value of plants	\$447,601,551	↓ \$397,320,050
Herbs and vegetables: +		
% selling herbs and vegetables	16%	17%
Total number of plants	175,406,556	360,325,510
Total value of plants	\$78,073,160	\$172,154,245
Fruit trees, nut trees, vines:		
% selling fruit trees, nut trees, vines	20%	18%
Total number of plants	8,992,916	↑ 21,675,327
Total value of plants	\$121,601,948	↑ \$212,313,839
Bedding and potted colour: +		
% selling bedding, potted colour	15%	14%
Total number of plants	161,343,169	95,571,558
Total value of plants	\$380,698,008	\$304,128,838
Indoor plants:		
% selling indoor plants	21%	22%
Total number of plants	37,516,954	↑ 50,176,068
Total value of plants	\$372,240,125	\$362,980,778
Perennials, trees and shrubs:		
% selling perennials, trees, shrubs	56%	↑ 65%
Total number of plants	144,541,833	238,349,676
Total value of plants	\$1,150,735,717	\$1,208,042,623
Other (includes those unable to breakdown by category): +		
% selling other	14%	11%
Total number of plants	221,625,091	275,816,020
Total value of plants	\$335,522,189	\$438,910,462
Total plants sold (including those sold to wholesalers):		
Total number of plants	1,617,939,270	↑ 1,942,073,368
Total value of plants	\$2,886,472,697	↑ \$3,095,850,834
Total plants sold (excluding double counting):		
Total number of plants	764,917,832	↑ 959,210,286
Total value of plants	\$2,287,028,934	↑ \$2,414,263,547

Due to small sample sizes by category, only national data is provided. ↑ significant increase since 2015-16

NOTE: Data is for the 2017-18 year and not necessarily representative of sales in every year.

7.3 Sales to 'big box' retailers

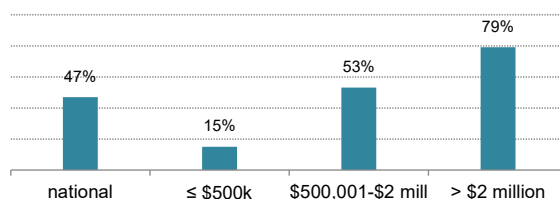
Questions asked:

Q17. In 2017-18, did you sell plants to 'big box' retailers such as Bunnings, Mitre 10, Big W or other large retailers? *New question this year*

Q18. What percentage of your sales to retail nurseries went to these 'big box' retailers? *New question this year*

% selling to 'big box' retailers

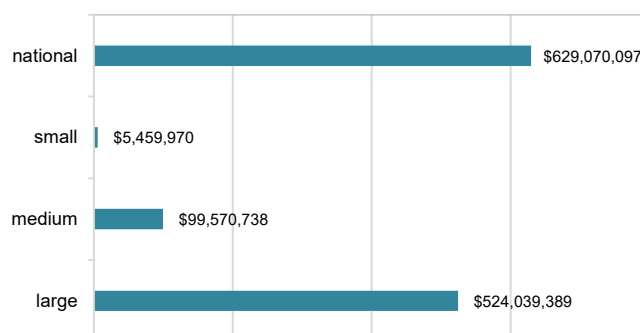
(base: respondents selling to retail)



Key findings

- ◆ Forty seven (47%) of businesses selling to retail sell to 'big box' retailers.
- ◆ Sales to 'big box' retailers represent 51% of the retail market.
- ◆ Although sample sizes mean data is indicative only, this proportion varies from 53% with turnover exceeding \$2 million to 15% of those turning over less than \$500k.

value of plants sold to 'big box' x business size



Implications

In line with expectations, larger businesses are more likely to sell to 'big box' and in total, sales represent 50% to 60% of the retail channel.

plants sold to 'big box' retailers 2017-18 (estimated)	% mentioning (base: all respondents able to answer)				
	national	≤ \$500k*	\$500,001 to \$2 million*	> \$2 million*	don't know t/o*
% selling to 'big box' retailers	47%	15%	53%	79%	Unavailable
% of retail sales to 'big box' retailers	51%	15%	48%	53%	Unavailable
Total value of plants sold	\$629,070,097	\$5,459,970	\$99,570,738	\$524,039,389	Unavailable

NOTE: Data is for the 2017-18 year and not necessarily representative of sales in every year.

*Caution, sub sample smaller than N=30.

7.4 Number and value of plants purchased for immediate resale

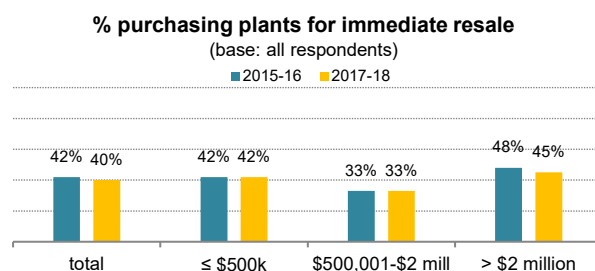
Questions asked:

Q8. During the 2017-18 financial year, did you purchase plants from other greenlife producers or nurseries for immediate resale?

Q9. If yes: What was the total value of the plants purchased from other greenlife producers or nurseries?

Q10. How many plants in total did you purchase?

Q11. What was the total value of these plants when sold?



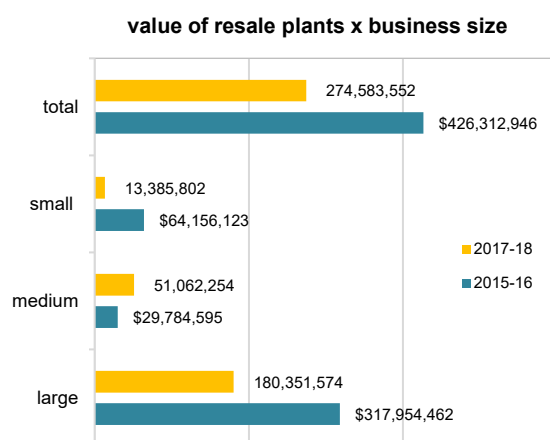
Key findings

- ◆ In 2017-18, 40% of businesses purchased plants from other nurseries for immediate resale (no real change from 2015-16, 42%).
- ◆ However, the number of plants purchased has decreased a significant 8.7% and the total value of purchases fell by 23%.
- ◆ Similarly, the average mark-up when sold has reduced a significant 45 points.
- ◆ As a result, approximately \$275 million worth of plants purchased through other nurseries was immediately resold, considerably lower than in 2015-16 (\$426 million).

Implications

Survey results suggest that the opportunistic nature of purchasing plants for immediate resale may result in a large variation in the value and mark-up of this market.

It is also possible that some of the 2015-16 purchases from smaller wholesalers were as a result of businesses winding down to cease operation. Monitoring these results in future will be important.



plants purchased for immediate resale in 2017-18 (estimated)	% mentioning (base: respondents able to provide data)				
	national	≤ \$500k (small) [†]	\$500k to \$2 mil (medium) [†]	> \$2 million (large) [†]	don't know t/o*
% purchasing plants for immediate resale	40%	42%	33%	45%	46%
Total number of plants purchased	55,534,917	2,189,577	8,333,966	44,640,316	371,057
Total value of plants when purchased	↓ \$160,189,834	\$6,543,489	\$21,571,048	\$115,365,688	\$16,709,608
Total value of plants when sold	↓ \$274,583,552	\$13,385,802	\$51,062,254	\$180,351,574	\$29,783,922
Average % mark-up	↓ 171%	205%	237%	156%	178%

↑ significant increase since 2015-16; ↓ significant decrease since 2015-16 [†]Significance testing not conducted, small sample size in 2017
*Caution, sub sample smaller than N=30.

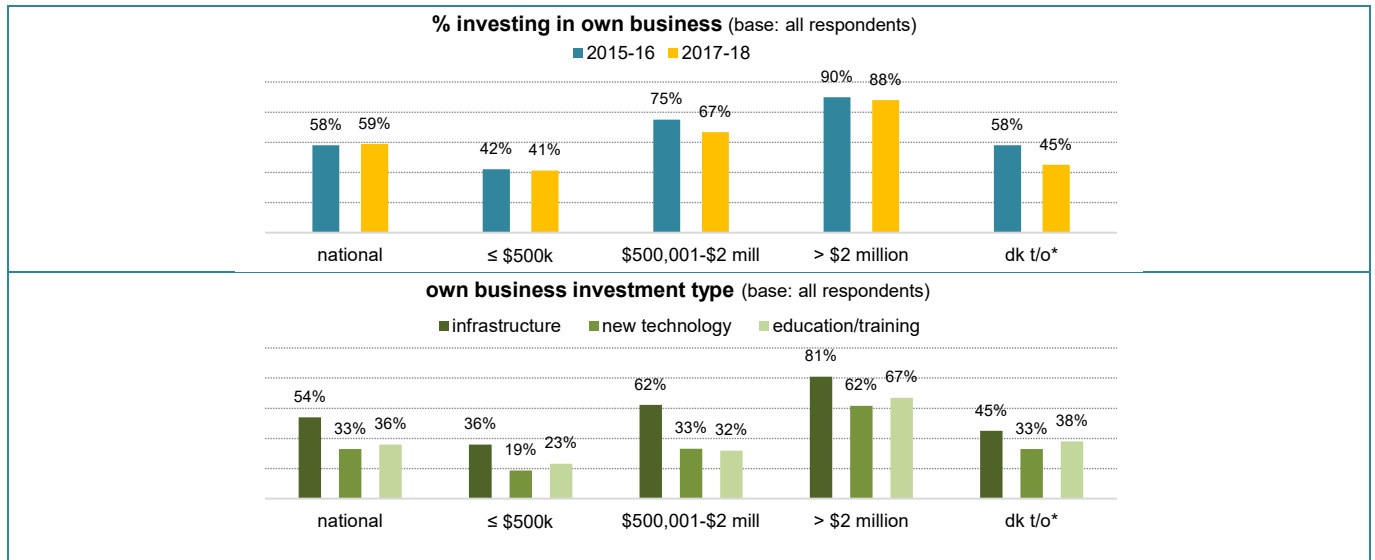
8. Business investment

Question asked:

Q29. During the 2017-18 financial year, did you invest in either infrastructure or new technology or training and education for the business?

Q30. If yes: Approximately how much did you invest in infrastructure?

Q31. If yes: Approximately how much did you invest in new technology?



Key findings

- ◆ In the 2017-18 financial year, business investments were made by more than half of respondents, with 54% investing in infrastructure (up slightly from 48% in 2015-16) and 33% in new technology (was 30% in 2015-16). Additionally, more than one third invested in training and education.
- ◆ On average, investments were valued at approximately \$118,000 on infrastructure and \$58,000 new technology (significantly higher than 2015-16, \$36,066).
- ◆ Notably, investment by businesses turning over greater than \$2 million is significantly more widespread for each category.
- ◆ Similarly, 72% of those planning to grow their business over the next 5 years made business investments, compared to a much lower 50% remaining steady and 20% winding down or selling.

Implications

Industry confidence and a large proportion of businesses expanding has resulted in relatively widespread investment in infrastructure but the proportion investing in new technology and education and training is lower, particularly among smaller businesses. This latter finding is probably due to lower degrees of need, with technology changes likely to occur less frequently than in larger businesses and staff turnover also potentially lower.

business investment	% mentioning (base: all respondents able to answer)				
	turnover				don't know t/o*
	national	≤ \$500k ⁺	\$500,001-\$2 mil ⁺	> \$2 million ⁺	
% making business investment	59%	41%	67%	88%	45%
% turnover invested	4%	6%	5%	3%	unavailable
% investing in infrastructure	54%	36%	62%	81%	45%
Average amount invested in infrastructure	\$102,211	\$33,009	\$88,926	\$201,873	\$59,155
Total invested in infrastructure	↑ \$90,434,264	\$8,187,563	\$31,065,563	\$48,347,310	\$2,833,828
% investing in new technology	33%	19%	33%	62%	33%
Average amount invested in new technology	↑ \$58,324	\$13,896	\$32,083	\$117,401	\$34,338
Total invested in new technology	↑ \$31,456,988	\$1,803,162	\$6,056,803	\$22,635,573	\$961,450
% investing in education and training	36%	23%	32%	67%	38%

↑ significant increase since 2015-16; ↓ significant decrease since 2015-16 *Caution sub sample smaller than N=30.

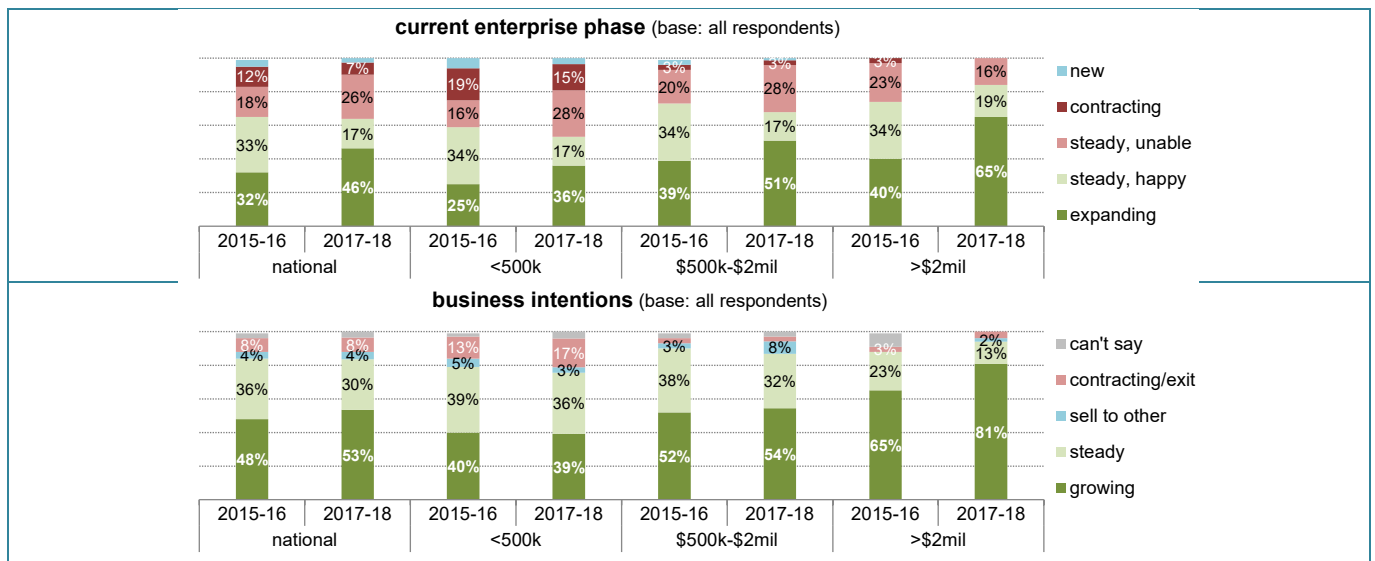
⁺Significance testing not conducted, small sample size in 2017

9. Current business phase and future intentions

Questions asked:

Q22. Which of the following best describes your nursery business over the past few years?

Q23. At this point in time, what is the intention for the business over the next 5 years?



Key findings

- ◆ Compared to 2017, the proportion of businesses expanding has increased significantly (46%, up from 32%) and positively, more than half of all respondents plan to grow their business over the next 5 years, including a substantial 81% of large business.
- ◆ However, in line with other metrics in this report, businesses turning over less than \$500k are considerably less likely to be expanding or intending to do so in the future and this segment also represents the vast majority of those planning to wind down and/or leave the industry.

Implications

Confidence in the industry's future and demand for greenlife products is resulting in growth among a large proportion of businesses, particularly those turning over greater than \$500k.

However the industry can still expect to lose some businesses – mostly those turning over less than \$500k, but it is probably that due to market demand, other businesses in an expansion phase will 'fill the gap', resulting in no overall reduction in plant sales.

current business stage	% mentioning (base: all respondents)				
	national (n=292)	≤ \$500k (n=116)	\$500,001-\$2 mill (n=96)	> \$2 million (n=56) ⁺	don't know t/o (n=24)*
Expanding	46%	36%	51%	65%	33%
Steady, where want it to be	17%	17%	17%	19%	18%
Steady, unable to expand	26%	28%	28%	16%	37%
Contracting/winding down	7%	15%	3%	0%	3%
New business	3%	4%	1%	0%	8%

future intentions for business	% mentioning (base: all respondents)				
	national (n=292)	≤ \$500k (n=116)	\$500,001-\$2 mill (n=96)	> \$2 million (n=56) ⁺	don't know t/o (n=24)*
Growing business	53%	39%	54%	81%	54%
Remaining steady	30%	36%	32%	13%	31%
Contracting/winding down	3%	6%	0%	2%	0%
Sell as business to other person/company	4%	3%	8%	2%	3%
Sell land to developer	2%	3%	2%	2%	0%
Close business	3%	8%	1%	0%	0%
Can't say	4%	4%	3%	0%	12%

▲ significant increase since 2017; ▼ significant decrease since 2017 *Caution sub sample smaller than N=30.

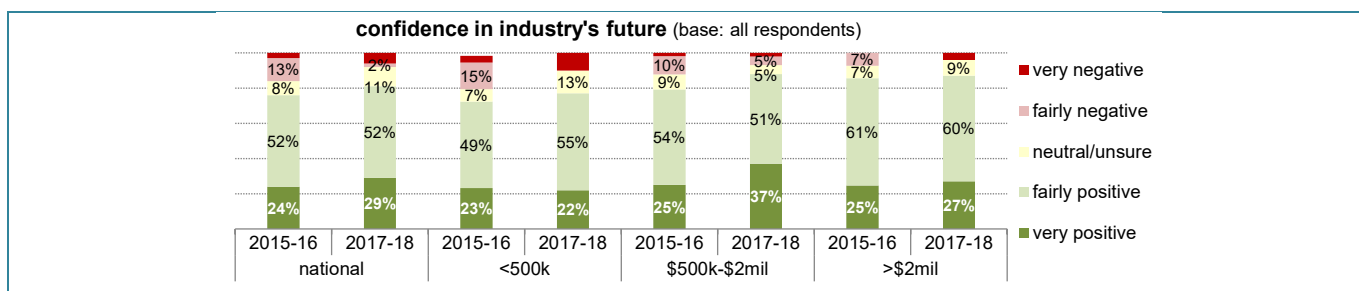
⁺Significance testing not conducted, small sample size in 2017

10. Confidence in industry

Questions asked:

Q24. Overall, how do you feel about the future of the nursery and garden industry? Would you say you feel (read out)

Q25. Why do you say that?



Key findings

- ◆ The proportion of respondents positive about the industry's future has increased a slight (but not statistically significant) 5 points to 81%.
- ◆ Those profitable in 2017-18, expecting a profit this financial year and/or expanding their enterprise are the segments most likely to be confident in the industry's future.
- ◆ Increased confidence is typically driven by more widespread belief that demand for product will continue.

Implications

Confidence in the industry's future remains widespread, typically driven by belief demand for products will continue. It will be important to track this measure in coming years to determine the impact of 202020. .

confidence	national (n=292)	% mentioning (base: all respondents) turnover			
		≤ \$500k (n=116)	\$500,001-\$2 mill (n=96)	> \$2 million (n=56)	don't know t/o (n=24)*
Very positive	29%	22%	37%	27%	36%
Fairly positive	52%	55%	51%	60%	23%
Neutral	10%	11%	5%	9%	23%
Fairly negative	2%	0%	5%	0%	9%
Very negative	6%	10%	2%	4%	4%
Can't say	1%	2%	1%	0%	4%
Total: positive	81%	77%	88%	87%	59%
Total: negative	12%	11%	10%	9%	32%

reasons for level of confidence (main mentions)		% mentioning (base: all respondents) turnover				
		national (n=292)	≤ \$500k (n=116)	\$500,001-\$2 mill (n=96)	> \$2 million (n=56)	don't know t/o (n=24)*
Positive mentions:						
Demand for product	📈 66%	61%	71%	71%	52%	
Opportunities for innovative/niche products	📉 6%	9%	6%	3%	0%	
Increasing opportunities due to industry exits	4%	8%	1%	1%	8%	
Optimistic outlook/enjoyment of farming/business (NFI)	2%	4%	0%	0%	3%	
Good business management	2%	3%	1%	1%	0%	
Negative mentions:						
Decreasing product demand	14%	17%	13%	12%	11%	
Specific mentions re supplying Bunnings	8%	7%	6%	7%	19%	
Number of nurseries closing down	4%	4%	3%	5%	0%	
Input costs	4%	4%	4%	0%	10%	
Low prices received	4%	4%	3%	8%	0%	

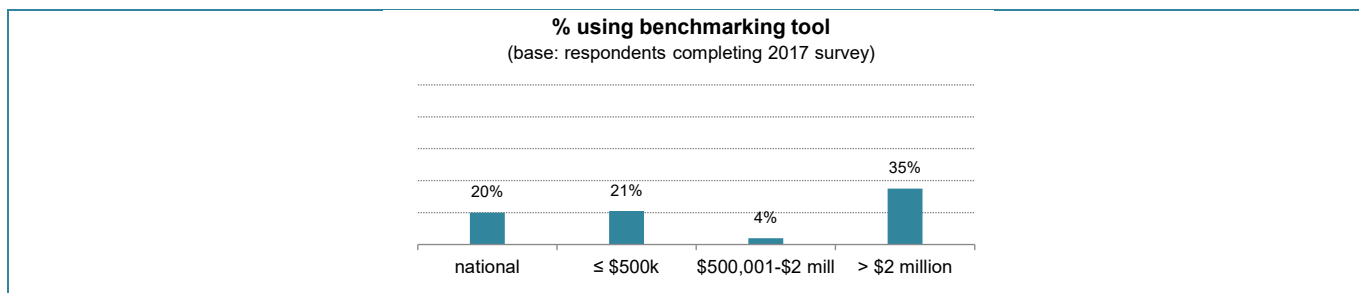
↑ significant increase since 2017; ↓ significant decrease since 2017 *Caution sub sample smaller than N=30.

+Significance testing not conducted, small sample size in 2017

11. Benchmarking tool usage

Questions asked:

Q33. Have you used the excel data benchmarking tool that was sent to those completing the survey? *New question this year*



Key findings

- ◆ Among respondents participating in the 2017 survey, 20% have used the benchmarking tool sent to them after they completed the survey. Despite the benchmarking tool being sent to all respondents who provided an email address, there is a relatively high proportion who say they did not receive it or are unsure if the business received it. This may be due to emails being sent to people in administrative roles who failed to pass the tool to the correct person, or issues with a 'macro enabled' file being quarantined by IT providers.
- ◆ Although sample sizes are too small to draw definitive conclusions, usage appears to have been more widespread among small and larger businesses.

Implications

Positively, in its first year since inception there has been some usage of the benchmarking tool developed by the NY16004 project. It is anticipated that adoption of the tool will increase as awareness and promotion of its value continues.

In future, including additional information to help ensure the benchmarking tool is forwarded to appropriate people within the organisation is recommended.

benchmarking tool usage	% mentioning (base: respondents participating in 2017 survey)				
	turnover				
	national (n=66)	≤ \$500k (n=24) *	\$500,001-\$2 mill (n=20) *	> \$2 million (n=21) *	don't know t/o (n=1) *
Used benchmarking tool	20%	21%	4%	35%	0%
Have not used tool	57%	54%	72%	50%	0%
Have not received the data tool	12%	16%	15%	0%	100%
Unsure if received/used	11%	10%	9%	16%	0%

*Caution sub sample smaller than N=30.

Appendix 1: Confidentiality statement



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30 October 2018

Nursery and Garden Industry Data & Statistics Collection

Confidentiality Statement

Thank you for agreeing to provide data for the Hort Innovation project NY17008 – Nursery Industry Research and Statistics. This project follows on from the 2017 project which for the first time captured figures on the value of greenlife production and will collect information for the 2017-18 financial year.

Data for the project will be collected and stored securely by Market Metrics, an independent, fully accredited data collection company based in Frankston, Victoria. Their web address is <http://www.marketmetrics.com.au> should you wish to read about their services. Data and information collected will only be used for the purposes of this specific project.

In accordance with Australia's strict Privacy Principles, full confidentiality is assured and once information processing has been completed, any identifying data such as your name, company and contact details (including address and postcode) will be removed from your responses to the survey. While interviewing is taking place, data held by Market Metrics will remain identifiable in case there is an anomaly in the data that requires a call back and clarification. Once Market Metrics has completed this process, de-identification will occur.

On completion of all interviewing, Down To Earth Research (DTER) will be provided with a de-identified data set so data can be aggregated and analysed. DTER will then provide an overall industry report to Hort Innovation. No one from the nursery and garden industry, Hort Innovation, industry organisations, government departments, etc. will know who participated in the study nor the information and data they provided.

Should you have any concerns whatsoever, please contact Daniel Watson from DTER (daniel@dter.com.au or 0409 775 553) or Adam Briggs from Hort Innovation (Adam.Briggs@horticulture.com.au or 02 8295 2335).

Thank you again for your assistance. The data collected for the study will be used to provide a tool that your company will be able to use for benchmarking purposes and to better understand the size and nature of the industry. It will also enable Hort Innovation to have more meaningful discussions with government organisations in the future.

Kind regards

Daniel Watson
Research Director
Down To Earth Research

Appendix 2: CATI questionnaire

Q1. Firstly, I need to clarify how many sites your nursery business operates from _____ sites

If more than 1 site, ask Q2, others go to Q3:

Q2. What states and territories are the sites location in? *Multiple possible*

If only 1 site OR more than 1 site, but in the same State, ask:

Q3. How many people including yourself are employed in the business in the following roles?

If more than 1 site in different States, ask:

Q3. How many people including yourself are employed in the business in each of the States it operates in for the following categories? *If unable to answer, obtain contact details of managers in other States who may be able to provide the information required. DP note: we may need a common ident in this situation so we can merge the data. Interviewer note: If person works in 2 roles, make sure you only record them as working in one role. Explain to respondent that we have to be careful not to double count people, so ask them to include people with 2 roles in the role they primarily work in.*

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Full time nursery labouring duties such as plant handling and/or despatch etc.								
Part time nursery labouring duties								
Casual nursery labouring duties								
Full time business administration full time								
Part time business administration part time								
Casual business administration								
Other (specify)								

So just confirming that is a total of (total from Q3) people employed in some capacity by the business?

Q4. How many of your nursery staff are qualified horticulturalists (including owners)?

Q5. And what would be the full time equivalent for each of the following in the States you operate in? *read out*

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Nursery labouring staff								
Business administration staff								
Other								

Q6. (By State if operate in more than one State), what was the total cost of wages for the business in the 2017-18 year, including your own?

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Total wages								

If only 1 site OR more than 1 site, but in the same State, ask:

Q7. What is the total area of the farm used for nursery production – and I would like you to give me outdoor area first and then undercover including greenhouses, cold frames, cloth houses and lath houses?

If more than 1 site in different States, ask:

Q6. What is the total farm area in each State used for nursery production – and I would like you to give me outdoor area first and then undercover including greenhouses, cold frames, cloth houses and lath houses?

DP note: allow for hectares and acres, convert at computer stage

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Outdoor space								
Indoor space								

Q8. During the 2017-18 financial year, did you purchase plants from other greenlife producers or nurseries for immediate resale?

Yes ----- 1 continue
No ----- 2 go to Q11

Q9. What was the total value of the plants purchased from other greenlife producers or nurseries?
\$ _____

Q10. How many plants in total did you purchase?

Q11. What was the total value of these plants when sold?
\$ _____

- Q12. Would you be able to provide accurate information on the number of plants your business sold in the 2017-18 financial year or would you have to give me an estimate?
- Accurate ----- 1
 Estimate ----- 2
 Neither/refused ----- 3
- Q13. (By State if operate in more than one State) In the 2017-18 financial year, approximately how many plants did your business sell to ... *read out. If none, type 0. If the respondent can only provide details of total plants sold, capture that number in 'Only able to provide total sold' box.*
- Q14. And what was the total value excluding GST in the plants sold to (from Q13) in 2016-17 ... *read out options where response is not zero. If none is response for Q13, type 0. If the respondent can only provide details of total plants sold, capture that number in 'Only able to provide total sold' box. DP note: loop directly after each mentioned in Q13.*

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Whole sale nurseries:								
Number of plants								
Value								
Retail nurseries:								
Number of plants								
Value								
Revegetation, including forestry:								
Number of plants								
Value								
Local, State & Federal government departments including water corporations, RTA, schools, etc:								
Number of plants								
Value								
Landscapers, developers and builders:								
Number of plants								
Value								
Primary industry:								
Number of plants								
Value								
Direct to consumer/public:								
Number of plants								
Value								
Other (specify): <i>DP note: allow for more than 1 other</i>								
Number of plants								
Value								
Only able to provide total sold/total value:								
Number of plants								
Value								
TOTAL (computer calculate and confirm with respondent):								
Number of plants								
Value								

- Q15. During the 2017-18 financial year, how many plants did you sell in the following categories? *Record in grid*
 If operating in more than one State:
 During the 2017-18 financial year, how many plants did you sell in the following categories in each State? *Record in grid*
- Q16. And what was the total value of (from Q14) of plants sold? If you don't know exactly, please give us your best estimate. *Record in grid. National response only. DP note: loop each category from Q15 straight after Q15. DP note: include a logic check to ensure total of ALL types sold at Q15 = Q13 for both pot numbers and value*

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Propagation plants (eg, plugs, tubestock, cuttings, tissue culture):								
Number of plants								
Value								
Herbs and vegetables (excluding seeds and bulbs):								
Number of plants								
Value								
Fruit trees, nut trees and vines (excluding seeds and bulbs):								
Number of plants								
Value								
Bedding and potted colour (eg. annuals):								
Number of plants								
Value								
Indoor plants (excluding seeds, bulbs):								
Number of plants								
Value								
Perennials, trees and shrubs:								
Number of plants								
Value								
Other (including seeds, bulbs, water plants, shot seed, etc.): <i>DP note: allow for more than 1 other</i>								
Number of plants								
Value								
TOTAL (computer calculate and confirm with respondent):								
Number of plants								
Value								

If sell to retail (Q13=retail), ask Q17. Others go to Q19

Q17. In 2017-18 did you sell plants to 'big box' retailers such as Bunnings, Mitre 10, Big W or other large retailers?

- Yes ----- 1 continue
No ----- 2 go to Q19

Q18. What percentage of your sales to retail nurseries went to these 'big box' retailers? _____ %

Q19. Do you know what your business's total operating costs were for the 2017-18 financial year, including input costs, wages, cost of goods sold, transport costs, rent etc?

- Yes, can provide an accurate figure ----- 1 continue
Yes, but only a guesstimate ----- 2 continue
No ----- 3 go to Q21

Q20. And what were your total operating costs (or estimated total operating costs if Q16 = 2) for the 2017-18 year?

DP note: If respondent says no in Q19, ask Q21. Others go to Q22

Q21. Approximately what proportion of your business turnover was taken up by operating costs for the 2017-18 financial year? _____ %

Q22. Which of the following best describes your nursery business over the past few years? Has it been ...

- In an expansion phase ----- 1
In a steady phase because it was difficult to expand ----- 2
In a steady phase because it is where it needed to be ----- 3
In a contracting or winding down phase ----- 4
A new business just starting up ----- 5

Q23. At this point in time, what is the intention for the business over the next 5 years? Is the intention ...

- To grow the business ----- 1
Keep the business in a steady phase ----- 2
Contract or wind down the business ----- 3
Sell it as a business to another person or company ----- 4
Sell the land to a developer ----- 5
Wind down and close ----- 6
Do not read out/avoid Can't say ----- 7

Q24. Overall, how do you feel about the future of the nursery and garden industry? Would you say you feel ... (*read out*)

- Very positive ----- 1
Fairly positive ----- 2
Fairly negative ----- 3
Very negative ----- 4
Do not read Neutral ----- 5
Do not read Unsure ----- 6

Q25. Why do you say that? *Probe fully*

.....

Q26. In the 2017-18 financial year, did your nursery business make an operating profit?

- Yes ----- 1
No ----- 2
Don't know ----- 3
Refused ----- 4
Not in business in 2017-18 ----- 5

Q27. And do you expect to make an operating profit in the 2018-19 financial year?

- Yes ----- 1
No ----- 2
Don't know ----- 3
Refused ----- 4

Q28. Compared to the average of the past 5 years, do you expect profit levels for the 2018-19 financial year to be ...

- Considerably higher ----- 1
Slightly higher ----- 2
About the same ----- 3
Slightly lower ----- 4
Considerably lower ----- 5
Avoid Don't know yet ----- 6

Q29. During the 2017-18 financial year did you invest in either infrastructure, new technology or training and education for the business?

- Yes, new infrastructure ----- 1 continue
Yes, new technology ----- 2 go to Q31
Yes, training and education ----- 3 go to Q30
No ----- 4 go to Q32

Q30. Approximately how much did you invest in new infrastructure during 2017-18? _____

Q31. Approximately how much did you invest in new technology for the business during 2017-18? _____

Q32. Did you participate in the 2017 nursery industry statistics survey
Yes ----- 1 continue
No ----- 2 Go to Q34
Can't say/unsure ----- 3 Go to Q34

Q33. Have you used the excel data benchmarking tool that was sent to those completing the survey?
Yes ----- 1
No ----- 2
Haven't received ----- 3
Can't say/unsure ----- 4

I just have a couple of questions about you now.

Q34. May I ask your age please? _____

Q35. How many years have you been involved in the nursery industry? _____

Q36. Are you the ...
Owner or joint owner of the business ----- 1
Manager ----- 2
Other role (specify) ----- 3

Q37. Record gender (do not ask)
Male ----- 1
Female ----- 2

Appendix J

Nursery Industry Statistics Report
(Greenlife) (2018/2019)

Nursery Industry Statistics 2017-18 to 2019-20 (NY17008)

Data capture project report 2018-19 December 2019



DTER report authors:

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Data and insights provided in this report are based on information provided by survey respondents and subsequent assumptions made. Readers should note there is a margin for error on all data provided and the report authors cannot guarantee the accuracy of information provided or assumptions made.

Acknowledgements

NGIA, DTER and AAC would like to thank all survey respondents for providing data and information for this study. We appreciate the time and effort taken to provide a considerable amount of data and information.

Summary

Background

The third nursery industry statistics study and second survey wave under the umbrella Project NY17008 captures 2018-19 financial year nursery industry statistics to inform decision making, resource prioritisation, investment evaluation and strategic planning activities among Greenlife businesses and the broader industry. The data collected will also track important industry trends and inform the development of a Greenlife production business benchmarking tool. Of note, some Report sections have been removed due to data sensitivities.

Methodology

To ensure data is comparable longitudinally, NY17008 largely follows the Computer Assisted Telephone Interviewing (CATI) data collection methodology and assumptions first utilised in the NY16004 Project (conducted in 2017), detailed fully in section 1 of this report.

Minor alterations in appointment setting, the implementation of a more effective communication campaign and overall learnings from both the NY16004 Project and the first wave of NY17008 (conducted in 2018) resulted in a total of 305 production businesses participating in the 2019 survey, up from 292 in 2018 and 221 in 2017.

Survey results

Number and value of plants sold

Survey results suggest production nursery sales have seen modest growth in 2018-19, increasing 1.6% from 2017-18 to approximately \$3.14 billion. When sales to other production businesses are excluded (to ensure no double counting), it can be estimated that the industry provides \$2.44 billion to the economy.

Similarly, the number of plants sold increased from approximately 1.94 billion to an estimated 2.03 billion. Approximately 700 million plants were sold to other production businesses (valued at approximately \$700 million), resulting in 1.34 billion sold to retail, landscape, local government, revegetation, primary industry and directly to consumers in 2018-19.

Consistent with past survey waves, perennials, trees and shrubs remain the category of plants most commonly sold, accounting for approximately 42% of the value of national sales. Compared to previous years, the number of herb and vegetable plants sold has increased, however small sample sizes in past years means that it is likely that 2018-19 data is a more accurate estimate.

Sales to 'big box' retailers

In line with 2017-18 data, 49% of respondent businesses selling into the retail channel sold to 'big box' retailers last financial year. This proportion is significantly higher among businesses turning over in excess of \$2 million (70%) than those turning over less than \$500,000 (22%).

In total, sales to 'big box' retailers represented 53% of the total value of sales to the retail sector (similar to 2017-18 – 51%) or approximately \$661 million, up 5% from 2017-18.

Employment

While 2019 results suggests that nursery production businesses employ slightly fewer people than in 2018 (23,300 and 24,100 respectively), the variation is not statistically significantly different. Therefore, we can be fairly confident that the industry employs between an estimated 22,000 and 24,500 (variation at the 95% confidence interval) people.

Similarly, the Full Time Equivalent (FTE) remains similar to 2018, suggesting Greenlife production businesses employ the equivalent of approximately 19,000 full time (37.5 hours per week) staff.

The 2019 survey asked respondents to estimate their workforce's gender ratios and in line with Workforce Gender Equality Agency data, results suggest the industry employs 53% males and 47% females or an estimated 12,396 men and 10,863 women. There is some (not statistically significant) variation by business size, women making up 51% of those employed by businesses turning over in excess of \$2 million, compared to 43% among those turning over less than \$500,000.

Consistent with 2018 results, the majority of respondent businesses employ at least one qualified horticulturalist (78%, no real change from 2018 – 80%). This result however, varies from 89% of large businesses to a significantly lower 75% of small counterparts.

On par with 2018, in total, qualified horticulturalists are estimated to represent 17% of the production nursery workforce.

Wages paid

In 2018-19 Greenlife businesses are estimated to have paid \$1.11 billion dollars in wages (no significant change from 2017-18 - \$1.19 billion) at a similar average wage to previous years (\$58,465, was \$59,974 in 2017-18). On average, the cost of wages represented 35% of turnover, varying slightly by business size, from 45% among small to 34% of large enterprise turnover.

Industry sentiment

Despite falling 5 points from 2018, confidence in the industry's future remains widespread (76% *fairly* to *very* positive), but is significantly more so among large enterprises than small counterparts (86% and 68% respectively). Demand continues to be the key factor driving positivity, however, concerns that drought or dry conditions will impact demand has grown considerably over the past year.

While in real terms the proportion of respondent's expanding their business remains high, consistent with a slight reduction in industry confidence, the proportion has decreased (38%, down from 46% in 2018). Although a slight reduction is seen across

each business size segment, expansion remains considerably more widespread among large enterprises than small (56% and 29% respectively).

At the time of interviewing, a high 51% of respondents planned to grow their business over the next 5 years (no real change from 2018 – 53%), however this result is slightly (not statistically significantly) lower among large businesses than in 2018 (66%, was 81%). Continued drought and the impact of bushfires since interviews were conducted may impact the actual number of businesses able to expand in the near future.

Consistent with 2018 results, less than 1 in 10 respondents plan to contract or exit the industry over the next 5 years, but this result varies from 12% of small businesses to no businesses turning over greater than \$2 million.

Business investment

Widespread confidence in the industry's future, profitability and a substantial number of businesses expanding has resulted in the proportion of businesses investing in their own enterprise trending upwards since 2015-16 (63% doing so in 2018-19). Investment in infrastructure remains the most common (59%), with a smaller proportion investing in either new technology (34%) and/or education and training (34%).

Consistent with previous results, large businesses remain more likely than small and medium counterparts to invest in each area, however compared with 2017-18 a slightly lower proportion of large enterprises invested in training and education (53%, was 67%) and this result should be monitored in future surveys.

Conclusions and recommendations:

- ❖ Despite dry conditions across many regions in Australia, demand for plants remained strong in 2018-19, resulting in a 1.6% increase in total Greenlife production sales to \$3.14 billion or \$2.44 billion excluding sales to other wholesalers (to avoid double counting). It is estimated that approximately 2.03 billion plants were sold (1.34 billion excluding double counting), however, providing accurate plant numbers sold remains challenging for many businesses, which may impact confidence in this latter result.
- ❖ Consistent with moderate sales growth, overall results for confidence in the industry's future, profitability and the number of businesses expanding in 2018-19 are positive, however, more detailed investigation of the data reveals that positive results are considerably more widespread among large businesses than small.
- ❖ This financial year, a large proportion of businesses anticipate demand for plants will continue, meaning that most expect to be profitable and in line with last financial year, profitability is more likely to be expected to be higher than the average of the past 5 years than lower. Additionally, almost half of respondent businesses are planning growth over the next 5 years compared to less than 1 in 10 contracting may indicate further growth in the industry is possible.
- ❖ There is however, a growing number of businesses impacted by dry conditions and bushfires since interviews were completed may impact the survey's estimates.

Main report

1. Background and methodology

Background

Historically, the nursery and garden industry's diversity and lack of engagement with data collection methodologies has meant accurate and credible statistical data has not been collected. In 2017, the Nursery & Garden Industry Statistics project NY16004 implemented a different methodology and largely overcame these barriers to determine a volume and production value of the industry as well as sales channel, employment and sentiment data.

Consequently, Hort Innovation commissioned NY17008, a three year program (encompassing 2017-18 to 2019-20 financial years) to build upon the methodology and outputs from NY16004 and provide accurate, timely and longitudinal nursery industry data to inform industry decision making, resource prioritisation, investment evaluation and strategic planning activities.

Data in this Report is based on the second survey wave within the NY17008 Project and captures data from the 2018-19 financial year.

Data collection methodology

NY17008 builds on NY16004's quantitative CATI data collection methodology, undertaking the following stages to allow for appropriate monitoring of progress and to maximise participation:

- Stage 1: A random sample of Greenlife producers are contacted by experienced members of the interview team, contact details confirmed and an appointment to complete the survey booked. Consistent with the approach in 2018, a greater amount of time was allowed between initial contact and call back appointments (than in NY16004) to ensure producers had sufficient time to gather survey data required. Additionally, after feedback in 2018, the survey was bought forward to ensure interviews were completed well prior to the busy lead up to the festive season.
- Stage 2: Respondents expressing interest in participation are sent a confidentiality statement (appendix 1), snapshot of the industry from 2018 results and full copy of the questionnaire (appendix 2) ensuring respondents are aware of the data required to complete the survey.
- Stage 3: Computer Assisted Telephone Interviews (CATI) are conducted or if preferred, the option to return completed surveys via email is provided.

The contact database developed in NY16004 and updated by NGIA and DTER in 2018 and 2019 was fed into the CATI program set up by Market Metrics (accredited market research call centre used for the project based in Victoria). All interviewers used for the project have considerable experience working on DTER's projects in the agriculture sector and almost all worked on the previous two waves of the survey. Prior to commencement, interviewers were thoroughly briefed on all aspects of the project by Daniel Watson, a senior consultant at DTER.

Initial contact, appointment setting and interviewing commenced on the 8th October 2019 and concluded on Thursday 21st November 2019.

Consistent with NY16004 and 2018 surveys, a large proportion of respondents rescheduled appointment times, often on multiple occasions. Additionally, some respondents initially agreeing to provide information refused to do so following receipt of the list of data requirements.

In total, 305 interviews were completed, higher than in 2018 (292) and 2017 (221 achieved). As a result, the sampling margin for error (at the 95% confidence level) is $\pm 5.1\%$ on national results. In total, 249 interviews were completed via telephone and 56 received through email. Notably, when telephone calls to Greenlife businesses ceased, receipt of email completes also stopped, indicating phone calls to respondents are required to stimulate completion of surveys.

Consistent with previous years, the average interview length was approximately 22 minutes, however, the response rate (interviews versus refusals) was significantly higher than in 2018 (50%, up from 41%). Reasons for refusing to participate were similar to past years and included:

- Sensitive nature of the data required and confidentiality concerns
- Complexity of information required
- Data required not captured
- Respondent ill health
- Busy time of year (preference for survey to run in winter months)

Data weighting and number of Greenlife businesses

Based on the previous two survey waves and the comprehensive number of calls made, it was possible to make assumptions on the number of businesses in each State and subsequently determine weighting figures that could be applied to the interviews achieved so that statistics provided represent the entire Greenlife production industry, not only the sub-set of organisations participating in the study (these estimates are detailed below). It is important to note that the extrapolation of data makes the assumption that the sample for the project represents 'the universe' of Greenlife production organisations.

number of greenlife businesses estimated	national	nsw/act	vic	qld	sa	wa	tas	nt
2019	1,651	519	426	412	101	127	53	13

Confidence limits

sample base	margin for error (where 50% of respondents concur)
305	±5.1%
200	±6.5%
100	±9.5%
50	±13.7%
30	±17.7%

Handling of 'empty cells'/missing data

The data set includes a number of 'empty cells' or missing data due to respondents saying 'don't know' or unable to extract data according to the categories and supply chain options asked for.

While the amount of missing data remains considerably lower than in NY16004 (2017), the proportion across most variables is similar to the 2018 survey.

In 2018 the possibility of using Multiple Imputation by Chained Equations and K-Nearest Neighbour techniques was explored. However, the large variation between Greenlife businesses, including plant sizes and values sold meant that the technique used in 2017 was preferred and potentially more reliable.

This technique (detailed in paragraph below) is again used in 2019 and provides consistency with NY16004 and 2018 waves of the survey.

NY16004 identified a considerable range in businesses sizes and a large variation in business data (for example selling \$1 plants through to \$1,500) therefore it was deemed inappropriate to apply an overall average to each empty cell. Consequently, where respondents were able to provide the number of plants sold or the value of plants sold, the missing category was applied data based on information available (plant sales value to category, employee numbers, FTE, total turnover etc). For example, an organisation with 20 employees provided the total value of 'perennial, trees & shrubs' and 'bedding and potted colour' sold to retailers and landscapers but could not provide data on the number of plants sold in each category. In this scenario, averages for similar organisations (similar value sold to the category, size of organisation, same clients and products) was used to populate empty cells.

While it is acknowledged that a margin for error exists in the data provided in this report due to sampling, assumptions made and data provided by respondents, the report authors are reasonably confident it provides useful insights into the size of the Greenlife production industry as well as attitudinal data. DTER acknowledges this method may be a contributing factor in discrepancies between data collected for this project and historical data collection efforts.

2. Definitions and report notes

Due to very small sample sizes in South Australia, Western Australia, Tasmania, Northern Territory and Australian Capital Territory, it was decided to present data nationally and by business size rather than by State and Territory.

While the Australian Bureau of Statistics (ABS) splits Greenlife production businesses into 3 classes (\$200,000 turnover or less; \$200,001 to \$2 million and more than \$2 million), DTER believes a 'micro' business is more appropriately defined as having turnover of \$500,000 or less. Consequently, business sizes included in this report vary from those presented by ABS in the past.

The majority of data collected for the project is based on the 2018-19 financial year, comparisons made to 2018 data, will be based on the 2017-18 financial year for most variables.

Throughout this report, reference is made to various segments, defined in the table below:

Enterprise phase	Steady, happy	Those whose business is in status due to being at an acceptable stage
	Steady, unable	Those whose business is in status due to being unable to expand
	Expansion	Those whose business is in an expansion phase
	Winding down	Those contracting size of enterprise
business size (turnover)	Small	Turnover less than \$500,000
	Medium	Turnover between \$500,000 and \$2,000,000
	Large	Turnover greater than \$2,000,000
	Don't know (don't know t/o)	Unable to provide turnover value
Perception of industry	Positive	Those feeling very or fairly positive about the future of the nursery industry
	Negative	Those feeling very or fairly negative about the future of the nursery industry
	Neutral	Those feeling neutral or unsure about the future of the nursery industry

3. Sample demographics

demographic metric	% of sample (base: all respondents)				
		turnover			
	national (n=305)	≤ \$500k (n=115)	\$500,001 to \$2 million (n=101)	> \$2 million (n=69)	don't know t/o (n=20)*
Age:					
18 to 39 years	16%	10%	7%	33%	36%
40 to 59 years	50%	46%	63%	41%	29%
60 and older	35%	44%	30%	26%	36%
Average age	54	56	54	49	53
Average years business operated	30	26	28	38	26
Gender:					
Male	72%	66%	78%	77%	50%
Female	28%	34%	22%	23%	50%
Respondent role:					
Owner or joint owner of the business	80%	84%	84%	69%	79%
Manager	17%	14%	16%	25%	14%
Admin/Accounts	2%	3%	0%	3%	0%
Completed 2018 survey	📈 44%	📈 39%	📈 44%	📈 58%	28%

 significant increase since 2018;  significant decrease since 2018 *Caution, sub sample smaller than N=30.

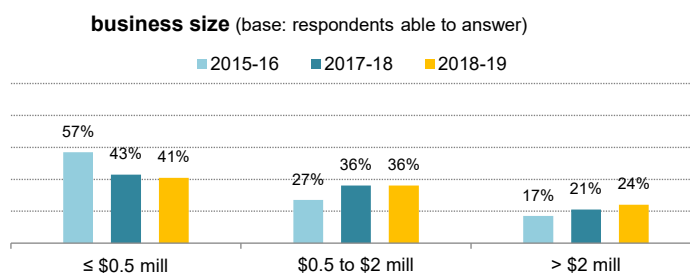
Key findings

- Consistent with past survey waves, the 'average' respondent is male, 54 years of age and is the owner of a business operating for 30 years.
- Of note, compared to the 2018 survey, a significantly higher proportion of respondents say they participated in the previous survey.

Implications

- Results again confirm that despite a number of different businesses competing the survey, random sampling has resulted in similar demographics among respondents participating in the 2019, 2018 and 2017 surveys.

4. Organisation size (based on survey sample)



Key findings

- Compared with 2018, there is no significant variation in the spread of business sizes included in the survey.
- Respondent's business turnover varied from \$8,500 to approximately \$28 million and on par with 2018, almost half (44%) turned over \$500,000 or less (41% turning over less than \$500,000).
- Consistent with the proportion of small business saying they are contracting, there is some evidence suggesting that businesses in this segment are more likely to have decreased turnover than counterparts with turnover greater than \$500,000 who are more likely to be increasing turnover.

Implications

- In line with other survey results over the past 2 years, businesses with turnover in excess of \$500,000 are the most likely to be increasing their turnover.

business turnover	% mentioning (base: respondents able to provide data)	
	2018 survey (2017-2018 year)	2019 survey (2018-2019 year)
\$500,000 or less	43%	44%
\$500,001 to \$1,000,000	19%	18%
\$1,000,001 to \$1,500,000	9%	12%
\$1,500,001 to \$2,000,000	8%	5%
\$2,000,001 to \$2,500,000	4%	3%
\$2,500,001 to \$3,000,000	1%	5%
\$3,000,001 to \$3,500,000	3%	2%
\$3,500,001 to \$4,000,000	3%	2%
\$4,000,001 to \$4,500,000	3%	2%
\$4,500,001 to \$5,000,000	2%	0%
\$5,000,000 to \$10,000,000	3%	5%
\$10 million+	3%	3%

▲ significant increase since 2017-18; ▼ significant decrease since 2017-18

5. Production area

Question asked:

Q8. What is the total farm area in each State used for nursery production – and I would like you to give me outdoor area first and then undercover including greenhouses, cold frames, cloth houses and lath houses?

Key findings

- Consistent with 2018 results, the 'average' business operates on 3.9 hectares of outdoor area and 0.8 hectares indoor.
- Of note, turnover per hectare has trended upwards since 2015-16 (\$407,998 up from \$391,731 in 2017-18 and \$385,000 in 2015-16)

Implications

- While the amount of land used by Greenlife businesses remains on par with past results, turnover per hectare appears to be trending upwards.

production area (hectares) (estimated)	% mentioning (base: respondents able to provide data)				
	turnover				
	national	≤ \$500k	\$500,001 to \$2 million	> \$2 million	don't know t/o*
Outdoor area (approximate)					
Average ha per farm	3.9	1.3	↓ 2.7	10.9	1.5
Median ha per farm	1.0	0.4	1.2	4.0	1.4
Estimated total outdoor area (ha)	6,460	834	↓ 1,525	↑ 3,981	120
Indoor area (approximate)					
% of farms with indoor area	83%	84%	80%	89%	73%
Average ha per farm with indoor area	0.8	0.3	0.8	1.7	0.2
Median ha per farm with indoor area	0.2	0.1	0.4	1.0	0.1
Estimated total indoor area (ha)	1,247	↓ 188	↑ 421	618	19
Estimated turnover per hectare (outdoor + indoor)	\$407,998	\$152,656	\$319,874	\$514,357	na

↑ significant increase since 2018; ↓ significant decrease since 2018 *Caution sub sample smaller than N=30

6. Industry workforce

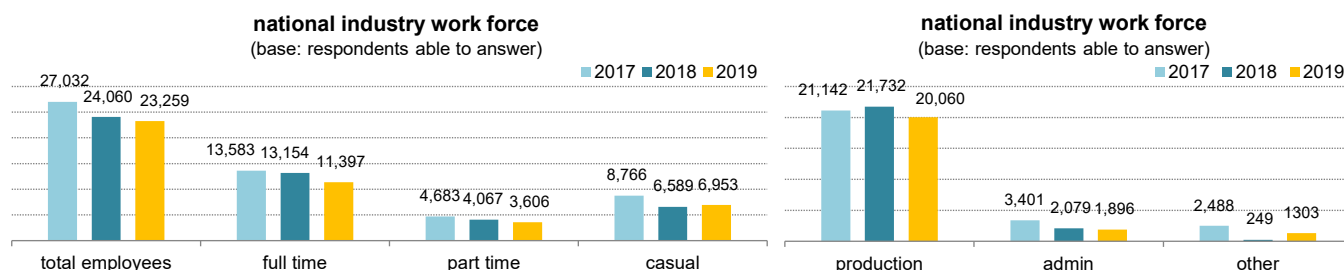
6.1 Number of people employed and roles

Questions asked:

Q3. How many people including yourself are employed in the business in each of the States it operates in for the following categories?

Q5. And what would be the full time equivalent for each of the following in the States you operate in?

Q6. In total, what proportion of all staff are (female/male)? *New question in 2019*



Key findings

- In total, survey results suggest that Greenlife businesses employ approximately 23,300 people, down from 24,100 in 2018 (but within the 95% confidence interval - 23,000 and 25,000 in 2018). Similarly, the FTE (19,055) is slightly but not significantly lower than in 2018 (19,485).
- While survey results suggest that compared to 2018, considerably fewer employees are full time, further investigation of the de-identified data set showing comparisons of businesses completing surveys in both years reveals that this is likely due to a variance in the businesses included in the sample rather than decreasing full time numbers.
- Consistent with past results, businesses turning over greater than \$2 million employ more than half of the industry's workforce.

Implications

- Survey results suggest that Greenlife businesses employ between approximately 22,000 and 24,500.

total people employed by production greenlife nurseries 2019 (estimated)	% mentioning (base: all respondents able to answer)				
	national (n=305)	≤ \$500k (n=115)	\$500,001 to \$2 mil (n=101)	> \$2 million (n=69)	don't know t/o*
Nursery production – full time	↓ 10,463	1,030	2,150	7,088	195
Nursery production – part time	↓ 2,998	557	963	↓ 1,397	81
Nursery production – casual	6,600	↑ 884	2,039	3,558	118
Admin – full time	↓ 934	97	171	643	23
Admin – part time	608	74	194	↑ 318	21
Admin – casual	↑ 354	↑ 148	↑ 123	83	-
Other (including seasonal workers)	↑ 1,303	↑ 650	↑ 644	↓ 9	-
Total nursery production	21,364	↑ 3,121	5,796	12,052	395
Total admin	1,896	320	488	1,044	44
Total people employed	23,259	↑ 3,441	6,283	13,096	439
Full time equivalent	19,055	2,132	↑ 5,612	10,972	339

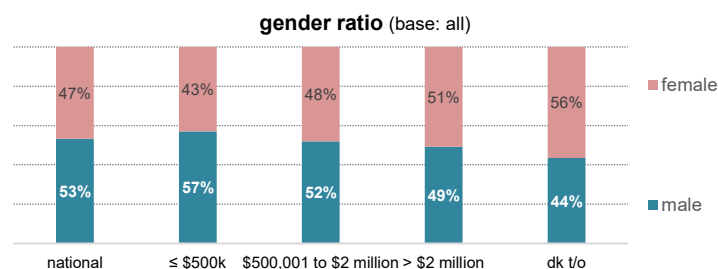
↓ significant decrease since 2018; ↑ significant increase since 2018 *Significance testing not conducted, small sample size

6.2 Production nursery gender ratios

Questions asked:

Q6. In total, what proportion of all staff are (female/male)?

New question in 2019



Key findings

- It is estimated that within respondent businesses, males make up 53% of all employees and females 47%.
- The proportion of females employed by businesses turning over greater than \$2 million is slightly (but not statistically significantly) higher than among those with turnover less than \$500,000 (51% and 43% respectively).
- When survey results are extrapolated to estimate the entire workforce, it can be estimated that 12,396 men and 10,863 women are employed by Greenlife production businesses.

Implications

- Survey results reflect Workforce Gender Equality Agency data suggesting that women represent almost half of the nursery industry workforce, a higher proportion than most agricultural industries.

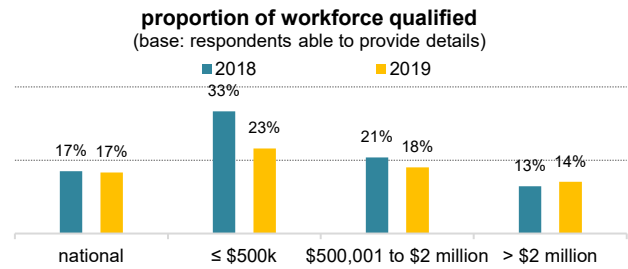
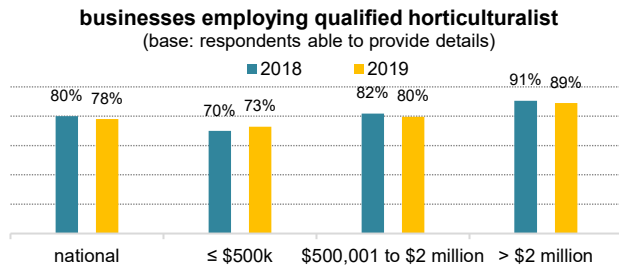
workforce gender (estimated)	% mentioning (base: all respondents able to answer)				
	national (n=305)	≤ \$500k (n=115)	\$500,001 to \$2 mil (n=101)	> \$2 million (n=69)	don't know t/o*
Average proportion of workforce male	53%	57%	52%	49%	44%
Average proportion of workforce female	47%	43%	48%	51%	56%
Estimated number of men employed	12,396	1,964	3,262	6,440	191
Estimated number of women employed	10,863	1,477	3,021	6,656	248

*caution small sample size

6.3 Number of qualified horticulturalists

Question asked:

Q4. How many of your nursery staff are qualified horticulturalists (including owners)?



Key findings

- Consistent with 2018 survey results, approximately 8 in 10 production businesses employ qualified horticulturalists. This result varies by business size, from 89% among those with turnover exceeding \$2 million to a significantly lower 73% of those turning over less than \$500,000.
- On par with 2018, it is estimated that qualified horticulturalists make up 17% of the total Greenlife production workforce.

Implications

- Survey results validate past findings showing the majority of Greenlife businesses employ qualified staff.

qualified horticulturalist employment (estimated)	% mentioning (base: all respondents able to answer)				
		turnover			
	national (n=305)	≤ \$500k (n=115)	\$500,001-\$2 mill (n=101)	> \$2 million (n=69)	don't know t/o* (n=20)
Businesses with at least 1 qualified horticulturalist	78%	73%	80%	89%	62%
Total number of qualified horticulturalists in industry	3,881	797	1,132	1,844	108
% of workforce qualified horticulturalists	17%	↓ 23%	18%	14%	25%

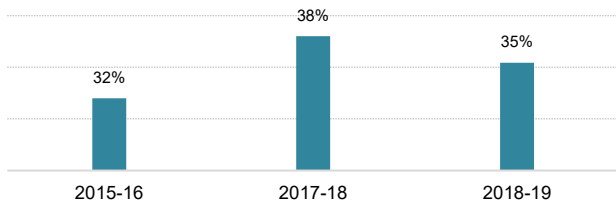
↑ significant increase since 2018; ↓ significant decrease since 2018

6.4 Wages paid

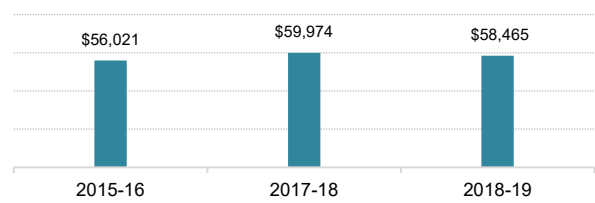
Question asked:

Q7. What was the total cost of wages for the business in the 2018-19 financial year, including your own?

% turnover spent on wages (average)
(base: respondents able to provide details)



average wage
(base: respondents able to provide details)



Key findings

- In total, it is estimated that Greenlife production businesses paid approximately \$1.11 billion dollars in wages (slightly, but not statistically significantly lower than in 2017-18 - \$1.19 billion) in 2018-19 at an average FTE rate of \$58,465 (no real change from 2018 - \$59,974).
- On average, wages represent 35% of respondent turnover, slightly (but not statistically) lower than in 2018 (38%).
- It should be noted the figures represented in this section include wages paid to business owners and variation in profitability is likely to result in the fluctuation seen in businesses turning over less than \$2 million.
- Additionally, several respondents mention being a new business where owners are not yet taking wages.

Implications

- It can be estimated that Greenlife businesses contributed in excess of \$1 billion in wages in 2018-19, which on average represented slightly greater than one third of business turnover.

cost of wages in 2018-19 (estimated)	% mentioning (base: all respondents able to answer)				
	national	turnover			
		≤ \$500k	\$500,001-\$2 mill	> \$2 million	don't know t/o*
Approximate total cost of wages	\$1,114,059,736	↑ \$70,585,565	\$248,327,083	\$793,600,819	\$1,546,269
Average wage based on FTE (including owners)	\$58,465	\$33,101	↓ \$44,246	\$72,333	\$4,566
% of turnover spent on wages (average, including owners)	35%	45%	40%	34%	-

↑ significant increase since 2017-18; ↓ significant decrease since 2017-18 *Caution, sub sample smaller than N=30.

+Significance testing not conducted, small sample size

7. Number and value of plants sold

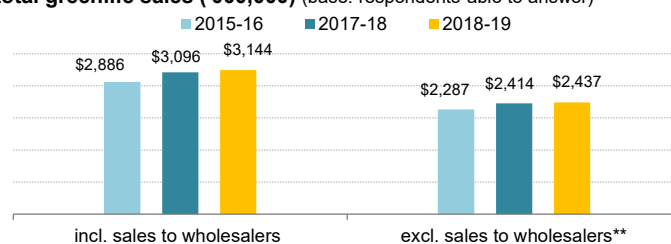
7.1 Number and value of plants sold to clients by category

Questions asked:

Q14. In the 2018-19 financial year, approximately how many plants did your business sell to ...?

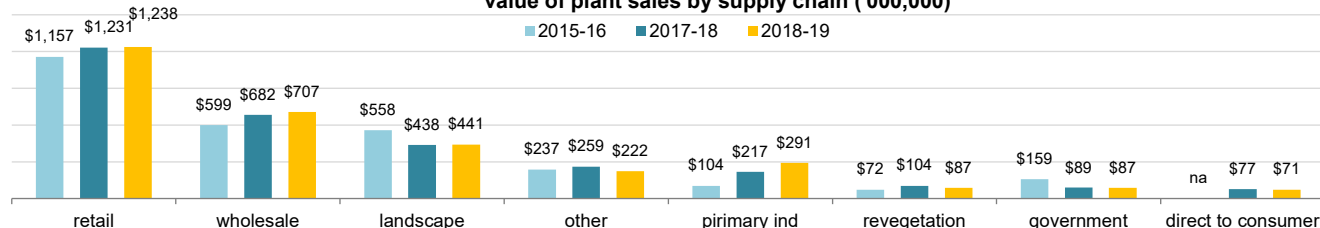
Q15. And what was the total value excluding GST in the plants sold to (from Q13) in 2018-19 ...

total greenlife sales ('000,000) (base: respondents able to answer)

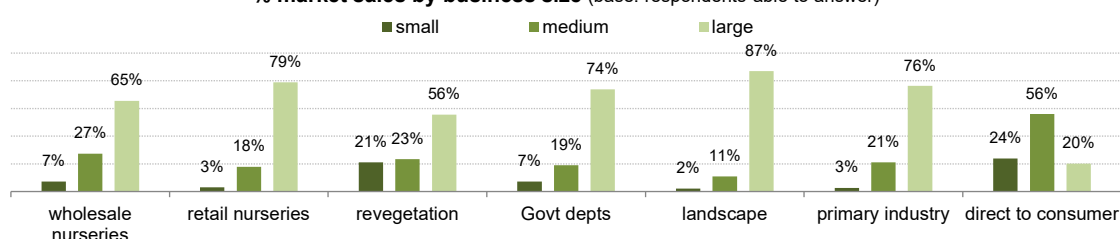


** excluding double counting

value of plant sales by supply chain ('000,000)



% market sales by business size (base: respondents able to answer)



Key findings

- Survey results suggest that the total value of Greenlife production plants sales increased 1.6% (from 2017-18 to 2018-19) to approximately \$3.14 billion.
- When sales to other production businesses are excluded (ensuring no double counting), approximately \$2.44 billion worth of plants was sold.
- Consistent with past surveys, the 'top' 23% of businesses account for approximately 78% of the industry's contribution to the economy.
- To assist data reliability, further investigation of the de-identified data set showing comparisons of businesses completing surveys in both years was undertaken and validates the overall increase in the value of Greenlife sales.
- The *number* of plants sold in 2018-19 is estimated to be 2.03 billion (1.34 billion when sales to wholesale nurseries to avoid double counting is excluded), up from 1.9 billion in 2017-18.
- While the total estimate of plants sold is within estimated confidence intervals, significant variation compared to 12 months ago is evident among sales to some categories. These results may be due to changes in product demand, but is more likely due to variation between businesses in each year's sample as well as a number of businesses only able to provide an estimate of plant numbers, typically due to plants being sold as units or trays and/or a large variation in plant sizes and values (from \$1 to \$1,500) within some individual businesses.

Implications

- Survey results suggest that on average, production nursery sales have seen modest growth over the past 12 months.

- Bounce in results is due to a different mix of businesses in each survey and confirms that while confidence in overall data results is strong, interpreting results for supply channels should occur with caution.

client category for plants sold (estimated)	2018 survey (2017-2018 year)	2019 survey (2018-2019 year)
Production nurseries:		
% selling to sector	67%	68%
Total number of plants	982,863,082	↓ 691,221,473
Total value of plants	\$681,587,287	\$706,626,196
Retail nurseries:		
% selling to sector	58%	63%
Total number of plants	336,287,553	332,741,128
Total value of plants	\$1,230,761,145	\$1,237,046,784
Revegetation, including forestry:		
% selling to sector	20%	17%
Total number of plants	237,651,613	↓ 78,785,43273
Total value of plants	\$103,897,481	\$89,315,393
Local, State and Federal Government Departments:		
% selling to sector	27%	29%
Total number of plants	25,829,914	30,245,174
Total value of plants	\$88,892,063	\$87,077,332
Landscapers, developers and builders:		
% selling to sector	41%	43%
Total number of plants	77,079,073	73,951,806
Total value of plants	\$438,295,092	\$440,898,783
Primary industry: +		
% selling	14%	18%
Total number of plants	211,360,779	620,592,467
Total value of plants	\$217,152,303	\$290,507,881
Direct to consumer:		
% selling	32%	28%
Total number of plants	15,324,678	↓ 9,112,703
Total value of plants	\$76,549,996	\$71,153,932
Other (includes those unable to breakdown by category) : +		
% selling to sector	8%	11%
Total number of plants	55,676,676	191,741,115
Total value of plants	\$258,715,467	\$221,642,342
Total plants sold (including those sold to wholesalers):		
Total number of plants	1,942,073,368	2,028,391,297
Total value of plants	\$3,095,850,834	\$3,144,268,644
Total plants sold (excluding double counting):		
Total number of plants	959,210,286	↑ 1,337,169,824
Total value of plants	\$2,414,263,547	\$2,437,642,447

Due to small sample sizes by category, only national data is provided.
 NOTE: Data is for the 2018-19 year and not necessarily representative of sales in every year.

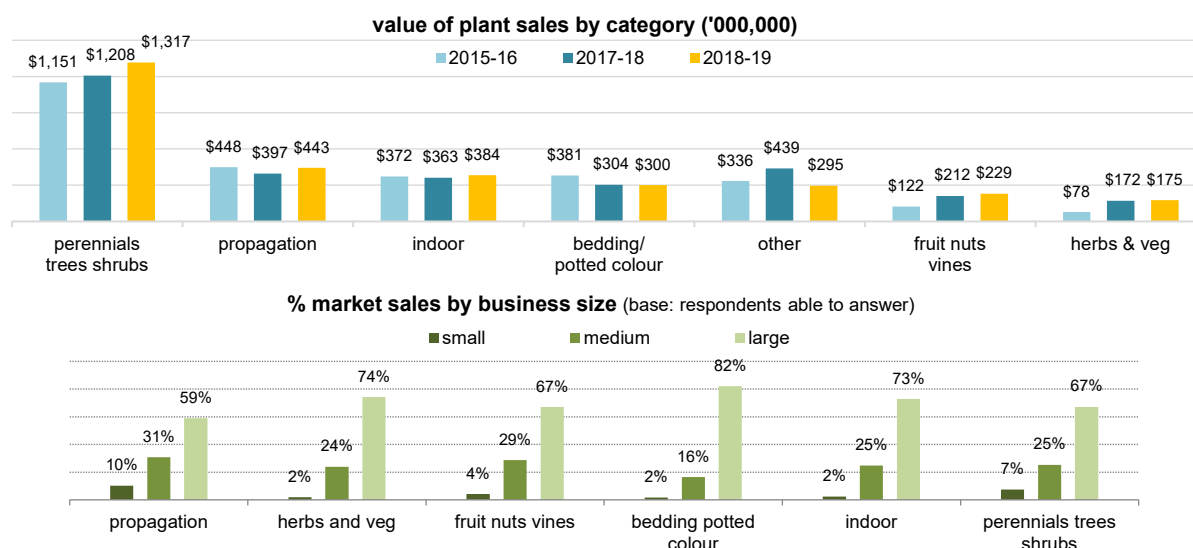
↑ significant increase since 2017-18; ↓ significant decrease since 2017-18 +Significance testing not conducted, small sample size

7.2 Number and value of plants sold by plant category

Questions asked:

Q16. During the 2018-19 financial year, approximately how many plants did you sell in the following categories?

Q17. And what was the total value excluding GST of (from Q15) sold?



Key findings

- The proportion of Greenlife production businesses selling each plant category has not varied significantly from 2017-18.
- Perennials, trees and shrubs remain the most commonly sold category (sold by 64% of respondents) and compared to the 2017-18 financial year, a significantly greater value of plants was sold.
- Notably, other categories did not show significant variation in the value of plants sold compared to 2017-18.
- However, there is some variation longitudinally in the *number* of plants sold, but these results are likely to be due to variation between businesses in survey samples and a number of businesses only able to provide an estimate of plant numbers.
- The significant increase in the number of herbs and vegetable plants sold is notable, but may be due to small sample sizes in 2017-18 and therefore 2018-19 figures are preferred.

Implications

- Sales to most plant categories remain similar to 2017-18, however a significantly greater number and value of perennials, trees and shrubs was sold in 2018-19. Bounce in results is due to a different mix of businesses in each survey and confirms that while confidence in overall data results is strong, interpreting results for individual product types should occur with caution.
- It will be important to monitor the number of propagation plants and herbs and vegetables sold in subsequent surveys to confirm this year's results.

client category for plants sold 2018-19 (estimated)	2018 survey (2017-2018 year)	2019 survey (2018-2019 year)
Propagation plants:		
% selling propagation plants	30%	29%
Total number of plants	900,159,210	↓ 676,515,498
Total value of plants	\$397,320,050	\$443,149,102
Herbs and vegetables: +		
% selling herbs and vegetables	17%	14%
Total number of plants	360,325,510	762,791,634
Total value of plants	\$172,154,245	\$175,227,939
Fruit trees, nut trees, vines:		
% selling fruit trees, nut trees, vines	18%	20%
Total number of plants	21,675,327	↑ 26,526,443
Total value of plants	\$212,313,839	\$228,933,978
Bedding and potted colour: +		
% selling bedding, potted colour	14%	16%
Total number of plants	95,571,558	134,190,728
Total value of plants	\$304,128,838	\$300,241,137
Indoor plants:		
% selling indoor plants	22%	20%
Total number of plants	50,176,068	↑ 62,354,827
Total value of plants	\$362,980,778	\$384,042,554
Perennials, trees and shrubs:		
% selling perennials, trees, shrubs	65%	64%
Total number of plants	238,349,676	↑ 282,702,200
Total value of plants	\$1,208,042,623	↑ \$1,317,196,214
Other (includes those unable to breakdown by category): +		
% selling other	11%	10%
Total number of plants	275,816,020	83,309,966
Total value of plants	\$438,910,462	\$295,477,720
Total plants sold (including those sold to wholesalers):		
Total number of plants	1,942,073,368	\$2,028,391,296
Total value of plants	\$3,095,850,834	\$3,144,268,644
Total plants sold (excluding double counting):		
Total number of plants	959,210,286	↑ 1,337,169,824
Total value of plants	\$2,414,263,547	\$2,437,642,447

Due to small sample sizes by category, only national data is provided.

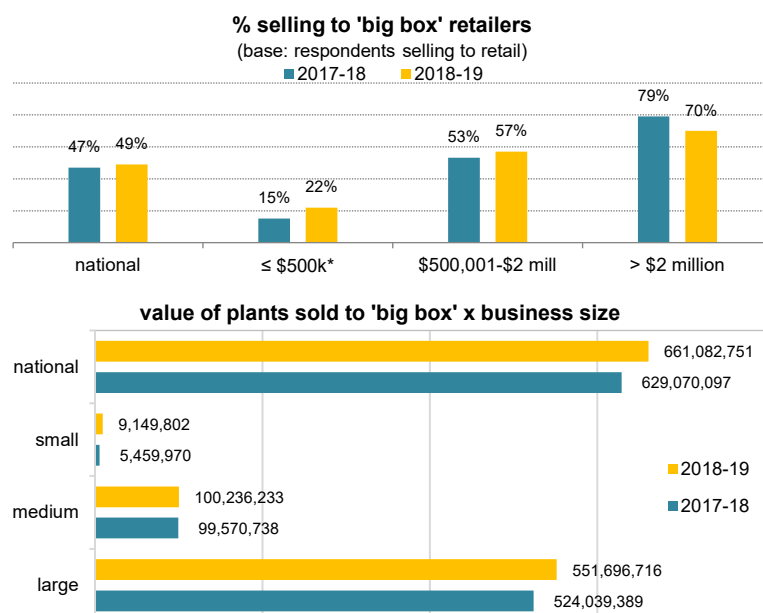
↑ significant increase since 2017-18; ↓ significant decrease since 2017-18 +Significance testing not conducted, small sample size
NOTE: Data is for the 2018-19 year and not necessarily representative of sales in every year.

7.3 Sales to 'big box' retailers

Questions asked:

Q18. In 2018-19, did you sell plants to 'big box' retailers such as Bunnings, Mitre 10, Big W or other large retailers?

Q19. What percentage of your sales to retail nurseries went to these 'big box' retailers?



Key findings

- In line with 2017-18 results, 49% of respondents selling to the retail chain sold to 'big box' retailers in 2018-19. While data suggests slightly fewer large businesses sold to 'big box' than in 2017-18, small sample sizes means that the variation is not significant.
- In total, sales to 'big box' retailers represented 53% of the retail market and were worth an estimated \$661 million, slightly (not statistically significantly) up from 2017-18 (\$629 million).
- Consistent with past survey results, sales to 'big box' retailers represent a considerably higher proportion of total retail sales among large businesses than small counterparts.

Implications

- Results validate 2018 survey findings and past estimates that 'big box' retailers account for between 50-60% of the sale value to the retail channel. It may be useful to continue monitoring this metric in future to identify trends in this market.

plants sold to 'big box' retailers 2018-19 (estimated)	% mentioning (base: all respondents selling to retail/able to answer)				
	turnover		turnover		
	national	≤ \$500k*	\$500,001 to \$2 million ⁺	> \$2 million ⁺	don't know t/o*
% selling to 'big box' retailers	49%	22%	57%	70%	-
% of retail sales to 'big box' retailers	53%	24%	45%	56%	-
Total value of plants sold	661,082,751	9,149,802	100,236,233	551,696,716	-

NOTE: Data is for the 2018-19 year and not necessarily representative of sales in every year.

*Caution, sub sample smaller than N=30

⁺sig testing not conducted due to small sample size in 2018

7.4 Number and value of plants purchased for immediate resale

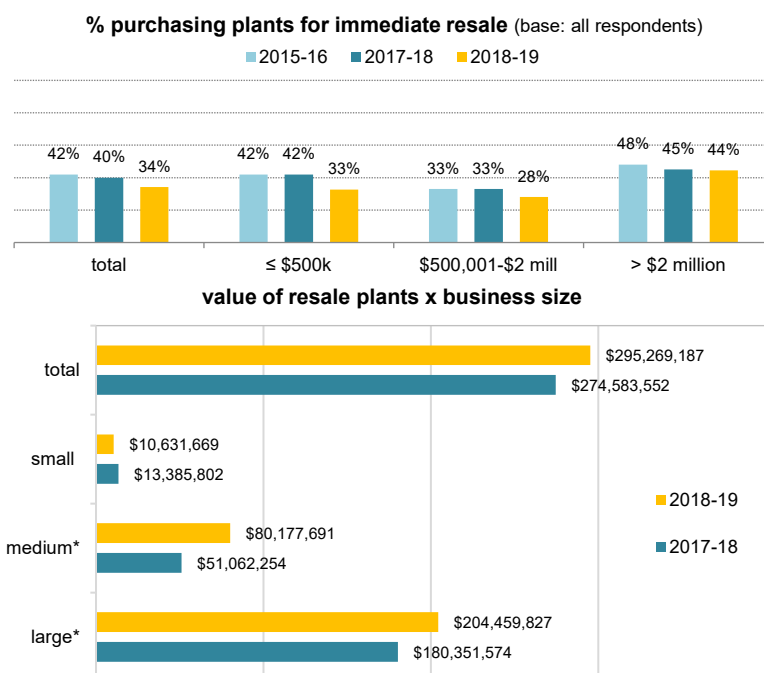
Questions asked:

Q9. During the 2018-19 financial year, did you purchase plants from other greenlife producers or nurseries for immediate resale?

Q10. If yes: What was the total value of the plants purchased from other greenlife producers or nurseries?

Q11. How many plants in total did you purchase?

Q12. What was the total value of these plants when sold?



Key findings

- Nationally, the proportion of businesses purchasing plants for immediate resale was slightly lower in 2018-19 than the previous financial year (34% and 40% respectively), but this is mainly due to changes among smaller and medium sized businesses.
- Despite slightly fewer businesses purchasing plants for immediate resale, a considerably greater amount of plants were purchased (approximately 69 million, up from 55 million in 2017-18), resulting in a slightly higher value when sold than in 2017-18 (\$295 million, up from \$275 million).
- Notably, the average mark-up remains comparable (69%, was 71% in 2017-18).

Implications

- Despite fewer businesses nationally than in 2017-18 buying plants for immediate resale, a similar proportion of larger businesses did so and overall the value of plants purchased and resold increased over the past year.

plants purchased for immediate resale in 2018-19 (estimated)	% mentioning (base: respondents able to provide data) turnover				
	national	≤ \$500k (small) [■]	\$500k to \$2 mil (medium) [■]	> \$2 million (large) ⁺	don't know t/o*
% purchasing plants for immediate resale	34%	33%	28%	44%	43%
Total number of plants purchased	↑ 69,069,633	1,996,216	26,447,113	40,599,428	26,875
Total value of plants when purchased	174,720,572	6,606,617	40,682,269	127,324,186	107,500
Total value of plants when sold	295,269,187	10,631,669	80,177,691	204,459,827	-
Average % mark-up	69%	61%	97%	61%	-

↑ significant increase since 2017-18; ↓ significant decrease since 2017-18

⁺Significance testing not conducted, small sample size

*Caution, sub sample smaller than N=30.

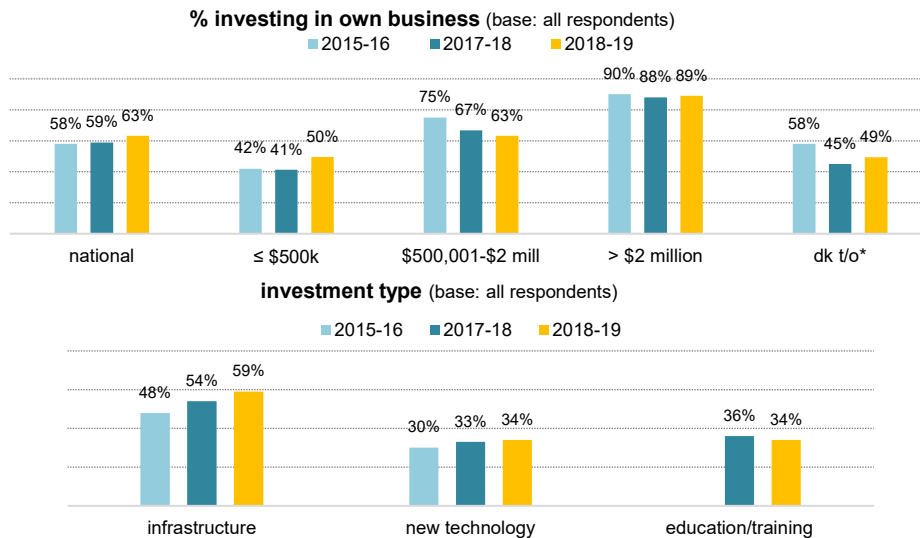
8. Business investment

Question asked:

Q30. During the 2018-19 financial year, did you invest in either infrastructure or new technology or training and education for the business?

Q31. If yes: Approximately how much did you invest in infrastructure?

Q32. If yes: Approximately how much did you invest in new technology?



Key findings

- The total proportion of businesses investing in their own enterprise has trended upwards since 2015-16.
- Of note, almost all large businesses continue to invest, however the proportion of medium sized businesses doing so has trended downwards since 2015-16.
- As a result, large businesses are more likely to invest in each area than small and medium counterparts, however it is notable that a slightly lower proportion of large enterprises invested in education and training in 2018-19 than the previous financial year

Implications

- Survey results suggest growth in the total number of businesses investing in their own enterprise. Next year's survey should monitor the proportion of large businesses investing in education and training to analyse whether this year's result is due to a sampling anomaly.

business investment	% mentioning (base: all respondents able to answer)				
	national	≤ \$500k ⁺	\$500,001-\$2 mil ⁺	> \$2 million ⁺	don't know t/o*
% making business investment	63%	50%	63%	89%	49%
% turnover invested	4%	8%	6%	4%	-
% investing in infrastructure	59%	46%	59%	82%	42%
Average amount invested in infrastructure	\$110,598	\$37,744	\$70,157	\$238,753	\$37,638
Total invested in infrastructure (extrapolated)	105,475,155	11,040,399	23,452,816	69,660,210	1,321,730
% investing in new technology	34%	19%	35%	59%	21%
Average amount invested in new technology	62,457	14,553	74,140	80,614	9,500
Total invested in new technology (extrapolated)	34,725,851	1,732,129	15,013,344	17,857,230	123,148
% investing in education and training	34%	20%	37%	53%	27%

↑ significant increase since 2017-18; ↓ significant decrease since 2017-18

*Caution sub sample smaller than N=30.

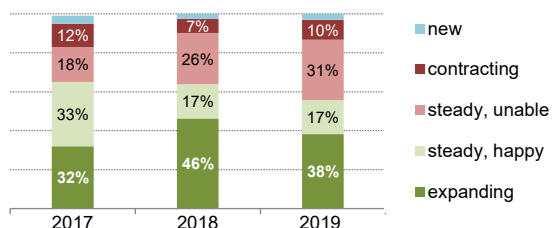
9. Current business phase and future intentions

Questions asked:

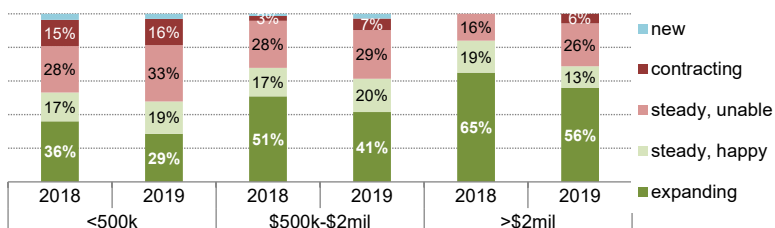
Q23. Which of the following best describes your nursery business over the past few years?

Q24. At this point in time, what is the intention for the business over the next 5 years?

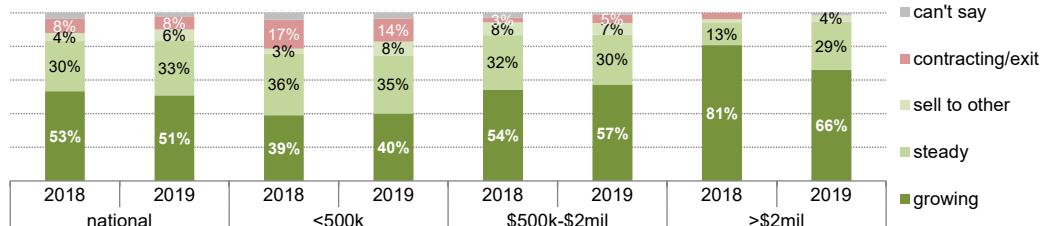
current enterprise phase (base: all respondents)



current enterprise phase (base: all respondents)



business intentions (base: all respondents)



Key findings

- While the proportion of businesses currently expanding remains fairly high (in comparison to other industries DTER conducts studies in) the proportion is significantly lower than 12 months ago. Notably, slight decreases are evident across each business size segment.
- Similarly, the proportion of businesses steady but unable to expand has trended upwards since 2015-16 and is now the most common business phase among small businesses.
- Encouragingly, approximately half of all respondents plan to grow their business over the next 5 years, however the 15 point decrease among large business is notable. Consistent with past results, 8% plan to contract or exit the industry.

Implications

- Survey results suggest that while a large proportion of businesses continued to expand, a number of enterprises may have achieved their short term growth potential. Next year's survey should monitor any trends emerging as well as the impact of continued dry conditions, bushfires and the completion of the 2020 Project.

current business stage	% mentioning (base: all respondents)				
	turnover				
	national (n=305)	≤ \$500k (n=115)	\$500,001-\$2 mil (n=101)	> \$2 million (n=69)	don't know t/o (n=20)*
Expanding	38%	29%	41%	56%	7%
Steady, where want it to be	17%	19%	20%	13%	7%
Steady, unable to expand	31%	33%	29%	26%	52%
Contracting/winding down	10%	16%	7%	6%	13%
New business	3%	3%	3%	0%	21%

future intentions for business	% mentioning (base: all respondents)				
	turnover				
	national (n=305)	≤ \$500k (n=115)	\$500,001-\$2 mil (n=101)	> \$2 million (n=69)	don't know t/o (n=20)*
Growing business	51%	40%	57%	66%	21%
Remaining steady	33%	35%	30%	29%	58%
Contracting/winding down	3%	6%	3%	0%	0%
Sell as business to other person/company	6%	8%	7%	4%	0%
Sell land to developer	1%	2%	1%	0%	0%
Close business	3%	6%	1%	0%	13%
Can't say	2%	3%	1%	1%	8%

↑ significant increase since 2017-18; ↓ significant decrease since 2017-18

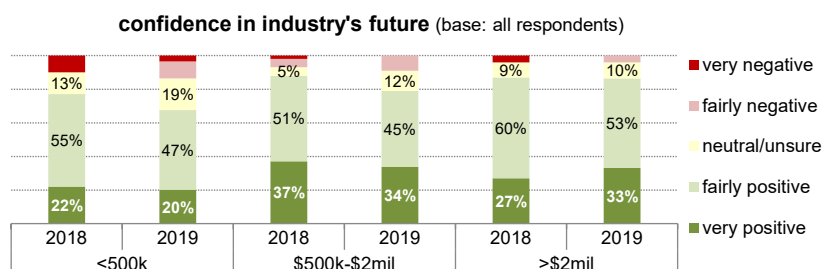
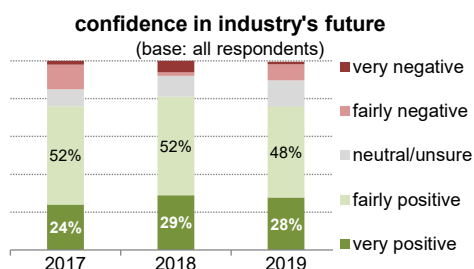
*Caution sub sample smaller than N=30.

10. Confidence in industry

Questions asked:

Q25. Overall, how do you feel about the future of the nursery and garden industry? Would you say you feel (read out)

Q26. Why do you say that?



Key findings

- The majority of respondents continue to be positive towards the industry's future (76%, down slightly from 2018 - 81% but on par with 2017) and the proportion very positive remains similar to 2018 (28%, was 29%).
- There is however, some variation by business size, from 86% among those from large businesses, to a significantly lower 68% among respondents from businesses turning over less than \$500,000.
- Demand continues to be the key factor impacting both positive and negative sentiment and it is notable that negativity due to the impact of drought and climate on demand is more widespread than in 2018.

Implications

- In a good result, confidence in the industry's future remains widespread, but dry conditions and climate are impacting a growing number of businesses. It will be interesting to monitor the impact that fires have on the demand for plants.

confidence	national (n=305)	% mentioning (base: all respondents) turnover			
		≤ \$500k (n=115)	\$500,001-\$2 mil (n=101)	> \$2 million (n=69)	don't know t/o (n=20)*
Very positive	28%	20%	34%	33%	22%
Fairly positive	48%	47%	45%	53%	46%
Neutral	11%	14%	11%	6%	13%
Fairly negative	9%	10%	9%	4%	13%
Very negative	1%	4%	0%	0%	0%
Can't say	3%	5%	1%	3%	6%
Total: positive	76%	68%	79%	86%	68%
Total: negative	10%	14%	9%	4%	13%

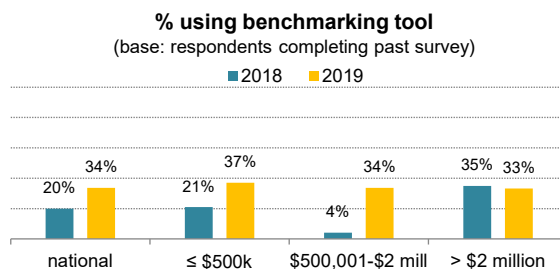
reasons for level of confidence (main mentions)	national (n=305)	% mentioning (base: all respondents) turnover			
		≤ \$500k (n=115)	\$500,001-\$2 mil (n=101)	> \$2 million (n=69)	don't know t/o (n=20)*
Positive mentions:					
Demand for product	↓ 50%	↓ 46%	↓ 52%	57%	47%
Good business management	↑ 9%	7%	↑ 10%	9%	7%
Opportunities for innovative/niche products	6%	9%	6%	0%	17%
Optimistic outlook/enjoyment of farming/business (NFI)	6%	9%	6%	0%	17%
Increasing opportunities due to industry exits	5%	2%	6%	8%	0%
Negative mentions:					
Total: decreasing product demand	↑ 21%	21%	↑ 24%	16%	14%
Effect of climate on demand/drought	↑ 12%	12%	13%	10%	7%
Specific mentions re supplying Bunnings	9%	7%	11%	7%	13%
Input costs	7%	9%	7%	6%	6%
Low prices received	4%	5%	3%	3%	6%

↑ significant increase since 2018; ↓ significant decrease since 2018 *Caution sub sample smaller than N=30.

11. Benchmarking tool usage

Questions asked:

Q34. Have you used the excel data benchmarking tool that was sent to those completing the survey?



Key findings

- Over the past 12 months, usage of the benchmarking data tool has increased significantly overall.
- While small sample sizes means that data is indicative only, it is notable that small to medium business are more likely to have used the tool than in 2018, however there is no change in usage among larger enterprises.

Implications

- The project team's promotion and communication campaign appears to be growing awareness and usage of the benchmarking tool.

benchmarking tool usage	% mentioning (base: respondents participating in 2018 survey)				
	turnover				
	national (n=132)	≤ \$500k (n=44) ⁺	\$500,001-\$2 mill (n=45) ⁺	> \$2 million (n=39) ⁺	don't know t/o (n=4) ⁺
Used benchmarking tool	34%	37%	34%	33%	0%
Have not used tool	44%	41%	40%	51%	54%
Have not received the data tool	8%	8%	5%	11%	25%
Unsure if received/used	14%	14%	22%	5%	22%

↑ significant increase since 2018; ↓ significant decrease since 2018 *Caution sub sample smaller than N=30.

⁺Significance testing not conducted, small sample size in 2018

Appendix 1: Confidentiality statement



9 October 2019

Nursery and Garden Industry Data & Statistics Collection

Confidentiality Statement

Thank you for your interest in providing data for the Hort Innovation project NY17008 – Nursery Industry Research and Statistics. This project is a strategic levy investment that is part of the Hort Innovation Nursery Fund and follows on from the 2017 and 2018 waves that captured figures on the value of Greenlife production and will collect information for the 2018-19 financial year.

Data for the project will be collected and stored securely by Market Metrics, an independent, fully accredited data collection company based in Frankston, Victoria. Their web address is <http://www.marketmetrics.com.au> should you wish to read about their services. Data and information collected will only be used for the purposes of this specific project.

In accordance with Australia's strict Privacy Principles, full confidentiality is assured and once information processing has been completed, any identifying data such as your name, company and contact details (including address and postcode) will be removed from your responses to the survey. While interviewing is taking place, data held by Market Metrics will remain identifiable in case there is an anomaly in the data that requires a call back and clarification. Once Market Metrics has completed this process, de-identification will occur.

On completion of all interviewing, Down To Earth Research (DTER) will be provided with a de-identified data set so data can be aggregated and analysed. DTER will then provide an overall industry report to Hort Innovation. No one from the nursery and garden industry, Hort Innovation, industry organisations and associations, government departments, etc. will know who participated in the study nor the information and data they provided.

Should you have any concerns whatsoever, please contact Daniel Watson from DTER (daniel@dter.com.au or 0409 775 553) or Brendan O'Keefe from Hort Innovation (Brendan.OKeeffe@horticulture.com.au or 02 8295 2311).

Thank you again for your assistance. The data collected for the study will assist Hort Innovation and Greenlife Industry Australia to have more meaningful discussions with government organisations in the future. Additionally, survey data is used to provide a tool that your company will be able to use for benchmarking purposes and to better understand the size and nature of the industry.

Kind regards

A handwritten signature in black ink, appearing to read "Dan Watson".

Dan Watson
Research Director
Down To Earth Research

Appendix 2: CATI questionnaire

Q1. Firstly, I need to clarify how many sites your nursery business operates from _____ sites

If more than 1 site, ask Q2, others go to Q3:

Q2. What states and territories are the sites located in? *Multiple*

- NSW ----- 1
 Vic ----- 2
 Qld ----- 3
 SA ----- 4
 WA ----- 5
 Tas ----- 6
 NT ----- 7
 ACT ----- 8

If only 1 site OR more than 1 site, but in the same State, ask:

Q3. How many people including yourself are employed in the business in the following roles?

If more than 1 site in different States, ask:

Q3. How many people including yourself are employed in the business in each of the States it operates in for the following categories?

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Full time nursery production duties such as plant handling, sales and/or despatch etc.								
Part time nursery production duties								
Casual nursery production duties								
Full time business administration								
Part time business administration								
Casual business administration								
Other (specify)								

So just confirming that is a total of (total from Q3) people employed in some capacity by the business?

Q4. How many of your nursery staff are qualified horticulturalists (including owners)?

Q5. And what would be the full time equivalent (so 37.5 hours per week, including business owners) for each of the following in the States you operate in? *read out*

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Nursery production staff								
Business administration staff								
Other								

Q6. In total (including full time, part time, casual employees and owners) what proportion of all staff are:

Male _____ %
 Female _____ %

Q7. (By State if operate in more than one State), what was the total cost of wages (inclusive of superannuation) for the business in the 2018-19 year, including your own?

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Total wages								

If only 1 site OR more than 1 site, but in the same State, ask:

Q8. What is the total area of the farm used for nursery production – and I would like you to give me outdoor area first and then undercover including greenhouses, cold frames, cloth houses and lath houses?

If more than 1 site in different States, ask:

Q8. What is the total farm area in each State used for nursery production – and I would like you to give me outdoor area first and then undercover including greenhouses, cold frames, cloth houses and lath houses?

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Outdoor space								
Indoor space								

Q9. During the 2018-19 financial year, did you purchase plants from other greenlife producers or nurseries for immediate resale?

Yes ----- 1 continue
 No ----- 2 go to Q13

Q10. What was the total value of the plants purchased from other greenlife producers or nurseries?

\$ _____

Q11. How many plants in total did you purchase?

Q12. What was the total value of these plants when sold?

\$ _____

- Q13. Would you be able to provide accurate information on the total number or value of plants your business sold in the 2018-19 financial year or would you have to give me an estimate?
- Accurate ----- 1
 Estimate ----- 2
 Neither/refused ----- 3
- Q14. (By State if operate in more than one State) In the 2018-19 financial year, approximately how many plants (including resale) did your business sell to ... *read out*.
- Q15. And what was the total value (including resale) excluding GST in the plants sold to (from Q14) in 2018-19 ... *read out options where response is not zero*.

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Whole sale nurseries:								
Number of plants								
Value								
Retail nurseries:								
Number of plants								
Value								
Revegetation, including forestry:								
Number of plants								
Value								
Local, State & Federal government departments including water corporations, RTA, schools, etc:								
Number of plants								
Value								
Landscapers, developers and builders:								
Number of plants								
Value								
Primary industry:								
Number of plants								
Value								
Direct to consumers/public:								
Number of plants								
Value								
Other (specify): <i>DP note: allow for more than 1 other</i>								
Number of plants								
Value								
Only able to provide total sold/total value:								
Number of plants								
Value								
TOTAL (computer calculate and confirm with respondent):								
Number of plants								
Value								

Q16. During the 2018-19 financial year, how many plants did you sell in the following categories (including resale)? If operating in more than one State: During the 2018-19 financial year, how many plants did you sell in the following categories in each State?

Q17. And what was the total value of (from Q16) of plants sold (including resale)?

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Propagation plants (eg, plugs, tubestock, cuttings, tissue culture):								
Number of plants								
Value								
Herbs and vegetables (excluding seeds and bulbs):								
Number of plants								
Value								
Fruit trees, nut trees and vines (excluding seeds and bulbs):								
Number of plants								
Value								
Bedding and potted colour (eg. annuals):								
Number of plants								
Value								
Indoor plants (excluding seeds, bulbs):								
Number of plants								
Value								
Perennials, trees and shrubs:								
Number of plants								
Value								
Other (including seeds, bulbs, water plants, shot seed, etc.): <i>DP note: allow for more than 1 other</i>								
Number of plants								
Value								
TOTAL (computer calculate and confirm with respondent):								
Number of plants								
Value								

If sell to retail (Q14=retail), ask Q18. Others go to Q20

Q18. In 2018-19 did you sell plants to 'big box' retailers such as Bunnings, Mitre 10, Big W or other large retailers?

- Yes ----- 1 continue
No ----- 2 go to Q20

Q19. What percentage of your sales to retail nurseries went to these 'big box' retailers? _____ %

Q20. Do you know what your business's total operating costs or expenses were for the 2018-19 financial year, so this includes input costs, wages, cost of goods sold, transport costs/freight, rent etc?

- Yes, can provide an accurate figure ----- 1 continue
Yes, but only a guesstimate ----- 2 continue
No ----- 3 go to Q22

Q21. And what were your total operating costs or expenses (including input costs, wages, cost of goods sold, transport costs, rent) (or estimated total operating costs if Q20 = 2) for the 2018-19 year? _____ \$

DP note: If respondent says no in Q20, ask Q22. Others go to Q23

Q22. Approximately what proportion of your business turnover was taken up by operating costs or expenses for the 2018-19 financial year? _____ %

Q23. Which of the following best describes your nursery business currently. Is it ...

- In an expansion phase ----- 1
In a steady phase because it was difficult to expand ----- 2
In a steady phase because it is where it needed to be ----- 3
In a contracting or winding down phase ----- 4
A new business just starting up ----- 5

Q24. At this point in time, what is the intention for the business over the next 5 years? Is the intention ...

- To grow the business ----- 1
Keep the business in a steady phase ----- 2
Contract or wind down the business ----- 3
Sell it as a business to another person or company ----- 4
Sell the land to a developer ----- 5
Wind down and close ----- 6
Do not read out/avoid Can't say ----- 7

Q25. Overall, how do you feel about the future of the nursery and garden industry? Would you say you feel ... (read out)

- Very positive ----- 1
Fairly positive ----- 2
Fairly negative ----- 3
Very negative ----- 4
Do not read Neutral ----- 5
Do not read Unsure ----- 6

- Q26. Why do you say that? *Probe fully*
.....
- Q27. In the 2018-19 financial year, did your nursery business make an operating profit?
 Yes ----- 1
 No ----- 2
 Don't know ----- 3
 Refused ----- 4
- Q28. And do you expect to make an operating profit in the 2019-20 financial year?
 Yes ----- 1
 No ----- 2
 Don't know ----- 3
 Refused ----- 4
- Q29. Compared to the average of the past 5 years, do you expect profit levels for the 2019-20 financial year to be ... *read out*
 Considerably higher ----- 1
 Slightly higher ----- 2
 About the same ----- 3
 Slightly lower ----- 4
 Considerably lower ----- 5
 Avoid Don't know yet ----- 6
- Q30. During the 2018-19 financial year did you invest in either infrastructure, new technology or training and education for the business?
 Yes, new infrastructure ----- 1 continue
 Yes, new technology ----- 2
 Yes, training and education ----- 3
 No ----- 4 go to Q33
- If Q30 = code 1, ask:
 Q31. Approximately how much did you invest in new infrastructure during 2018-19? _____
- If Q30 = code 2, ask:
 Q32. Approximately how much did you invest in new technology for the business during 2018-19? _____
- Q33. Did you or someone within your business participate in the 2018 nursery industry statistics survey
 Yes ----- 1 continue
 No ----- 2 Go to Q35
 Can't say/unsure ----- 3 Go to Q35
- Q34. Have you or someone within your business used the excel data benchmarking tool that was sent to those completing the survey?
 Yes ----- 1
 No ----- 2
 Haven't received ----- 3
 Can't say/unsure ----- 4
- I just have a couple of questions about you now.
 Q35. May I ask your age please? _____
- Q36. And how many years has your nursery business operated for? _____
- Q37. Are you the ...
 Owner or joint owner of the business ----- 1
 Manager ----- 2
 Other role (specify) ----- 3
- Q38. Record gender (do not ask)
 Male ----- 1
 Female ----- 2

Appendix K

Nursery Industry Statistics Report
(Greenlife) (2019/2020)

Nursery Industry Statistics 2017-18 to 2019-20 (NY17008)

2019-20 Production Nursery Data Capture Report

Report date: December 2020



DTER report authors:

Daniel Watson
Pamela Watson

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Data and insights provided in this report are based on information provided by survey respondents and subsequent assumptions made. Readers should note there is a margin for error on all data provided and the report authors cannot guarantee the accuracy of information provided or assumptions made.

Acknowledgements

NGIA, DTER and AAC would like to thank all survey respondents for providing data and information for this study. We appreciate the time and effort taken to provide a considerable amount of data and information.

Summary

Background

The 2019-20 Production Nursery Data Capture Report is the fourth annual statistics survey and third and final wave under the umbrella Project NY17008. The data collected provides insights into industry trends to inform decision making, resource prioritisation, investment evaluation and strategic planning activities among Greenlife businesses and the broader industry. In 2020, the survey also explores the impact on sales from COVID-19 disruptions.

Methodology

Data collection closely follows the methodology used in past NY17008 survey waves, ensuring data is comparable longitudinally.

A random sample of Greenlife producers were interviewed through Computer Assisted Telephone Interviewing (CATI). To ensure Project aims and data requirements were understood, prior to participation, respondents received a confidentiality statement, industry snapshot and full questionnaire.

Consistent with past years, assumptions first utilised in the NY16004 Project (conducted in 2017) and detailed fully in section 1 of this report were made to enable extrapolation of the data to represent the entire production nursery industry.

Throughout the 2020 survey period, COVID-19 disruptions created additional consumer demand for Greenlife products and burden on production nurseries to meet Government regulations. As a result, encouraging survey participation was more challenging than in past years and compared to 2019, required an additional 2 weeks to ensure a reasonable sample size was achieved. In total, 292 interviews were completed, slightly lower than the target (300) and the number achieved in 2019 (305).

Survey results

Number and value of plants sold

Survey results suggest that production nursery sales have trended upwards since 2015-16, resulting in an estimated 2.2 billion plants, valued at approximately \$3.3 billion sold in 2019-20.

When sales to other production businesses are excluded (ensuring figures are not double counted), 1.6 billion plants were sold to retail, landscape, Government, direct to consumer, revegetation and primary industry sectors at an estimated value of approximately \$2.6 billion, up 6% on the previous financial year.

Consistent with past survey waves, retail (independent and 'big box') represents the largest sales channel (41% of the value all production sales or approximately \$1.37 billion), but wholesale nurseries (22% of the value of all sales), landscape (14%) and primary industry (9%) represent significant value and sales to each have trended upwards over the past 3 years.

Sales to 'big box' retailers

Consistent with growth in the overall retail channel, the value of sales to 'big box' retailers has trended upwards since 2017-18. In total, these sales represent 52% of the retail channel, worth an estimated \$710 million in 2019-20, up 7% compared to the previous financial year.

Although small sample sizes mean that caution is required interpreting data, survey results suggest that large businesses (turnover exceeding \$2 million) are responsible for 87% of all sales to 'big box' retailers.

Turnover per hectare

Over the past 3 years, data suggests that on average, producers have increased their turnover per hectare and compared to the previous financial year, the value is significantly greater in 2019-20 (approximately \$440,000, up from \$410,000 per hectare).

Impact from COVID-19 disruptions

In the 2019-20 financial year, COVID-19 disruptions were significantly more likely to have a positive impact on sales (49% of production nurseries) than negative (15%). Among those experiencing a positive outcome, on average, it is estimated that sales increased 26% and decreased 24% among those experiencing a negative impact.

Current and future industry sentiment

Greater demand for Greenlife over the past 12 months has resulted in a significant 14 point increase in the proportion of respondents confident in the industry's future (now 90%, the highest result since the survey's inception in 2017).

Currently, 4 in 10 businesses are expanding and less than 1 in 20 are contracting or winding down. There is some evidence suggesting that the industry will continue to grow over the next 5 years, with half of all respondents, including 6 in 10 large businesses expecting to grow.

Business investment

Consistent with increasing confidence, widespread expansion and profitability, the number of businesses investing in new technology or infrastructure has trended upwards since 2015-16. While investing in education and training appears to be trending downwards, this year's result is likely impacted by COVID-19 disruptions on opportunities to conduct face to face training.

In line with past results, large businesses remain more likely than smaller counterparts to invest in new infrastructure or technology and education or training.

Employment

Extrapolated data suggests that nursery production businesses employ between 23,000 and 25,000 at an estimated FTE of between 18,500 and 20,500.

In total, 92% of businesses employ staff (or owners) with trade level certificates, diplomas, degrees or higher in any field. When this data is extrapolated to represent the industry, it can be estimated that approximately 5,700 staff or 24% of the total workforce have tertiary qualifications.

Wages paid

In 2019-20, production businesses are estimated to have paid \$1.13 billion dollars in wages (up slightly from 2018-19 - \$1.11 billion) at a similar average wage (approximately \$57,000).

Consistent with past years, the cost of wages represented 34% of turnover, varying slightly by business size, from 46% among small to 32% of large enterprise turnover.

Independent retail nursery and landscape supply chain data validation

Purchase data from the Independent Retail and Landscape Supply Chain Report (under separate cover) validates production nursery sales data and confirms the validity of survey methodology and data extrapolation techniques implemented.

Conclusions and recommendations:

Project processes and methodology:

- ❖ Strong participation throughout NY17008's 3 survey waves, including during COVID-19 disruptions, potentially indicates that the Project is perceived to provide value to the industry.
- ❖ Anecdotal evidence suggests that a strong communication campaign, randomised telephone calls encouraging participation and provision of the benchmarking data tool are essential to ensure a robust sample of nurseries participate.
- ❖ Longitudinal comparison of results shows similarities across most measures and the library of data collected each year creates a more robust dataset to inform data extrapolation, indicating the methodology is sound for this Project.
- ❖ Additionally, the Supply Chain Survey indicates a similar value of Greenlife purchased through wholesale nurseries by landscapers and independent retailers as that sold by production businesses. Positive sentiment, current and expected future industry growth is reflected across landscape, independent retail and production nursery sectors.

Survey results:

- ❖ Survey data suggests that demand for Greenlife has continued to increase since 2017 and combined with a greater consumer focus on gardening due to COVID-19 restrictions, has resulted in substantial sales growth and widespread confidence, which is now at its highest since the survey's inception.
- ❖ The large proportion of nurseries planning growth over the next 5 years and an expectation among independent retailers and landscapers that a greater number of plants will be purchased this financial year than last, may indicate that growth in the industry is likely to continue.

Main report

1. Background and methodology

Background

Historically, the nursery and garden industry's diversity and lack of engagement with data collection methodologies has meant accurate and credible statistical data has not been collected.

In 2017, the Nursery & Garden Industry Statistics project NY16004 implemented a different methodology and largely overcame these barriers to determine a volume and production value of the industry as well as sales channel, employment and sentiment data.

Consequently, Hort Innovation commissioned NY17008, a three year program (encompassing 2017-18 to 2019-20 financial years) to build upon the methodology and outputs from NY16004 and provide accurate, timely and longitudinal nursery industry data to inform industry decision making, resource prioritisation, investment evaluation, strategic planning activities and provide industry with an interactive benchmarking data tool.

Data in this Report is based on the third and final survey wave within the NY17008 Project and captures data from the 2019-20 financial year.

Data collection methodology

The 2019-20 data collection methodology remains consistent with the past 2 survey waves within the NY17008 project, ensuring reliability of data comparison year on year is maintained.

Throughout 2020, COVID-19 disruptions created additional consumer demand for Greenlife products and workload complying with Government regulations. As a result, encouraging participation in the survey was more challenging than past years, however, the team managed 292 interviews, slightly less than the target quota (300).

In 2020, the following stages were undertaken to allow appropriate monitoring of progress and to maximise participation:

Stage 1:

- A random sample of Greenlife producers contacted by experienced members of the interview team
- Respondent contact details confirmed and appointments made to complete the survey.

Stage 2:

- Prior to completing the survey, respondents receive a confidentiality statement (appendix 1), snapshot of the industry (from 2019 results) and full copy of the questionnaire (appendix 2), ensuring awareness of the data required.

Stage 3:

- Computer Assisted Telephone Interviews (CATI) are conducted or if preferred, completed surveys may be returned via email or post.

The contact database developed in NY16004 and updated by NGIA and DTER in 2018, 2019 and 2020 was fed into the CATI program set up by Market Metrics (accredited market research call centre used for the project based in Victoria). All interviewers used for the project have considerable experience working on DTER's projects in the agriculture sector and almost all worked on the previous two waves of the survey. Prior to commencement, interviewers were thoroughly briefed on all aspects of the project by Daniel Watson, a senior consultant at DTER.

Initial contact, appointment setting and interviewing commenced on the 12th October 2020 and concluded on Wednesday 9th of December. The 2020 survey period was extended an additional 2 weeks due to challenges encouraging survey participation due to COVID-19 disruptions.

Consistent past surveys, a large proportion of respondents rescheduled appointment times, often on multiple occasions. Additionally, some respondents initially agreeing to provide information refused to do so following receipt of the list of data requirements.

In total, 292 interviews were completed, lower than in 2020 (305), on par with 2018 (292) and significantly higher than in 2017 (221 achieved). As a result, the sampling margin for error (at the 95% confidence level) is $\pm 5.2\%$ on national results.

195 interviews were completed via telephone at an average interview length of 22 minutes and 97 received through email. Consistent with past surveys, when telephone calls to production businesses ceased, receipt of email completes also stopped, indicating phone calls to respondents are required to stimulate completion of surveys.

Key anecdotal reasons for refusing to participate included:

- Excessively busy due to increased plant demand through COVID-19 and challenges meeting Government requirements.
- Challenges obtaining staff to accommodate increased demands
- Sensitive nature of the data required and confidentiality concerns
- Complexity of information required/data required not captured
- Respondent ill health
- Busy time of year (preference for survey to run in winter months)

Data weighting and number of Greenlife businesses

Based on past survey waves and the comprehensive number of calls made, it was possible to make assumptions on the number of businesses in each State and subsequently determine weighting figures that could be applied to the interviews achieved so that statistics

provided represent the entire Greenlife production industry, not only the sub-set of organisations participating in the study (these estimates are detailed below). It is important to note that the extrapolation of data makes the assumption that the sample for the project represents 'the universe' of Greenlife production organisations.

number of greenlife businesses estimated	national	nsw/act	vic	qld	sa	wa	tas	nt
2020	1,651	519	426	412	101	127	53	13

Confidence limits

sample base	margin for error (where 50% of respondents concur)
292	±5.2%
200	±6.5%
100	±9.5%
50	±13.7%
30	±17.7%

Handling of 'empty cells'/missing data

The data set includes a number of 'empty cells' or missing data, typically due to respondents being unaware of the number of plants sold or being unable to extract data according to requested categories and supply chain options.

To reliably weight and extrapolate data to represent the entire industry means these 'empty cells' need to be accounted for and the technique (detailed below) utilised in NY16004 is used in all NY17008 waves. Additionally, extrapolated results are informed through DTER's database of de-identified data.

NY16004 identified a considerable range in business sizes and a large variation in business data (for example selling \$1 plants through to \$1,500) therefore it was deemed inappropriate to apply an overall average to each empty cell. Consequently, where respondents were able to provide the number of plants sold or the value of plants sold, the missing category was applied data based on

information available (plant sales value to category, employee numbers, FTE, total turnover etc). For example, an organisation with 20 employees provided the total value of 'perennial, trees & shrubs' and 'bedding and potted colour' sold to retailers and landscapers but could not provide data on the number of plants sold in each category. In this scenario, averages for similar organisations (similar value sold to the category, size of organisation, same clients and products) was used to populate empty cells.

While it is acknowledged that a margin for error exists in the data provided in this report due to sampling, assumptions made and data provided by respondents, the report authors are reasonably confident it provides useful insights into the size of the Greenlife production industry as well as attitudinal data. DTER acknowledges this method may be a contributing factor in discrepancies between data collected for this project and historical data collection efforts.

2. Definitions and report notes

Due to very small sample sizes in South Australia, Western Australia, Tasmania, Northern Territory and Australian Capital Territory, data is presented nationally and by business size rather than by State and Territory.

While the Australian Bureau of Statistics (ABS) splits Greenlife production businesses into 3 classes (\$200,000 turnover or less; \$200,001 to \$2 million and more than \$2 million), DTER believes a 'micro' business is more appropriately defined as having turnover of \$500,000 or

less. Consequently, business sizes included in this report vary from those presented by ABS in the past.

The majority of data collected for the project is based on the 2019-20 financial year, comparisons made to 2019 data, will be based on the 2018-19 financial year for most variables.

Throughout this report, reference is made to various segments, defined in the table below:

Enterprise phase	Steady, happy	Those whose business is in status due to being at an acceptable stage
	Steady, unable	Those whose business is in status due to being unable to expand
	Expansion	Those whose business is in an expansion phase
	Winding down	Those contracting size of enterprise
business size (turnover)	Small	Turnover less than \$500,000
	Medium	Turnover between \$500,000 and \$2,000,000
	Large	Turnover greater than \$2,000,000
	Don't know (don't know t/o)	Unable to provide turnover value
Perception of industry	Positive	Those feeling very or fairly positive about the future of the nursery industry
	Negative	Those feeling very or fairly negative about the future of the nursery industry
	Neutral	Those feeling neutral or unsure about the future of the nursery industry
*	Small sample size	Sample less than n=30, caution required interpreting data

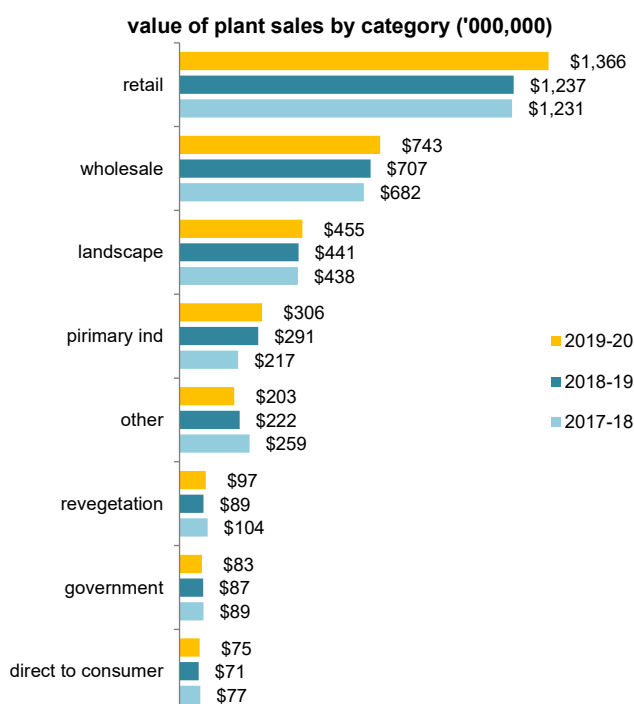
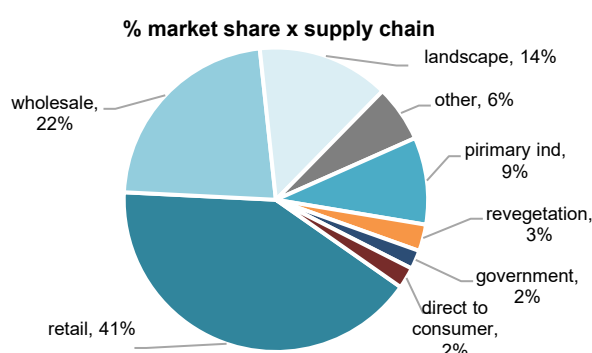
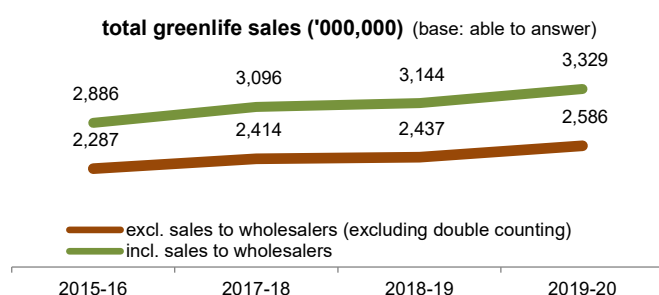
3. Number and value of plants sold

3.1 Number and value of plants sold to clients by category

Questions asked:

Q13. In the 2019-20 financial year, approximately how many plants did your business sell to ...?

Q14. And what was the total value excluding GST in the plants sold to (from Q13) in 2019-20 ...



Key findings

- Survey data suggests production nursery sales increased 6% year on year in 2019-20, continuing an upwards trend evident since 2015-16.
- In total, an estimated 2.2 billion plants were sold, valued at approximately \$3.3 billion. When sales to other production businesses are excluded (ensuring figures are not double counted), industry turnover is estimated to be approximately \$2.6 billion, up from \$2.4 billion in 2018-19.
- Retail (independent and 'big box') continues to be the largest sales category, representing 41% of all

production sales. Compared to 2018-19, sales to this sector increased approximately 10% in 2019-20 to an estimated \$1.37 billion.

- Additionally, survey results suggest the value of plants sold to retail, wholesale nursery, primary industry and the landscape, builder and developer sectors has grown over the past 3 years.
- Readers should note 'other' mentions include totals for those people unable to provide breakdowns by category.

Implications

Widespread industry confidence and expansion evident in past surveys, combined with consumer demand for plants through COVID-19 restrictions has resulted in substantial sales growth over the past 12 months.

client category for plants sold (estimated)**	2019 survey (2018-2019 year)	2020 survey (2019-2020 year)
Production nurseries:		
% selling to sector	68%	63%
Total number of plants	691,221,473	608,562,513
Total value of plants	\$706,626,196	\$742,914,018
Retail nurseries:		
% selling to sector	63%	62%
Total number of plants	332,741,128	366,062,302
Total value of plants	\$1,237,046,784	⬆️ \$1,365,711,785
Revegetation, including forestry:		
% selling to sector	17%	21%
Total number of plants	78,785,432	191,471,681
Total value of plants	\$89,315,393	\$96,697,227
Local, State and Federal Government Departments:		
% selling to sector	29%	32%
Total number of plants	30,245,174	25,324,309
Total value of plants	\$87,077,332	\$82,532,822
Landscapers, developers and builders:		
% selling to sector	43%	49%
Total number of plants	73,951,806	104,624,008
Total value of plants	\$440,898,783	\$454,720,332
Primary industry:		
% selling to sector	18%	20%
Total number of plants	620,592,467	794,904,753
Total value of plants	\$290,507,881	\$306,170,367
Direct to consumer:		
% selling to sector	28%	30%
Total number of plants	9,112,703	12,453,326
Total value of plants	\$71,153,932	\$75,199,529
Other (includes those unable to breakdown by category) : +		
% selling to sector	11%	11%
Total number of plants	191,741,115	78,620,514
Total value of plants	\$221,642,342	\$203,375,940
Total plants sold (including those sold to wholesalers):		
Total number of plants	2,028,391,297	2,182,023,407
Total value of plants	\$3,144,268,644	⬆️ \$3,328,548,546
Total plants sold (excluding double counting):		
Total number of plants	1,337,169,824	1,573,460,894
Total value of plants	\$2,437,642,447	⬆️ \$2,585,634,527

Due to small sample sizes by category, only national data is provided.

NOTE: Data is for the 2019-20 year and not necessarily representative of sales in every year.

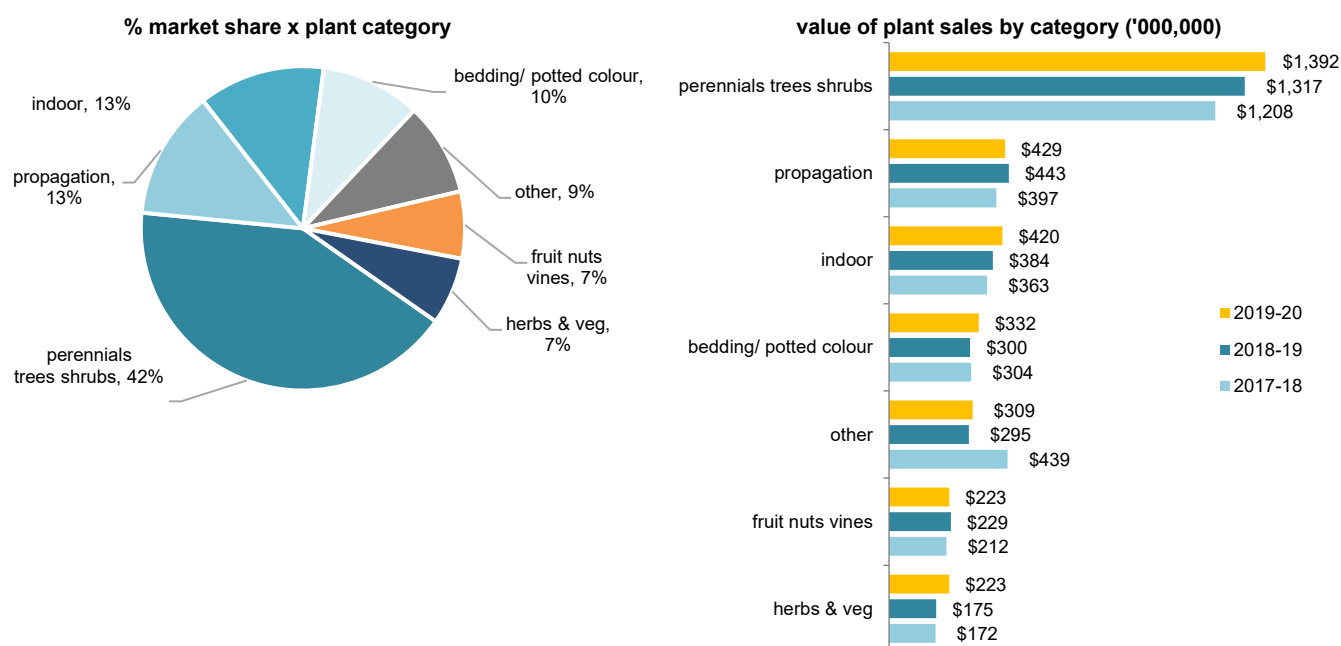
⬆️ significant increase since 2018-19; ⬇️ significant decrease since 2018-19 +Significance testing not conducted, small sample size
 **significance testing not conducted on the number of plants sold due estimated figures provided by some respondents

3.2 Number and value of plants sold by plant category

Questions asked:

Q15. During the 2019-20 financial year, approximately how many plants did you sell in the following categories?

Q16. And what was the total value excluding GST of (from Q15) sold?



Key findings

- Sales of perennials, trees and shrubs remains the largest plant category (62% of production businesses selling to the sector, was 64% in 2018-19) and represents 42% of all sales. Extrapolation of respondents' data suggests that over the past 12 months the channel has grown approximately 6%, to an estimated \$1.4 billion in 2019-20.
- In total, the top 23% of businesses are responsible for 76% of production nursery turnover.
- Consistent with past years, allocating sales to plant categories and providing an accurate number of plants sold (due to selling trays etc.) remains challenging for many businesses.
- Readers should note 'other' mentions include totals for those people unable to provide breakdowns by category.

Implications

Sales of perennials, trees and shrubs continue to dominate plant category sales and while greater granularity in categories is desired, difficulty allocating sales by plant categories means caution is required.

client category for plants sold 2019-20 (estimated)**	2019 survey (2018-2019 year)	2020 survey (2019-2020 year)
Propagation plants:		
% selling propagation plants	29%	31%
Total number of plants	676,515,498	681,146,159
Total value of plants	\$443,149,102	\$428,617,910
Herbs and vegetables:		
% selling herbs and vegetables	14%	14%
Total number of plants	762,791,634	698,253,436
Total value of plants	\$175,227,939	⬆️ \$222,952,534
Fruit trees, nut trees, vines:		
% selling fruit trees, nut trees, vines	20%	23%
Total number of plants	26,526,443	27,190,137
Total value of plants	\$228,933,978	\$222,923,522
Bedding and potted colour:		
% selling bedding, potted colour	16%	16%
Total number of plants	134,190,728	163,694,986
Total value of plants	\$300,241,137	\$331,790,883
Indoor plants:		
% selling indoor plants	20%	26%
Total number of plants	62,354,827	78,844,705
Total value of plants	\$384,042,554	\$420,482,957
Perennials, trees and shrubs:		
% selling perennials, trees, shrubs	64%	62%
Total number of plants	282,702,200	322,653,364
Total value of plants	\$1,317,196,214	\$1,392,774,709
Other (includes those unable to breakdown by category):⁺		
% selling other	10%	11%
Total number of plants	83,309,966	210,240,619
Total value of plants	\$295,477,720	\$309,006,030
Total plants sold (including those sold to wholesalers):		
Total number of plants	\$2,028,391,296	2,182,023,407
Total value of plants	\$3,144,268,644	⬆️ \$3,328,548,546
Total plants sold (excluding double counting):		
Total number of plants	1,337,169,824	1,573,460,894
Total value of plants	\$2,437,642,447	⬆️ \$2,585,634,527

Due to small sample sizes by category, only national data is provided.

⬆️ significant increase since 2018-19; ⬇️ significant decrease since 2018-19 ⁺Significance testing not conducted, small sample size

NOTE: Data is for the 2019-20 year and not necessarily representative of sales in every year

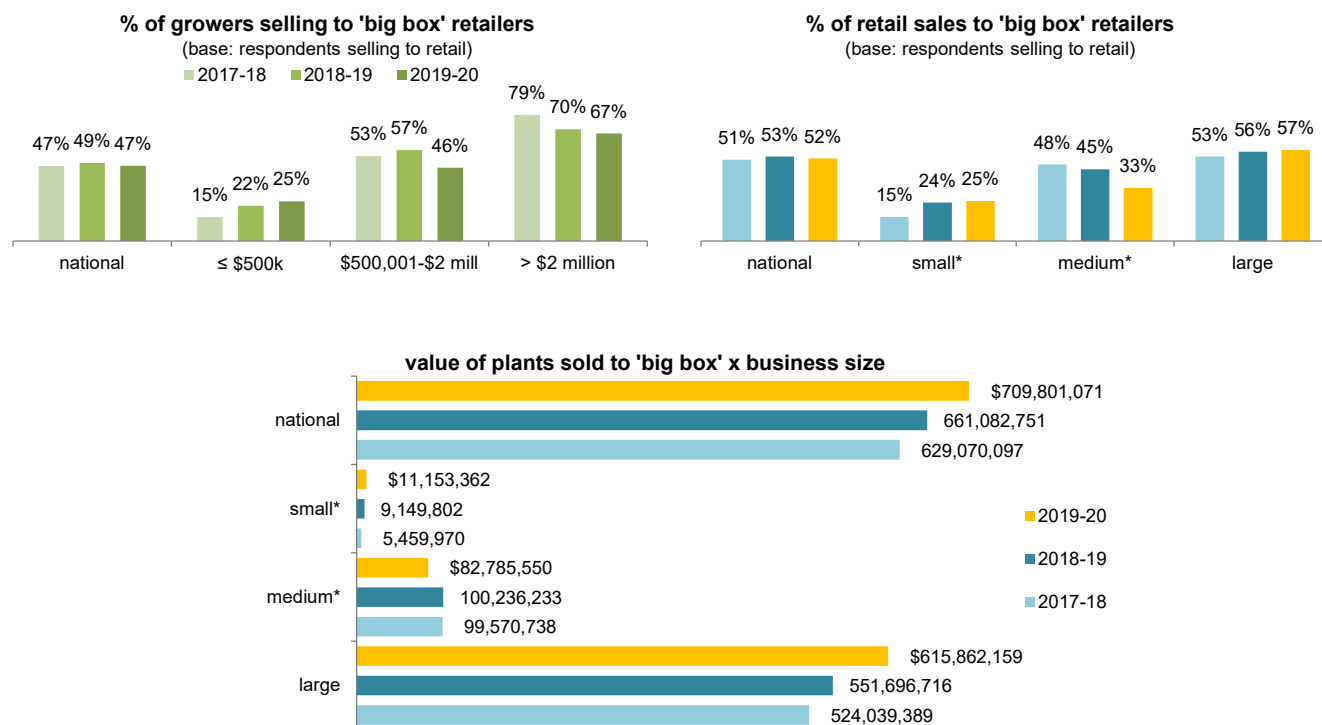
**significance testing not conducted on the number of plants sold due estimated figures provided by some respondents

3.3 Sales to 'big box' retailers

Questions asked:

Q17. In 2019-20, did you sell plants to 'big box' retailers such as Bunnings, Mitre 10, Big W or other large retailers?

Q18. What percentage of your sales to retail nurseries went to these 'big box' retailers?



Key findings

- Consistent with overall sales to the retail channel, the value of sales to 'big box' retailers has trended upwards since 2017-18 and in total, represent 52% of the retail channel.
- Survey results suggest that compared to 2018-19, sales to 'big box' retailers increased an estimated 7% to approximately \$710 million in 2019-20.
- Although small sample sizes mean that caution is required interpreting data by business size segment, production nurseries with turnover exceeding \$2 million represented 87% of all sales to 'big box' retailers.

Implications

Survey results suggest that sales to 'big box' retailers increased in line with sales to independent retailers.

plants sold to 'big box' retailers 2019-20 (estimated)	% mentioning (base: all respondents selling to retail/able to answer)				
	turnover				
	national	≤ \$500k*	\$500,001 to \$2 million*	> \$2 million	don't know t/o*
% selling to 'big box' retailers	47%	25%	46%	67%	-
% of retail sales to 'big box' retailers	52%	25%	33%	57%	-
Total value of plants sold	\$709,801,071	\$11,153,362	\$82,785,550	\$615,862,159	-

NOTE: Data is for the 2019-20 year and not necessarily representative of sales in every year.

*Caution, sub sample smaller than N=30

3.4 Number and value of plants purchased for immediate resale

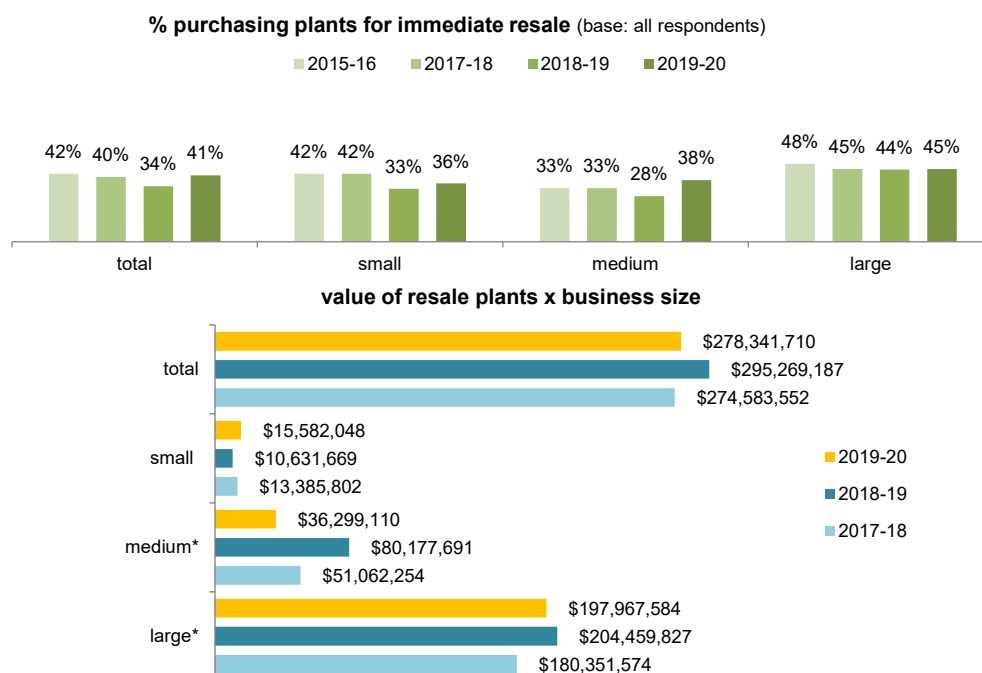
Questions asked:

Q8. During the 2019-20 financial year, did you purchase plants from other Greenlife producers or nurseries for immediate resale?

Q9. If yes: What was the total value of the plants purchased from other Greenlife producers or nurseries?

Q10. How many plants in total did you purchase?

Q11. What was the total value of these plants when sold?



Key findings

- A slightly (but not statistically significantly) higher proportion of production businesses purchased plants to be immediately resold in 2019-20 (41%) than in the previous financial year (34%).
- However, the total value of plants is slightly lower (approximately \$278 million, down from \$295 million in 2018-19).
- Average mark-up for plants immediately resold remains comparable to the past 2 survey waves (74%, was 69% in 2018-19 and 71% in 2017-18).

Implications

Purchasing plants for immediate resale remains common. It will be interesting to monitor these results in next year's survey to identify whether a greater number of businesses purchase plants from other businesses to offset stock shortages.

plants purchased for immediate resale in 2019-20 (estimated)	% mentioning (base: respondents able to provide data)				
	national	≤ \$500k (small)	\$500k to \$2 mil (medium)*	> \$2 million (large)	don't know t/o*
% purchasing plants for immediate resale	41%	36%	38%	45%	75%
Total number of plants purchased**	88,585,634	1,361,544	4,225,130	82,998,960	-
Total value of plants when purchased	\$160,168,115	\$7,893,456	\$25,376,250	\$110,958,762	\$15,939,648
Total value of plants when sold	\$278,341,710	\$15,582,048	\$36,299,110	\$197,967,584	\$28,492,968
Average % mark-up	74%	97%	43%	78%	79%

*Caution, sub sample smaller than N=30.

**significance testing not conducted on the number of plants sold due estimated figures provided by some respondents

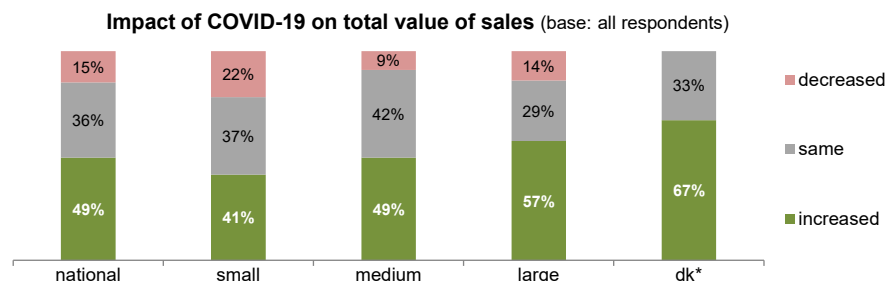
4. Estimated impact of COVID-19 disruptions/restrictions on sales

Question asked:

Q19. For the 2019-20 financial year, did COVID-19 disruptions/restrictions have any impact on the total value of your Greenlife sales?

Q20. And as a result of COVID-19 disruptions/restrictions, did the total value of your Greenlife sales in 2019-20 ...?

Q21. In your best estimate, what proportion did your total Greenlife sales increase/decrease in 2019-20 as a result of COVID-19 disruptions/restrictions?



Key findings

- In 2019-20, COVID-19 disruptions impacted the value of sales for 64% of production businesses. Most commonly resulting in an increase in sales (49%), but almost 1 in 5 (15%) experienced a decrease.
- Although not quite statistically significant, large businesses (57%) were more likely to mention increased sales value than small counterparts (41%).
- Among businesses experiencing a positive impact, on average, sales are estimated to have increased 26%.
- Conversely, where COVID-19 negatively impacted sales, on average, sales are estimated to have decreased 24%.

Implications

As expected, COVID-19 has had a positive impact on overall Greenlife sales, but it should be noted that the disruption reduced Greenlife sales for almost 1 in 5 businesses.

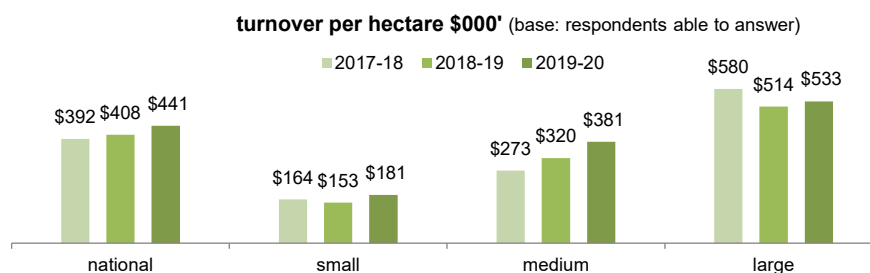
COVID-19 impact	% mentioning (base: all respondents able to answer)				
		turnover			
	national	≤ \$500k	\$500,001-\$2 mil	> \$2 million	don't know t/o*
Impacted by COVID-19 disruptions	64%	63%	58%	71%	67%
Sales increased as a result of COVID-19	49%	41%	49%	57%	67%
Average % sales increased (base: sales increased as a result of COVID-19)	26%	29%	26%	22%	38%
Sales decreased as a result of COVID-19	15%	22%	9%	14%	0%
Average % sales decrease (base: sales decreased as a result of COVID-19)	24%	28%	20%	17%	-

*Caution sub sample smaller than N=30.

5. Turnover per hectare and overall production area

Question asked:

Q7. What is the total farm area in each State used for nursery production – and I would like you to give me outdoor area first and then undercover including greenhouses, cold frames, cloth houses and lath houses?



Key findings

- Survey data suggests that on average, turnover per hectare has trended upwards over the past 3 financial years.
- Consistent with past results, extrapolated data suggests that turnover per hectare increases in correlation with increasing business size.
- Compared to 2018-19, the total turnover generated per hectare increased significantly in 2019-20.

Implications

In a good result, increased sales over the past 3 years appears to have resulted from production nurseries generating greater turnover per hectare rather than expansion of land.

production area (hectares) (estimated)	% mentioning (base: respondents able to provide data)				
	turnover				don't know t/o*
	national	≤ \$500k	\$500,001 to \$2 million	> \$2 million	
Estimated turnover per hectare (outdoor + indoor)	⬆️ \$441,284	⬆️ \$180,726	⬆️ \$380,713	\$532,780	-
Outdoor area (approximate)					
Average ha per farm	3.8	1.4	2.6	⬇️ 8.4	1.5
Median ha per farm	1.0	0.6	1.3	⬇️ 2.1	0.8
Estimated total outdoor area (ha)	6,278	833	1,299	4,048	97
Indoor area (approximate)					
% of farms with indoor area	85%	83%	83%	92%	74%
Average ha per farm with indoor area	0.8	0.3	0.8	1.3	0.4
Median ha per farm with indoor area	0.4	0.1	0.4	0.7	0.2
Estimated total indoor area (ha)	1,264	206	406	628	24

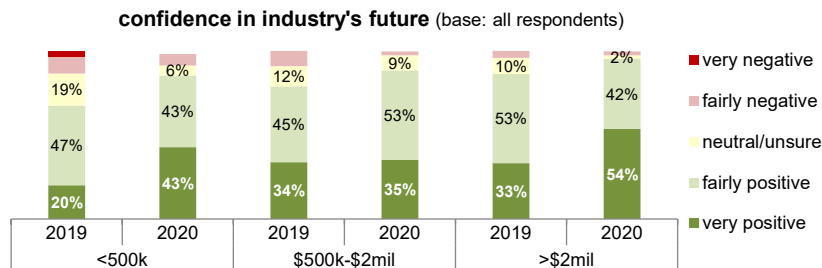
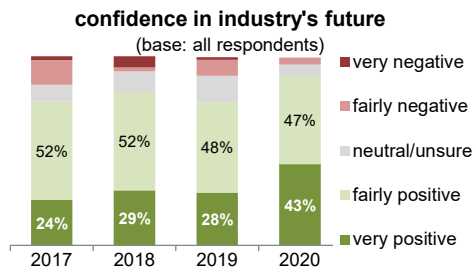
⬆️ significant increase since 2019; ⬇️ significant decrease since 2019 *Caution sub sample smaller than N=30

6. Industry confidence

Questions asked:

Q27. Overall, how do you feel about the future of the nursery and garden industry? Would you say you feel (read out)

Q28. Why do you say that?



Key findings

- The proportion of respondents *very* to *fairly* positive towards the industry's future has increased significantly over the past 12 months, resulting in the highest proportion (90%) since the survey's inception in 2017.
- The key driver of positivity is product demand and compared to 12 months ago, the proportion of respondents mentioning demand due to environmental benefits has increased significantly.
- Additionally, demand created by COVID-19 disruptions and a greater focus on gardening was mentioned by 30% of respondents.
- Only 4% of respondents perceive the industry's future negatively, the lowest since the survey's inception.
- Negativity is mainly due to concerns with demand, including due to dry conditions and an oversupply of plants post COVID-19 disruption.

Implications

Survey results indicate that confidence towards the industry's future is at its highest since 2017.

confidence	% mentioning (base: all respondents)				
	Turnover				don't know t/o* (n=12)
	national (n=292)	≤ \$500k (n=104)	\$500,001 to \$2 mil (n=89)	> \$2 million (n=87)	
Very positive	43%	43%	35%	54%	25%
Fairly positive	47%	43%	53%	42%	67%
Neutral	5%	6%	8%	1%	0%
Fairly negative	4%	7%	2%	2%	0%
Very negative	0%	0%	1%	0%	0%
Can't say	1%	2%	0%	1%	8%
Total: positive	90%	85%	88%	95%	92%
Total: negative	4%	7%	3%	2%	0%

reasons for level of confidence (main mentions)	% mentioning (base: all respondents)				
	Turnover				don't know t/o* (n=12)
	national (n=292)	≤ \$500k (n=104)	\$500,001 to \$2 mil (n=89)	> \$2 million (n=87)	
Positive mentions:					
Total: Demand for product	75%	74%	70%	82%	66%
Product demand (general)	32%	35%	24%	35%	49%
COVID driving demand/focus on gardening	30%	24%	32%	36%	17%
DPI/environmental aspects creating demand	13%	20%	10%	8%	0%
Strong sales/positive industry	10%	4%	13%	14%	9%
Negative mentions:					
Total: Decreased demand for product	8%	10%	9%	4%	17%
Effect of climate on demand/drought	4%	7%	5%	1%	8%
Concerns with demand/oversupply post COVID	5%	6%	4%	5%	9%
Specific mentions re supplying Bunnings	3%	4%	2%	2%	9%

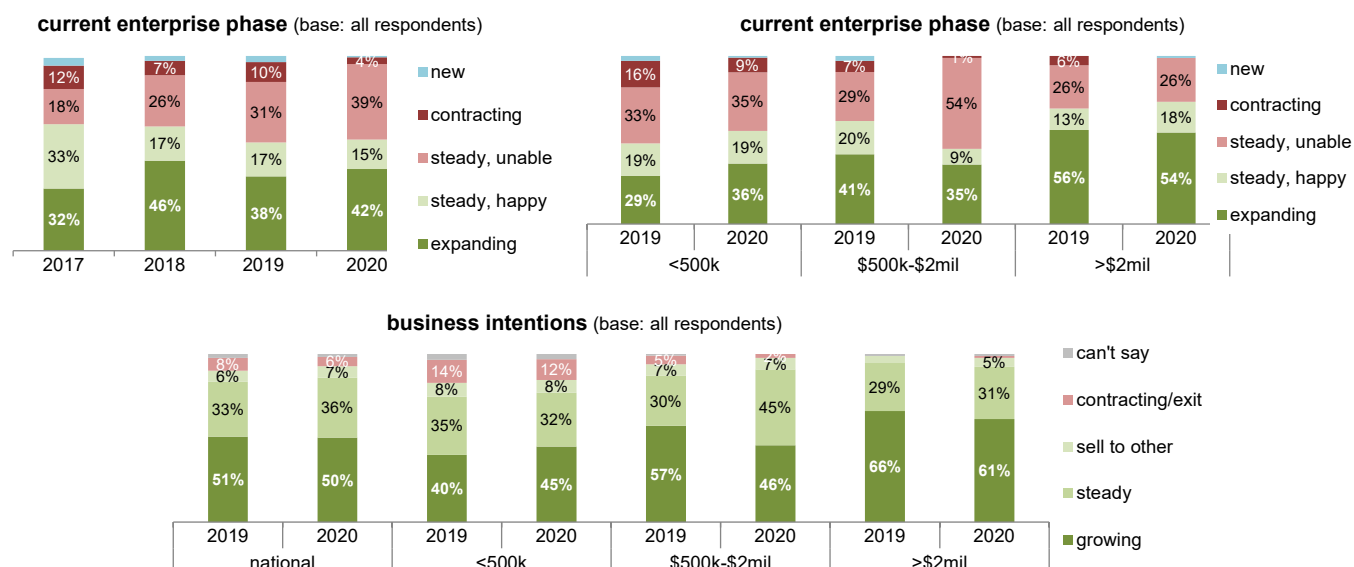
↑ significant increase since 2019; ↓ significant decrease since 2019 *Caution sub sample smaller than N=30.

7. Current business phase and future intentions

Questions asked:

Q25. Which of the following best describes your nursery business over the past few years?

Q26. At this point in time, what is the intention for the business over the next 5 years?



Key findings

- Nationally, 42% of production businesses are currently expanding, 54% steady and only 4% are contracting or winding down.
- Consistent with past results, expansion is significantly more widespread among businesses turning over greater than \$2 million. However, more than one third of smaller counterparts are also expanding.
- Notably, the proportion of businesses in a steady phase, but unable to expand has trended upwards since 2017.
- Over the next 5 years, production nurseries are significantly more likely to grow their business (50% mentioning), rather than contract (3%) or exit the industry (4%).

Implications

While some nurseries may have achieved their short term growth potential, a large group expect growth to continue. Results from the supply chain survey (detailed separately in DTER's Supply Chain Survey Report) suggest growth in plant numbers purchased by landscapers and independent retail nurseries.

current business stage	% mentioning (base: all respondents)				
	national (n=292)	≤ \$500k (n=104)	\$500,001 to \$2 mil (n=89)	> \$2 million (n=87)	don't know t/o* (n=12)
Expanding	42%	36%	35%	54%	50%
Steady, where want it to be	15%	19%	9%	18%	0%
Steady, unable to expand	39%	35%	54%	26%	50%
Contracting/winding down	4%	9%	1%	0%	0%
New business	1%	1%	0%	1%	0%

future intentions for business	% mentioning (base: all respondents)				
	national (n=292)	≤ \$500k (n=104)	\$500,001 to \$2 mil (n=89)	> \$2 million (n=87)	don't know t/o* (n=12)
Growing business	50%	45%	46%	61%	50%
Remaining steady	36%	32%	45%	31%	33%
Contracting/winding down	3%	7%	1%	1%	0%
Sell as business to other person/company	5%	7%	4%	4%	8%
Sell land to developer	2%	1%	3%	1%	0%
Close business	2%	6%	1%	0%	0%
Can't say	2%	3%	0%	1%	8%

▲ significant increase since 2018-19; ▼ significant decrease since 2018-19

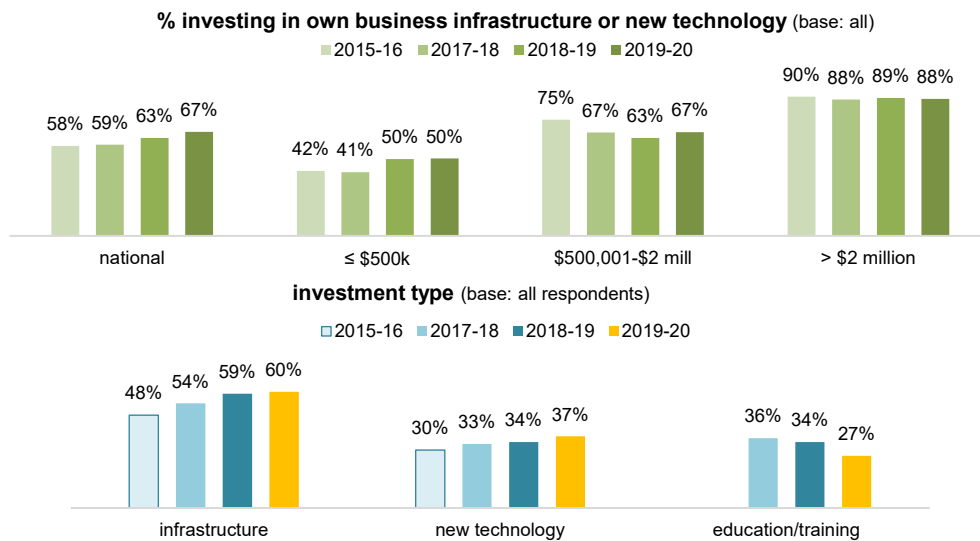
*Caution sub sample smaller than N=30.

8. Business investment

Question asked:

Q32. During the 2019-20 financial year, did you invest in either infrastructure or new technology or training and education for the business?

Q33. If yes: Approximately how much did you invest in infrastructure? Q34. If yes: Approximately how much did you invest in new technology?



Key findings

- Since 2015-16 an upwards trend is evident in the proportion of businesses investing in new technology or infrastructure (now 67%).
- While investment in training and education appears to be trending downwards, COVID-19 disruption on face to face and group activities is likely to have impacted the 2019-20 result.
- Consistent with past results, businesses with turnover exceeding \$2 million are significantly more likely than smaller counterparts to invest in each investment type.

Implications

Investment trends reflect widespread industry profitability and positivity.

business investment	% mentioning (base: all respondents able to answer)				
	turnover				
	national	≤ \$500k*	\$500,001-\$2 mil*	> \$2 million	don't know t/o*
% making business investment	67%	50%	67%	88%	73%
% investing in infrastructure	60%	43%	59%	79%	64%
Average amount invested in infrastructure	📈 \$123,759	\$57,862	\$108,569	📉 \$187,220	\$67,755
Total invested in infrastructure (extrapolated)	📈 \$121,036,025	\$15,787,765	\$34,028,529	\$70,018,309	\$1,201,422
% investing in new technology	37%	20%	35%	60%	28%
Average amount invested in new technology	\$60,296	\$13,890	\$35,823	\$95,125	\$30,512
Total invested in new technology (extrapolated)	\$36,298,084	\$1,631,541	\$6,413,756	\$27,871,268	\$381,519
% investing in education and training	27%	18%	28%	40%	9%

📈 significant increase since 2018-19; 📉 significant decrease since 2018-19

*Caution sub sample smaller than N=30.

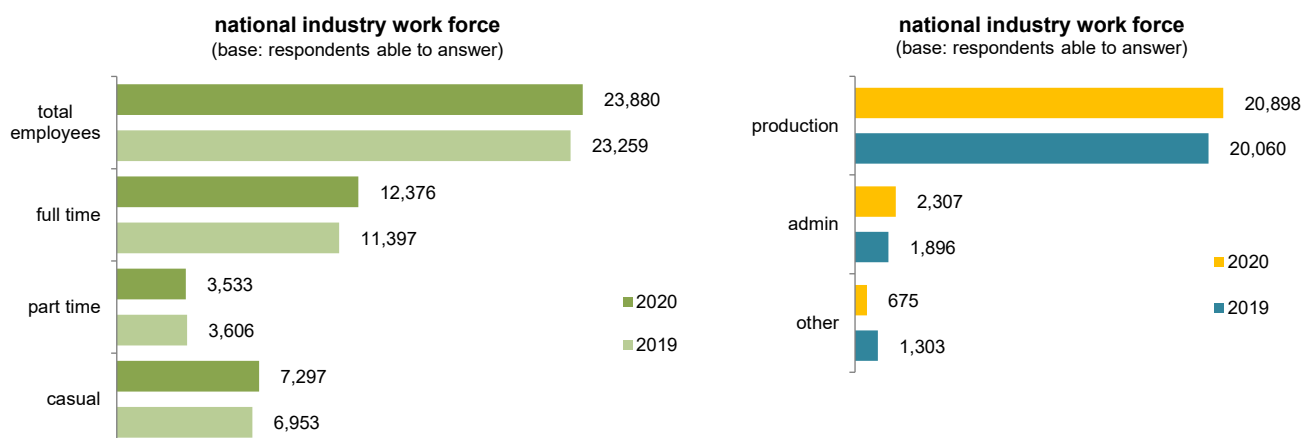
9. Industry workforce

9.1 Number of people employed and roles

Questions asked:

Q3. How many people including yourself are employed in the business in each of the States it operates in for the following categories?

Q4. And what would be the full time equivalent for each of the following in the States you operate in?



Key findings

- When margin for error is considered, survey results suggest production nurseries employ between 23,000 and 25,000 staff.
- In total, these staff represent approximately the FTE of between 18,500 and 20,500.

Implications

Extrapolated survey results estimate the production nursery workforce to be between 23,000 and 25,000 staff.

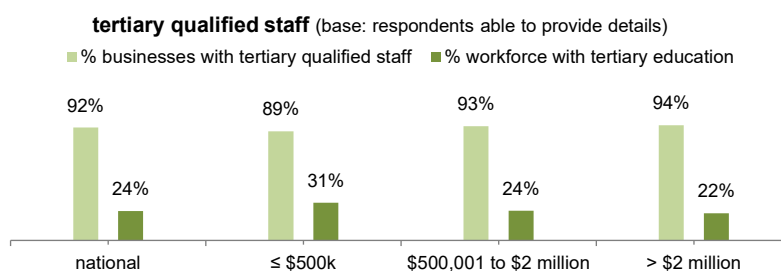
total people employed by production greenlife nurseries (estimated)	% mentioning (base: all respondents able to answer)				
	national (n=292)	≤ \$500k (n=104)	\$500,001 to \$2 mil (n=89)	> \$2 million (n=87)	don't know t/o* (n=12)
Total nursery production	20,898	↓ 2,790	↓ 5,035	12,262	812
Total admin	↑ 2,307	↑ 532	↑ 574	1,119	83
Total people employed	23,880	↓ 3,668	5,780	13,538	895
Full time equivalent	19,701	↑ 2,429	↓ 4,483	12,442	346

↓ significant decrease since 2019; ↑ significant increase since 2019 *Caution, sub sample smaller than N=30

9.2 Number of tertiary qualified staff

Question asked:

Q5. What proportion of your nursery staff (including owners) have trade level certificate (not traineeship level), diploma, degree or higher qualifications in any field, including, but not limited to horticulture?



Key findings

- Tertiary qualified staff are employed in more than 9 in 10 (92%) production businesses.
- Notably, there is no variation by business size.
- When survey respondent data is extrapolated, it can be estimated that approximately 5,700 tertiary qualified staff are employed, equivalent to almost one quarter (24%) of the workforce.

Implications

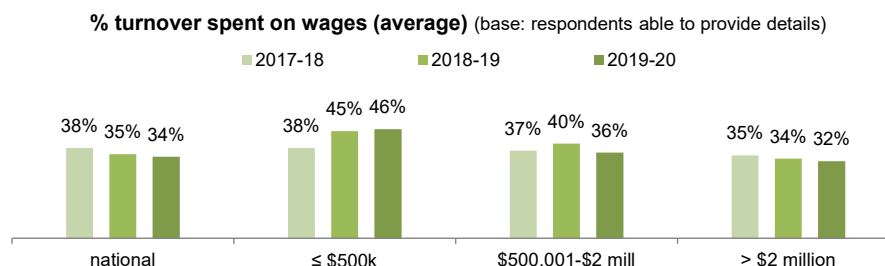
Results suggest that most Greenlife business have tertiary qualified staff.

tertiary qualifications (estimated)	% mentioning (base: all respondents able to answer)				
	national (n=292)	≤ \$500k (n=104)	\$500,001 to \$2 mil (n=89)	> \$2 million (n=87)	don't know t/o* (n=12)
Businesses with at least 1 tertiary qualified staff member	92%	89%	93%	94%	100%
Total number of tertiary qualified staff in industry	5,722	1,123	1,404	2,994	202
Total % of workforce with tertiary qualifications	24%	31%	24%	22%	23%

9.3 Wages paid

Question asked:

Q6. What was the total cost of wages for the business in the 2019-20 financial year, including your own?



Key findings

- Survey results suggest that in 2019-20 production nurseries paid an estimated \$1.13 billion in wages (up from \$1.11 billion in 2018-19).
- Over the past 3 surveys, the average wage has not varied significantly and remains approximately \$57,000.
- Similarly, in line with 2018-19, wages last year represented 34% of total turnover in 2019-20 (35% in 2018-19). Although results suggest the proportion of turnover spent on wages is lower among businesses with turnover exceeding \$2 million than less than \$500,000 the difference is not quite statistically significant.
- It should be noted the figures represented in this section include wages paid to business owners and variation in profitability is likely to result in the fluctuation seen in businesses turning over less than \$2 million.

Implications

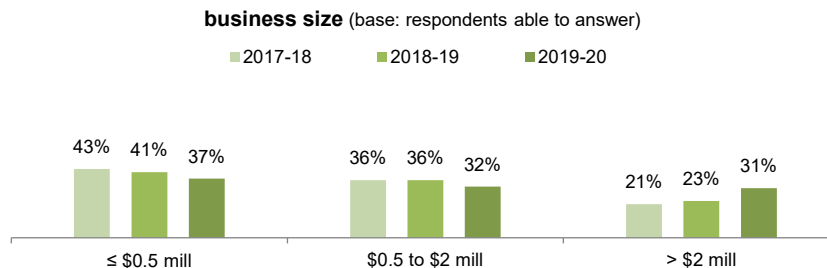
Results suggest that increased turnover in 2019-20 was associated with an increase in the amount of wages paid.

cost of wages in 2019-20 (estimated)	% mentioning (base: all respondents able to answer) turnover				
	national	≤ \$500k	\$500,001-\$2 mill	> \$2 million	don't know t/o*
Approximate total cost of wages	\$1,127,084,678	↑ \$85,021,007	\$229,422,079	\$799,784,150	\$12,857,442
Average wage based on FTE (including owners)	\$57,210	\$34,996	\$51,172	\$64,281	\$37,147
% of turnover spent on wages (average, including owners)	34%	45%	35%	32%	-

↑ significant increase since 2018-19

*Caution, sub sample smaller than N=30.

10. Organisation size (based on survey sample)



Key findings

- Consistent with past survey waves, the survey sample provides a spread of businesses sizes.
- While incremental business growth may mean that businesses have tipped in to the next turnover bracket

(for example, those turning over \$1.95 million now turning over \$2.05), a significantly higher proportion of businesses turning over greater than \$2 million participated in 2019-20 compared to 2018-19.

Implications

COVID-19 disruptions may have resulted in a greater number of larger businesses participating in this year's survey and as a result data has been weighted by size to ensure that large businesses are not over represented when extrapolating data.

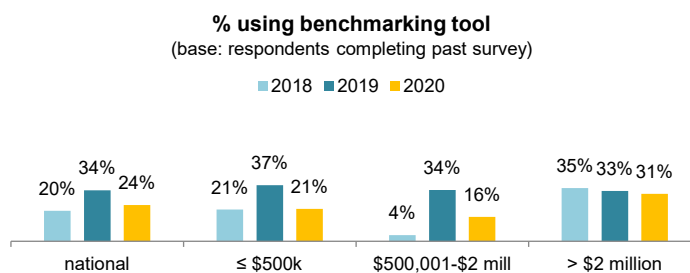
business turnover	% mentioning (base: respondents able to provide data)	
	2019 survey (2018-2019 year)	2020 survey (2019-2020 year)
Less than \$500,000	41%	37%
\$500,001 to \$1,000,000	21%	18%
\$1,000,001 to \$1,500,000	12%	8%
\$1,500,001 to \$2,000,000	5%	5%
\$2,000,001 to \$2,500,000	3%	7%
\$2,500,001 to \$3,000,000	5%	4%
\$3,000,001 to \$3,500,000	2%	3%
\$3,500,001 to \$4,000,000	2%	2%
\$4,000,001 to \$4,500,000	2%	2%
\$4,500,001 to \$5,000,000	0%	2%
\$5,000,000 to \$10,000,000	5%	8%
\$10 million+	3%	5%

📈 significant increase since 2018-19; 📉 significant decrease since 2018-19

11. Benchmarking tool usage

Questions asked:

Q34. Have you or someone within your business used the excel data benchmarking tool that is sent to those completing the survey or is available on request through Hort Innovation or Greenlife Industry Australia?



Key findings

- Over the past 12 months, there has been a significant reduction in the proportion of respondents (participating in the prior year's survey) using the benchmarking data tool (24%, was 34%).
- This result is reflected across small and medium businesses, however, there is no significant variation in usage among those turning over greater than \$2 million (31%, was 33% in 2019).

Implications

Additional burden from COVID-19 related disruptions and product demand may have reduced the capacity for some organisations to use the benchmarking data tool over the past 12 months.

Notably, in 2020, DTER received a greater number of requests for the benchmarking data tool than in past years.

benchmarking tool usage	% mentioning (base: respondents participating in 2019 survey)				
	national (n=147)	≤ \$500k (n=43)	\$500,001-\$2 mill (n=38)	> \$2 million (n=64)	don't know t/o (n=2) *
Used benchmarking tool	↓ 24%	↓ 21%	↓ 16%	31%	0%
Have not used tool	↑ 62%	↑ 60%	↑ 73%	56%	100%
Have not received the data tool	5%	9%	0%	5%	0%
Unsure if received/used	9%	9%	11%	8%	0%

↑ significant increase since 2019; ↓ significant decrease since 2019 *Caution sub sample smaller than N=30.

12. Sample demographics

demographic metric	% of sample (base: all respondents)				
	national (n=292)	≤ \$500k (n=104)	\$500,001 to \$2 million (n=89)	turnover > \$2 million (n=87)	don't know t/o (n=12)*
Age:					
18 to 39 years	15%	12%	10%	23%	28%
40 to 59 years	50%	47%	55%	50%	44%
60 and older	35%	41%	35%	27%	28%
Average age	54	56	55	51	48
Average years business operated	31	24	29	43	21
Gender:					
Male	72%	66%	78%	79%	42%
Female	28%	33%	22%	21%	58%
Respondent role:					
Owner or joint owner of the business	↓ 72%	81%	80%	↓ 56%	54%
Manager	↑ 24%	16%	19%	↑ 39%	27%
Admin/Accounts	2%	2%	0%	2%	19%
Completed 2019 survey	50%	41%	43%	↑ 73%	17%

↑ significant increase since 2019; ↓ significant decrease since 2019 *Caution, sub sample smaller than N=30.

Appendix 1: Confidentiality statement



Down To Earth Research

ABN: 72 593 148 838
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Mobile: 0409 775 553
Email: admin@dter.com.au

12 October 2020

Nursery and Garden Industry Data & Statistics Collection

Confidentiality Statement

Thank you for your interest in providing data for the Hort Innovation project NY17008 – Nursery Industry Research and Statistics. This project is a strategic levy investment that is part of the Hort Innovation Nursery Fund and follows on from the 2017, 2018 and 2019 waves that captured figures and trends on the value of Greenlife production and will collect information for the 2019-20 financial year.

Data for the project will be collected and stored securely by Market Metrics, an independent, fully accredited data collection company based in Frankston, Victoria. Their web address is <http://www.marketmetrics.com.au> should you wish to read about their services. Data and information collected will only be used for the purposes of this specific project.

In accordance with Australia's strict Privacy Principles, full confidentiality is assured and once information processing has been completed, any identifying data such as your name, company and contact details (including address and postcode) will be removed from your responses to the survey. While interviewing is taking place, data held by Market Metrics will remain identifiable in case there is an anomaly in the data that requires a call back and clarification. Once Market Metrics has completed this process, de-identification will occur.

On completion of all interviewing, Down To Earth Research (DTER) will be provided with a de-identified data set so data can be aggregated and analysed. DTER will then provide an overall industry report to Hort Innovation. No one from the nursery and garden industry, Hort Innovation, industry organisations and associations, government departments, etc. will know who participated in the study nor the information and data they provided.

Should you have any concerns whatsoever, please contact Daniel Watson from DTER (daniel@dter.com.au or 0409 775 553) or Brendan O'Keefe from Hort Innovation (Brendan.OKeefe@horticulture.com.au or 02 8295 2311).

Thank you again for your assistance. The data collected for the study will assist Hort Innovation and Greenlife Industry Australia to have more meaningful discussions with government organisations in the future. Additionally, survey data is used to provide a tool that your company will be able to use for benchmarking purposes and to better understand the size and nature of the industry.

Kind regards

Dan Watson
Research Director
Down To Earth Research

Appendix 2: CATI questionnaire

Q1. Firstly, I need to clarify how many sites your nursery business operates from _____ sites

If more than 1 site, ask Q2, others go to Q3:

Q2. What states and territories are the sites located in? *Multiple*

- NSW ----- 1
 Vic ----- 2
 Qld ----- 3
 SA ----- 4
 WA ----- 5
 Tas ----- 6
 NT ----- 7
 ACT ----- 8

If only 1 site OR more than 1 site, but in the same State, ask:

Q3. How many people including yourself are employed in the business in the following roles?

If more than 1 site in different States, ask:

Q3. How many people including yourself are employed in the business in each of the States it operates in for the following categories?

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Full time nursery production duties such as plant handling, sales and/or despatch etc.								
Part time nursery production duties								
Casual nursery production duties								
Full time business administration								
Part time business administration								
Casual business administration								
Other (specify)								

So just confirming that is a total of (total from Q3) people employed in some capacity by the business?

Q4. And what would be the full time equivalent (so 37.5 hours per week, including business owners) for each of the following in the States you operate in? *read out*

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Nursery production staff								
Business administration staff								
Other								

Q5. What proportion of your nursery staff (including owners) have trade level certificate (not traineeship level), diploma, degree or higher qualifications in any field, including, but not limited to horticulture?

Q6. (By State if operate in more than one State), what was the total cost of wages (inclusive of superannuation) for the business in the 2019-20 year, including your own?

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Total wages								

If only 1 site OR more than 1 site, but in the same State, ask:

Q7. What is the total area of the farm used for nursery production – and I would like you to give me outdoor area first and then undercover including greenhouses, cold frames, cloth houses and lath houses?

If more than 1 site in different States, ask:

Q7. What is the total farm area in each State used for nursery production – and I would like you to give me outdoor area first and then undercover including greenhouses, cold frames, cloth houses and lath houses?

DP note: allow for hectares and acres, convert at computer stage

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Outdoor space								
Indoor space								

Q8. During the 2019-20 financial year, did you purchase plants from other Greenlife producers or nurseries for immediate resale?

- Yes ----- 1 continue
 No ----- 2 go to Q12

Q9. What was the total value of the plants purchased from other Greenlife producers or nurseries?

- Q10. How many plants in total did you purchase?
- Q11. What was the total value of these plants when sold?
- Q12. Would you be able to provide accurate information on the total number or value of plants your business sold in the 2019-20 financial year or would you have to give me an estimate?
- Accurate ----- 1
- Estimate ----- 2
- Neither/refused ----- 3
- Q13. (By State if operate in more than one State) In the 2019-20 financial year, approximately how many plants (including resale) did your business sell to ... *read out*
- Q14. And what was the total value (including resale) excluding GST in the plants sold to (from Q13) in 2019-20 ...

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Whole sale nurseries:								
Number of plants								
Value								
Retail nurseries:								
Number of plants								
Value								
Revegetation, including forestry:								
Number of plants								
Value								
Local, State & Federal government departments including water corporations, RTA, schools, etc:								
Number of plants								
Value								
Landscapers, developers and builders:								
Number of plants								
Value								
Primary industry:								
Number of plants								
Value								
Direct to consumers/public:								
Number of plants								
Value								
Other (specify): <i>DP note: allow for more than 1 other</i>								
Number of plants								
Value								
Only able to provide total sold/total value:								
Number of plants								
Value								
TOTAL (computer calculate and confirm with respondent):								
Number of plants								
Value								

- Q15. During the 2019-20 financial year, how many plants did you sell in the following categories (including resale)?

If operating in more than one State:

During the 2019-20 financial year, how many plants did you sell in the following categories in each State?

Q16. And what was the total value of (from Q15) plants sold (including resale)? If you don't know exactly, please give us your best estimate. *Record in grid. National response only.*

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Propagation plants (eg, plugs, tubestock, cuttings, tissue culture):								
Number of plants								
Value								
Herbs and vegetables (excluding seeds and bulbs):								
Number of plants								
Value								
Fruit trees, nut trees and vines (excluding seeds and bulbs):								
Number of plants								
Value								
Bedding and potted colour (eg. annuals):								
Number of plants								
Value								
Indoor plants (excluding seeds, bulbs):								
Number of plants								
Value								
Perennials, trees and shrubs:								
Number of plants								
Value								
Other (including seeds, bulbs, water plants, shot seed, etc)								
Number of plants								
Value								
TOTAL (computer calculate and confirm with respondent):								
Number of plants								
Value								

If sell to retail (Q13 retail>0), ask Q17. Others go to Q19

Q17. In 2019-20 did you sell plants to 'big box' retailers such as Bunnings, Mitre 10, Big W or other large retailers?

Yes ----- 1 continue
No ----- 2 go to Q19

Q18. In total, what percentage of your sales to retail nurseries went to these 'big box' retailers?

Ask all:

Q19. For the 2019-20 financial year, did COVID-19 disruptions/restrictions have any impact on the total value of your Greenlife sales (all categories, not only sales to 'big box' retailers):

Yes ----- 1 continue
No ----- 2 go to Q22
Can't say ----- 3 go to Q22

If Q19=1, ask:

Q20. And as a result of COVID-19 disruptions/restrictions, did the total value of your Greenlife sales in 2019-20:

Increase ----- 1
Decrease ----- 2

If Q20 = code 1 ask:

Q21. (Q21a) In your best estimate, what proportion did your total Greenlife sales *increase* in 2019-20 as a result of COVID-19?

If Q20 = code 2 ask:

(Q21b) In your best estimate, what proportion did your total Greenlife sales *decrease* in 2019-20 as a result of COVID-19?

Q22. Do you know what your business's total operating costs or expenses were for the 2019-20 financial year, so this includes input costs, wages, cost of goods sold, transport costs/freight, rent etc?

Yes, can provide an accurate figure ----- 1 continue
Yes, but only a guesstimate ----- 2 continue
No ----- 3 go to Q24

Q23. And what were your total operating costs or expenses (including input costs, wages, cost of goods sold, transport costs, rent) (*or estimated total operating costs if Q22 = 2*) for the 2019-20 year?

DP note: If respondent says no in Q22, ask Q24. Others go to Q25

Q24. Approximately what proportion of your business turnover was taken up by operating costs or expenses for the 2019-20 financial year?

Q25. Which of the following best describes your nursery business currently. Is it ...

In an expansion phase ----- 1
In a steady phase because it was difficult to expand ----- 2
In a steady phase because it is where it needed to be ----- 3
In a contracting or winding down phase ----- 4
A new business just starting up ----- 5

Q26. At this point in time, what is the intention for the business over the next 5 years? Is the intention ...

To grow the business ----- 1

Keep the business in a steady phase -----	2
Contract or wind down the business -----	3
Sell it as a business to another person or company -----	4
Sell the land to a developer -----	5
Wind down and close -----	6
<i>Do not read out/avoid</i> Can't say -----	7

Q27. Overall, how do you feel about the future of the nursery and garden industry? Would you say you feel ... *(read out)*

Very positive -----	1
Fairly positive -----	2
Fairly negative -----	3
Very negative -----	4
<i>Do not read</i> Neutral -----	5
<i>Do not read</i> Unsure -----	6

Q28. Why do you say that? *Probe fully*

Q29. In the 2019-20 financial year, did your nursery business make an operating profit?

Yes -----	1
No -----	2
Don't know -----	3
Refused -----	4

Q30. And do you expect to make an operating profit in the 2020-21 financial year?

Yes -----	1
No -----	2
Don't know -----	3
Refused -----	4

Q31. Compared to the average of the past 5 years, do you expect profit levels for the 2020-21 financial year to be ... *read out*

Considerably higher -----	1
Slightly higher -----	2
About the same -----	3
Slightly lower -----	4
Considerably lower -----	5
<i>Avoid</i> Don't know yet -----	6

Q32. During the 2019-20 financial year did you invest in either infrastructure, new technology or training and education for the business?

Yes, new infrastructure -----	1	continue
Yes, new technology -----	2	
Yes, training and education -----	3	
No -----	4	go to Q35

If Q32 = code 1, ask:

Q33. Approximately how much did you invest in new infrastructure during 2019-20?

If Q32 = code 2, ask:

Q34. Approximately how much did you invest in new technology for the business during 2019-20?

Q35. Did you or someone within your business participate in the 2019 nursery industry statistics survey?

Yes -----	1
No -----	2
Can't say/unsure -----	3

Ask all:

Q36. Have you or someone within your business used the excel data benchmarking tool that is sent to those completing the survey or is available on request through Hort Innovation or Greenlife Industry Australia?

Yes -----	1
No -----	2
Haven't received -----	3
Can't say/unsure -----	4

Q37. May I ask your age please?

Q38. And how many years has your nursery business operated for?

Q39. Are you the ...

Owner or joint owner of the business -----	1
Manager -----	2
Other role (specify) -----	3

Q40. Record gender (do not ask)

Male -----	1
Female -----	2

Appendix L
Purchasers Report (Validation)
(2017/2018)

Hort Innovation

Nursery Industry Statistics 2017-18 to 2019-20 (NY17008)

Supply Chain and Data Validation Report 2017-18
December 2018
Not for distribution



DTER report authors:

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NGIA, DTER and AAC would like to thank all survey respondents for providing data and information for this study.

We appreciate the time and effort taken to provide a considerable amount of data and information.

DISCLAIMER

Data and insights provided in this report are based on information provided by survey respondents and subsequent assumptions made.

Readers should note there is a margin for error on all data provided and the report authors cannot guarantee the accuracy of information provided or assumptions made.

Summary

Background

Collecting accurate nursery and garden industry statistics has proven challenging in the past due to the industry's diversity and lack of engagement with data collection methodologies. In 2017, the Nursery & Garden Industry Statistics project NY16004 was commissioned to address data gaps for the industry. The project successfully collected production, sales channel, employment and sentiment data for the 2015-16 year from a random sample of production nurseries. A subsequent investment in data collection has been made (NY17008) focusing on data collection for the 2017-18, 2018-19 and 2019-20 financial years. An additional component has been included in the 2017-18 collection to validate data by surveying independent retail nurseries and landscape businesses who purchase from wholesale nurseries and comparing results from this approach with greenlife producer sales data. Due to being the largest of the greenlife sales channels and availability of contact lists through the Nursery and Garden Industry Australia (NGIA) and the various state associations, meant landscape and retail channels would be the most robust to validate against.

Methodology

To be able to compare data reliably, the same methodology of Computer Assisted Telephone Interviewing (CATI) surveys was undertaken with a random sample of independent retail nurseries and landscape builders and contractors purchasing directly from wholesale nurseries.

DTER compiled a database of NSW, QLD and VIC independent retailers and landscapers from industry associations, yellow pages and internet searches. When businesses no longer in the industry as well as those not purchasing through wholesalers are accounted for, it is estimated 1,477 NSW, QLD and VIC independent retail nurseries and 1,635 landscapers purchase through wholesale nurseries.

While similar difficulties to the greenlife survey arose during the interviewing process, including respondents rescheduling their interview times or not being available at the time and date they originally set, the project achieved the original aim of 100 interviews with landscapers (105 completed) and 100 with retail nurseries.

Survey results

Estimated greenlife production nursery sales to independent retail nurseries and purchase validation

The greenlife production nursery survey conducted as part of NY17008 estimates that between \$446 and \$511 million worth of plants were sold by greenlife production businesses to independent retailers based in QLD, NSW and VIC in 2017-18.

When data from interviews with 100 QLD, NSW and VIC independent retail nurseries is extrapolated to represent the 1,477 business (who purchase through wholesale nurseries), survey results suggest that purchases were valued at between \$382 and \$461 million. If nurseries listed as both wholesale and retail are included in the total population, this value increases to approximately \$470 million. Both results fall within an acceptable comparison range.

Estimated greenlife production nursery sales to landscape businesses and purchase validation

Sales to landscapers by greenlife production nurseries were estimated by NY17008 to be valued at approximately \$374 million.

Extrapolated Supply Chain Validation Survey data estimates that approximately \$328 and \$389 million worth of plants was purchased by through wholesale nurseries by landscape builders and contractors in 2017-18 – a result that also confirms NY17008 findings.

Expected value of plants purchased in 2018-19

Forty five percent (45%) of independent retail nurseries based in QLD, NSW and VIC expect purchases through wholesale nurseries to be greater this financial year than last and on average, predict an increase of approximately 21% worth of sales.

Similarly, 52% of QLD, NSW and VIC landscape respondents predict 2018-19 plant purchases to be greater than last financial year, with an average increase of 16% expected.

Proportion of turnover spent on greenlife purchases through wholesale nurseries

On average, independent retailers spend 20% of their total income on purchases through production nurseries, while the survey does not capture the mark-up applied when sold, it is likely to result in a substantially greater amount of overall turnover. Among landscapers, 5% of total income is spent on production nursery purchases.

Confidence

Three quarters (75%) of independent retail nurseries and 9 in 10 landscapers are positive about the future of their industries, including a high 38% of landscapers very positive (20% among retailers). In line with greenlife wholesale survey findings, demand for products and services is the key driver of positivity.

Similarly, a large proportion of greenlife production business are currently expanding and this result is reflected across both independent retail nurseries and landscapers and approximately half of both segments expect business growth to continue over the next 5 years.

Survey results also suggest a small number of independent retailers (5%) may exit the industry.

Conclusions and recommendations

- ❖ Following NY16004's methodology and assumptions, the Supply Chain Survey's results validate NY17008's landscape and retail sector sales figures for 2017-18 for the following reasons:
 - The value of independent retailer purchases through wholesale nurseries is within the confidence interval for the comparable greenlife sales into this sector.
 - Taking into account nurseries listed as both wholesale and retail as well as the likelihood of respondents 'rounding up or down' sales into 'big box' retailers (51% of retail sales, but likely between 50% and 60%), the exact purchase figure is likely even closer to the production sales results.
 - NY17008 greenlife sales data to the landscape sector matches reasonably closely with the landscape purchase results in this survey.
- ❖ Although designed as a point in time validation of greenlife production nursery sales, survey results also validate the methodology of data collection through CATI random sampling. If future validation surveys are planned, it may be worth considering an increase in sample size, to further increase confidence in results and minimise the margin for error.

Main report

1. Background and methodology

Background

For many years collecting accurate nursery and garden industry statistics has proven challenging due to the industry's diversity and lack of engagement with data collection methodologies.

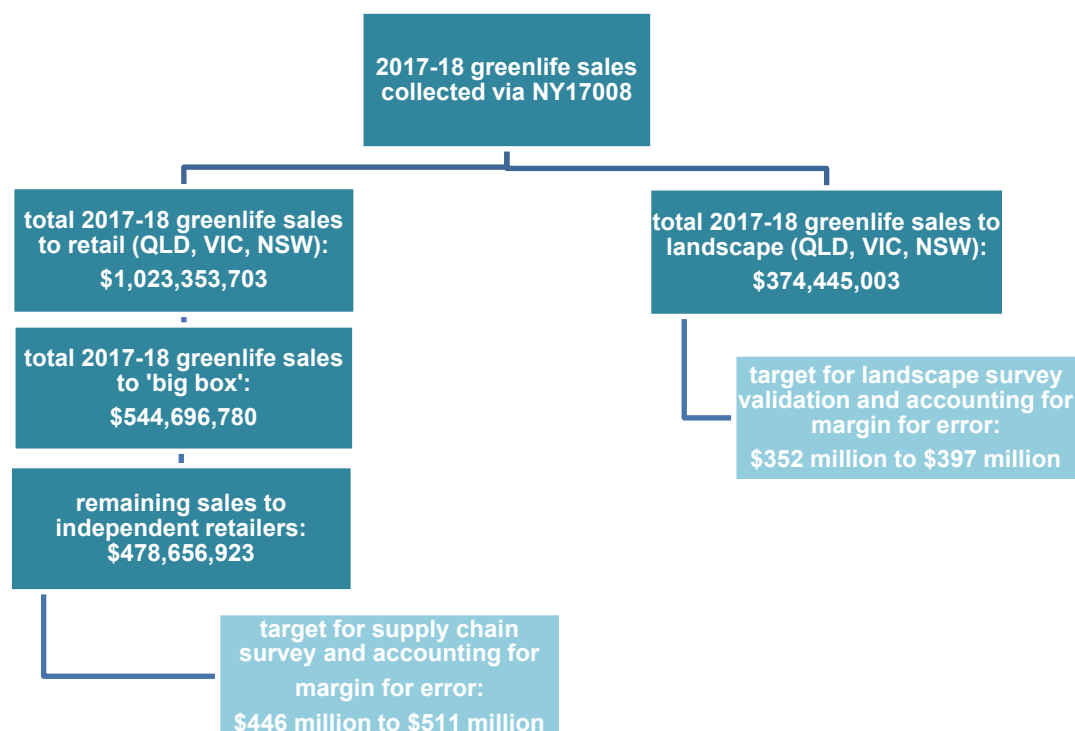
Consequently, in 2017, the Nursery & Garden Industry Statistics project NY16004 implemented a different methodology and largely overcame previous barriers to determine a 2015-16 volume and production value for the industry that was substantially greater than previously reported.

To build upon NY16004, Hort Innovation commissioned NY17008, a three-year program to provide accurate, timely and longitudinal nursery industry data to inform industry decision making, resource prioritisation, investment evaluation and strategic planning activities.

However, to ensure accuracy of the data collected, validation of production nursery sales data collected in NY16004 and NY17008 through the sales supply chain was sought.

Validation of sales data against the landscape and retail channels offers several advantages, including being the largest of the greenlife sales channels and availability of contact lists through the Nursery and Garden Industry Australia (NGIA) and state associations.

To be able to compare data reliably, the same methodology needed to be used across both the greenlife and supply chain datasets. Consequently, a survey of independent retail nurseries and landscape builders and contractors purchasing directly from wholesale nurseries was conducted. The data validation model is detailed below.



Data collection methodology

Challenges obtaining contact lists from some state associations as well as survey sample sizes limited by budget, resulted in a decision to validate data only in Queensland, Victoria and New South Wales. Notably, these states account for approximately 88% of greenlife sales.

Additionally, landscape architects, originally included in the sample were excluded due to the vast majority not purchasing from wholesale nurseries.

The project largely follows NY16004 and NY17008's quantitative CATI data collection methodology, undertaking the following stages to allow for appropriate monitoring of progress and to maximise participation Data collection was undertaken in the following stages to allow for appropriate monitoring of progress and to maximise participation:

- Stage 1: Initial contact with retailers and landscapers to confirm contact details, make an appointment to complete the survey as well as obtaining email address.
- Stage 2: DTER sent a confidentiality statement (appendix 2 & 3), snapshot of the industry from 2017 results and a full copy of the questionnaire (appendix 1) so the respondent fully understood the information required.
- Stage 3: Computer Assisted Telephone Interviews (CATI) with retail nursery and landscape and contractor businesses to collect the statistical data required.

DTER developed a contact database using contact lists provided by NGIA for the retail nursery sector and the NSW, VIC and QLD landscape association member databased.

This database was fed into the Computer Assisted Telephone Interviewing (CATI) program set up by Market Metrics (accredited market research call centre used for the project based in Frankston, Victoria). All interviewers used for the project have considerable experience working on DTER's projects in the agriculture sector. Prior to commencement, interviewers were thoroughly briefed on all aspects of the project by Daniel Watson, senior consultant at DTER.

Initial contact interviews and appointment setting commenced on the 30th October 2018 and concluded on 14th December 2018

Consistent with past greenlife interviewing results, completing interviews proved challenging due many respondents rescheduling appointments. Additionally, several respondents who initially agreed to provide information subsequently refused to participate once they had received the list of data requirements.

In total, 205 interviews were completed with respondents purchasing through wholesale nurseries. 190 conducted via CATI and 15 received via email.

Achieving 100 completed interviews with nursery retailers provides a margin for error (at the 95% confidence level) of $\pm 8.7\%$ on national results. Whereas 105 landscape interviews provides a margin for error (at the 95% confidence level) of $\pm 8.5\%$.

Outcomes:

Call analysis provides a definition of the industry in terms of retail nursery and landscape businesses in QLD, VIC and NSW.

Data weighting

Due to the comprehensive number of calls made for the project, it was possible to make assumptions on the number of businesses in each State and subsequently determine weighting figures that could be applied to the interviews achieved so that statistics provided represent the entire independent nursery and landscape industries, not only the sub-set of organisations participating in the study. The numbers detailed below are the totals when those not purchasing from wholesale nurseries or identified as no longer operating are removed from the total population.

number of businesses estimated	total	nsw/act	vic	qld
Independent retail nurseries	1,477	574	497	406
Landscape builders/contractors	1,635	641	549	445

Handling of 'empty cells'/missing data

The data set includes a number of 'empty cells' or missing data due to respondents saying 'don't know' or unable to extract data according to the categories and supply chain options asked for. Notably, missing data is considerably more widespread among nursery than landscape business.

Where there was a sufficient number of responses it was feasible to exclude missing data for extrapolation of that variable.

However, where the number of responses or the amount of missing data was insufficient to extrapolate data to represent the industry, the technique for dealing with missing data in NY16004 was used to ensure consistency of approach between the 2 datasets.

NY16004 identified a considerable range in businesses sizes and a large variation in business data (for example selling \$1 pots through to \$1,000 pots) included in the sample, it was deemed inappropriate to apply an overall average to each empty cell. Consequently, where respondents were able to provide the number of plants sold or the value of plants sold, the missing category was applied data based on information available (for example plant purchase value by category, employee numbers, total turnover etc).

For example, an organisation with 20 employees provided the total purchase value of 'perennial, trees & shrubs' and 'bedding and potted colour' but could not provide data on the number of plants purchased in each category. In this scenario, averages for similar organisations (similar value purchased in the category, size of organisation) was used to populate empty cells.

Additionally, Multiple Imputation by Chained Equations and K-Nearest Neighbour techniques provided guidance on the imputed data, however the large variation in data meant the technique used in 2017 was preferred.

2. Report notes

Data collected for the project is based on the 2017-18 financial year and is only based on NSW, QLD and VIC retail and landscape businesses.

Throughout this report, reference is made to various segments, defined in the table below:

Enterprise phase	Steady, happy	Those whose business is in status due to being at an acceptable stage
	Steady, unable	Those whose business is in status due to being unable to expand
	Expansion	Those whose business is in an expansion phase
	Winding down	Those contracting size of enterprise
business size (turnover)	Small	Turnover less than \$500,000
	Medium	Turnover between \$500,000 and \$2,000,000
	Large	Turnover greater than \$2,000,000
	Don't know (don't know t/o)	Unable to provide turnover value
Perception of industry	Positive	Those feeling very or fairly positive about the future of the nursery industry
	Negative	Those feeling very or fairly negative about the future of the nursery industry
	Neutral	Those feeling neutral or unsure about the future of the nursery industry

3. Greenlife production sales validation through retail and landscape purchases

3.1 Greenlife production sales to independent retail and purchase validation

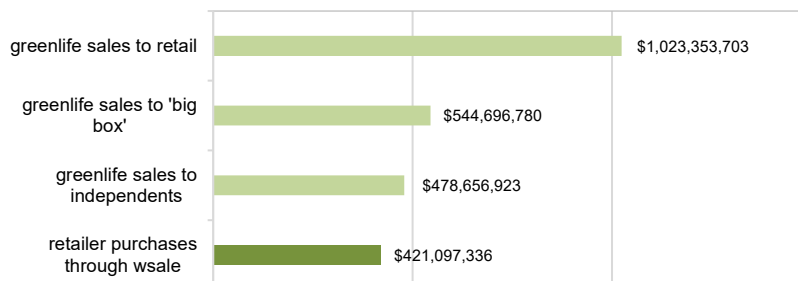
Questions asked:

Q6. How many plants in total did you purchase from wholesale nurseries in the 2017-18 financial year?

Q7. And what was the total value of the plants purchased from wholesale nurseries in 2017-18??

Q9. How many plants in total did you purchase?

estimated greenlife sales and retail purchases (qld, vic, nsw)



retail nursery sales/purchases in 2017-18 (estimated)	national	nsw, vic, qld only
Greenlife production survey: Retail sales results		
Total sales to retail channel	\$1,230,761,145	\$1,023,353,703
'Big box' sales	\$629,070,097	\$544,696,780
% to 'big box'	51%	53%
Sales to independent retailers	\$601,691,048	\$478,656,923
Supply chain survey: Retail nursery purchases		
Value purchased through wholesale nurseries (total number of retailers = 1,477)		\$421,097,336
Value purchased through wholesale nurseries (total number of retailers = 1,660 includes nurseries undertaking both wholesale and retail sales)		\$470,481,534

Key findings

- ◆ Nationally, results from the greenlife production survey suggest sales to 'big box' retailers in 2017-18 represent approximately 51% of total retail sales. Among NSW, VIC and QLD greenlife businesses, this proportion is slightly higher (53%) and represents approximately \$545 million.
- ◆ Among these eastern states, if the value of 'big box' sales is subtracted from total retail sales, plants worth approximately \$479 million were sold to independent retailers. Accounting for sampling error, it can be said that between \$446 million and \$511 million was sold.
- ◆ Among the 100 independent retail nurseries interviewed in the supply chain survey, results suggest purchases through wholesale nurseries in QLD, NSW and VIC was valued at between \$382 million and \$461 million (when accounting for sampling error).
- ◆ Notably, to avoid the possibility of double counting, nurseries listed in both wholesale and retail were deducted from the total number of retail businesses. However, if included, the value of retail purchases increases from \$421 million to approximately \$470 million.

Implications

Results from the supply chain survey confirm the value of sales to retail nurseries reported by wholesale greenlife producers. While there is some variation in total values, closer examination of the survey data suggests respondents typically 'rounded out' the proportion of sales to 'big box', saying it was 50% or 45% but may in fact have been closer to 51.5% or 43.6% which will have a reasonable impact on totals.

3.2 Greenlife sales to landscape channel and purchase validation

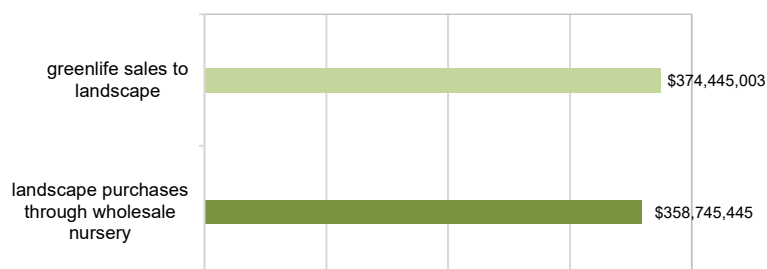
Questions asked:

Q6. How many plants in total did you purchase from wholesale nurseries in the 2017-18 financial year?

Q7. And what was the total value of the plants purchased from wholesale nurseries in 2017-18??

Q9. How many plants in total did you purchase?

greenlife sales and landscape purchases (qld, vic, nsw)



landscape sales/purchases in 2017-18 (estimated)	national	nsw, vic, qld only
Greenlife production survey: Landscape sales results		
Sold to Landscape	438,295,092	\$374,445,003
Supply chain survey: Landscaping purchase results		
Value purchased through wholesale nurseries (total number of landscapers = 1,635)		\$358,745,445

Key findings

- ◆ Nationally, greenlife survey results suggest approximately \$438 million worth of plants was sold to landscapers in 2017-18, including \$374 million among NSW, VIC and QLD businesses.
- ◆ Among 105 landscape contractors and builders (based in NSW, VIC and QLD) interviewed as part of the supply chain survey, approximately \$359 million in plants was purchased through wholesale nurseries. Accounting for sampling error, it can be said between \$328 million and \$389 million was purchased.

Implications

The value of plants purchased by landscape builders and contractors in NSW, VIC and QLD is in line with sales reported by greenlife producers, providing further confidence in the NGI statistics project.

3.3 Number and value of plants sold by plant category

Questions asked:

Q8. During the 2017-18 financial year, how many plants did you buy from wholesale nurseries in the following categories?

Q9. And what was the total value of (from Q18) of plants purchased from wholesale nurseries?

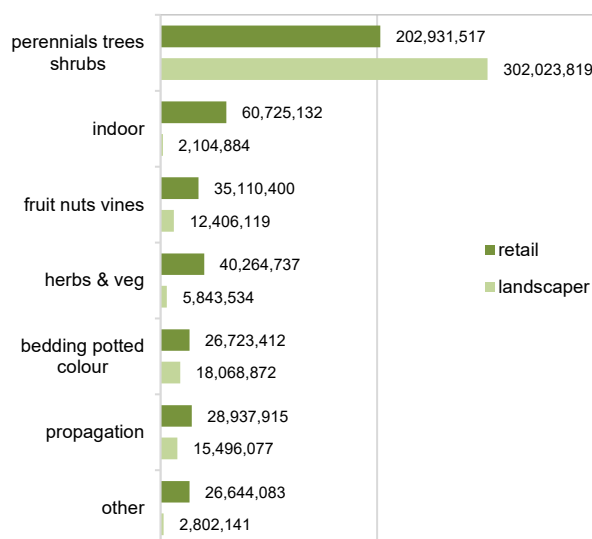
Key findings.

- ◆ In line with greenlife production sales data, perennials, trees and shrubs are the most commonly purchased plant category among both landscape and retail nurseries based in QLD, VIC and NSW.
- ◆ Additionally, similar to production nursery results, this category is responsible for approximately half of all independent retail purchases.
- ◆ While categorical comparison of production nursery sales and retail and landscape purchases would be ideal, the complexity required for respondents to provide the number and value of plants sold to each supply chain by plant category is not feasible.
- ◆ Readers should note 'other' mentions include totals for those people unable to provide breakdowns by category.

Implications

Although definitive comparisons are unable to be made, retail and landscape sales data appears reasonably comparable to greenlife nursery sales data.

value of purchases by plant category



category for plants purchased 2017-18 (estimated)	retail (base: respondents able to provide data)	landscape (base: respondents able to provide data)
Propagation plants:		
% purchasing propagation plants	47%	18%*
Total number of plants	11,683,872	7,816,425
Total value of plants	28,937,915	15,496,077
Herbs and vegetables:		
% purchasing herbs and vegetables	71%	36%
Total number of plants	22,728,601	10,900,811
Total value of plants	40,264,737	5,843,534
Fruit trees, nut trees, vines:		
% purchasing fruit trees, nut trees, vines	79%	52%
Total number of plants	8,740,241	5,921,789
Total value of plants	35,110,400	12,406,119
Bedding and potted colour:		
% purchasing bedding, potted colour	66%	36%
Total number of plants	11,092,005	3,876,555
Total value of plants	26,723,412	18,068,872
Indoor plants:		
% purchasing indoor plants	71%	15%*
Total number of plants	9,764,978	172,796
Total value of plants	60,725,132	2,104,884
Perennials, trees and shrubs:		
% purchasing perennials, trees, shrubs	88%	99%
Total number of plants	62,672,636	29,860,090
Total value of plants	202,931,517	302,023,819
Other (includes those unable to breakdown by category):		
% purchasing other	22%	2%*
Total number of plants	4,531,912	934,047
Total value of plants	26,644,083	2,802,141
Total plants bought:		
Total number of plants	131,214,245	59,482,513
Total value of plants	\$421,337,196	358,745,445

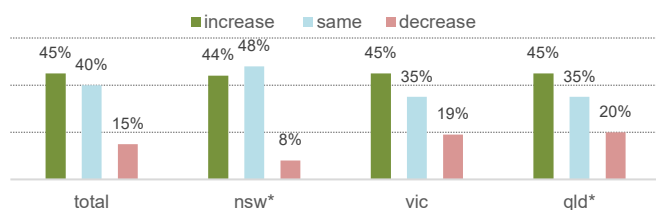
Due to small sample sizes by category, only total data is provided. NOTE: Data is for the 2017-18 year and not necessarily representative of sales in every year. *caution small sample sizes

3.4 Expected future number and value of plants purchased

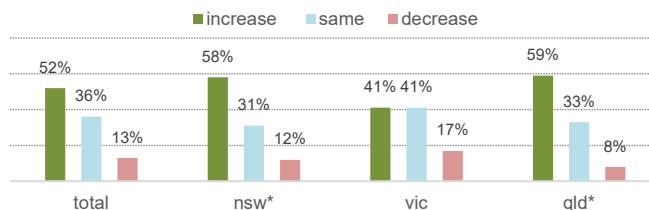
Question asked:

Q14. In total, how many plants do you expect to purchase from wholesale nurseries during the 2018-19 financial year?

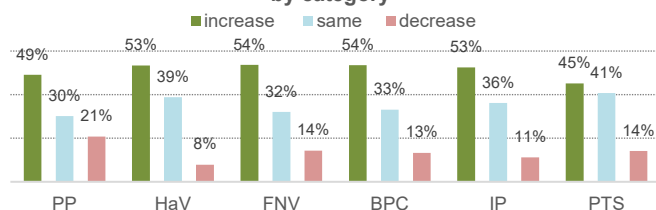
retail nursery expected purchases 2018-19 vs to 2017-18



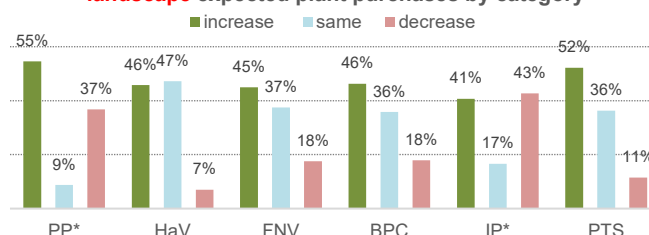
landscape expected plant purchases 2018-19 vs 2017-18



retail nursery expected change in plant purchases by category



landscape expected plant purchases by category



Key findings

- ◆ When asked to estimate the number of plants expected to be purchased through wholesale nurseries this financial year, 45% of independent retail nurseries and 52% of landscapers gave an estimate higher than 2017-18 figures.
- ◆ As a result, plant purchases through wholesales nurseries are expected to increase approximately 21% among retail nurseries and 16% among landscape builders and contractors.

Implications

Survey results suggest there will be future growth in sales to retailers and landscapers – a positive finding.

retail nursery expected plants purchased in 2018-19 (estimated)	% mentioning (base: respondents able to answer)			
	total	nsw*	vic	qld*
Expecting to purchase a greater number of plants	45%	44%	45%	45%
Expecting to purchase a similar number	40%	48%	35%	35%
Expecting to purchase fewer plants	15%	8%	19%	20%
Expected change in number of plants purchased	+21%	Sample sizes too small to calculate		

landscape expected plants purchased in 2018-19 (estimated)	% mentioning (base: all respondents able to answer)			
	total	nsw*	vic	qld
Expecting to purchase a greater number of plants	52%	58%	41%	59%
Expecting to purchase a similar number	36%	31%	41%	33%
Expecting to purchase fewer plants	13%	12%	17%	8%
Expected change in number of plants purchased	+16%	Sample sizes too small to calculate		

*Caution, sub sample smaller than N=30

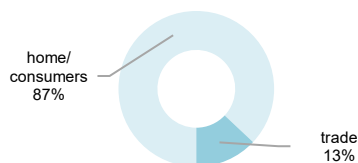
4. Income streams and proportion spent on greenlife purchases through wholesale nurseries

Questions asked:

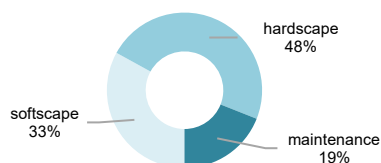
Q10. What proportion of your total turnover in the 2017-18 financial year would the following represent?

Q11. What proportion of your total turnover in the 2017-18 financial year would the following represent, sales to.....?

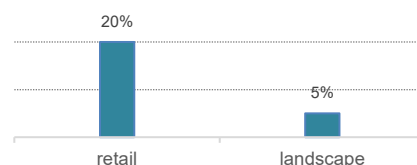
retail nursery income streams



landscape business turnover



% turnover spent on purchases through wholesale nurseries
(base: respondents able to answer)



Key findings

- ◆ Almost 90% of independent retail nursery income is derived through home/consumer sales, with trade representing a considerably smaller proportion.
- ◆ Among retail respondents, purchases through wholesale nurseries represent 20% of total turnover.
- ◆ The 'average' landscape respondent derives a considerably higher proportion of their income through hardscape (48%) than softscape (33%) and maintenance (19%).
- ◆ In total, purchases through wholesale nurseries represent 5% of landscape respondent's turnover.

Implications

Purchases through wholesale nurseries represent an arguably small proportion of independent retail nursery and landscape turnover. It would be interesting to compare results for this measure in a few years' time to determine the impact of 2020/2021.

retail nursery business income streams	% mentioning (base: respondents)			
	total (n=100)	nsw (n=29)*	state vic (n=38)	qld (n=28)*
Average proportion of income through home/consumers	87%	87%	86%	87%
Average proportion of income through trade	13%	13%	14%	13%
Proportion of turnover spent on purchases through greenlife production nurseries*	20%	16%	27%	18%

*Caution, sub sample smaller than N=30.

landscape business income streams	% mentioning (base: respondents)			
	total (n=105)	nsw (n=18)*	state vic (n=48)	qld (n=39)
Average proportion of income through softscape	33%	30%	36%	33%
Average proportion of income through hardscape	48%	51%	50%	44%
Average proportion of income through maintenance	19%	19%	13%	23%
Proportion of turnover spent on purchases through greenlife production nurseries	5%	4%	7%	6%

*Caution, sub sample smaller than N=30.

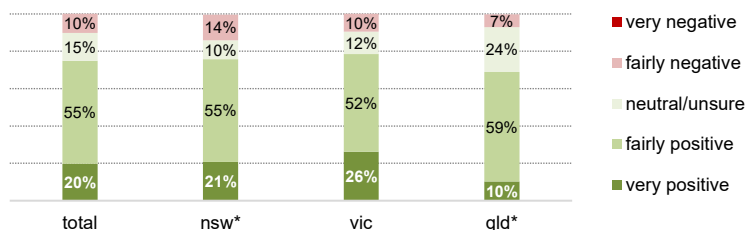
5. Confidence in retail nursery industry's future

Questions asked:

Q15. Overall, how do you feel about the future of your industry? Would you say you feel (read out)

Q16. Why do you say that?

retailer confidence in future (base: all respondents)



Key findings

- ◆ Similar to high levels of confidence seen among greenlife nursery businesses, the majority of independent retailers are positive towards the future of the nursery industry.
- ◆ Although sample sizes are too small to draw definitive conclusions, 93% of large businesses are positive, compared to a much lower 66% of small counterparts.
- ◆ Similar to most industries, product demand is a key driver of positivity, however good business management and sale of innovative and niche products are driving confidence among some retailers.

Implications

Widespread confidence in the industry's future among greenlife nurseries is mirrored among independent retailers, mainly driven by product demand as well as good business principles and management.

retailer confidence	total (n=100)	% mentioning (base: all respondents)		
		state		
		nsw (n=29)*	vic (n=42)	qld (n=29)*
Very positive	20%	21%	26%	10%
Fairly positive	55%	55%	52%	59%
Neutral	13%	10%	10%	21%
Fairly negative	10%	14%	10%	7%
Very negative	0%	0%	0%	0%
Can't say	2%	0%	2%	3%
Total: positive	75%	76%	79%	69%
Total: negative	10%	14%	10%	7%

*Caution, sub sample smaller than N=30

retailer reasons for level of confidence (main mentions)	total (n=105)	% mentioning (base: all respondents)		
		turnover		
		nsw (n=18)*	vic (n=48)	qld (n=39)
Positive mentions:				
Demand for product (net)	50%	48%	55%	48%
Good business management	18%	21%	14%	17%
Opportunities through innovative/niche products sold	9%	7%	12%	7%
Younger people starting gardening	9%	10%	12%	3%
Negative mentions:				
Decreased product demand	28%	31%	31%	21%
Bunnings impacting sales/margins	13%	10%	10%	21%
Young people not entering industry/lack of industry knowledge/skills	7%	10%	7%	3%
Nurseries closing down	5%	3%	2%	10%

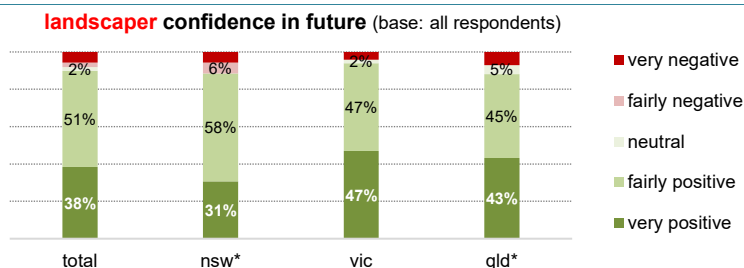
*Caution, sub sample smaller than N=30

6. Confidence in landscape industry's future

Questions asked:

Q15. Overall, how do you feel about the future of your industry? Would you say you feel (read out)

Q16. Why do you say that?



Key findings

- ◆ Nine in ten (90%) landscape respondents are confident in the future of their industry, including an arguably large proportion (38%) very positive.
- ◆ In line with greenlife and independent retail nursery findings, demand is the key driver of positivity.
- ◆ Notably, there is a proportion of respondents perceiving the industry to be lacking skills, particularly among those in QLD.

Implications

Demand for products and services is ensuring the vast majority of landscape contractors and builders are confident in their industry's future.

An arguably small proportion of respondents mention a lack of skills within the industry, highlighting the importance of continuing to market the industry and provide education opportunities for people wanting to enter it.

landscape confidence	% mentioning (base: all respondents)			
	total (n=105)	nsw (n=29)*	state vic (n=42)	qld (n=29)*
Very positive	38%	31%	47%	43%
Fairly positive	51%	58%	47%	45%
Neutral	2%	0%	2%	5%
Fairly negative	2%	6%	0%	0%
Very negative	6%	6%	4%	7%
Can't say	0%	0%	0%	0%
Total: positive	90%	88%	94%	88%
Total: negative	4%	6%	2%	5%

*Caution, sub sample smaller than N=30

landscape reasons for level of confidence (main mentions)	% mentioning (base: all respondents)			
	total (n=105)	nsw (n=113)	state vic (n=51)	qld (n=28)*
Positive mentions:				
Demand for product/services (net)	75%	71%	80%	74%
Enjoyment of business/industry (NFI)	6%	6%	4%	9%
Good industry support/associations	3%	0%	8%	2%
Negative mentions:				
Decreased demand	12%	17%	6%	9%
Young people not entering industry/lack of industry knowledge/skills	8%	0%	8%	19%
Issues getting supply of plants/wholesalers selling to Bunnings first/exclusively	4%	6%	4%	0%

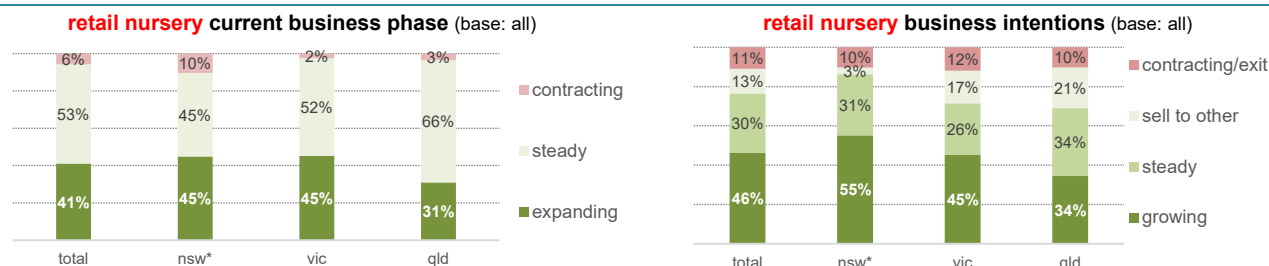
*Caution, sub sample smaller than N=30

7. Current independent retail nursery business phase and future intentions

Questions asked:

Q12. Which of the following best describes your business at this point in time?

Q13. And what is the intention for the business over the next 5 years?



Key findings

- ◆ A large proportion (41%) of independent retailers are currently expanding their enterprise and only a small proportion are contracting (6%).
- ◆ Over the next 5 years a similar proportion anticipate expanding their business, however those turning over greater than \$500k (56%) are significantly more likely to expect their business to grow than those turning over less (36%).
- ◆ Survey results suggest 6% of respondents may exit the industry over the next 5 years, either through closing the business or selling to a developer and a further 5% will contract or wind down.

Implications

Results for this metric align with other results indicating much of the industry expects continued expansion, however a small number of industry exits is likely to occur.

retail nursery current business stage	% mentioning (base: all respondents)			
	total (n=100)	nsw (n=29)*	state vic (n=42)	qld (n=29)*
Expanding	41%	45%	45%	31%
Steady	53%	45%	52%	66%
Contracting	6%	10%	2%	3%

retail future intentions for business	% mentioning (base: all respondents)			
	total (n=100)	nsw (n=29)*	state vic (n=42)	qld (n=29)*
Growing business	46%	55%	45%	34%
Remaining steady	30%	31%	26%	34%
Contracting/winding down	5%	7%	7%	0%
Sell as business to other person/company	13%	3%	17%	21%
Sell land to developer	2%	0%	2%	3%
Close business	4%	3%	2%	7%

*Caution, sub sample smaller than N=30.

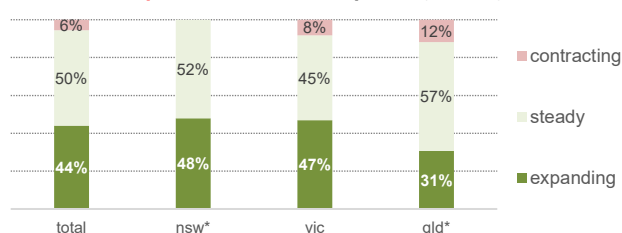
8. Current **landscape** business phase and future intentions

Questions asked:

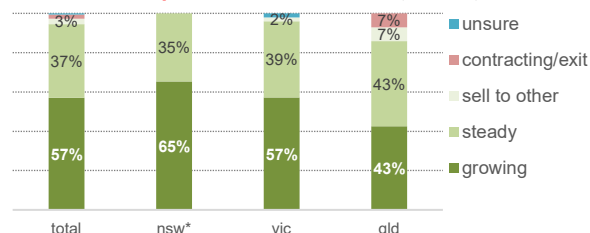
Q12. Which of the following best describes your business at this point in time?

Q13. And what is the intention for the business over the next 5 years?

landscape current business phase (base: all)



landscape business intentions (base: all)



Key findings

- ◆ Landscape respondents are approximately 6 times more likely to be currently expanding their business than contracting.
- ◆ Survey results suggest this trend may continue, with 57% saying they will grow their business over the next 5 years, compared to a significantly lower 37% remaining steady and 2% contracting or winding down.
- ◆ Only 1% of businesses plan to exit the industry.

Implications

Survey results suggest few landscape businesses will exit the industry over the next 5 years and in line with positive sentiment throughout the survey, business growth is predicted to be widespread.

landscape current business stage	% mentioning (base: all respondents)			
	total (n=105)	nsw (n=18)*	state vic (n=49)	qld (n=40)
Expanding	44%	48%	47%	31%
Steady	50%	52%	45%	57%
Contracting	6%	0%	8%	12%

landscape future intentions for business	% mentioning (base: all respondents)			
	total (n=105)	nsw (n=18)*	state vic (n=49)	qld (n=40)
Growing business	57%	65%	57%	43%
Remaining steady	37%	35%	39%	43%
Contracting/winding down	1%	0%	0%	2%
Sell as business to other person/company	3%	0%	2%	7%
Sell land to developer	0%	0%	0%	0%
Close business	1%	0%	0%	5%
Can't say	1%	0%	2%	0%

*Caution, sub sample smaller than N=30.

9. Sample demographics

retail demographic metric	total (n=100)	% of sample (base: all respondents)		
		state		
		nsw (n=29)*	vic (n=38)	qld (n=28)*
Age:				
Average age	55	54	54	58
Average years in industry:	23	23	23	22
Gender:				
Male	54%	59%	60%	41%
Female	46%	41%	40%	59%
Respondent role:				
Owner or joint owner of the business	81%	90%	74%	76%
Manager	19%	10%	26%	24%

landscape demographic metric	total (n=105)	% of sample (base: all respondents)		
		state		
		nsw (n=18)*	vic (n=48)	qld (n=39)
Age:				
Average age	46	46	46	47
Average years in industry:	21	19	22	23
Gender:				
Male	72%	54%	78%	93%
Female	28%	46%	22%	7%
Respondent role:				
Owner or joint owner of the business	74%	46%	88%	100%
Manager	22%	48%	8%	0%
Admin/Accounts	3%	6%	2%	0%

*Caution, sub sample smaller than N=30

Key findings

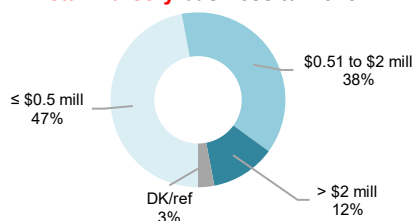
- ◆ The 'average' retail nursery respondent is 55 years of age (on par with greenlife nursery results), has worked in the industry for 23 years and is the owner of the business. However respondent age varies from 23 to 83 and the number of years worked in the industry from 1 to 52.
- ◆ The 'average' landscape respondent is male, 46, has worked in the industry for 21 years and is the owner of the business. Landscape respondent age varies from 24 to 74 and between 1 and 52 years of experience in the industry.

Implications

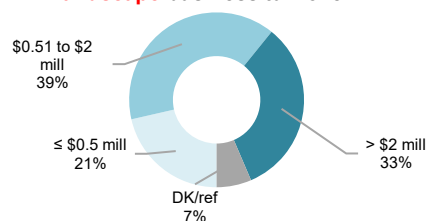
The survey sample includes respondents from each age group, gender and years of experience working in the industry.

10. Organisation size (based on survey sample)

retail nursery business turnover



landscape business turnover



Key findings

- ◆ The vast majority of retail nursery respondents are from small (less than \$500k turnover) to medium businesses (\$500k to \$2 million) and only 12% turn over in excess of \$2 million.
- ◆ Among landscape respondents, one third turnover greater than \$2 million dollars, including almost 10% with turnover greater than \$10 million, however almost two thirds of the sample are small (less than \$500k) and medium (\$500k to \$2 million) businesses.

Implications

The survey sample provides a range of business sizes.

retail nursery business turnover amount 2017-18**	% mentioning (base: respondents)			
	total (n=100)	nsw (n=29)*	state vic (n=38)	qld (n=28)*
\$500,000 or less	47%	52%	43%	45%
\$500,001 to \$2,000,000	38%	38%	36%	41%
More than \$2,000,001	12%	10%	14%	10%
Don't know/refused	3%	0%	7%	3%

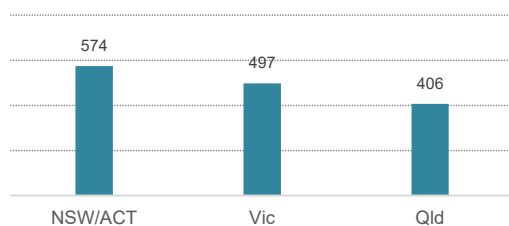
**Includes all sources of income (for example consulting, café etc) *Caution, sub sample smaller than N=30.

landscape business turnover amount 2017-18	% mentioning (base: all respondents)			
	total (n=105)	nsw (n=18)*	state vic (n=48)	qld (n=39)
\$500,000 or less	21%	0%	35%	33%
\$500,001 to \$2,000,000	39%	35%	41%	40%
More than \$2,000,001	33%	60%	14%	22%
Don't know/refused	6%	6%	10%	5%

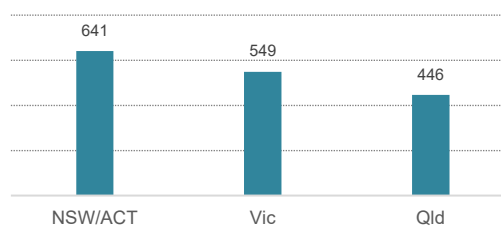
*Caution, sub sample smaller than N=30.

11. Number of retail nursery and landscape building/contracting organisations (QLD, NSW and VIC only)

estimated number of **retail nursery** businesses



estimated number of **landscape** businesses



retail nursery call outcomes	% mentioning (base: all retail respondents)			
	total	nsw	state vic	qld
Total numbers sourced	1,805	696	632	477
Total not retail nursery when contacted	168	74	56	38
Total NOT purchasing from wholesale nurseries	160	48	79	33
Total retail nursery businesses (estimated)	1,477	574	497	406

landscape call outcomes	% mentioning (base: all landscape respondents)			
	total	nsw	state vic	qld
Total numbers sourced	1,876	737	634	505
% of contacts known to NOT be landscape or landscape contractor business	6%	6%	6%	6%
% NOT purchasing from wholesale nurseries	7%	7%	7%	7%
Total landscape builder and contractor businesses (estimated)	1,625	641	549	446

Key findings

- ◆ Calculating the total number of retail nurseries and landscapers followed the methodology used in the NY16004 project, initial sample was sourced through industry associations and yellow pages.
- ◆ After several days of interviewing it became apparent that a large proportion of landscape architects did not purchase plants and were subsequently removed from the sample. Total landscape businesses represent landscape builders and contractors.
- ◆ Readers should also be aware retail nurseries and landscapers not purchase from wholesale nurseries are not included in these figures.

Implications

While survey weighting figures are based on results of call analysis and the subsequent assumptions, for the purpose of validating greenlife data, the report authors are confident weighting figures are reasonably accurate.

12. Employment and qualified staff

Questions asked:

Q17. How many people including yourself are employed in the business?

Q18. And how many of the people employed in the business (including yourself) are qualified horticulturalists?

Q19. And how many of the people employed in the business (including yourself) hold business qualifications?

Key findings

- ◆ Small sample sizes mean that an estimate of the total number of employees within the retail nursery and landscape industries is not possible.
- ◆ On average, respondents from independent nurseries have 8 staff and among landscapers a substantially greater 17.
- ◆ Among both landscape and retail nursery businesses, approximately 8 in 10 say they employ at least one qualified horticulturalist. As a result, this segment makes up 32% of the independent retail nursery and 28% of the landscape building and contracting respondent workforces.
- ◆ Business qualifications however are considerably more widespread among landscape businesses (74% employing at least one person with business qualifications) than among independent nursery retailers (47%).

Implications

Survey results suggests relatively widespread employment of qualified horticulturalists. However, the proportion of retailers with businesses qualifications is significantly lower and may be an area where continued support may be beneficial.

Retail nursery staff numbers (estimated)	% mentioning (base: all respondents able to answer)			
	total (n=100)	nsw (n=29)*	state vic (n=38)	qld (n=28)*
Average number of staff	8	7	11	7
Business has at least one qualified horticulturalist	78%	86%	90%	52%
At least one staff member has business qualifications	47%	48%	49%	43%
Estimated % of workforce qualified horticulturalists	32%	Sample sizes too small to estimate		

landscape staff numbers (estimated)	% mentioning (base: all respondents able to answer)			
	total (n=105)	nsw (n=18)*	state vic (n=48)	qld (n=39)
Average number of staff	17	26	13	10
Business has at least one qualified horticulturalist	80%	77%	85%	78%
At least one staff member has business qualifications	74%	69%	70%	88%
Estimated % of workforce qualified horticulturalists	28%	Sample sizes too small to estimate		

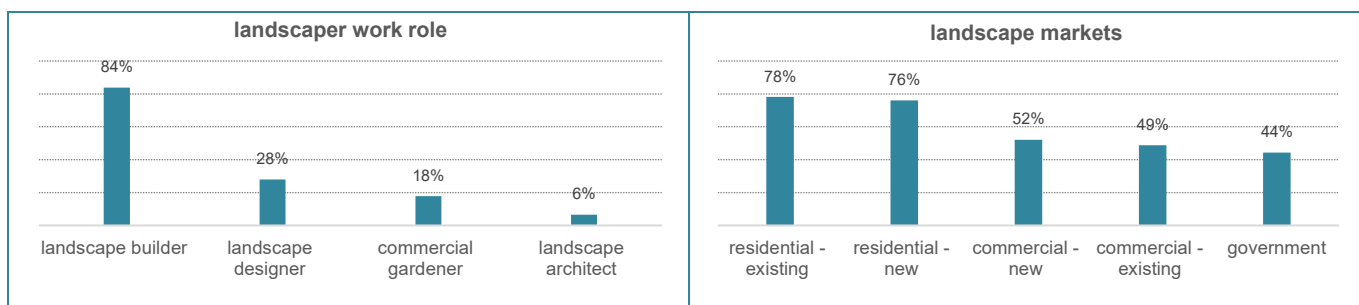
*Caution, sub sample smaller than N=30.

13. Landscape work roles and sales channels

Questions asked:

Q4. Which category best describes your work role?

Q5. Is your business involved in any of the following areas....?



Key findings

- ◆ The majority of landscape respondents are landscape builders (84%), but the sample also includes designers (28%), gardeners (18%) and architects (6%)
- ◆ Thirty six percent (36%) of businesses have multiple roles, for example conduct both landscape building and design.
- ◆ On average, respondents access 3 markets, most commonly residential new and existing.
- ◆ In total, more than three quarters of respondents work in residential, but this is slightly more common among VIC and QLD respondents than NSW.
- ◆ Government and commercial sector jobs are undertaken by approximately half of those interviewed.

Implications

The sample includes a cross section of businesses working across a variety of markets.

work role	% mentioning (base: all landscape respondents)			
	total (n=105)	nsu (n=18)*	state vic (n=49)	qld (n=40)
Landscape builder	84%	94%	76%	81%
Landscape designer	28%	23%	33%	26%
Commercial gardener	18%	13%	14%	26%
Landscape architect	6%	6%	6%	7%

sales channel	% mentioning (base: all landscape respondents)			
	total (n=105)	nsu (n=18)*	state vic (n=48)	qld (n=39)
Residential - existing	78%	71%	84%	82%
Residential - new	76%	71%	76%	85%
Commercial - new	52%	59%	41%	56%
Commercial - existing	49%	47%	49%	51%
Government or Government Department	44%	53%	31%	49%
Total: Residential	82%	71%	88%	90%
Total: Commercial	60%	65%	53%	62%

Appendix 1: CATI questionnaire

- Q1. During the 2017-18 financial year, did you purchase plants from wholesale nurseries?
 Yes ----- 1 Go to Q2
 No ----- 2 Thank and end.

Q2. Firstly, I need to clarify how many sites your business operates from _____ sites

If more than 1 site, ask Q3, others go to Q4 (landscaper) or Q6 (retail):

- Q3. What states and territories are the sites location in? *Multiple*
 NSW ----- 1
 Vic ----- 2
 Qld ----- 3

If landscaper, ask Q4, retail go to Q6

- Q4. Which category best describes your work role... *read out*
 Landscape builder ----- 1
 Commercial gardener ----- 2
 Landscape architect ----- 3
 Landscape designer ----- 4
 Other (specify) ----- 5

Q5. Is your business involved in any of the following areas... *read out - allow multiple responses*

- Residential - new ----- 1
 Residential - existing ----- 2
 Commercial - new ----- 3
 Commercial - existing ----- 4
 Government or Government Department ----- 5
 Other (specify) ----- 6
 Do not read out/avoid Can't say ----- 7

Q6. How many plants in total did you purchase from wholesale nurseries in the 2017-18 financial year? _____

Q7. And what was the total value of the plants purchased from wholesale nurseries in 2017-18? _____ \$

Q8. During the 2017-18 financial year, how many plants did you buy from wholesale nurseries in the following categories?

If operating in more than one State:

During the 2017-18 financial year, how many plants did you buy from wholesale nurseries in the following categories in each State? *Record in grid.*

Q9. And what was the total value of (from Q8) of plants purchased from wholesale nurseries? If you don't know exactly, please give us your best estimate. *Record in grid. National response only. DP note: loop each category from Q9 straight after Q8.*

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Propagation plants (eg, plugs, tubestock, cuttings, tissue culture):								
Number of plants								
Value								
Herbs and vegetables (excluding seeds and bulbs):								
Number of plants								
Value								
Fruit trees, nut trees and vines (excluding seeds and bulbs):								
Number of plants								
Value								
Bedding and potted colour (eg. annuals):								
Number of plants								
Value								
Indoor plants (excluding seeds, bulbs):								
Number of plants								
Value								
Perennials, trees and shrubs:								
Number of plants								
Value								
Other (including seeds, bulbs, water plants, shot seed, etc.): <i>DP note: allow for more than 1 other</i>								
Number of plants								
Value								
TOTAL (computer calculate and confirm with respondent):								
Number of plants								
Value								

If landscaper, ask Q10, others to Q11

Q10. What proportion of your total turnover in the 2017-18 financial year would the following represent... *read out*

Softscape	_____ %
Hardscape	_____ %
Maintenance	_____ %

Q11. What proportion of your total turnover in the 2017-18 financial year would the following represent, sales to ... *read out*

Home/gardeners/consumer	_____ %
Trade	_____ %

Q12. Which of the following best describes your business at this point in time? Is it ...

In a growth phase	----- 1
In a steady phase	----- 2
Contracting	----- 3
Other (specify)	----- 4

Q13. And what is the intention for the business over the next 5 years? Is the intention ...

To grow the business	----- 1
Keep the business in a steady phase	----- 2
Contract or wind down the business	----- 3
Sell it as a business to another person or company	----- 4
Sell the land to a developer	----- 5
Wind down and close	----- 6
<i>Do not read out/avoid</i> Can't say	----- 7

Q14. In total, how many plants do you expect to purchase from wholesale nurseries during the 2018-19 financial year?

Q15. Overall, how do you feel about the future of your industry? Would you say you feel ... (*read out*)

Very positive	----- 1
Fairly positive	----- 2
Fairly negative	----- 3
Very negative	----- 4
<i>Do not read</i> Neutral	----- 5
<i>Do not read</i> Unsure	----- 6

Q16. Why do you say that? *Probe fully*

.....

Now I would like to ask a few questions to classify your business.

Q17. How many people, including yourself, are employed in the business? (if more than one business, include a total of all, including those from different states.

Q18. And how many of the people employed in the business (including yourself) are qualified horticulturalists?

Q19. How many people employed in the business (including yourself) hold business qualifications?

Q20. Just for classification purposes, could you please indicate your company's turnover for the 2017-18 financial year?

If Q20 = don't know or refuse ask Q21, others skip

Q21. Would it help if I read out some broad dollar ranges? Would your company's turnover be.... *Read out*

\$200,000 or less	----- 1
\$200,000 to \$500,000	----- 2
\$500,001 to \$1,000,000	----- 3
\$1,000,001 to \$2,000,000	----- 4
\$2,000,001 to \$3,000,000	----- 5
\$3,000,001 to \$4,000,000	----- 6
\$4,000,001 to \$5,000,000	----- 7
\$5,000,001 to 10,000,000	----- 8
10 million to 30 million	----- 9
30 million or greater	----- 10
Don't know	----- 11
Refused	----- 12

Lastly, I just have a couple of questions about you now.

Q22. May I ask your age please?

Q23. How many years have you been involved in your industry? _____

Q24. Are you the ...
Owner or joint owner of the business ----- 1
Manager ----- 2
Other role (specify) ----- 3

Q25. Record gender (do not ask)
Male ----- 1
Female ----- 2

Appendix 2: Confidentiality statement - retail



Down To Earth Research

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30 October 2018

Nursery and Garden Industry Data & Statistics Collection

Confidentiality Statement

Thank you for agreeing to provide data for the Horticulture Innovation Australia project NY17008 – Nursery Industry Research and Statistics, this project follows on from the 2017 project which for the first time captured figures on the value of greenlife production sales. This year we want to validate the sales figures collected for the 2017-18 financial year which is why we are collecting purchase figures from the retail sector.

Data for the project will be collected and stored securely by Market Metrics, an independent, fully accredited data collection company based in Frankston, Victoria. Their web address is <http://www.marketmetrics.com.au> should you wish to read about their services. Data and information collected will only be used for the purposes of this specific project.

In accordance with Australia's strict Privacy Principles, full confidentiality is assured and once information processing has been completed, any identifying data such as your name, company and contact details (including address and postcode) will be removed from your responses to the survey. While interviewing is taking place, data held by Market Metrics will remain identifiable in case there is an anomaly in the data that requires a call back and clarification. Once Market Metrics has completed this process, de-identification will occur.

On completion of all interviewing, Down To Earth Research (DTER) will be provided with a de-identified data set so data can be aggregated and analysed. DTER will then provide an overall industry report to Hort Innovation. No one from the nursery and garden industry, Hort Innovation, industry organisations, government departments, etc. will know who participated in the study nor the information and data they provided.

Should you have any concerns whatsoever, please contact Daniel Watson from DTER (daniel@dter.com.au or 0409 775 553) or Adam Briggs from Hort Innovation (Adam.Briggs@horticulture.com.au or 02 8295 2335).

Thank you again for your assistance. The data collected for the study will be used to better understand the size and nature of the industry. It will also enable Hort Innovation to have more meaningful discussions with government organisations in the future.

Kind regards

Daniel Watson
Research Director
Down To Earth Research

Appendix 3: Confidentiality statement - landscape



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Kind regards

Daniel Watson
Research Director
Down To Earth Research

Appendix M
Purchasers Report (Validation)
(2019/2020)

Hort Innovation Nursery Industry Statistics 2017-18 to 2019-20 (NY17008)

Supply Chain and Data Validation Report 2019-20 - December 2020

Not for distribution



DTER report authors:

Daniel Watson
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Data and insights provided in this report are based on information provided by survey respondents and subsequent assumptions made. Readers should note there is a margin for error on all data provided and the report authors cannot guarantee the accuracy of information provided or assumptions made.

Acknowledgements

NGIA, DTER and AAC would like to thank all survey respondents for providing data and information for this study. We appreciate the time and effort taken to provide a considerable amount of data and information.

Summary

Background

Historically, the nursery and garden industry's diversity and lack of engagement with data collection methodologies has meant accurate and credible statistical data has not been collected. In 2017, the Nursery & Garden Industry Statistics project NY16004 implemented a different methodology and largely overcame these barriers to determine a volume and production value of the industry as well as sales channel, employment and sentiment data.

Consequently, Hort Innovation commissioned NY17008, a three year program (encompassing 2017-18 to 2019-20 financial years) to build upon the methodology and outputs from NY16004 and provide accurate, timely and longitudinal nursery industry data to inform industry decision making, resource prioritisation, investment evaluation and strategic planning activities.

To ensure accuracy of data, the 2019-20 data collection includes an additional component to validate data by surveying independent retail nurseries and landscape businesses who purchase from wholesale nurseries and comparing results from this approach with greenlife producer sales data.

Methodology

To be able to compare data reliably, the same methodology (used in all NY17008 survey waves) of Computer Assisted Telephone Interviewing (CATI) was undertaken with a random sample of independent retail nurseries (100 interviews completed) and landscape builders and contractors (101) purchasing directly from wholesale nurseries.

Survey results

Estimated production nursery sales to independent retail nurseries and purchase validation

NY17008's Production Nursery Data Capture Report for the 2019-20 financial year estimated the value of NSW, VIC & QLD production nursery sales to independent retail nurseries at approximately \$488 million (between \$455 and \$521 million when the margin for error is considered).

When data from interviews with 100 NSW, VIC & QLD independent retail nurseries is extrapolated to represent the 1,477 business who purchase through wholesale nurseries, it can be estimated that purchases were valued at approximately \$506 million (between \$458 and \$554 million with margin for error), which falls within an acceptable comparison range.

Estimated greenlife production nursery sales to landscape businesses and purchase validation

2019-20 sales to landscapers by NSW, VIC & QLD production nurseries were estimated by NY17008 to be valued at approximately \$400 million.

Extrapolated Supply Chain Validation Survey data estimates NSW, VIC & QLD landscape organisations purchased plants valued at approximately \$426 million (between \$386 and \$466 million with margin for error) from wholesale nurseries, which confirms NY17008 production sales findings.

Impact of COVID-19 disruption on purchases through production nurseries

In 2019-20, 64% of NSW, VIC & QLD independent retail respondents purchased a greater value of plants due to COVID-19 disruptions and only 10% purchased less. Among those experiencing a positive outcome, on average,

purchases increased an estimated 36%. Those purchasing a lesser value, estimated a reduction of 27% in value (caution small sample size).

Conversely, due to COVID-19, landscape respondents were significantly more likely to purchase a lesser value of plants through production nurseries (37% of all NSW, VIC & QLD landscape respondents) and only 1 in 10 purchased a greater value.

Proportion of turnover spent on greenlife purchases through wholesale nurseries

Compared to 2017-18, both independent retailers (29%, up from 20%) and landscape businesses (10%, was 5%) spent a slightly higher proportion of their total income on purchases through production nurseries in 2019-20.

Expected value of plants purchased in 2020-21

This financial year, 56% of NSW, VIC & QLD independent retail nurseries expect to purchase a greater number of plants through wholesale nurseries than in 2019-20. On average, plant purchases are expected to increase 17%.

A slightly lower proportion of QLD, NSW and VIC landscape businesses (47%) predict plant purchases to increase in 2020-21, but only 16% expect a decrease. As a result, the number of plants purchased by landscapers is estimated to increase approximately 7% this financial year.

Current and future industry sentiment - independent retail

Demand for products and COVID-19 restrictions creating a greater consumer focus on gardening has resulted in significantly more widespread industry positivity among independent retail nurseries than in 2018 (95%, was 75%).

As a result, 6 in 10 businesses are currently expanding and almost half expect growth to continue over the next 5 years, compared to only 6% expecting to wind down or close.

Current and future industry sentiment - landscape

Consistent with 2018 results, more than 9 in 10 landscape respondents are confident in the future of their industry, but the proportion who are very positive has increased a significant 21 points to 59%. Demand for products and services remains the key driver of positivity, however, one quarter mention COVID-19 driving demand through a greater focus on gardening.

On par with 2018, approximately half of respondents' landscape businesses are currently expanding and less than 1 in 20 are contracting. Over the next 5 years, industry growth is likely, with half of all respondents expecting to grow their business, including 6 in 10 large enterprises and in total, only 3% plan to contract.

Conclusions and recommendations

- ❖ The value of plants purchased through production nurseries by independent retail nurseries and landscape businesses is within acceptable estimates of sales data in the 2019-20 Production Nursery Data Capture Report. Additionally, results for business expansion, product demand and industry sentiment are reflected across Greenlife producers and the landscape and independent retail sectors.
- ❖ These results validate the methodology and data obtained through the NY17008 Project.

Main report

1. Background and methodology

Background

In 2017, the Nursery and Garden Industry Statistics Project NY16004 largely overcame past challenges collecting industry data due to the industry's diversity and lack of engagement with data collection and estimated the industry's value at substantially greater than previously reported.

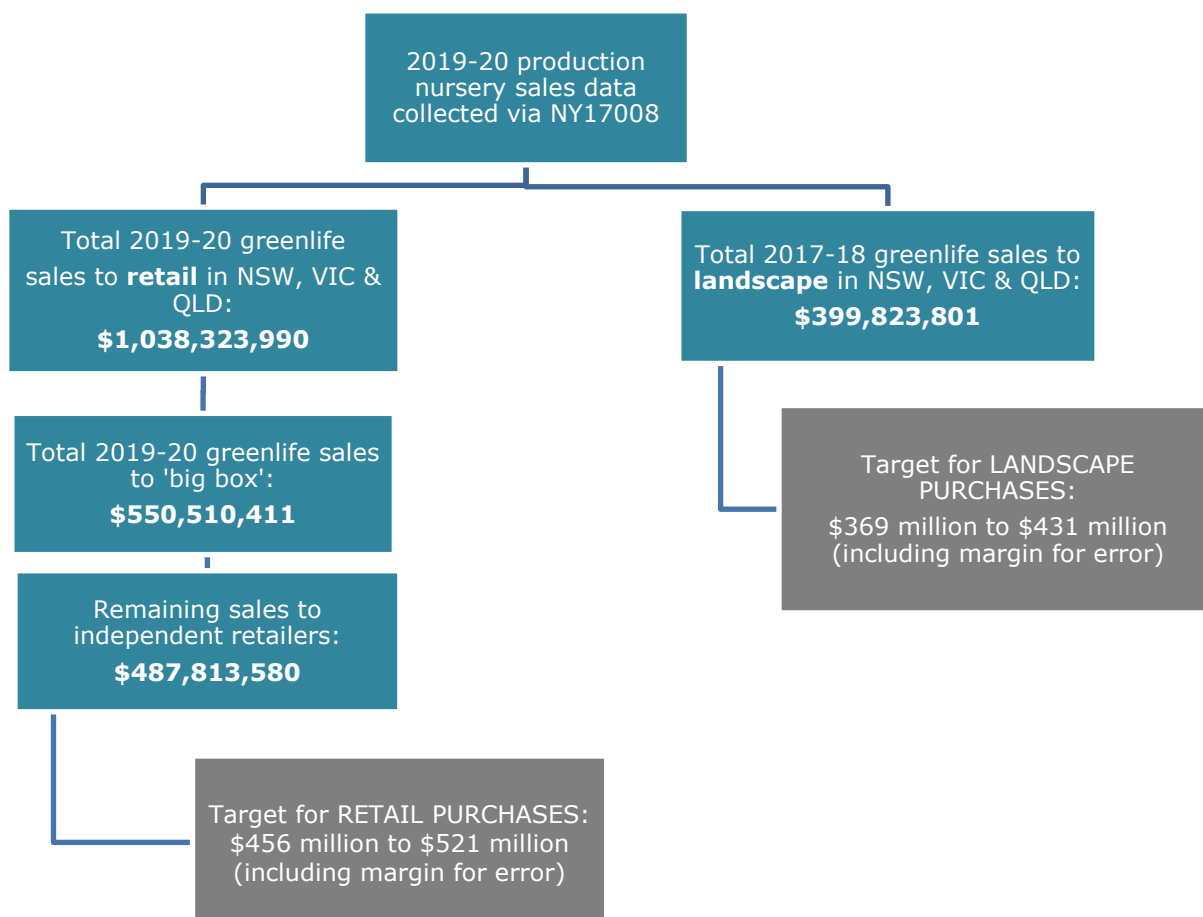
To build upon NY16004, Hort Innovation commissioned NY17008, a three-year program to provide accurate, timely and longitudinal nursery industry data to inform industry decision making, resource prioritisation, investment evaluation, strategic planning activities and provide industry with a benchmarking data tool.

However, to ensure accuracy of the data collected, validation of production nursery sales data collected in the 2019-20 survey was sought through a survey of independent retail nurseries and landscapers who purchase from production nurseries.

Validating data via these sectors offers several advantages, including being the largest of the greenlife sales channels and availability of contact lists through the Greenlife Industry Australia (GIA) and State Associations.

Challenges associated with small sample sizes in some states meant the decision was made to validate data only in NSW, VIC and QLD.

To ensure data can be compared reliably, the same methodology needed to be used across both the production and supply chain datasets. The data validation model is detailed below.



Data collection methodology

Data collection largely reflects the methodology used in the production nursery sales survey and was undertaken in the following stages to allow for appropriate monitoring of progress and to maximise participation:

- Stage 1:** Initial contact with retailers and landscapers to confirm contact details, make an appointment to complete the survey and obtain their email address.
- Stage 2:** Respondents received a confidentiality statement (appendix 2), snapshot of the industry from 2019 results and a full copy of the questionnaire (appendix 1) so the respondent fully understands the information required.
- Stage 3:** Computer Assisted Telephone Interviews (CATI) with retail nursery and landscape businesses to collect the statistical data required.

DTER developed a contact database using contact lists provided by GIA for the retail nursery sector and the NSW, VIC and QLD Association member databases for the landscape industry.

This database was fed into the Computer Assisted Telephone Interviewing (CATI) program set up by Market

Metrics (accredited market research call centre used for the project based in Frankston, Victoria). All interviewers used for the project have considerable experience working on DTER's projects in the agriculture sector. Prior to commencement, interviewers were thoroughly briefed on all aspects of the project by Daniel Watson, senior consultant at DTER.

Initial contact interviews and appointment setting commenced on the 27th October 2020 and concluded on 7th December 2020.

Consistent with past greenlife interviewing results, completing interviews proved challenging due many respondents rescheduling appointments. Additionally, several respondents who initially agreed to provide information subsequently refused to participate once they had received the list of data requirements.

In total, 201 interviews were completed with respondents purchasing through wholesale nurseries. 165 conducted via CATI and 36 received via email. Average interview length was approximately 20 minutes.

Achieving 100 completed interviews with nursery retailers provides a margin for error (at the 95% confidence level) of $\pm 9.5\%$ on national results. Whereas 101 landscape interviews provides a margin for error (at the 95% confidence level) of $\pm 9.4\%$.

Data weighting

Due to the comprehensive number of calls made for the project, it was possible to make assumptions on the number of businesses in each State and subsequently determine weighting figures that could be applied to the interviews achieved so that statistics provided represent the entire independent nursery and landscape industries, not only the sub-set of organisations participating in the

study. The numbers detailed below are the totals when those not purchasing from wholesale nurseries or identified as no longer operating are removed from the total population.

No significant variation in call outcomes compared to 2018, so 2018 estimates used for consistency.

number of businesses estimated	total	nsw/act	vic	qld
Independent retail nurseries	1,477	574	497	406
Landscape builders/contractors	1,635	641	549	445

Handling of 'empty cells'/missing data

The data set includes a number of 'empty cells' or missing data, typically due to respondents being unaware of the number of plants sold or being unable to extract data according to requested categories and supply chain options.

To reliably weight and extrapolate data to represent the entire industry means these 'empty cells' need to be accounted for and the technique (detailed in the 2019-20 Production Nursery data collection) utilised in NY16004 is used in all NY17008 waves.

2. Report notes

Data collected for the project is based on the 2019-20 financial year and is only based on NSW, QLD and VIC retail and landscape businesses.

Throughout this report, reference is made to various segments, defined in the table below:

Enterprise phase	Steady, happy	Those whose business is in status due to being at an acceptable stage
	Steady, unable	Those whose business is in status due to being unable to expand
	Expansion	Those whose business is in an expansion phase
	Winding down	Those contracting size of enterprise
business size (turnover)	Small	Turnover less than \$500,000
	Medium	Turnover between \$500,000 and \$2,000,000
	Large	Turnover greater than \$2,000,000
	Don't know (don't know t/o)	Unable to provide turnover value
Perception of industry	Positive	Those feeling very or fairly positive about the future of the nursery industry
	Negative	Those feeling very or fairly negative about the future of the nursery industry
	Neutral	Those feeling neutral or unsure about the future of the nursery industry
*	Small sample size	Sample less than n=30, caution required interpreting data

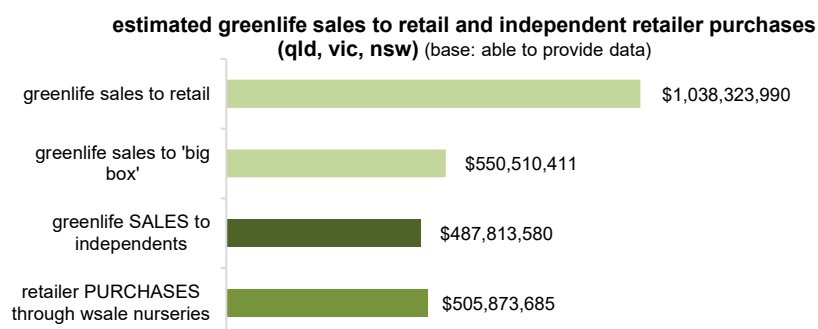
3. Greenlife production validation through retail and landscape purchases

3.1 Greenlife production sales to INDEPENDENT RETAIL and purchase validation

Questions asked:

Q6. How many plants in total did you purchase from wholesale nurseries in the 2019-20 financial year?

Q7. And what was the total value of the plants purchased from wholesale nurseries in 2019-20??



retail nursery sales/purchases in 2019-20 (estimated)		national	nsw, vic, qld only
Greenlife production survey: Retail sales results			
Total sales to retail channel		\$1,366,938,311	\$1,038,323,990
'Big box' sales		\$709,675,732	\$550,510,411
% to 'big box'		52%	53%
Sales to independent retailers		\$657,262,579	\$487,813,580
Supply chain survey: Retail nursery purchases			
Value purchased through wholesale nurseries (total number of retailers = 1,477)			\$505,873,685

Key findings

- NY17008 estimated that NSW, VIC and QLD production nurseries sold plants valued at approximately \$1.04 million to the retail channel in 2019-20 (findings detailed separately in DTER's 2019-20 Production Nursery Data Capture Report).
- Included in this total, is an estimated \$551 million or 53% to the 'big box' sector, resulting in an estimated \$488 million sold to independent retail nurseries in 2019-20.
- This figure represents the target for independent retail nursery purchases detailed below.
- When purchase data from 100 independent nursery businesses (NSW, VIC and QLD based) is extrapolated to represent all those purchasing from production nurseries, it can be estimated that purchases were valued at approximately \$506 million in 2019-20 (between \$458 and \$554 million when margin for error is considered).

Implications

Extrapolated survey data provides additional evidence that production nursery sales data estimated in the NY17008 Project is within acceptable limits.

3.2 Greenlife sales to LANDSCAPE channel and purchase validation

Questions asked:

Q6. How many plants in total did you purchase from wholesale nurseries in the 2019-20 financial year?

Q7. And what was the total value of the plants purchased from wholesale nurseries in 2019-20?

greenlife sales and landscape purchases (qld, vic, nsw)



landscape sales/purchases in 2019-20 (estimated)		national	nsw, vic, qld only
Greenlife production survey: Landscape sales results			
Sold to Landscape		\$454,720,332	\$399,823,801
Supply chain survey: Landscaping purchase results			
Value purchased through wholesale nurseries (total number of landscapers = 1,635)			\$425,837,815

Key findings

- The NY17008 project estimates that production nurseries in NSW, QLD and VIC sold plants valued at approximately \$400 million to landscape businesses in 2019-20 (findings detailed separately in DTER's 2019-20 Production Nursery Data Capture Report).
- This figure represents the target for purchases by landscape organisations in the following paragraph.
- When data from 101 NSW, QLD and VIC landscapers who purchase from wholesale production nurseries is extrapolated to represent all landscape businesses (where plants are purchased from production nurseries), it is estimated that approximately \$426 million (between \$386 and \$466 million when margin for error is considered) of plants were purchased in 2019-20.

Implications

Purchase data from landscape organisations correlates with production nursery sales to this sector and provides confidence in the results for the NGI Statistics Project.

3.3 Number and value of plants purchased by plant category - retail

Questions asked:

Q8. During the 2019-20 financial year, how many plants did you buy from wholesale nurseries in the following categories?

Q9. And what was the total value of (from Q8) of plants purchased from wholesale nurseries?

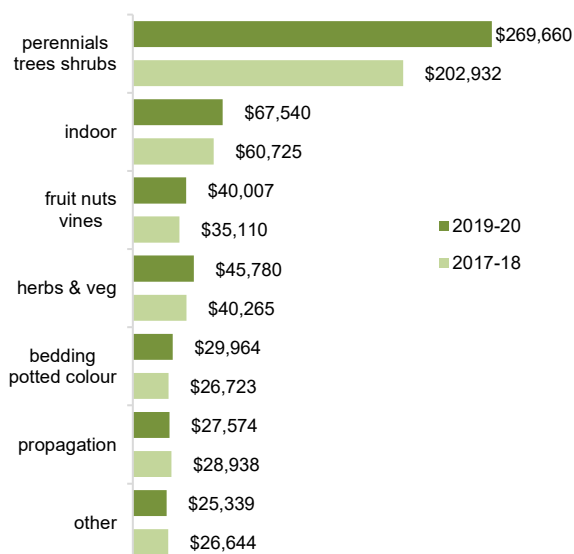
Key findings

- While direct comparison of sales and purchases by category and state would be ideal, complexity for production respondents to allocate sales by supply chain and plant type is not feasible (for example, one business selling to retail, landscape and wholesale would split these sales by propagation plants, indoor plants, herbs & vegetables for each of the 3 supply chains).
- Survey data suggests purchases among NSW, QLD and VIC retailers for the vast majority of plant categories increased in 2019-20 compared to 2017-18.
- Readers should note 'other' mentions include totals for those people unable to provide breakdowns by category.

Implications

In 2019-20, independent retailers purchased a greater value of plants across most plant categories than in 2017-18.

value of purchases by plant category (\$'000)



category for plants purchased** (estimated)	2017-18 (base: respondents able to provide data)	2019-20 (base: respondents able to provide data)
Propagation plants:		
% purchasing propagation plants	47%	52%
Total number of plants	11,683,872	18,833,328
Total value of plants	28,937,915	27,574,132
Herbs and vegetables:		
% purchasing herbs and vegetables	71%	81%
Total number of plants	22,728,601	34,243,023
Total value of plants	40,264,737	45,789,550
Fruit trees, nut trees, vines:		
% purchasing fruit trees, nut trees, vines	79%	86%
Total number of plants	8,740,241	11,435,818
Total value of plants	35,110,400	40,006,817
Bedding and potted colour:		
% purchasing bedding, potted colour	66%	74%
Total number of plants	11,092,005	23,353,442
Total value of plants	26,723,412	\$29,963,999
Indoor plants:		
% purchasing indoor plants	71%	83%
Total number of plants	9,764,978	21,067,421
Total value of plants	60,725,132	\$67,539,817
Perennials, trees and shrubs:		
% purchasing perennials, trees, shrubs	88%	90%
Total number of plants	62,672,636	101,172,478
Total value of plants	202,931,517	269,660,313
Other (includes those unable to breakdown by category):		
% purchasing other	22%	49%
Total number of plants	4,531,912	7,787,247
Total value of plants	26,644,083	\$25,339,058
Total plants bought:		
Total number of plants	131,214,245	217,892,757
Total value of plants	\$421,337,196	\$505,873,685

Due to small sample sizes by category, only total data is provided. NOTE: Data is for the 2019-20 year and not necessarily representative of sales in every year. *caution small sample sizes **significance testing not provided

3.4 Number and value of plants purchased by plant category - landscape

Questions asked:

Q8. During the 2019-20 financial year, how many plants did you buy from wholesale nurseries in the following categories?

Q9. And what was the total value of (from Q8) of plants purchased from wholesale nurseries?

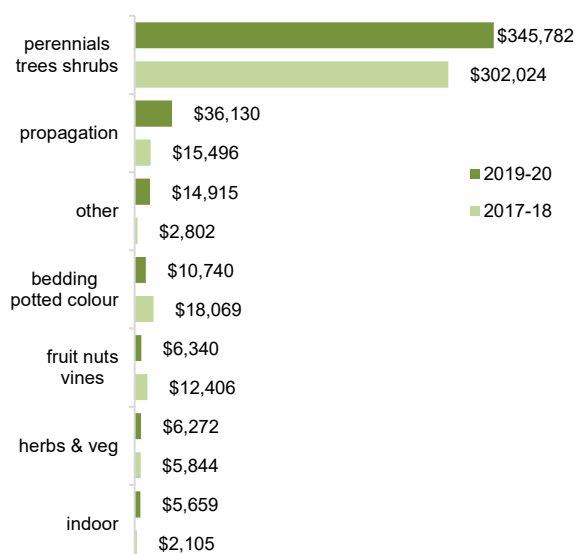
Key findings

- While direct comparison of sales and purchases by category and state would be ideal, complexity for production respondents to allocate sales by supply chain and plant type is not feasible (for example, one business selling to retail, landscape and wholesale would split sales by propagation plants, indoor plants, herbs & vegetables for each of the 3 supply chains).
- Small sample sizes in many purchase categories means that data should be viewed with caution.
- Readers should note 'other' mentions include totals for those people unable to provide breakdowns by category.

Implications

Consistent with 2017-18, perennials, trees and shrubs are significantly more likely to be purchased by landscapers than all other plant categories.

value of purchases by plant category (\$'000)



category for plants purchased 2019-20 (estimated)	retail (base: respondents able to provide data)	landscape (base: respondents able to provide data)
Propagation plants:		
% purchasing propagation plants	18%*	50%
Total number of plants	7,816,425	22,367,362
Total value of plants	15,496,077	\$36,129,991
Herbs and vegetables:		
% purchasing herbs and vegetables	36%	44%*
Total number of plants	10,900,811	1,449,250
Total value of plants	5,843,534	\$6,271,708
Fruit trees, nut trees, vines:		
% purchasing fruit trees, nut trees, vines	52%	58%
Total number of plants	5,921,789	1,597,483
Total value of plants	12,406,119	\$6,340,239
Bedding and potted colour:		
% purchasing bedding, potted colour	36%	31%*
Total number of plants	3,876,555	1,282,408
Total value of plants	18,068,872	\$10,739,710
Indoor plants:		
% purchasing indoor plants	15%*	33%*
Total number of plants	172,796	693,073
Total value of plants	2,104,884	\$5,658,887
Perennials, trees and shrubs:		
% purchasing perennials, trees, shrubs	99%	92%
Total number of plants	29,860,090	46,955,545
Total value of plants	302,023,819	\$345,781,911
Other (includes those unable to breakdown by category):		
% purchasing other	2%*	18%
Total number of plants	934,047	2,039,319
Total value of plants	2,802,141	\$14,915,370
Total plants bought:		
Total number of plants	59,482,513	76,384,440
Total value of plants	358,745,445	\$425,837,815

Due to small sample sizes by category, only total data is provided. NOTE: Data is for the 2019-20 year and not necessarily representative of sales in every year. *caution small sample sizes

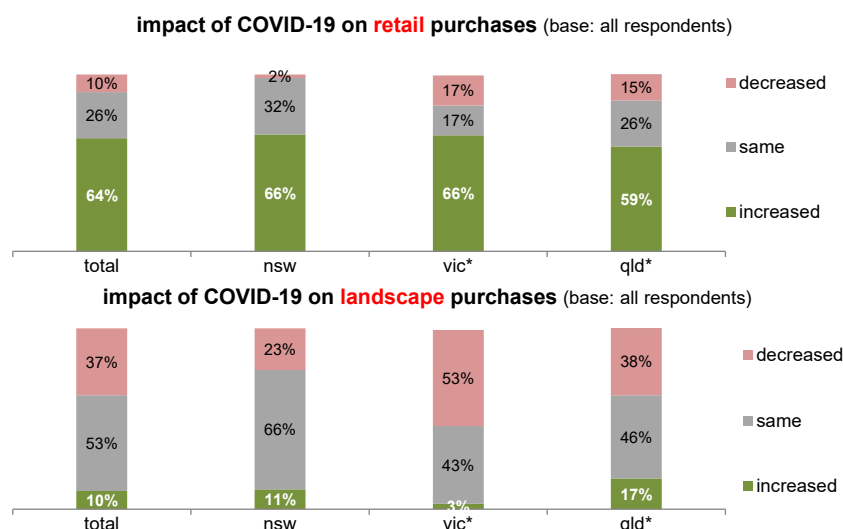
3.5 Estimated impact of COVID-19 disruptions on greenlife purchases

Question asked:

Q10. For the 2019-20 financial year, did COVID-19 disruptions/restrictions have any impact on the total value of your greenlife purchases?

Q11. And as a result of COVID-19 disruptions/restrictions, did the total value of your greenlife purchases in 2019-20.....?

Q12. In your best estimate, what proportion did your total greenlife purchases increase/decrease in 2019-20 as a result of COVID-19 disruptions/restrictions?



Key findings

- Seventy four percent (74%) of NSW, VIC & QLD independent nurseries say that their purchases through production nurseries were impacted by COVID-19 disruptions in 2019-20.
- Most commonly, the value of purchases increased (64% of all retail respondents) and on average, among this group, the value is estimated to have increased 36%.
- Conversely, 1 in 10 independent retailers purchased a lesser value of plants through wholesalers. On average, purchases decreased 27% among this group
- (small sample sizes means the latter result is indicative only).
- Compared to retailers, COVID-19 impacted plant purchases for a significantly lower proportion of landscapers (47%) and purchases were more likely to have decreased (37% of landscapers) than increased (10%).
- On average, landscape purchases increased 16% among those where plant sales were positively impacted and decreased 34% where purchases were reduced.

Implications

COVID-19 disruptions has significantly increased plant purchases among independent retailers, but the impact is considerably less among the landscape channel.

COVID-19 impact on retailer purchases	% mentioning (base: all respondents able to answer)			
	total	nsw	vic*	qld*
Greenlife purchases impacted by COVID-19 disruptions	74%	68%	83%	74%
Purchases increased as a result of COVID-19	64%	66%	66%	59%
Average % purchases increased (base: COVID increased greenlife purchases)	36%	34%	35%	42%
Purchases decreased as a result of COVID-19*	10%	2%	17%	15%
Average % purchases decrease (base: COVID decreased greenlife purchases)*	27%	-	27%	27%

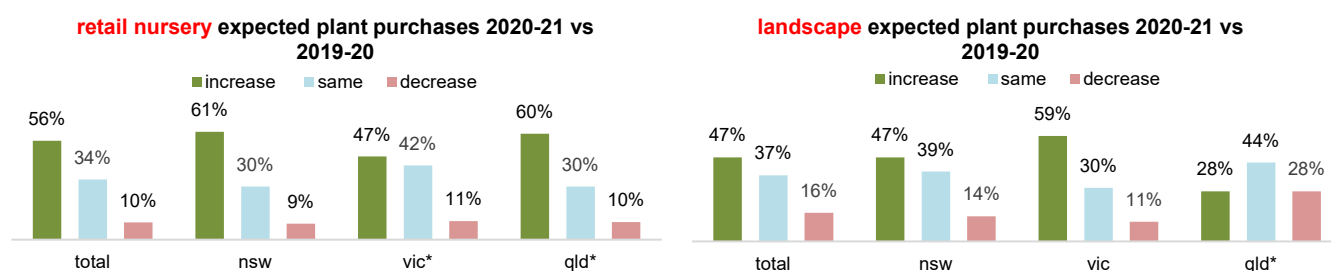
COVID-19 impact on landscaper purchases	% mentioning (base: all respondents able to answer)			
	total	nsw	vic	qld*
Greenlife purchases impacted by COVID-19 disruptions	47%	34%	57%	54%
Purchases increased as a result of COVID-19	10%	11%	3%	17%
Average % purchases increased (base: COVID increased greenlife purchases)*	16%	16%	10%	18%
Purchases decreased as a result of COVID-19	37%	23%	53%	38%
Average % purchases decrease (base: COVID decreased greenlife purchases)	34%	25%	40%	32%

*Caution sub sample smaller than N=30.

3.6 Expected future number and value of plants purchased

Question asked:

Q17. In total, how many plants do you expect to purchase from wholesale nurseries during the 2020-21 financial year?



Key findings

- This financial year, 56% of NSW, VIC & QLD independent retail and 47% of landscapers expect to purchase a greater number of plants than in 2019-20.
- As a result, the number of plants purchased from production nurseries by independent retailers is expected to increase 17% and landscapers 7%.

Implications

Survey results suggest independent retail and landscape demand for production nursery plants will continue to grow in NSW, QLD and VIC.

retail nursery expected plants purchased in 2020-21 vs 2019-20 (estimated)	% mentioning (base: respondents able to answer)			
	total	nsw	state vic*	qld*
Greater	56%	61%	47%	60%
Same	34%	30%	42%	30%
Less	10%	9%	11%	10%
Expected change in number of plants purchased	+17%	Sample sizes too small to calculate		

landscape expected plants purchased in 2020-21 vs 2019-20 (estimated)	% mentioning (base: all respondents able to answer)			
	total	nsw	state vic	qld*
Greater	47%	47%	59%	28%
Same	37%	39%	30%	44%
Less	16%	14%	11%	28%
Expected change in number of plants purchased	+7%	Sample sizes too small to calculate		

*Caution, sub sample smaller than N=30

4. Respondent business turnover

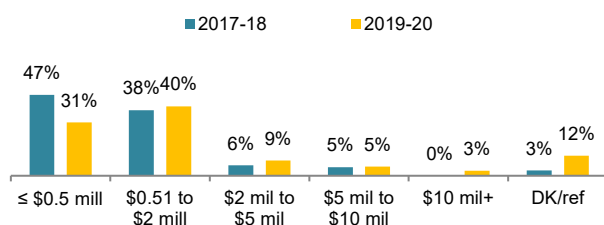
4.1 Business turnover in 2019-20

Question asked:

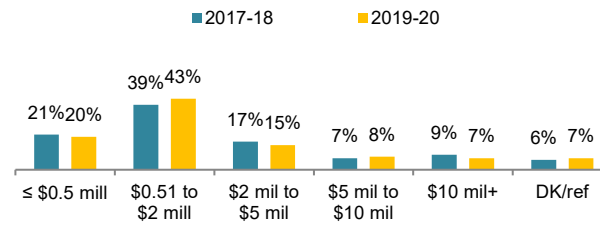
Q25. Just for classification purposes, could you please indicate your company's turnover for the 2019-20 financial year?

Q26. If refused at Q25, ask: Would it help if I read out some broad dollar ranges? Would your company's turnover be...?

retail business size (base: all respondents)



landscape business size (base: all respondents)



Key findings

- Among those able to provide data (filtered for don't know/refuse), 35% of NSW, QLD & VIC independent retailers turnover was less than \$500,000, 46% between \$500,001 and \$2 million and 19% exceeded \$2 million in 2019-20.
- Among landscapers able to answer (filtered for don't know/refuse), turnover was less than \$500,000 for 21%, between \$500,001 and \$2 million for 46% and one third (33%) exceeded \$2 million.

Implications

The survey sample provides a range of landscape and independent retail business sizes.

retail nursery business turnover amount 2019-20**	% mentioning (base: respondents)			
	total (n=100)	nsw (n=44)	state vic (n=29)*	qld (n=27)*
\$500,000 or less	31%	30%	28%	37%
\$500,001 to \$2,000,000	40%	36%	41%	44%
\$2,000,001 to \$5,000,000	9%	9%	7%	11%
\$5,000,000 to \$10,000,000	5%	5%	10%	0%
\$10,000,000 or greater	3%	5%	3%	0%
Don't know/refused	12%	16%	10%	7%

**Includes all sources of income (for example consulting, café etc) *Caution, sub sample smaller than N=30.

landscape business turnover amount 2019-20	% mentioning (base: all respondents)			
	total (n=101)	nsw (n=47)	state vic (n=30)	qld (n=24)*
\$500,000 or less	20%	13%	30%	17%
\$500,001 to \$2,000,000	43%	47%	37%	46%
\$2,000,001 to \$5,000,000	15%	19%	10%	17%
\$5,000,000 to \$10,000,000	8%	9%	3%	13%
\$10,000,000 or greater	7%	6%	10%	4%
Don't know/refused	7%	6%	10%	4%

*Caution, sub sample smaller than N=30.

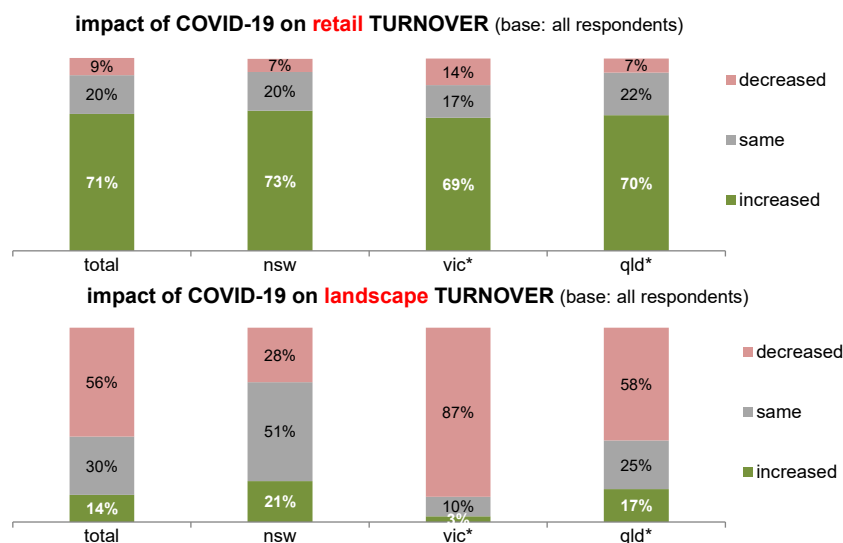
4.2 Estimated impact of COVID-19 disruptions on overall turnover

Question asked:

Q27. For the 2019-20 financial year, did COVID-19 disruptions/restrictions have any impact on your total turnover?

Q28. And as a result of COVID-19 disruptions/restrictions, did the total value of your total turnover in 2019-20.....?

Q29. In your best estimate, what proportion did your total turnover increase/decrease in 2019-20 as a result of COVID-19?



Key findings

- The majority of NSW, VIC & QLD independent retail (80%) and landscape (70%) businesses' turnover in 2019-20 was impacted by COVID-19.
- In total, 71% of independent retailer's turnover increased due to COVID-19. As a result, on average, among this group it is estimated that turnover increased 31%. COVID-19 decreased turnover for less than 1 in 10 (9%) independent retailers.
- Conversely, COVID-19 decreased turnover for more than half (56%) of landscape businesses, on average decreasing turnover 22% among this group.

Implications

Survey results suggest COVID-19 positively impacted independent retail sales, but reduced overall turnover for many landscape businesses.

COVID-19 impact on retailer turnover	% mentioning (base: all respondents able to answer)			
	total	nsw	vic*	qld*
Turnover impacted by COVID-19 disruptions	80%	80%	83%	78%
Turnover increased as a result of COVID-19	71%	73%	69%	70%
Average % turnover increased (base: COVID increased turnover)	31%	29%	29%	35%
Turnover decreased as a result of COVID-19	9%	7%	14%	7%
Average % turnover decreased (base: COVID decreased turnover) *	27%	-	37%	30%

COVID-19 impact on landscaper turnover	% mentioning (base: all respondents able to answer)			
	total	nsw	vic	qld*
Turnover impacted by COVID-19 disruptions	70%	49%	90%	75%
Turnover increased as a result of COVID-19	14%	21%	3%	17%
Average % turnover increased (base: COVID increased turnover)*	24%	22%	5%	34%
Turnover decreased as a result of COVID-19	56%	28%	87%	58%
Average % turnover decreased (base: COVID decreased turnover)	22%	22%	22%	23%

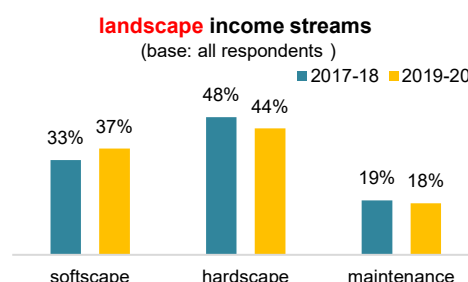
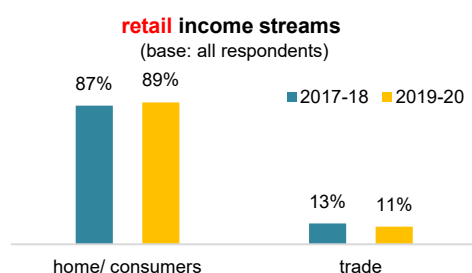
*Caution sub sample smaller than N=30.

4.3 Income streams

Questions asked:

Q13. What proportion of your total turnover in the 2019-20 financial year would the following represent?

Q14. What proportion of your total turnover in the 2019-20 financial year would the following represent, sales to.....?



Key findings

- Consistent with results from the 2017-18 survey, the vast majority of NSW, VIC & QLD independent retail income is derived through home/consumer channels (89%) and a much smaller amount through trade (11%).
- Similarly, NSW, VIC & QLD landscape income streams do not vary significantly to 2017-18. Hardscape and softscape (44% and 37% respectively) represent a significantly greater proportion of income than maintenance (18%).

Implications

2019-20 results do not vary significantly from 2017-18.

retail nursery business income streams	% mentioning (base: respondents)			
	total (n=100)	nsw (n=44)	state vic (n=29)*	qld (n=27)*
Average proportion of income through home/consumers	89%	87%	89%	92%
Average proportion of income through trade	11%	13%	11%	8%

*Caution, sub sample smaller than N=30.

landscape business income streams	% mentioning (base: respondents)			
	total (n=101)	nsw (n=47)	state vic (n=30)	qld (n=24)*
Average proportion of income through softscape	37%	33%	43%	36%
Average proportion of income through hardscape	44%	50%	38%	44%
Average proportion of income through maintenance	18%	17%	19%	19%

*Caution, sub sample smaller than N=30.

4.4 Proportion of income spent on greenlife purchases through wholesale nurseries

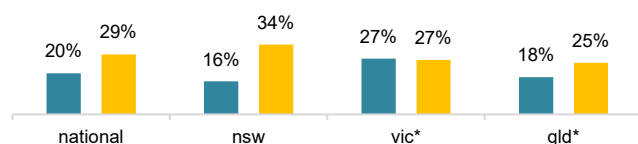
Questions asked:

Q7. What was the total value of plants purchased from wholesale nurseries in the 2019-20 financial year?

Q25. Just for classification purposes, could you please indicate your company's turnover for the 2019-20 financial year?

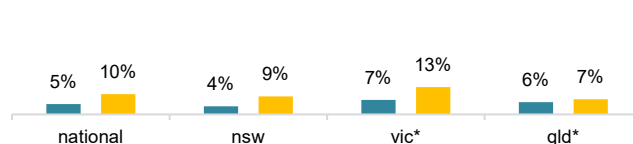
retailer % income spent on wholesale greenlife purchases (base: respondents able to answer)

■ 2017-18 ■ 2019-20



landscape % income spent on wholesale greenlife purchases (base: respondents able to answer)

■ 2017-18 ■ 2019-20



Key findings

- 2019-20 greenlife purchases through production nurseries represented a slightly higher proportion of total NSW, VIC & QLD independent retail nursery income (29%) than in 2017-18 (20%).
- Similarly, in total, purchases through wholesale nurseries represented 10% of NSW, VIC & QLD landscape business turnover, up slightly compared to 2017-18 (5%).

Implications

Purchases through production nurseries may have represented a slightly higher proportion of total turnover in 2019-20 than in 2018-19.

retail nursery % income spent on greenlife	% mentioning (base: respondents able to answer)			
	total (n=80)	NSW (n=33)	state VIC* (n=24)	state QLD* (n=27)
Proportion of turnover spent on purchases through greenlife production nurseries*	29%	34%	27%	25%

*Caution, sub sample smaller than N=30.

landscape business % income spent on greenlife	% mentioning (base: respondents able to answer)			
	total (n=90)	NSW (n=42)	state VIC* (n=25)	state QLD* (n=23)
Proportion of turnover spent on purchases through greenlife production nurseries	10%	9%	13%	7%

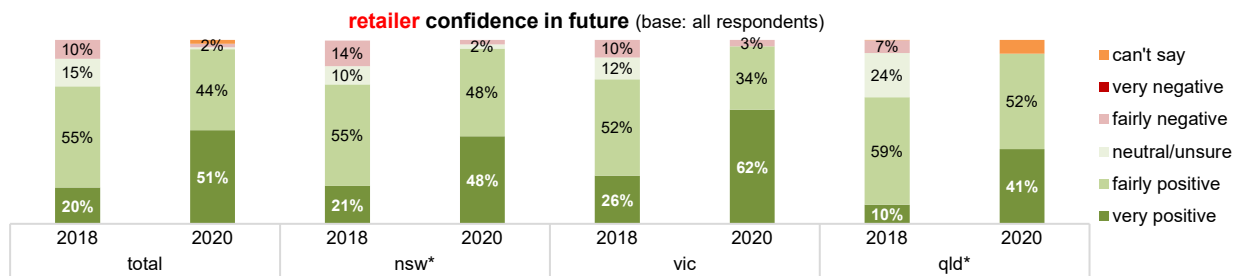
*Caution, sub sample smaller than N=30.

5. Confidence in retail nursery industry's future

Questions asked:

Q18. Overall, how do you feel about the future of your industry? Would you say you feel (read out)

Q19. Why do you say that?



Key findings

- Confidence towards the future of the retail industry is widespread among NSW, VIC & QLD respondents (95% *fairly* or *very* positive). Notably, this result is reflected across each state and business size.
- Challenges with a shortage of plants (11%) is the most commonly mentioned negative aspect and a small group (5%) have concerns with demand and oversupply of plants post COVID-19.
- Positive sentiment is driven by product demand, including through COVID-19 disruptions.

Implications

Demand generated through COVID-19 disruptions has clearly increased industry confidence among NSW, VIC & QLD independent retailers.

retailer confidence	% mentioning (base: all respondents)			
	total (n=100)	ns (n=44)	vic (n=29)*	qld (n=27)*
Very positive	51%	48%	62%	41%
Fairly positive	44%	48%	34%	52%
Neutral	1%	2%	0%	0%
Fairly negative	2%	2%	3%	0%
Very negative	0%	0%	0%	0%
Can't say	2%	0%	0%	7%
Total: positive	95%	95%	97%	93%
Total: negative	2%	2%	3%	0%

*Caution, sub sample smaller than N=30

retailer reasons for level of confidence (main mentions)	% mentioning (base: all respondents)			
	total (n=100)	ns (n=44)	vic (n=29)*	qld (n=27)*
Positive mentions:				
COVID driving demand/focus on gardening	48%	50%	45%	48%
Demand for product (net)	34%	30%	45%	26%
Strong sales/industry positivity	6%	2%	7%	11%
Younger people starting gardening	5%	14%	0%	0%
Negative mentions:				
Issues getting supply of plants/wholesalers selling to Bunnings first/exclusively	11%	7%	10%	19%
Concerns with demand/oversupply of plants post COVID	5%	7%	0%	7%
Bunnings/selling to Bunnings/tight margins/poor retail	4%	7%	3%	0%
Effect of climate on demand/drought	4%	2%	0%	11%

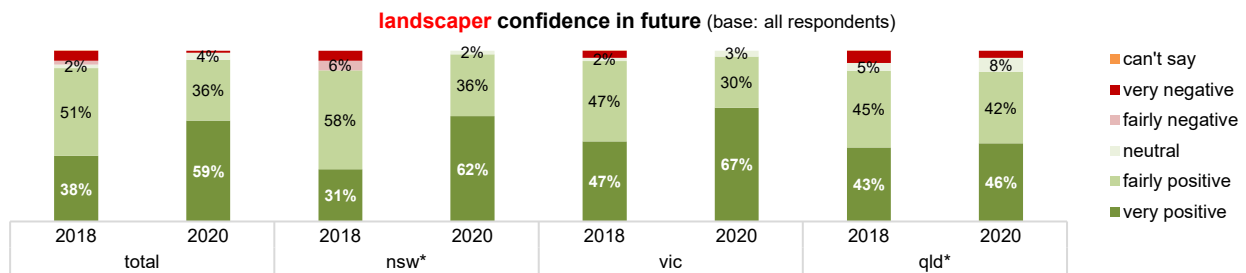
*Caution, sub sample smaller than N=30

6. Confidence in landscape industry's future

Questions asked:

Q18. Overall, how do you feel about the future of your industry? Would you say you feel (read out)

Q19. Why do you say that?



Key findings

- Similar to 2018 results, more than 9 in 10 (95%) NSW, VIC & QLD landscapers are positive towards the industry's future, but the proportion very positive has increased significantly (59%, up from 38%).
- Demand for landscaping products/services is clearly the key driver of positivity (68% mentioning), but one quarter (25%) mention COVID-19 increasing demand and focus on gardening.

Implications

Consistent with findings from other industries that DTER conducts surveys, strong demand for products and/or services typically results in widespread industry confidence.

landscape confidence	% mentioning (base: all respondents)			
	total (n=101)	nsw (n=47)	state vic (n=30)	qld (n=24)*
Very positive	59%	62%	67%	46%
Fairly positive	36%	36%	30%	42%
Neutral	4%	2%	3%	8%
Fairly negative	0%	0%	0%	0%
Very negative	1%	0%	0%	4%
Can't say	0%	0%	0%	0%
Total: positive	95%	98%	97%	88%
Total: negative	1%	0%	0%	4%

*Caution, sub sample smaller than N=30

landscape reasons for level of confidence (main mentions)	% mentioning (base: all respondents)			
	total (n=101)	nsw (n=47)	state vic (n=30)	qld (n=24)*
Positive mentions:				
Total: demand for product/services	68%	70%	63%	71%
Building demand	15%	13%	13%	21%
Council/Government demand	13%	17%	13%	8%
COVID driving demand/focus on gardening	25%	21%	37%	17%
Strong sales/industry positivity	7%	9%	7%	4%
Good business management	5%	6%	3%	4%
Negative mentions:				
Issues getting supply of plants/wholesalers selling to Bunnings first/exclusively	4%	2%	7%	4%
Concerns with demand/oversupply of plants post COVID	2%	0%	0%	8%
Decreased demand	2%	2%	0%	4%

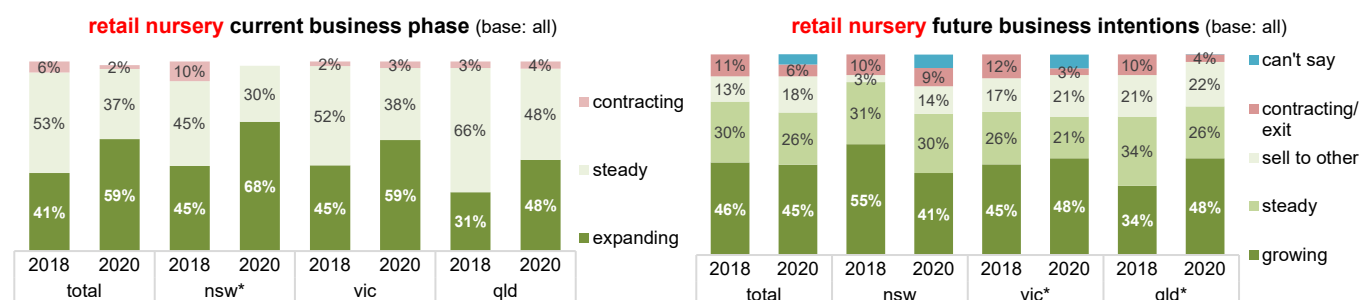
*Caution, sub sample smaller than N=30

7. Current business phase and future intentions – independent retailer

Questions asked:

Q15. Which of the following best describes your business at this point in time?

Q16. And what is the intention for the business over the next 5 years?



Key findings

- Currently, 6 in 10 NSW, VIC & QLD independent retailers are expanding their business and a large proportion (45%) expect growth to continue over the next 5 years.
- During this period, 1 in 20 business (6%) are likely to wind down or close over the next 5 years, however all of these business are small (turning over less than \$500,000).

Implications

Consistent with production nursery results, much of the NSW, VIC & QLD industry is currently expanding and half expect to continue to do so over the next 5 years.

retail nursery current business stage	% mentioning (base: all respondents)			
	total (n=100)	nsw (n=44)	state vic (n=29)*	qld (n=27)*
Expanding	59%	68%	59%	48%
Steady	37%	30%	38%	48%
Contracting	2%	0%	3%	4%
Other	1%	2%	0%	0%

retail future intentions for business	% mentioning (base: all respondents)			
	total (n=100)	nsw (n=44)	state vic (n=29)*	qld (n=27)*
Growing business	45%	41%	48%	48%
Remaining steady	26%	30%	21%	26%
Contracting/winding down	2%	5%	0%	0%
Sell as business to other person/company	18%	14%	21%	22%
Sell land to developer	1%	0%	0%	4%
Close business	3%	5%	3%	0%

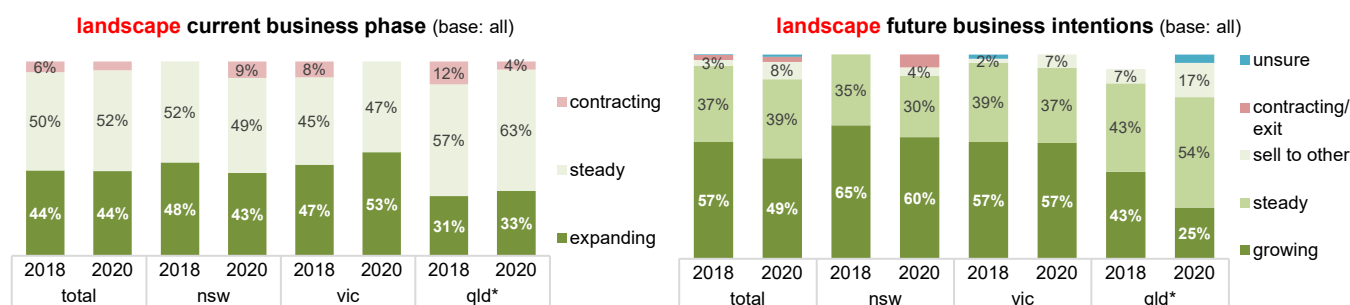
*Caution, sub sample smaller than N=30.

8. Current landscape business phase and future intentions - landscape

Questions asked:

Q15. Which of the following best describes your business at this point in time?

Q16. And what is the intention for the business over the next 5 years?



Key findings

- On par with 2018 results, 44% of NSW, VIC & QLD landscape businesses are currently expanding and a similar proportion (49%) expect this will continue over the next 5 years.
- Although sample sizes are too small to draw definitive conclusions, businesses with turnover exceeding \$2 million are more likely than small counterparts (turnover less than \$500,000) to expect their business to grow over the next 5 years (54% and 31% respectively).
- Only 3% of landscape businesses are likely to contract over this period and each of these turnover less than \$500,000.

Implications

Consistent with the current state of the industry, the NSW, VIC & QLD landscape industry is expected to grow over the next 5 years.

landscape current business stage	% mentioning (base: all respondents)			
	total (n=101)	nsw (n=47)	vic (n=30)	qld (n=24)*
Expanding	44%	43%	53%	33%
Steady	52%	49%	47%	63%
Contracting	4%	9%	0%	4%

landscape future intentions for business	% mentioning (base: all respondents)			
	total (n=101)	nsw (n=47)	vic (n=30)	qld (n=24)*
Growing business	49%	60%	57%	25%
Remaining steady	39%	30%	37%	54%
Contracting/winding down	3%	6%	0%	0%
Sell as business to other person/company	8%	4%	7%	17%
Close business	0%	0%	0%	0%
Can't say	1%	0%	0%	4%

*Caution, sub sample smaller than N=30.

9. Employment

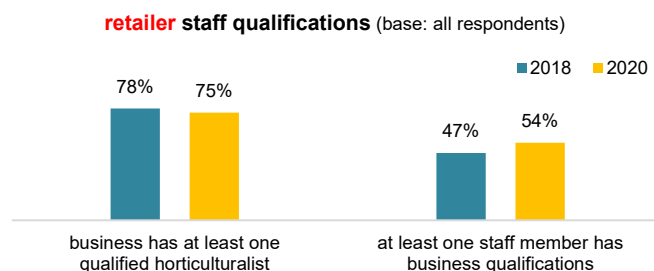
9.1 Retail nursery employment and qualifications

Questions asked:

Q20. How many people including yourself are employed in the business?

Q21. And how many of the people employed in the business (including yourself) are qualified horticulturalists?

Q24. And how many of the people employed in the business (including yourself) hold business qualifications?



Key findings

- Three quarters (75%) of NSW, VIC & QLD independent retail nurseries employ at least one qualified horticulturalist.
- Although sample sizes are too small to draw definitive conclusions, this result varies from 95% of businesses with turnover exceeding \$2 million to 61% of small counterparts.
- A significantly lower proportion of businesses employ at least one staff member with business qualifications (54%) and there is no variation in this result by business size.

Implications

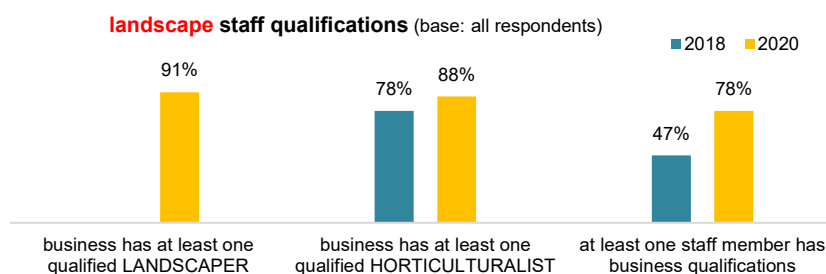
Compared to horticultural qualifications, business education remains significantly less widespread and continues to represent an area where industry support through industry associations may be beneficial.

retail nursery staff numbers (estimated)	% mentioning (base: all respondents able to answer)			
	total (n=100)	nsw (n=44)	state vic (n=29)*	qld (n=27)*
Average number of staff	10	10	11	8
Business has at least one qualified horticulturalist	75%	82%	76%	63%
At least one staff member has business qualifications	54%	67%	45%	46%

*Caution, sub sample smaller than N=30.

9.2 Landscape employment and qualifications

Questions asked: Q20. How many people including yourself are employed in the business?
 Q21. And how many of the people employed in the business (including yourself) are qualified horticulturalists?
 Q24. And how many of the people employed in the business (including yourself) hold business qualifications?
 Q22. How many people within your business are qualified landscapers?
 Q23. And how many of your staff are currently undertaking landscaping apprenticeships



Key findings

- Landscape and horticultural qualifications are held by approximately 9 in 10 NSW, VIC & QLD landscape businesses and 78% have at least one staff member with business qualifications
- Although sample sizes are too small to draw definitive conclusions, all businesses turning over greater than \$2 million employ qualified landscapers and horticulturalists, compared to 67% and 84% respectively among those turning over less than \$500,000.
- Similarly, 65% of all landscape respondent businesses employ a landscape apprentice, but this varies from 91% among businesses with turnover exceeding \$2 million to 14% turning over less than \$500,000.

Implications

Most landscape businesses employ qualified personnel, but this may be more widespread in medium to large businesses rather than small counterparts.

landscape staff numbers (estimated)	% mentioning (base: all respondents able to answer)			
	total (n=101)	nsw (n=47)	state vic (n=30)	qld (n=24)*
Average number of staff	15	15	11	21
Business has at least one qualified horticulturalist	88%	94%	83%	88%
Business has at least one qualified landscaper	91%	94%	80%	100%
At least one staff member has business qualifications	78%	72%	73%	92%
Business has at least one landscape apprentice	65%	68%	62%	63%

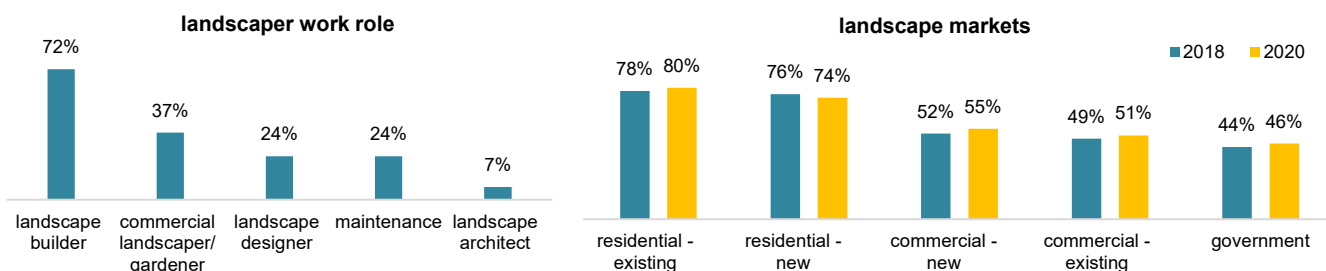
*Caution, sub sample smaller than N=30.

10. Landscape work roles and sales channels

Questions asked:

Q4. Which category best describes your work role?

Q5. Is your business involved in any of the following areas....?



Key findings

- The majority of NSW, VIC & QLD respondents define their work role as landscape builders (72%).
- However, 43% of businesses have multiple roles, for example landscaping building and also maintenance.
- Compared to 2018, there is no significant variation in the proportion of businesses accessing each landscape market and the average number of markets accessed is the same (3).
- In total, 82% of respondents work in residential markets, but this varies from 92% of small to medium businesses to 64% of large counterparts.
- Conversely, 78% of large businesses operate in commercial markets, compared to 50% of small to medium landscape enterprises.

Implications

While a significantly greater number of NSW, VIC & QLD businesses operate in residential markets than commercial, the latter market is more likely accessed by larger businesses.

work role	% mentioning (base: all landscape respondents)			
	total (n=101)	nsw (n=47)	state vic (n=30)	qld (n=24) *
Landscape contractor/builder	72%	74%	63%	79%
Commercial landscaper/gardener	37%	34%	27%	54%
Maintenance	24%	30%	20%	21%
Landscape architect	7%	13%	7%	0%
Landscape designer	24%	28%	30%	13%

sales channel	% mentioning (base: all landscape respondents)			
	Total (n=101)	nsw (n=47)	state vic (n=30)	qld (n=24) *
Residential - existing	80%	83%	80%	75%
Residential - new	74%	79%	73%	67%
Commercial - new	55%	60%	50%	54%
Commercial - existing	51%	49%	53%	50%
Government or Government Department	46%	57%	27%	54%
Total: Residential	82%	83%	83%	79%
Total: Commercial	58%	62%	53%	58%

11. Sample demographics

retail demographic metric	total (n=100)	% of sample (base: all respondents)		
		state		
		nsw (n=44)	vic (n=29)*	qld (n=27)*
Age:				
Average age	55	55	56	52
Average years in industry:	22	22	24	20
Gender:				
Male	57%	59%	62%	48%
Female	43%	41%	38%	52%
Respondent role:				
Owner or joint owner of the business	77%	84%	66%	78%
Manager	20%	11%	34%	19%
Other (including admin)	3%	5%	0%	3%

landscape demographic metric	total (n=101)	% of sample (base: all respondents)		
		state		
		nsw (n=47)	vic (n=30)	qld (n=24)*
Age:				
Average age	47	46	46	51
Average years in industry:	23	24	22	24
Gender:				
Male	82%	83%	73%	92%
Female	18%	17%	27%	8%
Respondent role:				
Owner or joint owner of the business	89%	89%	87%	92%
Manager	11%	11%	13%	8%

*Caution, sub sample smaller than N=30

Appendix 1: CATI questionnaire

- Q1. During the 2019-20 financial year, did you purchase plants from wholesale nurseries?
 Yes ----- 1 Go to Q2
 No ----- 2 Thank and end.
- Q2. Firstly, I need to clarify how many sites your business operates from (landscaper businesses please note this refers to the location of your business, not client sites)

If more than 1 site, ask Q3, others go to Q4 (landscaper) or Q6 (retail):

- Q3. What states and territories are the sites location in?
- | | | |
|-----|-------|---|
| NSW | ----- | 1 |
| Vic | ----- | 2 |
| Qld | ----- | 3 |
| SA | ----- | 4 |
| WA | ----- | 5 |
| Tas | ----- | 6 |
| NT | ----- | 7 |
| ACT | ----- | 8 |

If landscaper, ask Q4, retail go to Q6

- Q4. Which category best describes your work role... *read out*
- | | | |
|--------------------------------|-------|---|
| Landscape contractor/builder | ----- | 1 |
| Commercial landscaper/gardener | ----- | 2 |
| Landscape architect | ----- | 3 |
| Landscape designer | ----- | 4 |
| Maintenance | ----- | 5 |
| Other (specify) | ----- | 6 |

- Q5. Is your business involved in any of the following areas?
- | | | |
|--|-------|---|
| Residential - new | ----- | 1 |
| Residential - existing | ----- | 2 |
| Commercial - new | ----- | 3 |
| Commercial - existing | ----- | 4 |
| Government or Government Department | ----- | 5 |
| Other (specify) | ----- | 6 |
| <i>Do not read out/avoid Can't say</i> | ----- | 7 |

- Q6. How many plants in total did you purchase from wholesale nurseries in the 2019-20 financial year?
- Q7. And what was the total value of the plants purchased from wholesale nurseries in 2019-20?
- Q8. During the 2019-20 financial year, how many plants did you buy from wholesale nurseries in the following categories?
 If operating in more than one State:
 During the 2019-20 financial year, how many plants did you buy from wholesale nurseries in the following categories in each State?.
- Q9. And what was the total value of (from Q8) of plants purchased from wholesale nurseries?.

	NSW	VIC	QLD	SA	WA	TAS	NT	ACT
Propagation plants (eg, plugs, tubestock, cuttings, tissue culture):								
Number of plants								
Value								
Herbs and vegetables (excluding seeds and bulbs):								
Number of plants								
Value								
Fruit trees, nut trees and vines (excluding seeds and bulbs):								
Number of plants								
Value								
Bedding and potted colour (eg. annuals):								
Number of plants								
Value								
Indoor plants (excluding seeds, bulbs):								
Number of plants								
Value								
Perennials, trees and shrubs:								
Number of plants								
Value								
Other (including seeds, bulbs, water plants, shot seed, etc.): <i>DP note: allow for more than 1 other</i>								
Number of plants								
Value								
TOTAL (computer calculate and confirm with respondent):								
Number of plants								
Value								

Q10. For the 2019-20 financial year, did COVID-19 disruptions/restrictions have any impact on the total value of your greenlife purchases from wholesale nurseries?

Yes -----	1	continue
No -----	2	go to Q13
Can't say -----	3	go to Q13

If Q10 = code 1, ask:

Q11. And as a result of COVID-19 disruptions/restrictions did the total value of your greenlife purchases in 2019-20:

Increase -----	1
Decrease -----	2

If Q11 = code 1 ask:

Q12. (a) In your best estimate, what proportion did your total greenlife purchases *increase* as a result of COVID-19 in 2019-20?

If Q11 = code 2 ask:

(b) In your best estimate, what proportion did your total greenlife purchases *decrease* as a result of COVID-19 in 2019-20?

If landscaper, ask Q13, others to Q14

Q13. What proportion of your total turnover in the 2019-20 financial year would the following represent... *read out*

Softscape
Hardscape
Maintenance

If retail, ask Q14:

Q14. What proportion of your total turnover in the 2019-20 financial year would the following represent, sales to ... *read out*

Home/gardeners/consumer
Trade

Ask all:

Q15. Which of the following best describes your business at this point in time? Is it ...

In a growth phase -----	1
In a steady phase -----	2
Contracting -----	3
Other (specify) -----	4

Q16. And what is the intention for the business over the next 5 years? Is the intention ...

To grow the business -----	1
Keep the business in a steady phase -----	2
Contract or wind down the business -----	3
Sell it as a business to another person or company -----	4
Sell the land to a developer (retail respondents only)-----	5
Wind down and close -----	6
<i>Do not read out/avoid</i> Can't say -----	7

Q17. In total, how many plants do you expect to purchase from wholesale nurseries during the 2020-21 financial year?

Q18. Overall, how do you feel about the future of your industry? Would you say you feel?

Very positive -----	1
Fairly positive -----	2
Fairly negative -----	3
Very negative -----	4
<i>Do not read</i> Neutral -----	5
<i>Do not read</i> Unsure -----	6

Q19. Why do you say that?

.....

Now I would like to ask a few questions to classify your business.

Q20. How many people, including yourself, are employed in the business? (if more than one business, include a total of all, including those from different states).

Q21. And how many of the people employed in the business (including yourself) are qualified horticulturalists?

If Landscaper, ask Q22 and Q23:

Q22. How many people employed in the business (including yourself) are qualified landscapers?

Q23. In total, how many of your staff are currently undertaking landscaping apprenticeships?

Q24. How many people employed in the business (including yourself) hold business qualifications?

Q25. Just for classification purposes, could you please indicate your company's turnover for the 2019-20 financial year?

If Q25 = don't know or refuse ask Q26, others skip

Q26. Would it help if I read out some broad dollar ranges? Would your company's turnover be.... *Read out*

\$200,000 or less -----	1
\$200,000 to \$500,000-----	2
\$500,001 to \$1,000,000 -----	3
\$1,000,001 to \$2,000,000 -----	4
\$2,000,001 to \$3,000,000 -----	5
\$3,000,001 to \$4,000,000 -----	6
\$4,000,001 to \$5,000,000 -----	7
\$5,000,001 to 10,000,000 -----	8
10 million to 30 million -----	9
30 million or greater -----	10
Don't know -----	11
Refused -----	12

Q27. For the 2019-20 financial year, did COVID-19 disruptions/restrictions have any impact on your total turnover?

Yes -----	1	continue
No -----	2	go to Q30
Can't say -----	3	go to Q30

If Q27 = code 1, ask:

Q28. And as a result of COVID-19 disruptions/restrictions did your total turnover in 2019-20....

Increase -----	1
Decrease -----	2

If Q28 = code 1 ask:

Q29. (a) In your best estimate, what proportion did your total turnover *increase* in 2019-20 as a result of COVID-19? _____%

If Q28 = code 2 ask:

(b) In your best estimate, what proportion did your total turnover *decrease* in 2019-20 as a result of COVID-19?

Lastly, I just have a couple of questions about you now.

Q30. May I ask your age please?

Q31. How many years have you been involved in your industry?

Q32. Are you the ...

Owner or joint owner of the business -----	1
Manager -----	2
Other role (specify) -----	3

Q33. Record gender (do not ask)

Male -----	1
Female -----	2

Appendix 2: Confidentiality statement



Down To Earth Research

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27 October 2020

Nursery and Garden Industry Data & Statistics Collection

Confidentiality Statement

Thank your interest in providing data for the Hort Innovation project NY17008 – Nursery Industry Research and Statistics. This project captures yearly and trend data on the value of greenlife production sales. This year we want to validate the sales figures collected for the 2019-20 financial year which is why we are collecting purchase figures from the landscape and retail sector. Survey results will also inform the current state of your industry and the impact of COVID-19 disruptions.

Data for the project will be collected and stored securely by Market Metrics, an independent, fully accredited data collection company based in Frankston, Victoria. Their web address is <http://www.marketmetrics.com.au> should you wish to read about their services. Data and information collected will only be used for the purposes of this specific project.

In accordance with Australia's strict Privacy Principles, full confidentiality is assured and once information processing has been completed, any identifying data such as your name, company and contact details (including address and postcode) will be removed from your responses to the survey. While interviewing is taking place, data held by Market Metrics will remain identifiable in case there is an anomaly in the data that requires a call back and clarification. Once Market Metrics has completed this process, de-identification will occur.

On completion of all interviewing, Down To Earth Research (DTER) will be provided with a de-identified data set so data can be aggregated and analysed. DTER will then provide an overall industry report to Hort Innovation. No one from the nursery and garden industry, Hort Innovation, landscape and nursery industry organisations, government departments, etc. will know who participated in the study nor the information and data they provided.

Should you have any concerns whatsoever, please contact Daniel Watson from DTER (daniel@dter.com.au or 0409 775 553) or Brendan O'Keefe from Hort Innovation (Brendan.OKeeffe@horticulture.com.au or 02 8295 2311).

Thank you again for your assistance. The data collected for the study will be used to better understand the size and nature of your industry. It will also enable Hort Innovation to have more meaningful discussions with government organisations in the future.

Kind regards

Daniel Watson
Research Director
Down To Earth Research

Appendix N

Business Benchmarking Tool
(2019/2020)

GREENLIFE INDUSTRY DATA BENCHMARKING TOOL - INTRODUCTION									
Welcome to the 2020 version of the Greenlife Data Benchmarking Tool.									
Have a look at the top trends over the last 3 years here									
Top Trends									
What's your outlook on the future of the Industry? See what people think here									
Sentiment									
See how you compare to your peers for all of these metrics									
Value of Production									
Wage % Revenue									
Operating Cost % Revenue									
Employees									
Share of Sales									
Number of plants sold									
In some parts you will need to input your data and in others a calculation is performed based on those inputs. The data you enter here cannot be viewed by anyone other than you. This is a local copy of a master document and there is no possibility of this data being disseminated to third party organisations.									
An input cell is highlighted like this:									
									
A calculation cell is highlighted like this:									
									
This project has been funded by Hort Innovation, using the nursery industry research and development levy and contributions from the Australian Government. Hort Innovation is the grower owned, not-for-profit research and development corporation for Australian horticulture. This data tool has been developed under Project NY17008 Nursery Industry Statistics & Research. Down to Earth Research undertook an extensive random sample survey of over 290 nursery production businesses. The survey ensured that statistically relevant samples were captured across primary product lines nationally. The data provides a margin for error (at the 95% confidence level) of $\pm 5.2\%$ on national results. It has been validated by a Project Reference Group which includes nursery production growers. It is further validated through a comprehensive desk audit of existing research which has been conducted by ACIL Allen Consulting. Greenlife Industry Australia (formerly Nursery & Garden Industry Australia -NGIA) has overseen management of this research project and are fully supportive of the results and the data tool.									
Terms of Use									
You have been given access to the data tool developed during the NY17008 Nursery Industry Statistics and Research Project funded by Horticulture Innovation Australia Limited ("Hort Innovation"). This tool is solely for your use and may not be disseminated to third parties. You must not (i) present the data tool or any data within the data tool in a false or misleading way (ii) use the data tool or any data within the data tool to imply that it is a source of any claims made by you. The data tool and/or any data within the data tool must not be exchanged for compensation of any kind. Any reproduction of the data tool or any data therein requires the prior written consent of Hort Innovation. If permission is granted by Hort Innovation to reproduce the data within the data tool (or any part thereof) it must be referenced as required by Hort Innovation.									
 Greenlife Industry Australia  Down To Earth Research ABN: 38 673 356 803 Tel: (03) 9708 8008 Fax: (03) 9707 0267 Email: admin@der.com.au Web: www.der.com.au   									

GLOSSARY

Average	The result obtained by adding together several amounts and then dividing this total by the number of amounts.
Big box	Large retailers in the sector.
Business operating cost	Expenses directly related to the operation of the business, including input costs, wages, cost of goods sold, transport costs, rent, etc
Businesses	Company. May be split across several sites
Employee wage cost	Salary, entitlements and superannuation expenses
Expansion	Those whose business is in an expansion phase
Full time employee (FTE)	Employee working a minimum number of hours a week as defined by the employee agreement (usually 38 hours or more).
Full name of Market Segments	- Production nurseries - Retail nurseries - Revegetation, including forestry - Local, State and Federal Government Departments: - Landscapers, developers and builders: - Primary industry - Direct to consumer - Other
Full name of Product Types	- Propagation plants - Herbs and vegetables - Fruit trees, nut trees, vines - Bedding and potted colour - Indoor plants - Perennials, trees and shrubs - Other
Indoor area	Area used for nursery production including undercover including greenhouses, cold frames, cloth houses and lath houses
Infrastructure investment	Infrastructure items may refer to irrigation, pumps, shade, glasshouse, parking, shed, coolroom, etc
Median	When data is arranged from smallest to largest, the median is the value at the halfway point. It is the middle value.
Negative	Those feeling very or fairly negative about the future of the nursery industry
Neutral	Those feeling neutral or unsure about the future of the nursery industry
Positive	Those feeling very or fairly positive about the future of the nursery industry
Re-sellers	Purchasing plants from other greenlife producers or nurseries for immediate resale
Steady, happy	Those whose business is in status due to being at an acceptable stage

Steady, unable	Those whose business is in status due to being unable to expand
Technology investment	Technology items may refer to ICT systems, digital platforms, etc
Turnover range	Total value (\$) of sales in a year for a business
Value of production	Total value (\$) of sales in a year. (\$mn) refer to in millions of dollars. For the <4mil range, the value in \$1,616 million, or \$1.6 billion.
Winding down	Those contracting size of enterprise

Top trends across the sales turnover ranges are shown in this sheet. No input required. Scroll down to view.

What people are saying

Keyword analysis

Most frequently mentioned this year

COVID

New
(people, interest,
customers, products)

Sales
demand

What people have been talking about over the years

New
(customers,
houses, products)

Climate
change

Bunnings

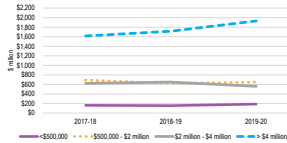
Young
people

Native plants

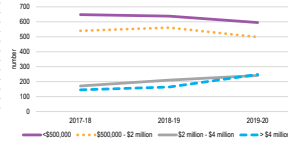
Indoor plants



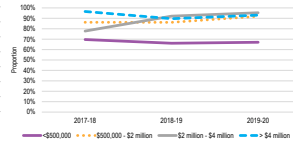
Value of production



Number of businesses

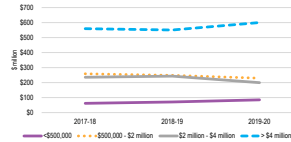


Proportion of profitable businesses

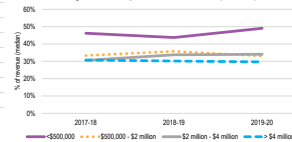


Segment above > \$2 m has relatively small sample sizes and greater diversity across the businesses compared to the segments < \$2 m. So, data should be interpreted with caution.

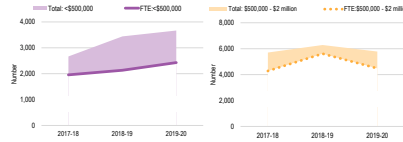
Total wage expense



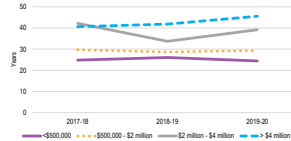
Wage cost as a per cent of Revenue (median)



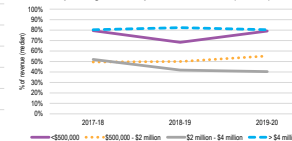
Full-time employees and total employees



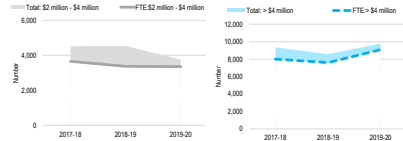
Average years of operation



Operating cost as a per cent of Revenue (median)

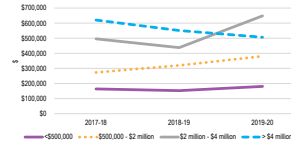


Full-time employees and total employees

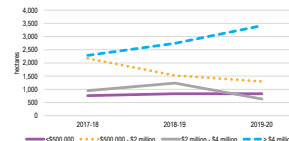


Segment above > \$2 m has relatively small sample sizes and greater diversity across the businesses compared to the segments < \$2 m. So, data should be interpreted with caution.

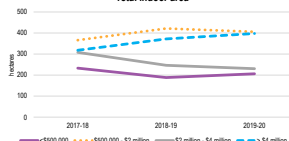
Estimated turnover per hectare



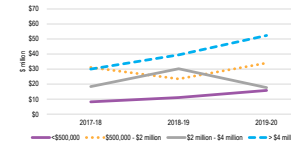
Total outdoor area



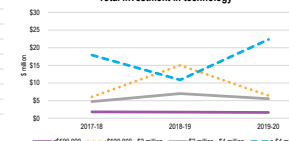
Total indoor area



Total investment in infrastructure

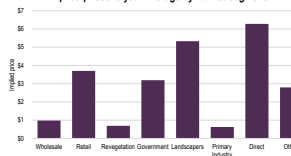


Total investment in technology

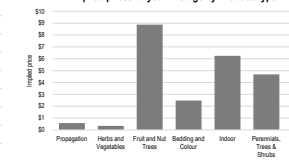


Segment above > \$2 m has relatively small sample sizes and greater diversity across the businesses compared to the segments < \$2 m. So, data should be interpreted with caution.

Implied prices: 3-year Average by Market Segment



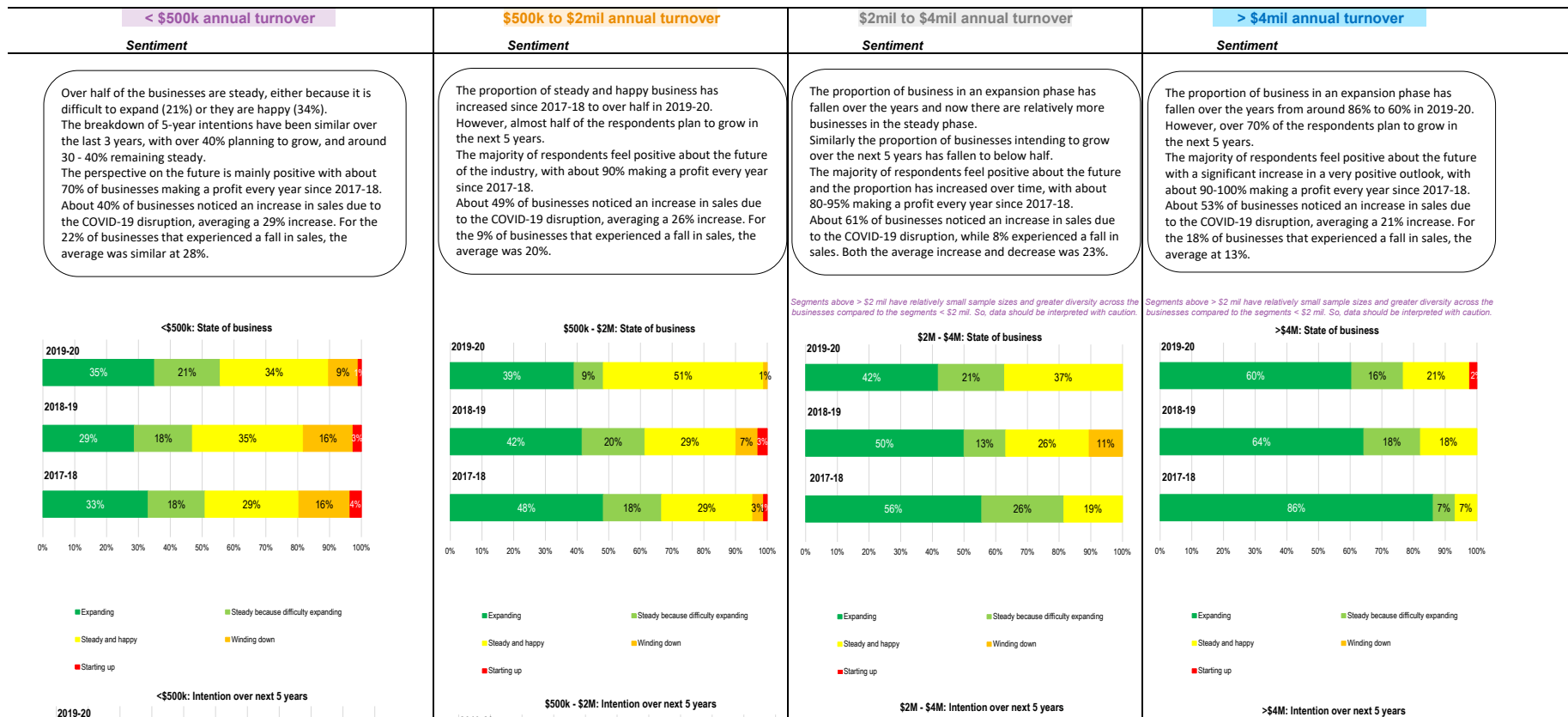
Implied prices: 3-year Average by Product Type



Implied price calculated = national value of sales / national volume sold

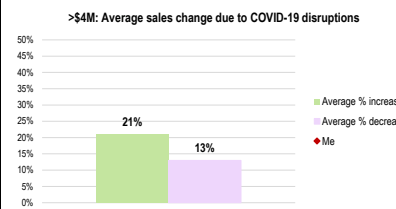
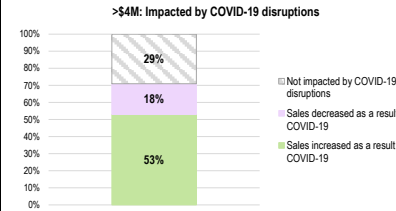
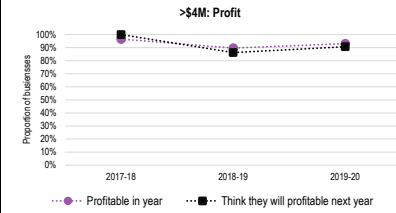
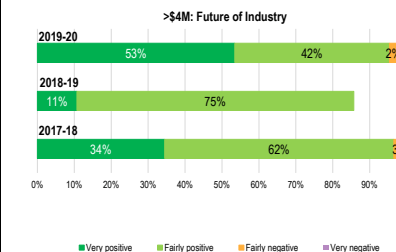
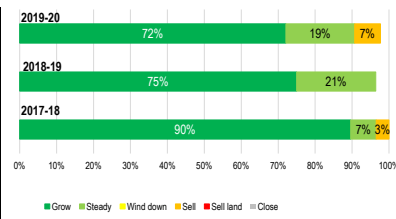
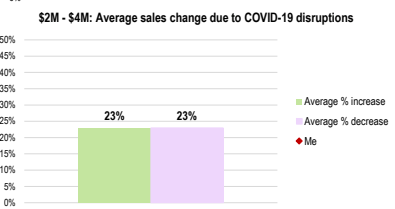
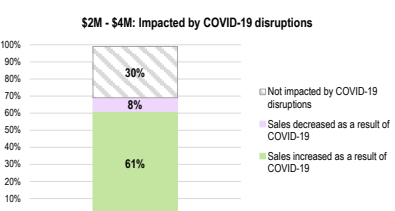
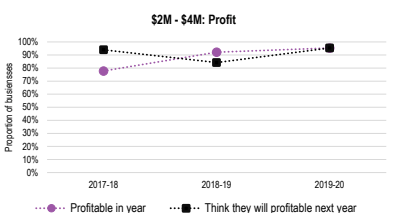
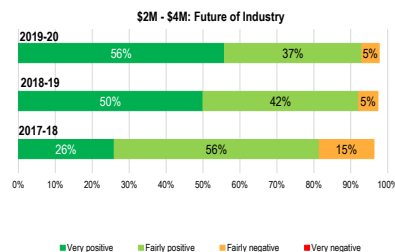
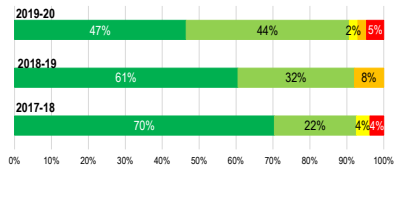
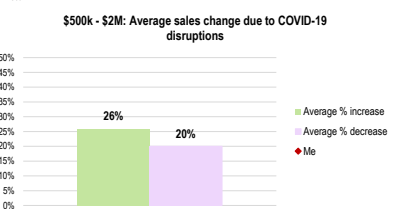
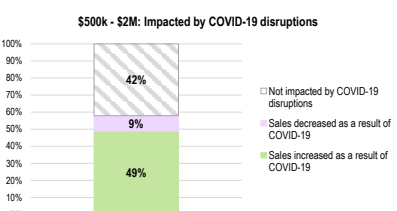
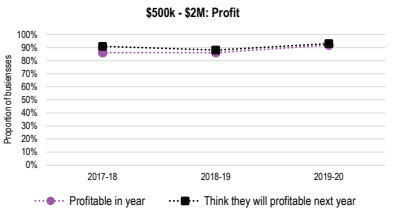
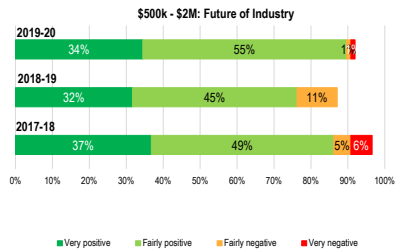
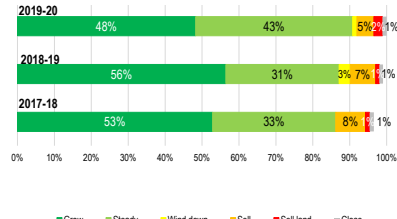
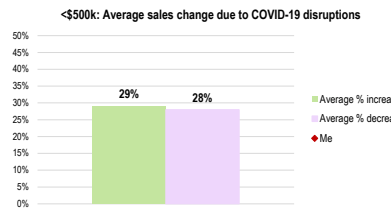
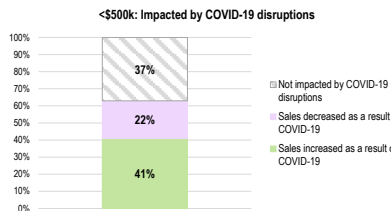
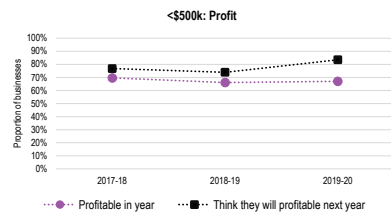
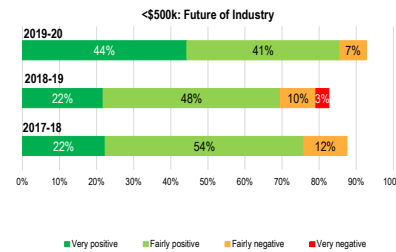
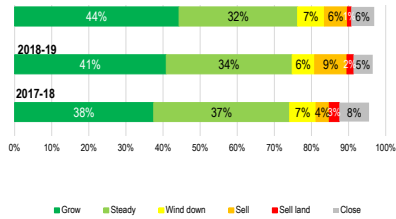
Select your answer to each statement in the drop down box in the green cells to see the proportion of respondents that agree with your selection

	I agree with x% of businesses with annual turnover of:			
	< \$500k	\$500k - \$2M	\$2M - \$4M	> \$4M
Description of state of current business	#N/A	#N/A	#N/A	#N/A
Intention for state of business over next 5 yrs	#N/A	#N/A	#N/A	#N/A
Feel about the future of the Industry	#N/A	#N/A	#N/A	#N/A
Think I will be profitable next year?	#N/A	#N/A	#N/A	#N/A
Was I profitable this year?	#N/A	#N/A	#N/A	#N/A
Due to COVID-19, did my sales increase (March to 30 June 2020)?	#N/A	#N/A	#N/A	#N/A
How much in %? (average increases shown to the right)	29%	26%	23%	21%



Segments above > \$2 mil have relatively small sample sizes and greater diversity across the businesses compared to the segments < \$2 mil. So, data should be interpreted with caution.

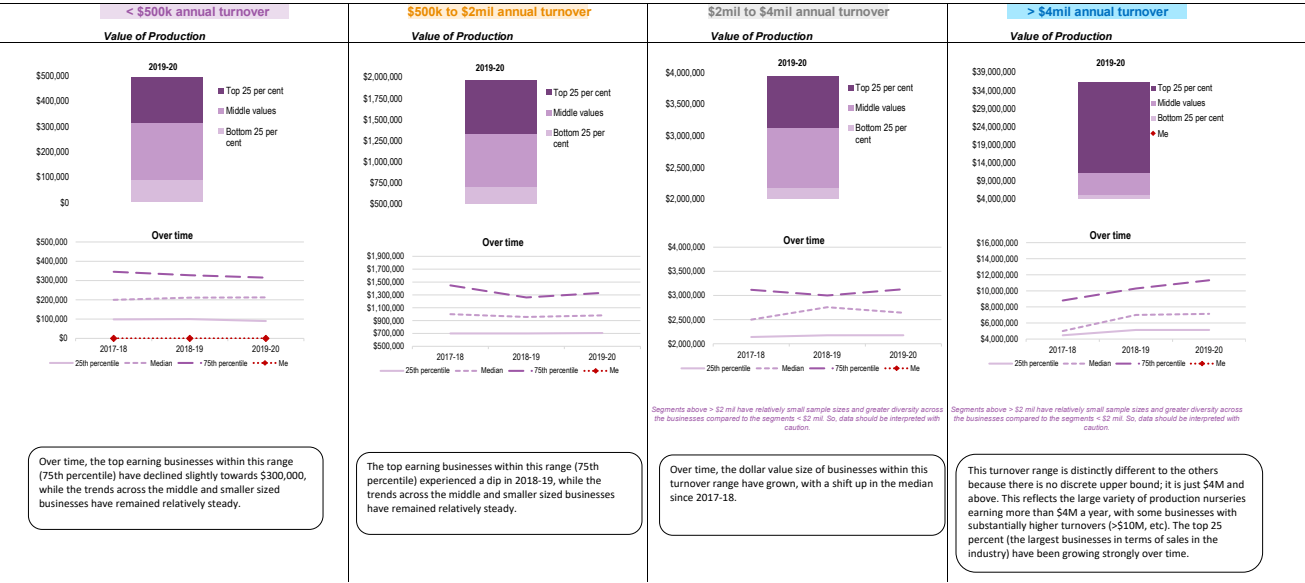
Segments above > \$2 mil have relatively small sample sizes and greater diversity across the businesses compared to the segments < \$2 mil. So, data should be interpreted with caution.



Type the annual sales value into the green cells and view the charts to see how you compare.

My value of production (revenue)

2017-18	2018-19	2019-20



Type the total wage cost for each year into the green cells. The total revenue numbers are linked to the 'Value of Production' sheet.
The wage cost as a per cent of revenue is calculated. View the charts to see how you compare.

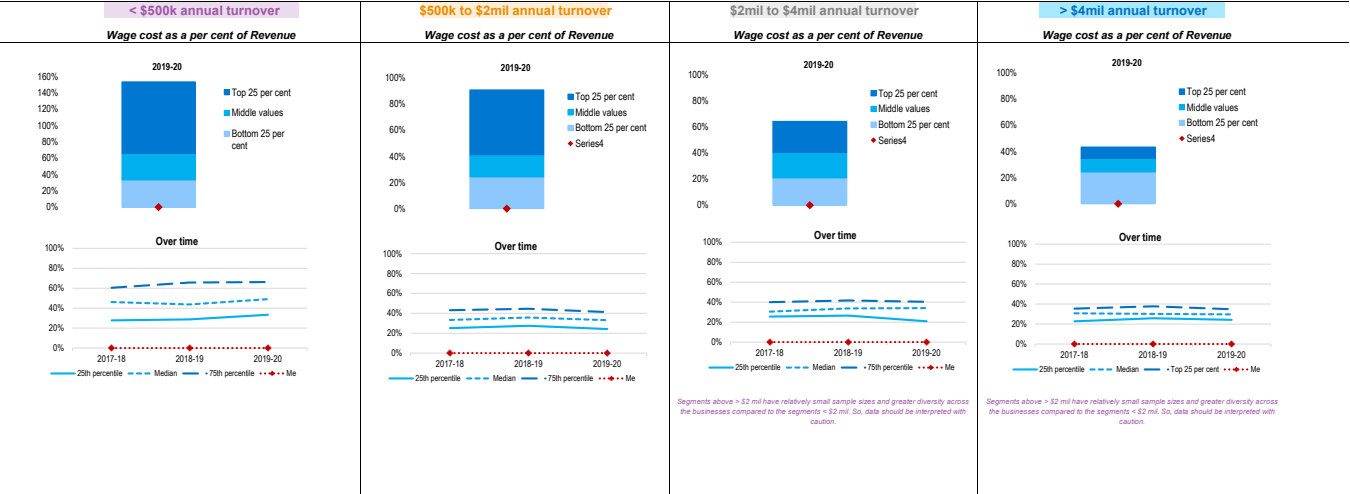
My total wage cost

2017-18	2018-19	2019-20

My total revenue

\$0	\$0	\$0

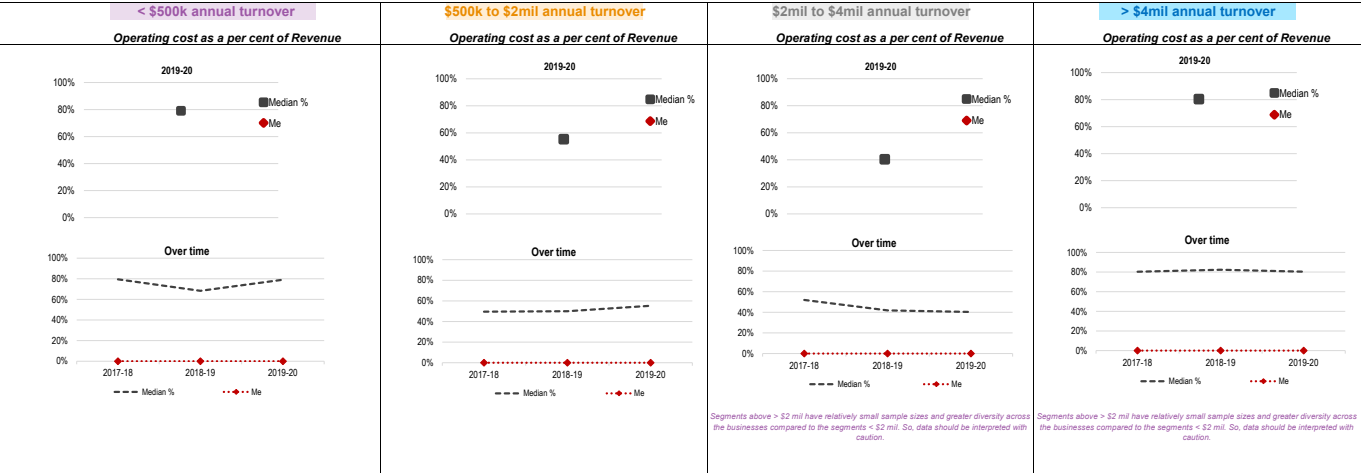
Calculated result:



Type the proportion (per cent) of operating cost in turnover revenue into the green cells.

My operating cost as a per cent of my revenue

2017-18	2018-19	2019-20



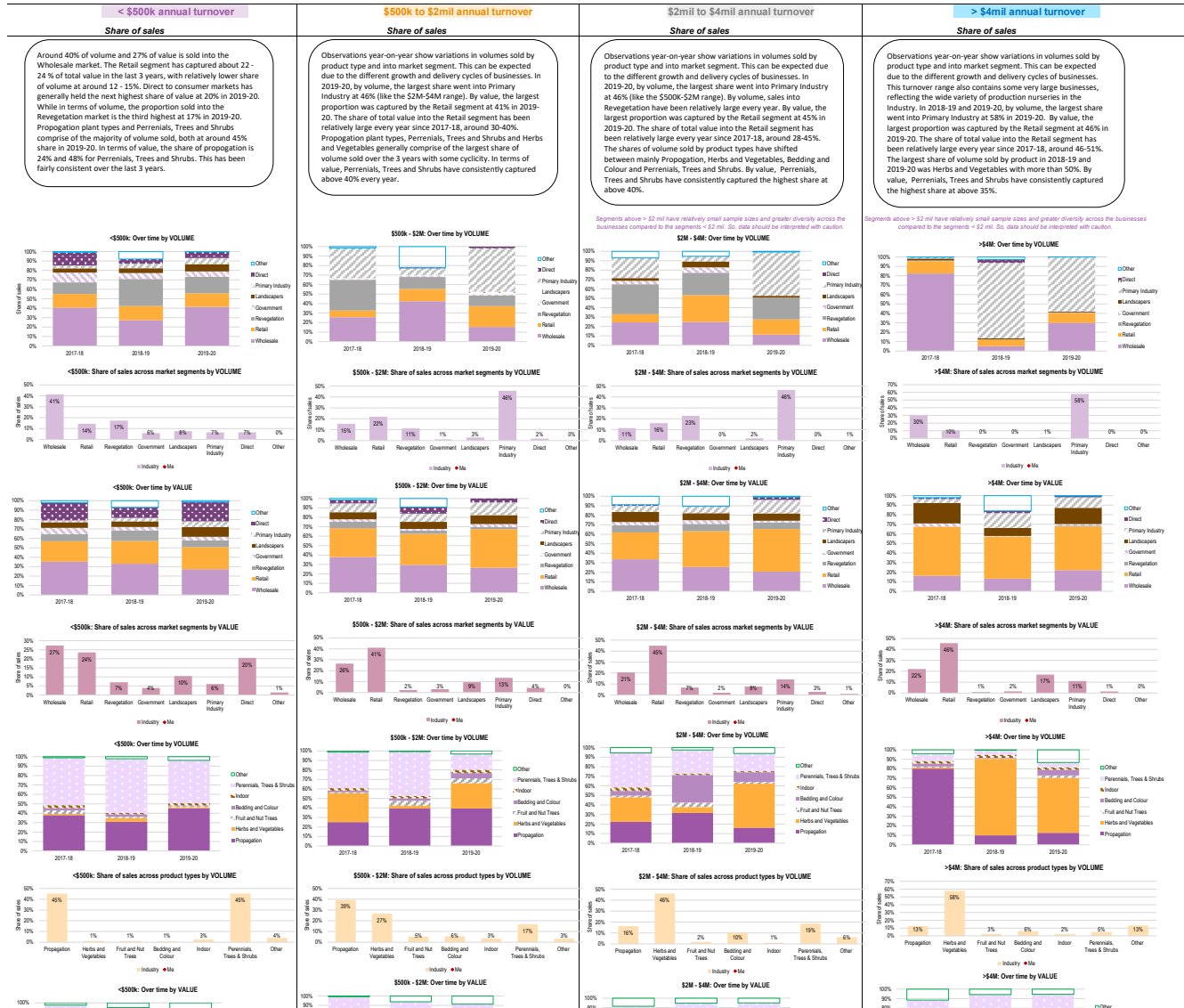
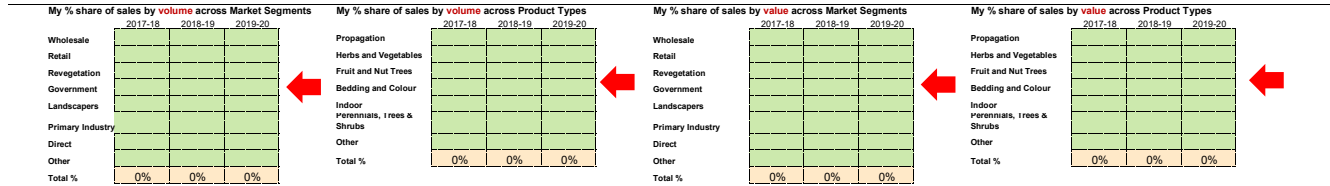
Type the number of full-time employees each year into the green cells and view the charts to see how you compare.

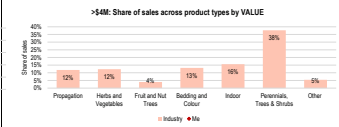
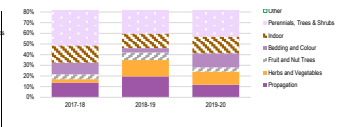
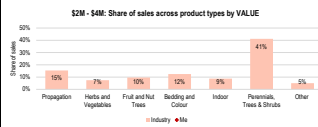
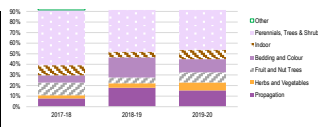
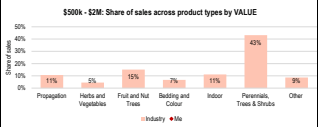
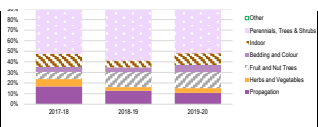
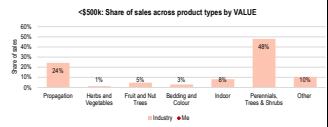
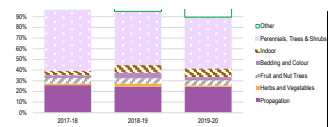
My number of full-time employees

2017-18	2018-19	2019-20



Type your share of sales as a percentage into the green cells and view the 4 charts to see how you compare. The other 4 charts show general trends.





Type the number of plants sold each year into the green cells. The maximum and minimum will be calculated. View the charts to see how those max and min compare to industry's max and min over the last 3 years.

The other charts show the percentage of businesses that sell into 2 or more market segments.

My sales by number of plants sold across Market Segments						My sales by number of plants across Product Types					
	2017-18	2018-19	2019-20	My minimum	My maximum		2017-18	2018-19	2019-20	My minimum	My maximum
Wholesale				0	0	Propagation				0	0
Retail				0	0	Herbs and Vegetables				0	0
Revegetation				0	0	Fruit and Nut Trees				0	0
Government				0	0	Bedding and Colour				0	0
Landscapers				0	0	Indoor				0	0
Primary Industry				0	0	Perennials, Trees & Shrubs				0	0
Direct				0	0	Other				0	0
Other segments sold into	0	0	0								



Segments above > \$2 mil have relatively small sample sizes and greater diversity across the businesses compared to the segments < \$2 mil. So, data should be interpreted with caution.

Segments above > \$2 mil have relatively small sample sizes and greater diversity across the businesses compared to the segments < \$2 mil. So, data should be interpreted with caution.

Appendix 0

Engagement activities delivered
(2017/2018)

NY17008

Communications Engagement Activities 17/18 Collection Tracking Sheet

Social Media

23 posts across Facebook, Twitter and LinkedIn:

- 18 posts NY15006/NY18001 (9 Facebook, 9 Twitter)
- 5 posts NY17008

	Project	Date	Heading/Topic	Channel/Link	Channel/Link
1.	NY15006	30 October	Random Sample Survey	https://www.facebook.com/nurseryandgarde/industry/posts/2537820262894871	
2.	NY15006	1 November	Data Project Reference Group head to Boomaroo	https://www.facebook.com/nurseryandgarde/industry/posts/2539714979372066	https://twitter.com/NGI_NEWS/status/1057716504635039745
3.	NY15006	7 November	In our latest case study, we hear from Joel Vanderuit from TALL TREES	https://www.facebook.com/nurseryandgarde/industry/videos/415541885645672/	https://twitter.com/NGI_NEWS/status/1053141077761318912 https://twitter.com/NGI_NEWS/status/1009936289431465984
4.	NY15006	14 November	Nursery Industry Statistics Survey is Underway	https://www.facebook.com/nurseryandgarde/industry/posts/2570201892990041	https://twitter.com/NGI_NEWS/status/1063242808641884160
5.	NY15006	19 November	Jong's Nursery – Grower Case Study		https://twitter.com/NGI_NEWS/status/1064601866674290689
6.	NY18001	28 November	Nursery Industry Statistics Survey is well Underway	https://www.facebook.com/nurseryandgarde/industry/posts/2598097946867102	https://twitter.com/NGI_NEWS/status/1072357916445954049
7.	NY18001	12 December	If you are approached to participate	https://www.facebook.com/nurseryandgarde/industry/posts/2625765607433669	
8.	NY18001	19 December	Thanks for participating	https://www.facebook.com/nurseryandgarde/industry/posts/2642049599138603	https://twitter.com/NGI_NEWS/status/1075201613915217921
9.	NY18001	22 January	Jong's Nursery – Grower Case Study in 'What's Growing On'		https://twitter.com/NGI_NEWS/status/1087911310480809984
10.	NY18001				
11.	NY18001				
12.	NY18001				
1.	NY17008	31 October	Better Industry Data for a stronger future	LinkedIn	
2.	NY17008	6 November	Nursery Industry Statistics	LinkedIn	

			Survey is Underway		
3.	NY17008		17/18 Media Release	LinkedIn	
4.	NY17008		Webinar #1 announcement	LinkedIn	
5.	NY17008		Webinar #2 announcement	LinkedIn	

Blog posts

- 4 blog posts NY15006/NY18001, 2 blog posts NY17008

1.	NY15006	October 2018	Better data for stronger future	https://yourlevyatwork.com.au/better-industry-data-for-a-stronger-future/	Your Levy @ Work and enews
2.	NY18001	6 November	Nationwide Survey to collect data kicks off	https://yourlevyatwork.com.au/nationwide-survey-to-collect-nursery-data-kicks-off/	Your Levy @ Work and enews
3.	NY18001	30 November	Survey Underway	https://yourlevyatwork.com.au/growers-retailers-and-landscapers-urged-to-participate-in-data-survey/	Your Levy @ Work and enews
4.	NY18001	December 18	A year in Review	https://yourlevyatwork.com.au/nursery-levy-a-year-in-review/	Your Levy @ Work and enews
5.	NY17008	August 2018	You're only as good as your tools	https://www.ngia.com.au/Story?Action=View&Story_id=2500	NGIA Member enews NNN
6.	NY17008	31 October	Retailers targeted for Australian research survey on greenlife	https://www.ngia.com.au/Story?Action=View&Story_id=2523	NGIA Member enews NNN
7.	NY17008	30 November	Growers, retailers, landscapers urged to participate in Data Survey	https://www.ngia.com.au/Story?Action=View&Story_id=2544	NGIA Member enews NNN
8.	NY17008	December 2018	CEO Update December 2018	https://www.ngia.com.au/Story?Action=View&Story_id=2546	NGIA Member enews NNN
9.					

Case Study

- 1 written, NY15006/NY18001 – Jong Nursery
- 1 digital, NY15006/NY18001. – Tall Trees

Case Study 1

14 June – Tall Trees Case Study

Better data to remove the guess work for Tall Trees.

Written - https://www.ngia.com.au/Attachment?Action=Download&Attachment_id=2098

Digital - <https://www.facebook.com/nurseryandgardenindustry/videos/415541885645672/>

Case Study 2

12 November – Jong Nursery Case Study

Data revolutionising R&D decisions for Jong's Nursery

Written - https://www.ngia.com.au/Attachment?Action=Download&Attachment_id=2134

Digital Asset development

- 1 infographic NY17008
- An infographic on nursery industry data (perhaps update the last version) including trends from 15/16 and data validation.

Activity to be completed on release of report.

Media Releases

- 1 release NY18001
- Announcement of the results of the 17/18 data collection with snapshot of national statistics

Activity to be completed on release of report.

Webinar

- 2 webinars NY17008
- outlining the results of the 17/18 collection and demonstrating the benchmarking tool featuring Jan Paul van Moort of ACIL Allen Consulting.

Activity to be completed on release of report.

Nursery Papers

- 1 paper NY18001
- focusing on the results of the 17/18 collection and demonstrating the benchmarking tool; and translating the results of the research into industry commentary.

Activity to be completed on release of report. Scheduled for May.

State Association Liaison

- Ongoing NY17008

	Project	Date	Heading/Topic	Method	Facilitated By
1.	NY17008	17 October	Nursery Industry Data update - information for members	Email	Kobie Keenan
2.	NY17008	Oct-Dec 18	Various – updates on data collection	CEO Meetings	Peter Vaughan
3.					
4.					
5.					

NY17008
Communications Engagement Activities 17/18 Collection
Tracking Sheet

Social Media

23 posts across Facebook, Twitter and LinkedIn: 18 posts NY15006/NY18001 (9 Facebook, 9 Twitter) 5 posts NY17008

A total of 32 posts were made across the promotion of the 2017/2018 collection

1.	Project	Date	Heading/Topic	Channel/Link	Channel/Link
2.	NY15006	30 October	Random Sample Survey	https://www.facebook.com/nurseryandgardenindustry/posts/2537820262894871	
3.	NY15006	1 November	Data Project Reference Group head to Boomaroo	https://www.facebook.com/nurseryandgardenindustry/posts/2539714979372066	https://twitter.com/NGI_NEWS/status/1057716504635039745
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6.	NY15006	19 November	Jong's Nursery – Grower Case Study		https://twitter.com/NGI_NEWS/status/1064601866674290689
7.	NY18001	28 November	Nursery Industry Statistics Survey is well Underway	https://www.facebook.com/nurseryandgardenindustry/posts/2598097946867102	https://twitter.com/NGI_NEWS/status/1072357916445954049
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10.	NY18001	22 January	Jong's Nursery – Grower Case Study in 'What's Growing On'		https://twitter.com/NGI_NEWS/status/1087911310480809984
11.	NY18001	3 April	Exciting news to come from the recent release of our Nursery Statistics report!	https://www.facebook.com/GreenlifeIndustryAU/posts/2875077615835799	pic.twitter.com/qEBEORmkic
12.	NY18001	23 May	On May 28, ACIL Allen will host an interactive webinar to unveil a new tool for Australian growers	https://www.facebook.com/GreenlifeIndustryAU/posts/2998372290172997	pic.twitter.com/PDLMJxuXyX
13.	NY18001	27 May	Join us at 12pm AEST tomorrow for a free, interactive webinar on the new and improved business benchmarking tool	https://www.facebook.com/GreenlifeIndustryAU/posts/3008732089137017	pic.twitter.com/UmtFELVOGR
14.	NY18001	17 June	How has the nursery industry	https://www.facebook.com/GreenlifeIndustryAU/	pic.twitter.com/TleM8nvz8m

			flourished in recent years? Our new 'Facts at a Glance' provides a handy snapshot	posts/3065153876828171	
15.	NY17008	Mid Sep	Better Industry Data for a stronger future	https://www.linkedin.com/feed/update/urn:li:activity:6267523382640803840	
16.	NY17008	31 October	A random sample survey of greenlife producers... has kicked off	https://www.linkedin.com/feed/update/urn:li:activity:6463224012469297152	
17.	NY17008	6 November	Nursery Industry Statistics Survey is Underway	https://www.linkedin.com/feed/update/urn:li:activity:6467951466609995776	https://www.linkedin.com/feed/update/urn:li:activity:6467950773601918976
18.	NY17008	3 April	Nursery Industry Flourishes with record breaking year	https://www.linkedin.com/feed/update/urn:li:activity:6521230911147741184	
19.	NY17008	23 May	Join the Webinar on 28 May	https://www.linkedin.com/feed/update/urn:li:activity:6536813666011054080	
20.	NY17008	22 July	ACIL Allen recently ran a webinar	https://www.linkedin.com/feed/update/urn:li:activity:6558866836904075264	https://www.linkedin.com/feed/update/urn:li:activity:6558870617792311296
21.	ACIL Allen			https://www.linkedin.com/feed/update/urn:li:activity:6538930047716298752	

Blog posts

4 blog posts NY15006/NY18001, 2 blog posts NY17008

1.	NY15006	October 2018	Better data for stronger future	https://yourlevyatwork.com.au/better-industry-data-for-a-stronger-future/	Your Levy @ Work and enews
2.	NY18001	6 November	Nationwide Survey to collect data kicks off	https://yourlevyatwork.com.au/nationwide-survey-to-collect-nursery-data-kicks-off/	Your Levy @ Work and enews
3.	NY18001	30 November	Survey Underway	https://yourlevyatwork.com.au/growers-retailers-and-landscapers-urged-to-participate-in-data-survey/	Your Levy @ Work and enews
4.	NY18001	December 18	A year in Review	https://yourlevyatwork.com.au/nursery-levy-a-year-in-review/	Your Levy @ Work and enews
5.	NY18001	16 May	Webinar: Benchmarking towards better business	https://yourlevyatwork.com.au/webinar-benchmarking-towards-better-business/	Your Levy @ Work and enews
6.	NY17008	August 2018	You're only as good as your tools	https://www.ngia.com.au/Story?Action=View&Story_id=2500	NGIA Member enews NNN
7.	NY17008	31 October	Retailers targeted for Australian research survey on greenlife	https://www.ngia.com.au/Story?Action=View&Story_id=2523	NGIA Member enews NNN
8.	NY17008	30 November	Growers, retailers, landscapers urged to participate in Data Survey	https://www.ngia.com.au/Story?Action=View&Story_id=2544	NGIA Member enews NNN
9.	NY17008	December 2018	CEO Update December 2018	https://www.ngia.com.au/Story?Action=View&Story_id=2546	NGIA Member enews NNN

Case Study

- 1 written, NY15006/NY18001 – Jong Nursery
- 1 digital, NY15006/NY18001. – Tall Trees

Case Study 1

14 June – Tall Trees Case Study

Better data to remove the guess work for Tall Trees.

Written - https://www.ngia.com.au/Attachment?Action=Download&Attachment_id=2098

Digital - <https://www.facebook.com/nurseryandgardenindustry/videos/415541885645672/>

Case Study 2

12 November – Jong Nursery Case Study

Data revolutionising R&D decisions for Jong's Nursery

Written - https://www.ngia.com.au/Attachment?Action=Download&Attachment_id=2134

Digital Asset development

- 1 infographic NY17008
- An infographic on nursery industry data (perhaps update the last version) including trends from 15/16 and data validation.

See milestone 104 for infographic

Media Releases

- 1 release NY18001
- Announcement of the results of the 17/18 data collection with snapshot of national statistics

Nursery Industry Flourishes with record breaking year: <https://mailchi.mp/coxinall/nursery-industry-flourishes-with-record-breaking-year?e=eb70613dfc>

Webinar

- 2 webinars NY17008
- outlining the results of the 17/18 collection and demonstrating the benchmarking tool featuring Jan Paul van Moort of ACIL Allen Consulting.

One webinar was deemed necessary with the recording of the webinar hosted on YouTube <https://www.youtube.com/watch?v=zC9wavsadwU&t=1243s>

Nursery Papers

- 1 paper NY18001
- focusing on the results of the 17/18 collection and demonstrating the benchmarking tool; and translating the results of the research into industry commentary.

Benchmarking tool enables nurseries to 'mean' business https://www.ngia.com.au/Attachment?Action=Download&Attachment_id=2184

State Association Liaison

- Ongoing NY17008

	Project	Date	Heading/Topic	Method	Facilitated By
1.	NY17008	17 October	Nursery Industry Data update - information for members	Email	Kobie Keenan
2.	NY17008	Oct-Feb 2019	Various – updates on data collection	CEO Meetings	Peter Vaughan

ADDITIONAL ACTIVITIES

Additional activities that were not planned which have supported the project under NY18001 are:

Facts and at Glance - https://www.ngia.com.au/Attachment?Action=Download&Attachment_id=2194

Podcast – The Plant Pod, Episode 1 featuring JP Van Moort <https://soundcloud.com/theplantpod/episode-1>

Appendix P

Engagement activities delivered
(2018/2019)

NY17008

Communications Engagement Activities 18/19 Collection Tracking Sheet

Social Media

23 posts across Facebook, Twitter and LinkedIn: 18 posts NY18001 (9 Facebook, 9 Twitter) 5 posts NY17008 (LinkedIn)

As at 28 January a total of 24 posts were made in relation to the 2018/2019 collection. Additional posts will be made as the results are communicated

	Project	Date	Heading/Topic	Channel/Link	Channel/Link
1.	NY18001	6 December 19	Did you see our case study on Living Colour Plant Nursery utilising industry data to better plan for the future?	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3580322838644603/?type=3&theater	
2.	NY18001	20 November 19	In our latest case study, we talk to Ashley Burns from Living Colour Plant Nursery about how the Nursery industry statistics project is helping their business	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3523642877645933/?type=3&theater	https://twitter.com/Greenlife_AU/status/1196929381593051136
3.	NY18001	8 November 19	As we enter the final three weeks of collection for the Nursery Industry Statistics survey – the team at Down To Earth Research urge production	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3483718111638410/?type=3&theater	https://twitter.com/Greenlife_AU/status/1192718049775734784
4.	NY18001	6 November 19	Have you been called upon to participate in the Nursery Industry Statistics survey?	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3476360269040861/?type=3&theater	https://twitter.com/Greenlife_AU/status/1191850523202162688
5.	NY18001	29 October 19	If you receive a call regarding the Nursery Industry Statistics survey, please make an appointment to participate.	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3451786648164890/?type=3&theater	https://twitter.com/Greenlife_AU/status/1188994304724783104
6.	NY18001	18 October	Collection for the Nursery Industry Statistics survey is underway! Tune in to our latest episode of The Plant Pod, where we speak to Dan Watson	https://www.facebook.com/GreenlifeIndustryAU/photos/a.704035552940027/3417095941633961/?type=3&theater	https://twitter.com/Greenlife_AU/status/1185049231888801792

7.	NY18001	16 October 19	Our third episode of The Plant Pod is here...the Nursery Industry Statistics survey	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3409208982422657/?type=3&theater	https://twitter.com/Greenlife_AU/status/1184215238146584576
8.	NY18001	11 October 19	The Nursery Industry Statistics survey is now underway!	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3394454087231480/?type=3&theater	https://twitter.com/Greenlife_AU/status/1182524017254649857
9.	NY18001	1 October 19	The Nursery Industry Statistics survey starts this month!	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3364910640185825/?type=3&theater	https://twitter.com/Greenlife_AU/status/1178865073005056005
10.	NY18001	24 September 19	The 2019 Nursery Industry Statistics survey is set to get underway this October!	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3343474842329405/?type=3&theater	https://twitter.com/Greenlife_AU/status/1176323808845684737

1.	NY17008	29 November 2019	There was a record number of participants in the 18/19 greenlife data collection! Thank you to all who participated.	https://www.linkedin.com/feed/update/urn:li:activity:6607415482926632960	
2.	NY17008	20 November 19	A great case study on how the nursery benchmarking tool is being used for medium and long term business strategy.	https://www.linkedin.com/feed/update/urn:li:activity:6601965412244656128	
3.	NY17008	17 November 2019	Surveying of greenlife producers continues this month.	https://www.linkedin.com/feed/update/urn:li:activity:6601964268021743616	
4.	NY17008	5 November 2019	If you receive a call regarding the Nursery Industry Statistics survey, please make an appointment to participate.	https://www.linkedin.com/feed/update/urn:li:activity:6597301941980753920	
5.	NY17008	14 October 2019	The annual industry statistic survey is underway!	https://www.linkedin.com/feed/update/urn:li:activity:6589363877870436352	

Blog posts

4 blog posts NY18001, 2 blog posts NY17008

1.	NY18001	18 September	Nursery industry statistics survey to get underway in October	http://yourlevyatwork.com.au/nursery-industry-statistics-survey-to-get-underway-in-october/	
2.	NY18001	4 November 19	Growers urged to participate in 2019 Statistics survey	http://yourlevyatwork.com.au/growers-urged-to-participate-in-2019-statistics-survey/	
3.	NY17008	29 November 19	Record number of participants in greenlife data collection	https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2702	

Case Study

- 1 written NY18001 – Living Colour Nursery (South Australia)

15 November 2019

Data driven decision making

Case Study: https://www.greenlifeindustry.com.au/Attachment?Action=Download&Attachment_id=2227

Additional case study being considered subject to source material. NEED business using the tool and contributing not already profiled.

Media Releases

- 1 release NY18001
- Announcement of the results of the 18/19 data collection with snapshot of national statistics

Scheduled for March

Conference Presentation

- 1 concurrent conference presentation at the 2020 National Industry Conference
- outlining the results of the 18/19 collection and demonstrating the benchmarking tool featuring Jan Paul van Moort of ACIL Allen Consulting and Daniel Watson of Down to Earth Research.
- Exhibition booth for 1 on 1 appointments to capture feedback on the data tool and support users in interpreting the tool

Scheduled for March

Nursery Papers

- 1 paper NY18001
- focusing on the results of the 18/19 collection and demonstrating the benchmarking tool; and translating the results of the research into industry commentary.

Scheduled for April

Webinar

- 1 webinar NY17008
- outlining the results of the 18/19 collection and demonstrating the benchmarking tool featuring Jan Paul van Moort of ACIL Allen Consulting.

Scheduled for April/May

Facts and at Glance

- 1 page factsheet NY18001
- Snapshot of 18/19 collection aimed at general audience (media, broader horticulture sector)

Scheduled for April/May

Podcast

- 1 interview NY18001
- Interview on 18/19 key findings, survey process and benchmarking tool

The Plant Pod - Episode 3

Featuring Dan Watson Part 2: Dan Watson from Down to Earth Research on the Nursery Industry Statistics survey and how growers can best prepare (Starts at 15.26)

<https://soundcloud.com/theplantpod/episode-three-hort-innovation-strategy-statistics-survey-biosecurity-restrictions-market-access>

State Association Liaison

- Ongoing NY17008

	Project	Date	Heading/Topic	Method	Facilitated By
1.	NY17008	Monthly	CEOs Meeting	Meeting	Peter Vaughan

ADDITIONAL ACTIVITIES

Additional activities that were not planned which have supported the project under NY18001 are:

- NY18001 Blog: Communications Program: A look ahead featuring a reference a link to Facts at a Glance <http://yourlevyatwork.com.au/communications-program-a-look-ahead/>

NY17008
Communications Engagement Activities 18/19 Collection
Tracking Sheet

Social Media

23 posts across Facebook, Twitter and LinkedIn: 18 posts NY18001 (9 Facebook, 9 Twitter) 5 posts NY17008 (LinkedIn)

As at 3 August 2020 a total of 39 posts were made in relation to the 2018/2019 collection.

	Project	Date	Heading/Topic	Channel/Link	Channel/Link
1.	NY18001	6 December 19	Did you see our case study on Living Colour Plant Nursery utilising industry data to better plan for the future?	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3580322838644603/?type=3&theater	
2.	NY18001	20 November 19	In our latest case study, we talk to Ashley Burns from Living Colour Plant Nursery about how the Nursery industry statistics project is helping their business	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3523642877645933/?type=3&theater	https://twitter.com/Greenlife_AU/status/1196929381593051136
3.	NY18001	8 November 19	As we enter the final three weeks of collection for the Nursery Industry Statistics survey – the team at Down To Earth Research urge production	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3483718111638410/?type=3&theater	https://twitter.com/Greenlife_AU/status/1192718049775734784
4.	NY18001	6 November 19	Have you been called upon to participate in the Nursery Industry Statistics survey?	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3476360269040861/?type=3&theater	https://twitter.com/Greenlife_AU/status/1191850523202162688
5.	NY18001	29 October 19	If you receive a call regarding the Nursery Industry Statistics survey, please make an appointment to participate.	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3451786648164890/?type=3&theater	https://twitter.com/Greenlife_AU/status/1188994304724783104
6.	NY18001	18 October 19	Collection for the Nursery Industry Statistics survey is underway! Tune in to our latest episode of The Plant Pod, where we speak to Dan Watson	https://www.facebook.com/GreenlifeIndustryAU/photos/a.704035552940027/3417095941633961/?type=3&theater	https://twitter.com/Greenlife_AU/status/1185049231888801792
7.	NY18001	16 October 19	Our third episode of The Plant Pod is here...the Nursery Industry Statistics survey	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3409208982422657/?type=3&theater	https://twitter.com/Greenlife_AU/status/1184215238146584576
8.	NY18001	11 October 19	The Nursery Industry Statistics survey is now underway!	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3394454087231480/?type=3&theater	https://twitter.com/Greenlife_AU/status/1182524017254649857
9.	NY18001	1 October 19	The Nursery Industry Statistics survey starts this month!	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3364910640185825/?type=3&theater	https://twitter.com/Greenlife_AU/status/1178865073005056005

10.	NY18001	24 September 19	The 2019 Nursery Industry Statistics survey is set to get underway this October!	https://www.facebook.com/GreenlifeIndustryAU/photos/a.298423000167953/3343474842329405/?type=3&theater	https://twitter.com/Greenlife_AU/status/1176323808845684737
11.	NY18001	1 October 19	The Nursery Industry Statistics survey starts this month!	https://www.facebook.com/GreenlifeIndustryAU/posts/3364411476902408	https://twitter.com/Greenlife_AU/status/1178865073005056005
12.	NY18001	11 October 19	The Nursery Industry Statistics survey is now underway!	https://www.facebook.com/GreenlifeIndustryAU/posts/3394454320564790	https://twitter.com/Greenlife_AU/status/1182524017254649857
13.	NY18001	16 October 19	Our third episode of The Plant Pod is here! ... the Nursery Industry Stats survey		https://twitter.com/Greenlife_AU/status/1184215238146584576
14.	NY18001	18 October 19	Survey open. Listen to the latest episode of The Plant Pod (Dan Watson)		https://twitter.com/Greenlife_AU/status/1185049231888801792
15.	NY18001	29 October 19	If you receive a call regarding the Nursery Industry Statistics survey, please make an appointment to participate.	https://www.facebook.com/GreenlifeIndustryAU/posts/3451787014831520	https://twitter.com/Greenlife_AU/status/1188994304724783104
16.	NY18001	6 November 19	Have you been called upon to participate in the Nursery Industry Statistics survey? If so,	https://www.facebook.com/GreenlifeIndustryAU/posts/3476360462374175	https://twitter.com/Greenlife_AU/status/1191850523202162688
17.	NY18001	8 November 19	As we enter the final three weeks of collection for the Nursery Industry Statistics survey...	https://www.facebook.com/GreenlifeIndustryAU/posts/3483721248304763	https://twitter.com/Greenlife_AU/status/1192718049775734784
18.	NY18001	20 November 19	Launch of Living Colour Nursery Case Study	https://www.facebook.com/GreenlifeIndustryAU/posts/3523649054311982	https://twitter.com/Greenlife_AU/status/1196929381593051136
19.	NY18001	5 December 19	Sharing Case Study on Living Colour Nursery in Floraculture Magazine	https://www.facebook.com/GreenlifeIndustryAU/posts/3580324521977768	
20.	NY18001	13 March 20	The latest Nursery Industry Statistics 2018-19 survey report sees over 2 billion plants sold across Australian production nurseries.	https://www.facebook.com/GreenlifeIndustryAU/posts/3898604156816468	https://twitter.com/Greenlife_AU/status/1238268198836768768
21.	NY18001	2 April 20	Our nursery industry is thriving. Check out the latest data from our 2018-19 Nursery Industry Statistics survey showcasing industry productivity and confidence increases.		https://twitter.com/Greenlife_AU/status/1245498573015232512
22.	NY18001	6 May 20	The updated nursery benchmarking tool will soon be available for growers to utilise data and inform business decisions. ... Living Colour Plant Nursery have used the tool in our April Nursery Paper	https://www.facebook.com/GreenlifeIndustryAU/posts/4097756896901192	https://twitter.com/Greenlife_AU/status/1257821702790103041
23.	NY18001	12 May 20	Webinar postponed: The nursery industry benchmarking tool webinar has been postponed to Wednesday, 24 June.	https://www.facebook.com/GreenlifeIndustryAU/posts/4120643557945859	https://twitter.com/Greenlife_AU/status/1259973851363958785

24.	NY18001	21 May 20	NEW See how the numbers stack up! Check out our Facts at a Glance to see how the Australian nursery industry performed for 2018-19		https://twitter.com/Greenlife_AU/status/1263205469738405889
25.	NY18001	2 June 20	WEBINAR the latest version of the Nursery Industry Business Benchmarking Tool will be unveiled on 24 June.	https://www.facebook.com/GreenlifeIndustryAU/posts/4210537325623148	https://twitter.com/Greenlife_AU/status/1267710315023577089
26.	NY18001	10 June 20	Episode 6 of The Plant Pod is now available!... and the latest on nursery data with Rebecca Moriarty of ACIL Allen – it's worth a listen	https://www.facebook.com/GreenlifeIndustryAU/posts/4241424382534442	https://twitter.com/Greenlife_AU/status/1270445879976177672
27.	NY18001	15 June 20	Register Today for the Benchmarking Tool	https://www.facebook.com/GreenlifeIndustryAU/posts/4248202651856615	https://twitter.com/Greenlife_AU/status/1272265178906755078
28.	NY18001	19 June 20	FINAL DAYS TO REGISTER for the Nursery Industry Business Benchmarking Tool webinar.	https://www.facebook.com/GreenlifeIndustryAU/posts/4281934238483456	https://twitter.com/Greenlife_AU/status/1273773727235244032
29.	NY18001	30 June 20	RECAP: Facts at Glance		https://twitter.com/Greenlife_AU/status/1277856242514329600
30.	NY18001	3 July 20	Didn't catch the nursery business benchmarking tool webinar?	https://twitter.com/Greenlife_AU/status/1282512934602600448	https://twitter.com/Greenlife_AU/status/1279046826130239488

1.	NY17008	29 November 19	There was a record number of participants in the 18/19 greenlife data collection! Thank you to all who participated.	https://www.linkedin.com/feed/update/urn:li:activity:6607415482926632960
2.	NY17008	20 November 19	A great case study on how the nursery benchmarking tool is being used for medium and long term business strategy.	https://www.linkedin.com/feed/update/urn:li:activity:6601965412244656128
3.	NY17008	17 November 19	Surveying of greenlife producers continues this month.	https://www.linkedin.com/feed/update/urn:li:activity:6601964268021743616
4.	NY17008	5 November 19	If you receive a call regarding the Nursery Industry Statistics survey, please make an appointment to participate.	https://www.linkedin.com/feed/update/urn:li:activity:6597301941980753920
5.	NY17008	14 October 19	The annual industry statistic survey is underway!	https://www.linkedin.com/feed/update/urn:li:activity:6589363877870436352
6.	NY17008	5 May 2020	Webinar scheduled for 24 May	https://www.linkedin.com/feed/update/urn:li:activity:6663257644188467201
7.	NY17008	12 May 2020	Webinar postponed to 24 June	https://www.linkedin.com/feed/update/urn:li:activity:6665781599080198144
8.	NY17008	11 July 2020	ICYMI: Rebecca Moriarty Podcast	https://www.linkedin.com/feed/update/urn:li:activity:6676351445576634369
9.	NY17008	3 August 2020	ICYMI: Webinar link	https://www.linkedin.com/feed/update/urn:li:activity:6695879826462662656

Blog posts

4 blog posts NY18001, 2 blog posts NY17008

1.	NY18001	18 September	Nursery industry statistics survey to get underway in October	http://yourlevyatwork.com.au/nursery-industry-statistics-survey-to-get-underway-in-october/
2.	NY18001	4 November 19	Growers urged to participate in 2019 Statistics survey	http://yourlevyatwork.com.au/growers-urged-to-participate-in-2019-statistics-survey/
3.	NY17008	29 November 19	Record number of participants in greenlife data collection	https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2702
4.	NY18001	11 March 20	Industry gathers in the west (Mention)	https://yourlevyatwork.com.au/greenlife-industry-gathers-in-the-west/
5.	NY18001	26 April 20	WEBINAR: Business benchmarking tool	https://yourlevyatwork.com.au/webinar-updated-production-nursery-business-benchmarking-tool/
6.	NY17008	11 June 20	Free webinar: Nursery industry benchmarking tool	https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2813
7.	NY18001	15 July 20	Business benchmarking tool: a practical demonstration	https://yourlevyatwork.com.au/business-benchmarking-tool-webinar-a-practical-demonstration/

Case Study

- 1 written NY18001 – Living Colour Nursery (South Australia)

15 November 2019

Data driven decision making

Case Study: https://www.greenlifeindustry.com.au/Attachment?Action=Download&Attachment_id=2227

Media Releases

- 1 release NY18001
- Announcement of the results of the 18/19 data collection with snapshot of national statistics

10 March 2020

Australian wholesale nurseries sell over 2 billion plants in 2018-19

Media Release: https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2752

Conference Presentation

- 1 concurrent conference presentation at the 2020 National Industry Conference

Dan Watson & JP van Moort presented at the Healthy Plant Healthy People Conference on 4 March 2020 providing an overview of the results of the 18/19 collection and introducing the benchmarking tool

Rebecca Moriarty engaged with delegates via an exhibition booth holding 1 on 1 discussion and capturing feedback on the beta version of the data tool and supporting users in interpreting the tool

Nursery Papers

- 1 paper NY18001
- focusing on the results of the 18/19 collection and demonstrating the benchmarking tool; and translating the results of the research into industry commentary.

17 April 2020

Nursery Paper: Benchmarking for Success

https://www.greenlifeindustry.com.au/Attachment?Action=Download&Attachment_id=2242

Webinar

- 1 webinar NY17008
- outlining the results of the 18/19 collection and demonstrating the benchmarking tool featuring Jan Paul van Moort of ACIL Allen Consulting.

Scheduled for 24 May, postponed to 24 June

23 registered 13 attended

<https://youtu.be/jLsESMDbXEO>

Facts and at Glance

- 1 page factsheet NY18001
- Snapshot of 18/19 collection aimed at general audience (media, broader horticulture sector)

13 May 2020

Facts at a Glance

https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2795

Podcast

- 1 interview NY18001
- Interview on 18/19 key findings, survey process and benchmarking tool

The Plant Pod - Episode 3

Featuring Dan Watson Part 2: Dan Watson from Down to Earth Research on the Nursery Industry Statistics survey and how growers can best prepare (Starts at 15.26)

<https://soundcloud.com/theplantpod/episode-three-hort-innovation-strategy-statistics-survey-biosecurity-restrictions-market-access>

The Plant Pod – Episode 6

Featuring Rebecca Moriarty Part 3: Nursery Industry Business Benchmarking Tool (Starts at 23.08)

<https://soundcloud.com/theplantpod/episode-6-green-cities-international-year-of-plant-heath-nursery-data>

State Association Liaison

- Ongoing NY17008 – Monthly CEO Meeting facilitated by Peter Vaughan

ADDITIONAL ACTIVITIES

Additional activities that were not planned which have supported the project under NY18001 are:

- NY18001 Blog: Communications Program: A look ahead featuring a reference a link to Facts at a Glance <http://yourlevyatwork.com.au/communications-program-a-look-ahead/>
- Tool distributed under cover of letter on 22 April 2020 to over 300 survey participants.

Appendix Q

Engagement activities delivered
(2019/2020)

NY17008
Communications Engagement Activities 19/20 Collection
Tracking Sheet

Social Media

23 posts across Facebook, Twitter and LinkedIn: 18 posts NY18001 (9 Facebook, 9 Twitter) 5 posts NY17008 (LinkedIn)

	Project	Date	Heading/Topic	Channel/Link	Channel/Link
1.	NY18001	15 October 2020	Nursery Statistics Survey is underway	https://www.facebook.com/GreenlifeIndustryAU/posts/4892488670761340	https://twitter.com/Greenlife_AU/status/1318059288514809863
2.	NY18001	23 October 2020	October eNewsletters have hit inboxes, full of the latest nursery industry updates. Highlights of the month include the commencement of the nursery industry statistics survey...	https://www.facebook.com/GreenlifeIndustryAU/posts/4910297752313765	https://twitter.com/Greenlife_AU/status/1319524670958268416
3.	NY18001	2 November 2020	Keep an eye on the phone for a call to support the 2020 Nursery Industry Statistics Survey.	https://www.facebook.com/GreenlifeIndustryAU/posts/4956388101038063	https://twitter.com/Greenlife_AU/status/1323220076502294530
4.	NY18001	11 November 2020	We need you! The Nursery Statistics survey is underway and growers are urged to participate. Taking only 20 minutes to complete, it's a quick and easy way to help gain an accurate snapshot of our industry's data:		https://twitter.com/Greenlife_AU/status/1326377360212385792
5.	NY18001	18 November 2020	The 2020 Nursery Industry Statistics survey is still underway, with greater participation needed from growers, nursery landscapers	https://www.facebook.com/GreenlifeIndustryAU/posts/5024474970896042	https://twitter.com/Greenlife_AU/status/1328782459756900353
6.	NY18001	19 November 2020	Greater participation by growers, nursery landscapers and retailers in the 2020 Nursery Industry Statistics survey will mean more robust data	https://www.facebook.com/GreenlifeIndustryAU/posts/5033369700006569	https://twitter.com/Greenlife_AU/status/1329375898609410049
7.	NY18001	9 December 2020	Survey closes today	https://www.facebook.com/GreenlifeIndustryAU/posts/5120866714590200	https://twitter.com/Greenlife_AU/status/1336385056261222402
8.	NY18001				
9.	NY18001				
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12.	NY18001				
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20.	NY18001				
21.	NY18001				
22.	NY18001				
23.					
24.					

1.	NY17008	26 October 2020	To say greenlife growers, retailers and landscapers are 'busy' is an understatement. ...Surveying for the FY 2019-20 data collection is underway.	https://www.linkedin.com/feed/update/urn:li:activity:6726633963391213568
2.	NY17008	11 November 2020	REMINDER: Surveying for the FY 2019-20 data collection is underway.	https://www.linkedin.com/feed/update/urn:li:activity:6732106962160422912
3.	NY17008	25 November 2020	David Jakobs of Oasis Horticulture has a short message for businesses who receive a call from Down to Earth Research. If you are called upon to contribute, please support this important industry project.	https://www.linkedin.com/feed/update/urn:li:activity:6737501187756711936
4.	NY17008	26 November 2020	David Jakobs of Oasis Horticulture has a short message for businesses who receive a call from Down to Earth Research.	https://www.facebook.com/GreenlifeIndustryAU/posts/5062844757059063
5.	NY17008			
6.	NY17008			
7.	NY17008			

Social media assets

- 2 social media place holders (NY17008) attention grabbing stats featured as images for use on LinkedIn, Twitter and Facebook.

TO BE FINALISED AFTER THE DATA COLLECTION

Blog posts

4 blog posts NY18001, 2 blog posts NY17008

1.	NY18001	15 October	Nursery statistics survey is underway	https://yourlevyatwork.com.au/2020-nursery-statistics-survey-is-underway/
2.	NY17008	25 October	New market analysis report	https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2882
3.	NY18001	10 November	Help us demonstrate how valuable Australia's nursery industry is	https://yourlevyatwork.com.au/help-us-demonstrate-how-valuable-australias-nursery-industry-is/
4.	NY17008	12 November 2020	GIA President Report Mention	https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2893
5.	NY17008	26 November 2020	GIA CEO Report Mention	https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2908
6.				
7.				
8.				

Case Study

- 1 written NY18001 –
- Possible – where are they now Joel Vanderuit – early adopter. How has the tool continued to help you and how does the market analysis support your decision making.
- **TO BE FINALISED AFTER THE DATA COLLECTION – SCHEDULED EARLY MAY**

Media Releases

- 1 release NY18001
- Announcement of the results of the 19/20 data collection with snapshot of national statistics
- **TO BE FINALISED AFTER THE DATA COLLECTION – SCHEDULED FOR MARCH/APRIL**

Nursery Papers

- 1 paper NY18001
- focusing on the results of the 19/20 collection and demonstrating the benchmarking tool; and translating the results of the research into industry commentary.
- **TO BE FINALISED AFTER THE DATA COLLECTION- SCHEDULED FOR MARCH/APRIL**

Webinar/Workshop

- 1 webinar NY17008

- outlining the results of the 19/20 collection and demonstrating the benchmarking tool and PESTLE report for industry featuring ACIL Allen Consulting.
- *TO BE FINALISED AFTER THE DATA COLLECTION- SCHEDULED FOR MAY 2021*

Facts and at Glance

- 1 page factsheet NY18001
- Snapshot of 19/20 collection aimed at general audience (media, broader horticulture sector)
- *TO BE FINALISED AFTER THE DATA COLLECTION- SCHEDULED FOR MAY 2021*

Podcast

- 1 interview NY18001
- Interview on 19/20 key findings, survey process and benchmarking tool
- *TO BE FINALISED AFTER THE DATA COLLECTION- SCHEDULED FOR MAY 2021*

Industry Market Report (targeted to Levy Payers)

- NY17008
- A designed short report accompanying the benchmarking tool providing market relevant information.
- Copy prepared by ACIL Allen and GIA
- *TO BE FINALISED AFTER THE DATA COLLECTION- SCHEDULED FOR MAY 2021*

State Association Liaison

- Ongoing NY17008 – Monthly CEO Meeting facilitated by Peter Vaughan

ADDITIONAL ACTIVITIES

Additional activities that were not planned which have supported the project under NY18001 and NY17008 are:

- NY17008 – 30sec video featuring David Jakobs encouraging participation in the data collection <https://youtu.be/hDleNxgre4o>
- NY17008 – article targeted to landscapers provided to VIC, NSW and QLD landscape associations for publication.
-
- NY17008 - Tool distributed under cover of letter on XX April 2021 to over XX survey participants.

NY17008
Communications Engagement Activities 19/20 Collection
Tracking Sheet

Social Media

23 posts across Facebook, Twitter and LinkedIn: 18 posts NY18001 (9 Facebook, 9 Twitter) 5 posts NY17008 (LinkedIn)

NY18001 - (18 required – 24 completed)

	Project	Date	Heading/Topic	Channel/Link	Channel/Link
1.	NY18001	15 October 2020	Nursery Statistics Survey is underway	https://www.facebook.com/GreenlifeIndustryAU/posts/4892488670761340	https://twitter.com/Greenlife_AU/status/1318059288514809863
2.	NY18001	23 October 2020	October eNewsletters have hit inboxes, full of the latest nursery industry updates. Highlights of the month include the commencement of the nursery industry statistics survey...	https://www.facebook.com/GreenlifeIndustryAU/posts/4910297752313765	https://twitter.com/Greenlife_AU/status/1319524670958268416
3.	NY18001	2 November 2020	Keep an eye on the phone for a call to support the 2020 Nursery Industry Statistics Survey.	https://www.facebook.com/GreenlifeIndustryAU/posts/4956388101038063	https://twitter.com/Greenlife_AU/status/1323220076502294530
4.	NY18001	11 November 2020	We need you! The Nursery Statistics survey is underway and growers are urged to participate. Taking only 20 minutes to complete, it's a quick and easy way to help gain an accurate snapshot of our industry's data:		https://twitter.com/Greenlife_AU/status/1326377360212385792
5.	NY18001	18 November 2020	The 2020 Nursery Industry Statistics survey is still underway, with greater participation needed from growers, nursery landscapers	https://www.facebook.com/GreenlifeIndustryAU/posts/5024474970896042	https://twitter.com/Greenlife_AU/status/1328782459756900353
6.	NY18001	19 November 2020	Greater participation by growers, nursery landscapers and retailers in the 2020 Nursery Industry Statistics survey will mean more robust data	https://www.facebook.com/GreenlifeIndustryAU/posts/5033369700006569	https://twitter.com/Greenlife_AU/status/1329375898609410049
7.	NY18001	9 December 2020	Survey closes today	https://www.facebook.com/GreenlifeIndustryAU/posts/5120866714590200	https://twitter.com/Greenlife_AU/status/1336385056261222402

8.	NY18001	7 April 2021	Last week we announced that over 2.2 billion plants were produced and sold by the Australian greenlife industry in 2019-20, the highest volume of plant sales in history. Check out the full media release here via https://bit.ly/3mq8dNY	https://www.facebook.com/GreenlifeIndustryAU/posts/5672270836116449	https://twitter.com/Greenlife_AU/status/1379610829658578947
9.	NY18001	14 April 2021	Findings from the levy-funded data and statistics project were covered in ABC Rural. Check out it out the full article here: https://ab.co/31ORIBn	https://www.facebook.com/GreenlifeIndustryAU/posts/5712613132082219	https://twitter.com/Greenlife_AU/status/1382108031538761730
10.	NY18001	23 April 2021	Our April Nursery Paper unpacks the 2019-20 Nursery Industry Statistics and complementary market reports, after 292 production nurseries were surveyed to provide robust data and insights on the industry, its size and economic contribution. Learn more about the results and the updated business benchmarking tool via https://bit.ly/3x5MVdh	https://www.facebook.com/GreenlifeIndustryAU/posts/5773149389361926	https://twitter.com/Greenlife_AU/status/1386772068423897088
11.	NY18001	26 April 2021	Did you get a copy of our April eNewsletter? Read our latest media releases on new Nursery Industry Statistics report and the eradication of citrus canker, catch up on the new consumer usage and attitudes project, Pest of the Month, and more. Access it via	https://www.facebook.com/GreenlifeIndustryAU/posts/5773110869365778	https://twitter.com/Greenlife_AU/status/1386590149102882816
12.	NY18001	28 April 2021	A webinar to unveil the new nursery benchmarking tool is being held on 4 May. Don't miss out on this opportunity to see the tool at work and find out how it can result in improved productivity in your business. Register via: https://bit.ly/3nmHMJa	https://www.facebook.com/GreenlifeIndustryAU/posts/5773506282659570	https://twitter.com/Greenlife_AU/status/1387142004015091717

NY17008 - (5 required – 7 completed)

1.	NY17008	26 October 2020	To say greenlife growers, retailers and landscapers are 'busy' is an understatement. ...Surveying for the FY 2019-20 data collection is underway.	https://www.linkedin.com/feed/update/urn:li:activity:6726633963391213568
2.	NY17008	11 November 2020	REMINDER: Surveying for the FY 2019-20 data collection is underway.	https://www.linkedin.com/feed/update/urn:li:activity:6732106962160422912
3.	NY17008	25 November 2020	David Jakobs of Oasis Horticulture has a short message for businesses who receive a call from Down to Earth Research. If you are called upon to contribute, please support this important industry project.	https://www.linkedin.com/feed/update/urn:li:activity:6737501187756711936
4.	NY17008	26 November 2020	David Jakobs of Oasis Horticulture has a short message for businesses who receive a call from Down to Earth Research.	https://www.facebook.com/GreenlifeIndustryAU/posts/5062844757059063
5.	NY17008	30 April 2021	The nursery business benchmarking tool is now available to greenlife growers/levy payers by emailing.... Supporting the campaign is a FREE Webinar on 4 May 2021 presented by tool developers ACIL Allen	https://www.linkedin.com/feed/update/urn:li:activity:6793753289604370432
6.	NY17008	19 May 2021	ICYMI: The nursery benchmarking data tool webinar recording is now live.	https://www.linkedin.com/feed/update/urn:li:activity:6800668404509487105
7.	NY17008	24 May 2021	2.2 billion new plants-something to celebrate	https://www.linkedin.com/feed/update/urn:li:activity:6802470493581664256

Social media assets

2 social media place holders (NY17008) attention grabbing stats featured as images for use on LinkedIn, Twitter and Facebook. (2 required – 4 created)



Blog posts

4 blog posts NY18001, 2 blog posts NY17008 *(6 required – 8 completed)*

1.	NY18001	15 October 2020	Nursery statistics survey is underway	https://yourlevyatwork.com.au/2020-nursery-statistics-survey-is-underway/
2.	NY17008	25 October 2020	New market analysis report	https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2882
3.	NY18001	10 November 2020	Help us demonstrate how valuable Australia's nursery industry is	https://yourlevyatwork.com.au/help-us-demonstrate-how-valuable-australias-nursery-industry-is/
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5.	NY17008	26 November 2020	GIA CEO Report Mention	https://www.greenlifeindustry.com.au/Story?Action=View&Story_id=2908
6.	NY17008	19 April 2021	Free webinar: Nursery Industry Benchmarking Tool	https://www.greenlifeindustry.com.au/communications-centre/2020-benchmarking-tool-webinar
7.	NY18001	21 April 2021	WEBINAR: Updated Nursery Business Benchmarking Tool	http://yourlevyatwork.com.au/webinar-updated-nursery-business-benchmarking-tool/
8.	NY17008	25 May 2021	Project Acknowledgements – conclusion	https://www.greenlifeindustry.com.au/communications-centre/statistics-success-industry-benefits-from-the-data-project

Media Releases

- 1 release NY18001
- Announcement of the results of the 19/20 data collection with snapshot of national statistics

<https://www.greenlifeindustry.com.au/communications-centre/media-release-record-breaking-year-for-australian-greenlife-industry>

Media secured included:

- Radio interview with Sue McDougall, 6PR with Peter Vaughan
- ABC Rural News – e broadcast and website <https://www.abc.net.au/news/rural/2021-03-31/australians-bought-more-plants-than-ever-in-2020/100040258>

Coverage of the data was also included here <https://www.abc.net.au/news/rural/2021-05-12/nursery-owners-notice-a-boom-in-indoor-plant-sales/100130200>

Nursery Papers

- 1 paper NY18001
- focusing on the results of the 19/20 collection and demonstrating the benchmarking tool; and translating the results of the research into industry commentary.
- <https://www.greenlifeindustry.com.au/communications-centre/using-data-to-build-a-better-picture-of-the-nursery-industry>

Case Study

- 1 written NY18001 –
- Case study with Brett Sargeant of Andreasons on the greenlife market analysis
- <https://www.greenlifeindustry.com.au/communications-centre/case-study-andreasens-green-wholesale-nurseries-leverages-market-insights-for-st>

NOTE: A second case study is scheduled with Mark Engall of Engall's Nursery to discuss the usefulness of the data tool for business planning. Interview planned for w/c 24 May.

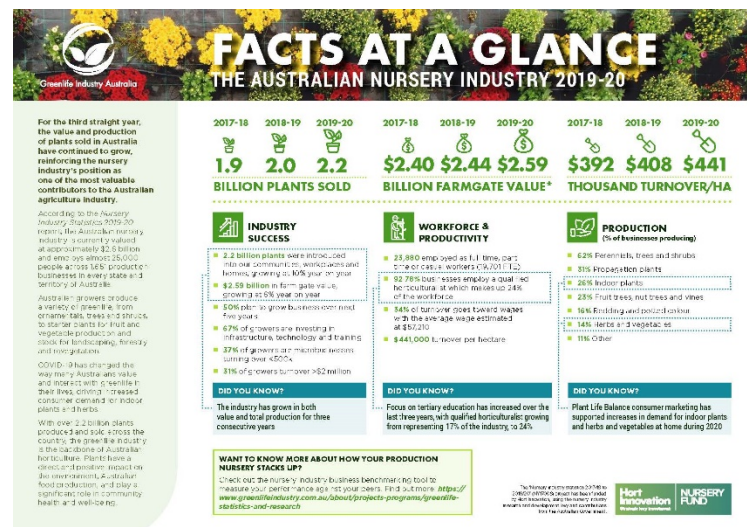
Webinar/Workshop

- 1 webinar NY17008
- outlining the results of the 19/20 collection and demonstrating the benchmarking tool and PESTLE report for industry featuring ACIL Allen Consulting.
- Conducted on 4 May 2021, 26 registered, 19 attended all participants remained online for the whole webinar.
- <https://youtu.be/Pd8wSnfmANA>

Facts and at Glance

- 1 page factsheet NY18001
- Snapshot of 19/20 collection aimed at general audience (media, broader horticulture sector) Facts at a Glance will be loaded here once approved.
- <https://www.greenlifeindustry.com.au/about/projects-programs/greenlife-statistics-and-research>

NOTE: Draft is currently with Hort Innovation for approval before publication. Two-page draft incorporating industry stats and market report provided for below.



Podcast

- 1 interview NY18001
- Interview with Rebecca Moriarty on 19/20 key findings, survey process and benchmarking tool
<https://www.greenlifeindustry.com.au/communications-centre/the-plant-pod-episode-9>

Industry Market Report (targeted to Levy Payers)

- NY17008
- Greenlife Market Analysis is available here:
<https://www.greenlifeindustry.com.au/communications-centre-content/industry-reports/greenlife-market-analysis-2021>

State Association Liaison

- Ongoing NY17008 – Monthly CEO Meeting facilitated by Peter Vaughan

ADDITIONAL ACTIVITIES

Additional activities that were not planned which have supported the project under NY18001 and NY17008 are:

- NY17008 – 30sec video featuring David Jakobs encouraging participation in the data collection <https://youtu.be/hDleNxgre4o>
- NY17008 – article targeted to landscapers provided to VIC, NSW and QLD landscape associations for publication.
- NY17008 - Tool distributed under cover of letter on **12** April 2021 to over **292** survey participants and

Appendix R

Greenlife Market Report
(PESTLE Analysis)

March 2021

Greenlife market analysis

Market commentary

ACIL ALLEN



Executive summary

The Greenlife industry is a multi-billion dollar industry, employing thousands of Australians and contributing to healthy people, homes, urban spaces and the natural environment.

This report is an informative resource targeted for a business and policy audience. This report provides an evidence base of key issues facing the industry and what can be done about it. The findings will inform future strategic planning for Hort Innovation and Greenlife Industry Australia.

Special thanks to Hort Innovation who funded this report, collaboration partners Greenlife Industry Australia and participants from industry, detailed in the [Appendix](#).

BUSINESS

Look here in the report:

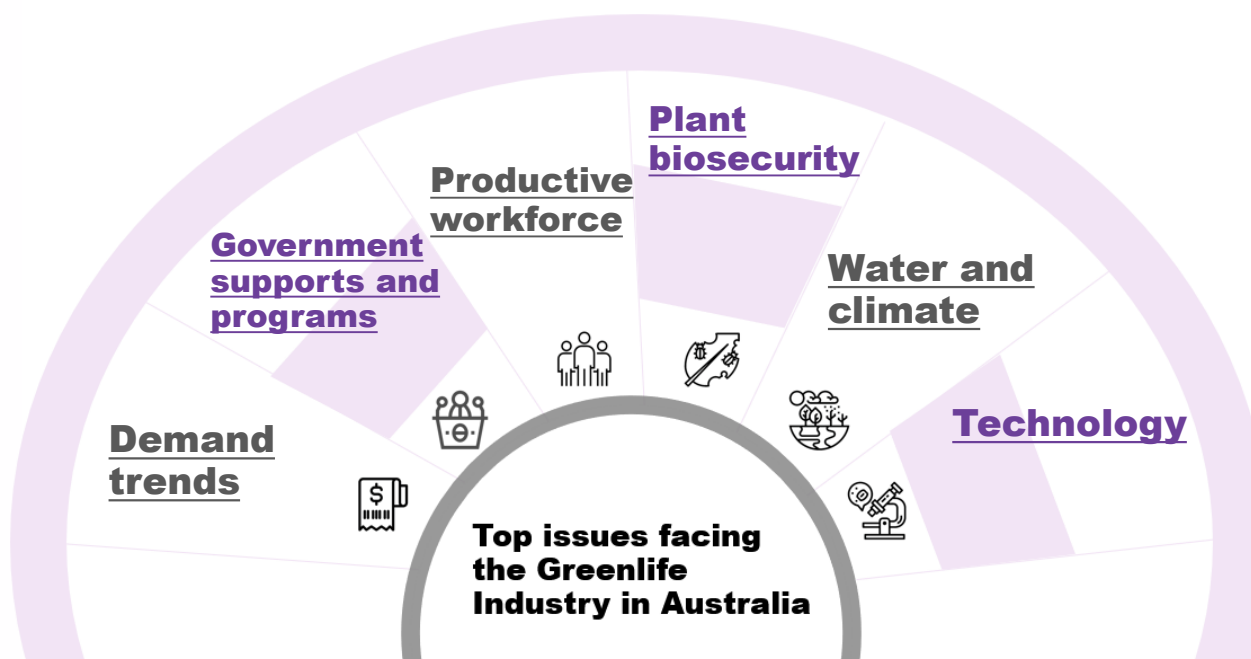
[Prioritisation tool](#)

[Greenlife market overview](#)

[Industry strategies and data gaps](#)

DETAILS

Click on the titles to link to section:



POLICY

Look here in the report:

[Policy aspirations](#)

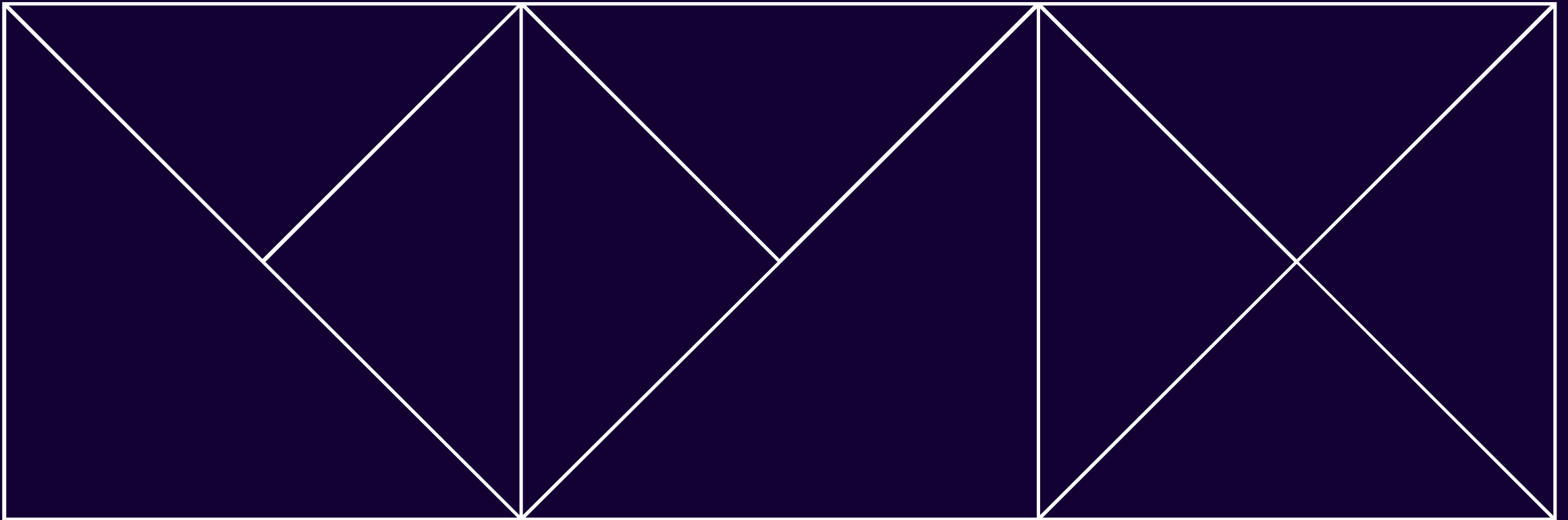
[Greenlife market overview](#)

[Industry strategies and data gaps](#)

Table of contents

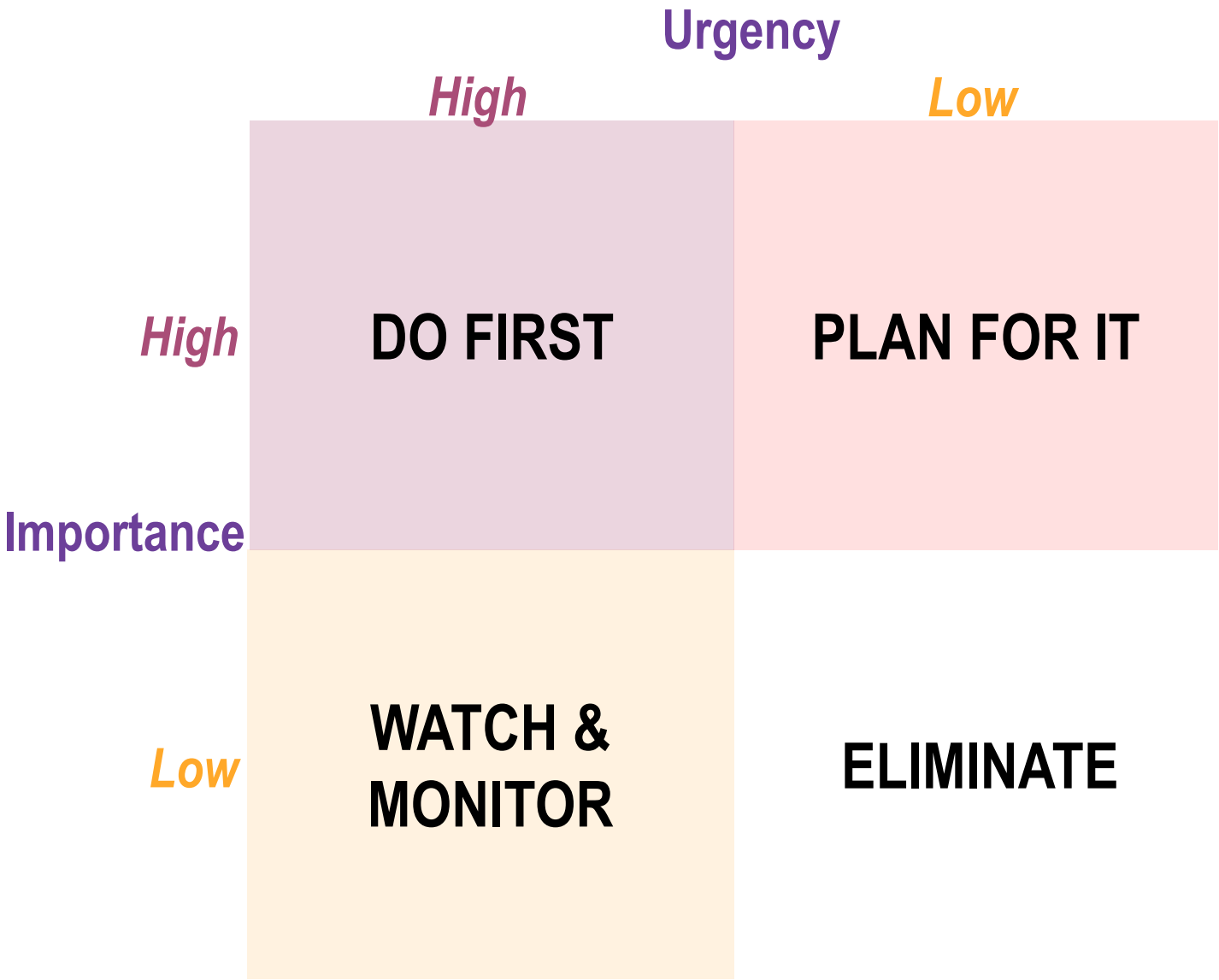
- Executive summary (slide 2)
- A simple prioritisation tool for business (slide 5)
- Aspirations for policy (slide 7-11)
- Industry strategies and data gaps (slide 13-15)
- Greenlife market overview (slide 17-20)
- Demand trends (slide 22-23)
- Government supports and programs (slide 24-26)
- Productive workforce (slide 27-29)
- Plant biosecurity (slide 30-33)
- Water and climate (slide 34-35)
- Technology (slide 37)
- Appendix (slide 39-40)
- Contact information (slide 41)

A simple prioritisation tool for business

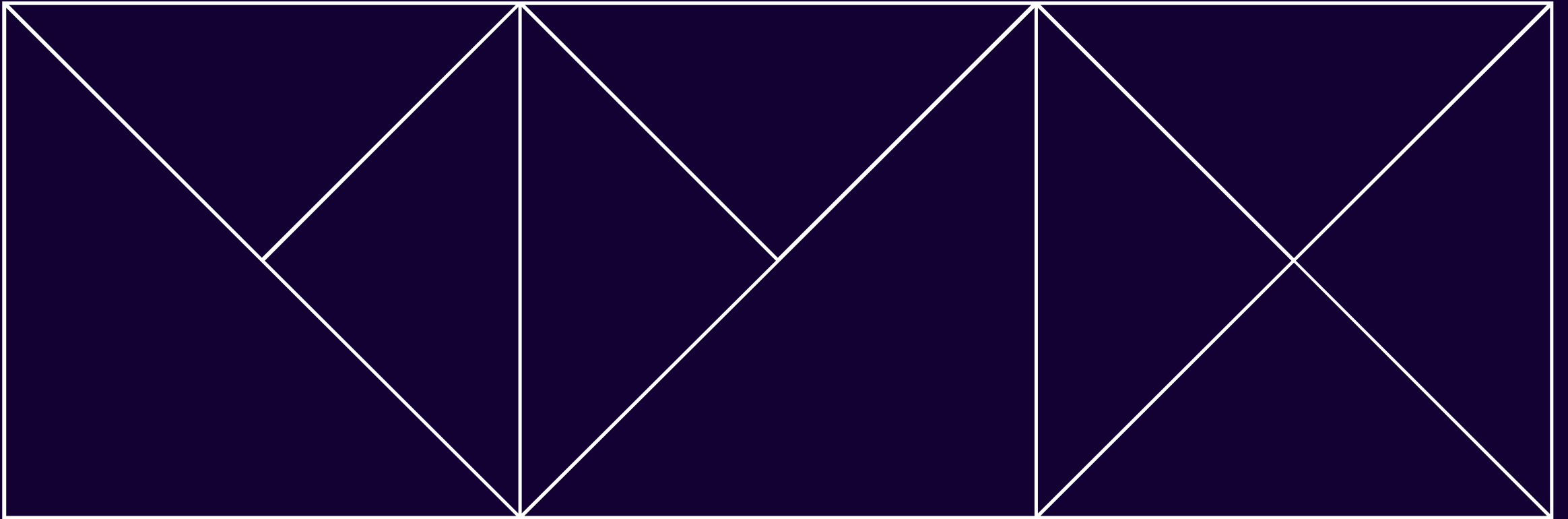


Nursery production businesses: how important are these issues to you?

	Details	Questions to think about
Demand trends	Slide 22-23	How can I manage this volatile demand? Where are my opportunities across the demand channels?
Government supports and programs	Slide 24-26	Am I taking advantage of these supports and programs before they change? Do I know how to do this- how to find out information and support?
Productive workforce	Slide 27-29	Can I hire and keep the qualified employees I need? Where & how do I source this labour – locally & overseas?
Plant biosecurity	Slide 30-33	Is my business-as-usual approach sufficient for this risk? Are the approaches my supply-chain partners take sufficient?
Water and climate	Slide 34-36	Do I have water security? Am I resilient and adaptable to climate-related risks and extreme events?
Technology	Slide 37	Can I enable the best use of technology? Is it worth it to invest (how quick will the return on my investment be)? Can I access government funding support?



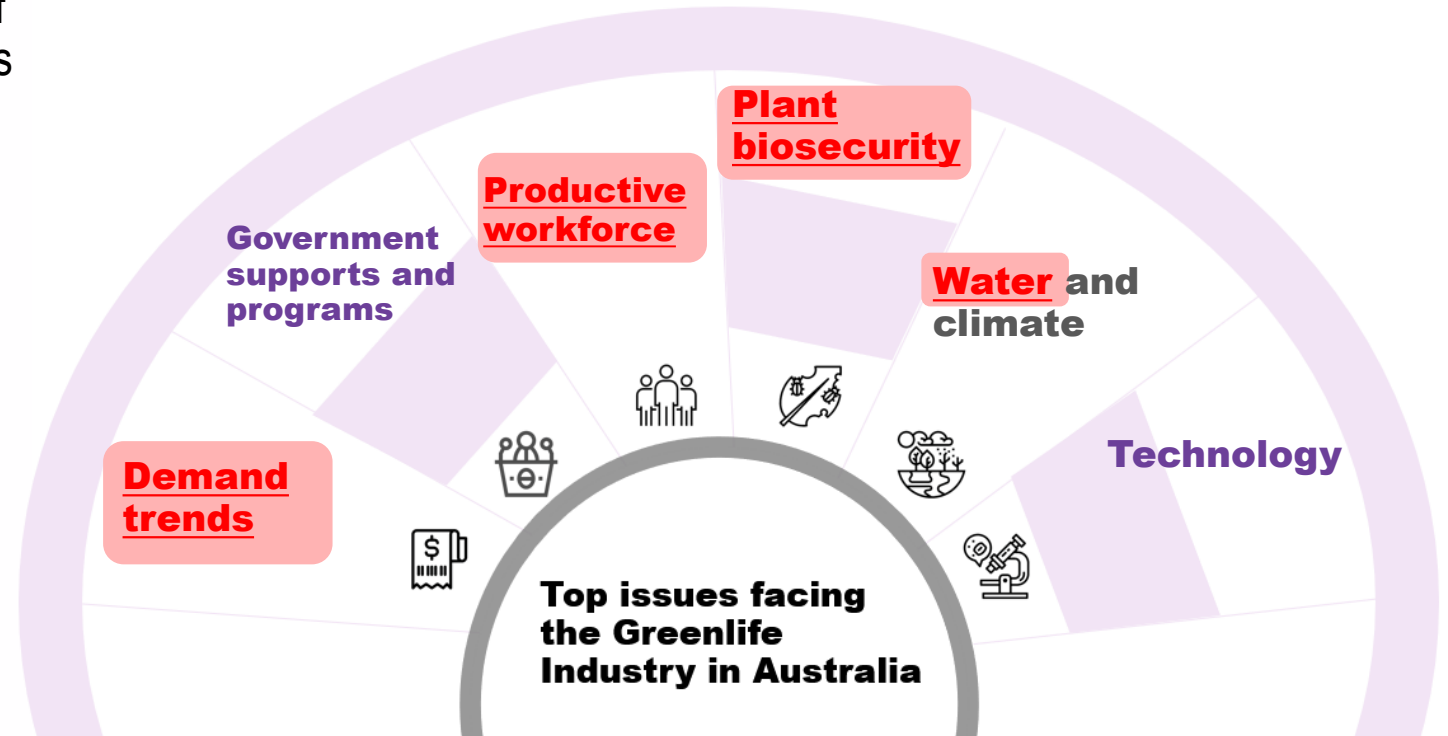
Aspirations for policy



Top-ranked issues

- Recognizing that all these issues are important we wanted to know which issues are at the forefront of successfully growing nurseries production business and the Greenlife Industry as a whole.
 - We invited industry participants from across the supply-chain to be involved in the review and development of this report and provided input on which are the major issues.
 - The four top-ranked industry issues are:
 1. Demand trends: Expectations of future demand
 2. Productive workforce
 3. Water security
 4. Plant biosecurity
- These issues are addressed in the next four slides.

Figure 1 Top-ranked issues for industry
(click on word to be taken to slide)



1. Sustain strong demand – Capitalise on and sustain the recent demand surge

Current snapshot



Expected demand in the short-term remains high especially from household, community and green infrastructure consumer segments.

Effective marketing campaigns can help sustain interest in greenlife

A dip in demand – uncertain how large - after the 'COVID high' is expected. 1 in 5 nursery business experienced a fall in sales due to COVID related disruption.

Supply-side constraints around skilled labour, water security and technology need to be resolved if demand is to be fully met.

Aspirational direction

P

Political

Enable greenlife businesses to operate at full capacity under lockdown/restriction through policies such as security and surety of input suppliers and sale channels.

E

Economic

Meet growing demand with continuous access to high quality supply and skilled labour.

S

Social

Production nurseries maintain high levels of trust and a social licence to operate.

T

Technological

Production nurseries have access to the technology they need to meet demand supported by government investment.

L

Legislative

Relevant workplace and consumer protection legislation continues to be upheld.

E

Environmental

In meeting demand, high standards of environmental and sustainable practices are also met.

2. Productive workforce – Attracting, developing and retaining

Current snapshot

 *Skilled labour is vital to drive business longevity and development.*

Training and education pathways can be more closely aligned with business needs.

The industry offers diverse & dynamic careers for life – this can be strongly promoted

 *Currently around a quarter of employees in production nurseries have a tertiary qualification.*

Without a clear career progression agenda and a long-term industry-focused training and education pathway, this issue will remain a threat to the development of businesses and industry.

Aspirational direction



Recognition of skills required in the greenlife industry in government policy.



A strong pool of skilled labour is available to production nurseries.



Careers in the greenlife industry are appealing to aspiring apprentices and school leavers, and mature age career changers.



Training and education providers are offering courses that are closely aligned with real-life business needs for production nurseries.



Relevant legislation (such as wage awards, codes of good practice) continue to be upheld by apprentices, trainees and employing businesses.



Workers understand and implement the environmental and sustainable practices of the greenlife industry.

3. Water security– Ensure for business and industry

Current snapshot



Water access and use is a critical input for production nurseries and enables consumers to get the full benefit of greenlife products.

Water security reduces the risk for business and drives growth and development.



Drought, uncertain water restrictions and policy across Australia is a threat and barrier to the growth and development of the industry.

Aspirational direction

P

Political

Support is needed for water security for nursery production at all levels of government and the water utilities.

E

Economic

Certainty of water access and usage for nursery production under water scarcity.

S

Social

People value the water used to create greenlife and they know how to benefit from their greenlife investment through educational resources.

T

Technological

Suitable technology needs to be available to growers to ensure efficient water access and usage

L

Legislative

Enable ease of water use and equitable access for nursery production businesses.

E

Environmental

Nursery products contribute to a sustainable and resilient environment no matter how scarce water is.

4. Plant biosecurity – Maintain and continue high standards

Current snapshot



Continuous high standards of prevention and management measures during normal and crisis periods mean the industry thrives and provides additional benefits for Australia with improved food security and a protected environment.



Incursions cause significant, sudden but lasting damage to the industry.

Detection, eradication and management is a continuous and costly effort – shown by recent cases of citrus canker, brown marmorated stink bugs, fall armyworm and serpentine leafminer.

Aspirational direction

P

Political

Improvement in government's plant biosecurity capacity and capability and harmonisation of approaches across states/territories.

E

Economic

Production nurseries need to prevent and manage biosecurity risks to continue trading at full capacity.

S

Social

Travellers need to recognise the importance of plant biosecurity.

T

Technological

Production nurseries have and can access the technology they need to implement their plant biosecurity plans.

L

Legislative

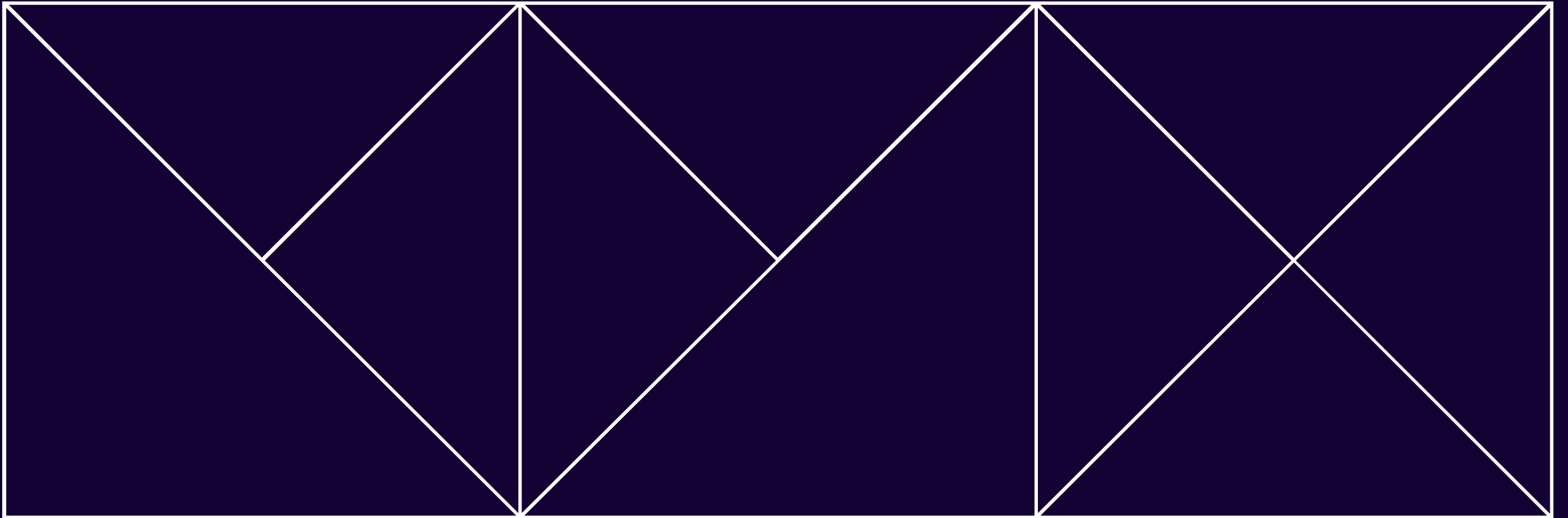
Plant Biosecurity Acts need to reflect the contemporary market experience.

E

Environmental

Australia's natural environment is protected from incursions as the risk exposure increases.

Industry strategies and data gaps



Industry strategies

The main outcomes and strategies of Greenlife Industry Australia (GIA) and Hort Innovation for the greenlife industry are below. Throughout this report, we will be comparing how these programs assist with the major issues currently impacting the industry's development (excluding the funding imperative from GIA as this is an internal objective).

Greenlife Industry Australia 2020 - 2023

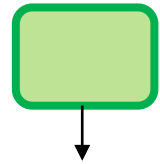
Imperative	Activities	KPIs	Measure
Advocacy 1	- Advocate to governments and influencers to obtain positive outcomes for the greenlife industry - Collect and analyse the data required to formulate industry strategy and policy positions - Form alliances with other industry groups	- National industry policies established on key issues - Alliances formed with 5 national bodies - Annual reports published by GIA detailing outcomes for the industry	- Board approved policies developed - Alliances established - Board approved reports published
Promotion 2	- Promote the size, importance and benefits of the greenlife industry - Engage and interact with Association members to develop a national communications matrix - Facilitate the use of a common language between growers and all other parts of the value chain	3% cumulative annual growth rate - National communication strategy - Common language/ messages, developed in consultation with Association members	- Industry statistics survey - Board approved strategy developed - Common language agreed by GIA and Association Member Boards
Sustainability 3	- Develop an industry sustainability framework - Set ambitious waste reduction and emissions targets - Transition to the Australian Plant Production Standard (APPS) incorporating environment, plant protection and biosecurity and best management practices	- Industry sustainability framework established and adopted - Australian Plant Production Standard covers 80% of volume of production - Industry support the development of a grower register	- Board approved framework developed and rolled out - APPS certified businesses' production as a % of total production - Grower register established
Careers 4	- Develop tools and materials that help Association members to promote greenlife careers - Work with the Federal programs and higher education sectors to ensure qualifications meet industry needs - Offer professional development programs to industry participants	90% (78% currently) of greenlife businesses employ qualified horticulturists - Career path strategy for the greenlife industry developed - Highly regarded education and training programs	- Industry statistics survey - Board approved strategy - Programs in place
Funding 5	- Provide excellent service, value and benefits to members - Recruit to GIA or develop strong alliances with other greenlife bodies - Seek additional revenue	- GIA remains financially viable - Membership and sponsorship revenue increase annually - All Associations are members	- Profit and loss statement - Board approved member engagement and partnership strategy - Association membership

Hort Innovation Nursery 2017 - 2021

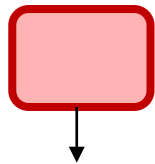
Outcomes	Strategies	Outcomes	Strategies
Increased demand and sales of green life products by four per cent per annum plus CPI	- Develop an annual marketing program - Identify and monitor effectiveness of marketing program and allocation of spend between business to business, and business to consumer - Continue to support the 202020 Vision program - Enhance the 202020 Vision brand beyond 2020 - Identify and promote the benefits of green-life products and services	Improved productivity, profitability and professionalism through the creation and adoption of innovation and industry BMPs	- Monitor overseas innovation and trends - Identify and fill R&D production gaps where research would provide a collective benefit to the industry - Review and update the industry best management practice (BMP) modules to promote and expand these programs, including accreditation - Develop and conduct extension activities to drive adoption of BMP practices - Promote, survey and monitor growers' uptake of BMP and levy funded outcomes - Create and maintain a library of projects that is open, easily accessible and catalogued for grower access - Develop and implement an effective communication program - Monitor the effectiveness of communication activities
Increased marketing effectiveness and efficiency and better decision making based on increased Industry knowledge	- Obtain a better understanding of the customer, their requirements and reasons for buying or not buying green-life products and/or services - Obtain better industry intelligence, including value of industry, and people employed - Disseminate industry information and insights to growers and key stakeholders		
Improved industry protection from exotic, emerging and endemic pests and diseases	- Maintain and test surveillance systems and emergency disease management preparedness - Increase the awareness of the requirement of biosecurity to industry and stakeholders - Review importation requirements and barriers to adoption of new genetics - Work with state governments to develop a more workable system for plant movements between states - Maintain access to chemicals through Minor Use Permits	Better career development	- Promote the industry as a professional career choice - Identify future skill sets needed in the industry - Collaborate with institutions about industry training and development needs - Implement a young leader and development program - Use future innovators/young leaders to promote and adopt R&D and marketing outcomes within the industry

Industry strategies and issues

Shaded boxes indicate that the industry strategy addresses this issue in some way through their activities



Refers to alignment with GIA's Strategy



Refers to alignment with Hort Innovation's Strategy

- The key issues impacting the industry's growth and development are mapped against the main outcomes and strategies of GIA and Hort Innovation.
- All the issues are addressed in some way through the GIA and Hort's activities.
- Within each issue are various barriers and drivers, known and emerging in which industry participants across the supply chain, GIA and Hort all have a role to play.

Figure 2 Key issues against industry strategies

Demand trends

GIA addresses this issue through advocacy and promotion work to government and with other industry bodies and investment in career development for the industry. Hort targets increased demand and sales as a strategic outcome, more effective marketing and promotion, and collaboration activities to improve career development in the industry.



Government supports and programs

GIA addresses this issue through advocacy and championing the industry to government and investment in career development for the industry. Hort invests in promotion and collaboration activities with training institutions to improve career and leadership development in the industry.



Productive workforce

GIA addresses this issue through investment in career development for the industry by working with other organisations like Skills Impact, the educational sector and offering development programs. Hort invests in promotion and collaboration activities with training institutions to improve career and leadership development in the industry and updates the industry's best management practices to improve productivity, profitability and professionalism



Plant biosecurity

GIA addresses this issue through offering the BioSecure HACCP accreditation and resources. Hort invests in management preparedness R&D and raising awareness of the importance of biosecurity with stakeholders and working with state governments on their systems of moving plants across states.



Water and climate

GIA addresses this issue through development of an industry sustainability framework. Hort updates the industry's best management practices to improve productivity, profitability and professionalism and invests in extension activities to drive adoption of these practices.



Technology

GIA addresses this issue through advocacy activities to government to support technology innovation and adoption in the industry. Hort invests in early stage and up to commercialisation-ready technology research, development, extension and adoption programs.



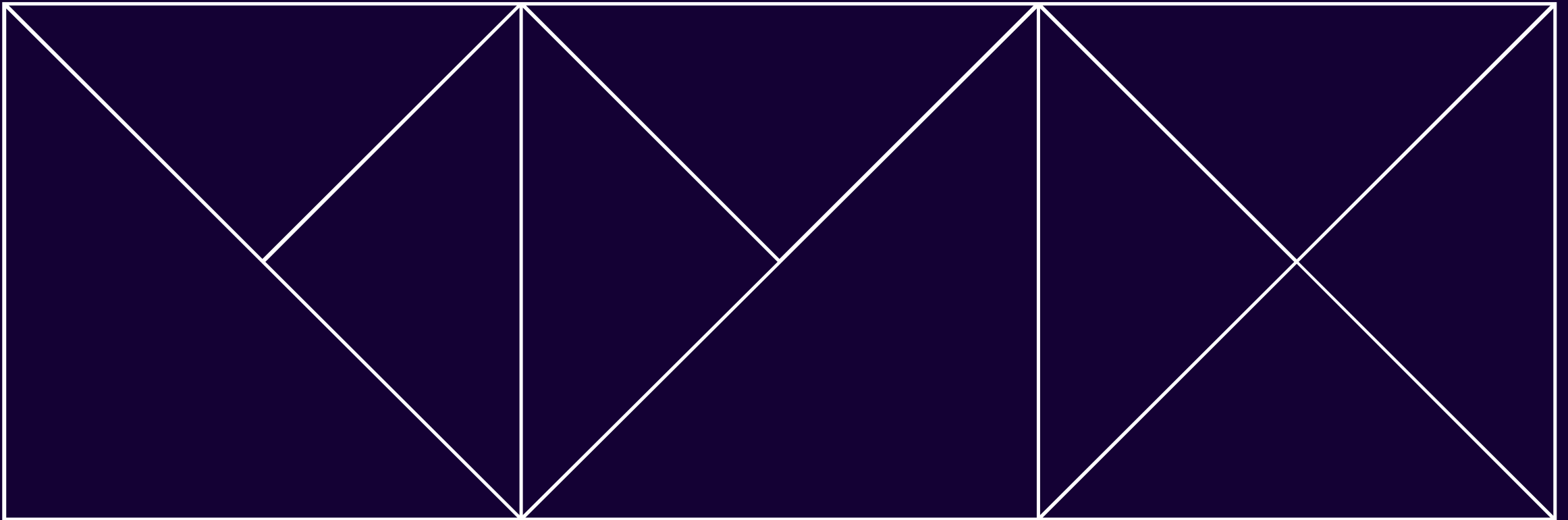
Summary: data / information gaps

- Across the six issues we have identified at least 35 data / information gaps.
- We have a fair visibility in some areas like Hort's Nursery Fund, the supply chain and government supports and programs and filling in these gaps will help to create a more complete picture.
- In the other areas there are a lot of unknowns and the potential for information to be out of date quickly.
- Greater data and information can facilitate better co-operation and co-ordination across the supply chain (e.g. better cost and risk sharing arrangements)
- Data delivers benefits where there is uncertainty and also allows the relative merit of different actions to be measured.

Table 1 Data / information gaps

Greenlife supply chain	Plant biosecurity
Quantitative data on Exports, Consumers of Landscape and Retail	Value of biosecurity (\$ terms) across the supply chain
The diversity of stores within the Retail market	Itemised business cost metrics to allow for a comparison of the value of biosecurity practices
Fresh food market trade volumes	Trends in biosecurity measures on production sites
Detailed data on value-add activities	Supply-chain traceability and grower monitoring register
Variation in supply-chains depending on product type	Water and climate
Baseline unit costs of production	The costs and benefits of different levels of water restrictions to production nursery businesses
Complementary supply-chains into the Greenlife supply-chain	Consistency of water restriction implementation across agencies in different states and territories
Demand trends	Projected impact / risk metrics for nursery sites across Australia for negative climate events
Quantitative data on government and commercial Greenlife spending trends	Detailed data on the Greenlife industry's potential role in climate change intervention and response efforts (greening, cooling, carbon sinks)
Quantitative data on food production	Industry participant figures on level of preparedness and management in case of natural disasters
Government supports and programs	Industry involvement with other agents on bushfire recovery and preparedness opportunities
Wage and job impact on the Greenlife industry specifically	Technology
Relative impacts compared to other similar industries	Trends in uptake of new technologies across supply chain participants in industry
Interest and opportunity for industry to take advantage of these programs and programs like these	Enabling best use of technology in the Industry
Productive workforce	The alignment / gaps with emerging technology and tech the industry wants
Features of and access to the current labour pool	Data on 'transformative' vs 'incremental' technology
How much more is the Industry willing to pay for labour?	Activities of large technology providers like Powerplants and Transplant Systems e alignment / gaps with emerging technology and tech the industry wants
The number and type of labour positions the Greenlife Industry requires to keep supplying at current volumes and what increase is needed to meet expected future demand	Hort Innovation Nursery Fund
The 'preferred providers' of courses well aligned with the Greenlife Industry's needs	What's next for the Nursery Fund?
Collaboration between the Greenlife Industry and Training and Education providers creating fit-for-purpose courses	Build strong, clear pathways between R&D and policy formation
Trade-offs and pay-offs on labour vs business investment	

Greenlife market overview



Greenlife industry statistics overview

\$3.3 billion
sales value*

>1,600
businesses

>23,000
employees

~26% increase in sales
On average for 4 out of 5
businesses due to COVID-19
related disruption

*sales value includes re-sales to other production businesses. With this excluded the sales value is \$2.6 billion. ACIL Allen, Down to Earth Research, GIA in Hort Innovation funded projects: NY17008, NY16004

Fig 3 National Greenlife Sales

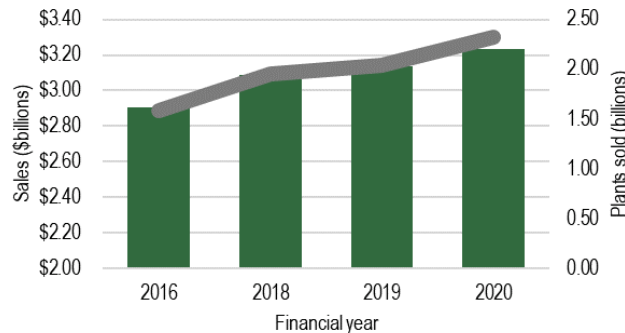


Fig 4 COVID-19 disruption

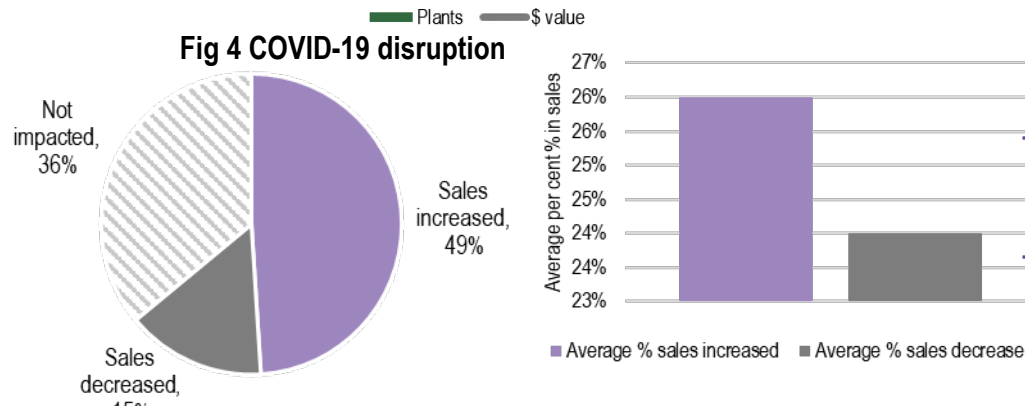
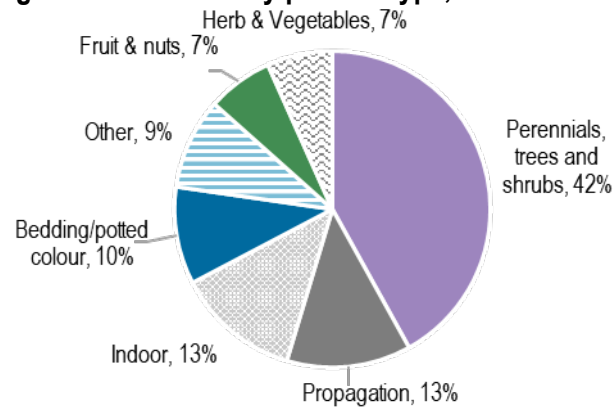


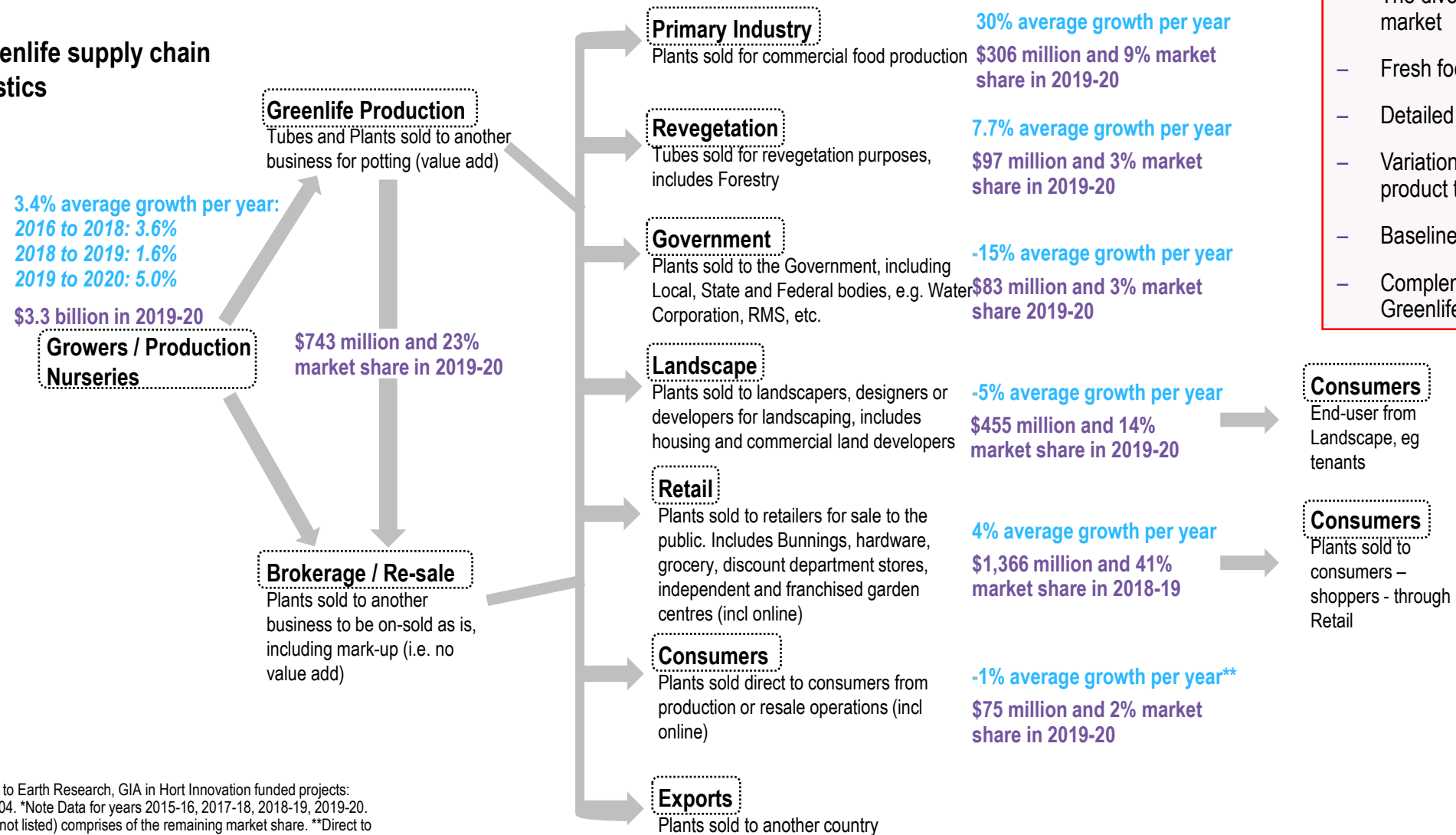
Fig 5 Share of sales by product type, 2019-20



- Since 2015-16, the greenlife industry has broken through the \$3 billion value and \$2 billion product volume in sales (including re-sales to other production nurseries)
- Retail is the largest market segment with over \$1.3 billion in sales, with growth at around 4 per cent per year.
- Primary industry is the highest growing customer group, averaging 30 per cent per year and a little over \$300 million in sales.
- Both government and landscape sales have fallen since 2015-16.
- Sales into retail, wholesale and landscape make up over three-quarters of the buying market.
- Over 40 per cent of greenlife products sold fall into the perennials, trees and shrubs category, followed by propagation, indoor and bedding/potted colour, each with between 10 - 13 per cent market share in 2019-20.

Greenlife supply chain

Fig 6 Greenlife supply chain and statistics



Data / Information gaps

- Exports, Consumers of Landscape and Retail
- The diversity of stores within the Retail market
- Fresh food market trade volumes
- Detailed data on value-add activities
- Variation in supply-chains depending on product type
- Baseline unit costs of production
- Complementary supply-chains into the Greenlife supply-chain

ACIL Allen, Down to Earth Research, GIA in Hort Innovation funded projects: NY17008, NY16004. *Note Data for years 2015-16, 2017-18, 2018-19, 2019-20. 'Other' Category (not listed) comprises of the remaining market share. **Direct to consumer market segment captured in 2017-18, 2018-19 and 2019-20 datasets

Hort Innovation Nursery Fund (1 of 2)

Hort Innovation has invested over \$13 million in research, development and marketing in the greenlife industry since 2016 across nearly 50 projects. A visualisation of their investments in the PESTLE* framework are shown overleaf.

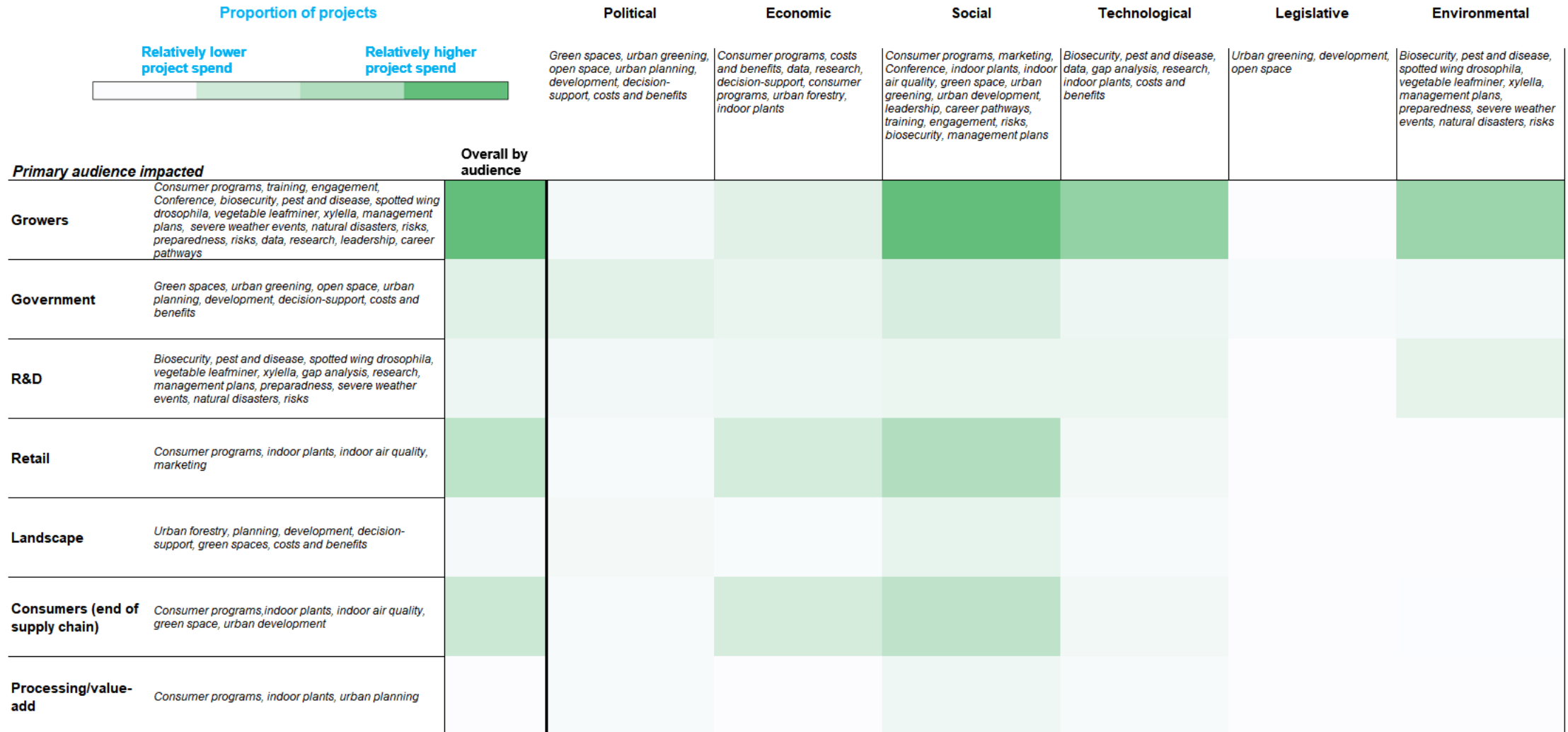
Data / Information gaps

- What's next for the Nursery Fund?
- Strong, clear pathways between R&D and policy formation

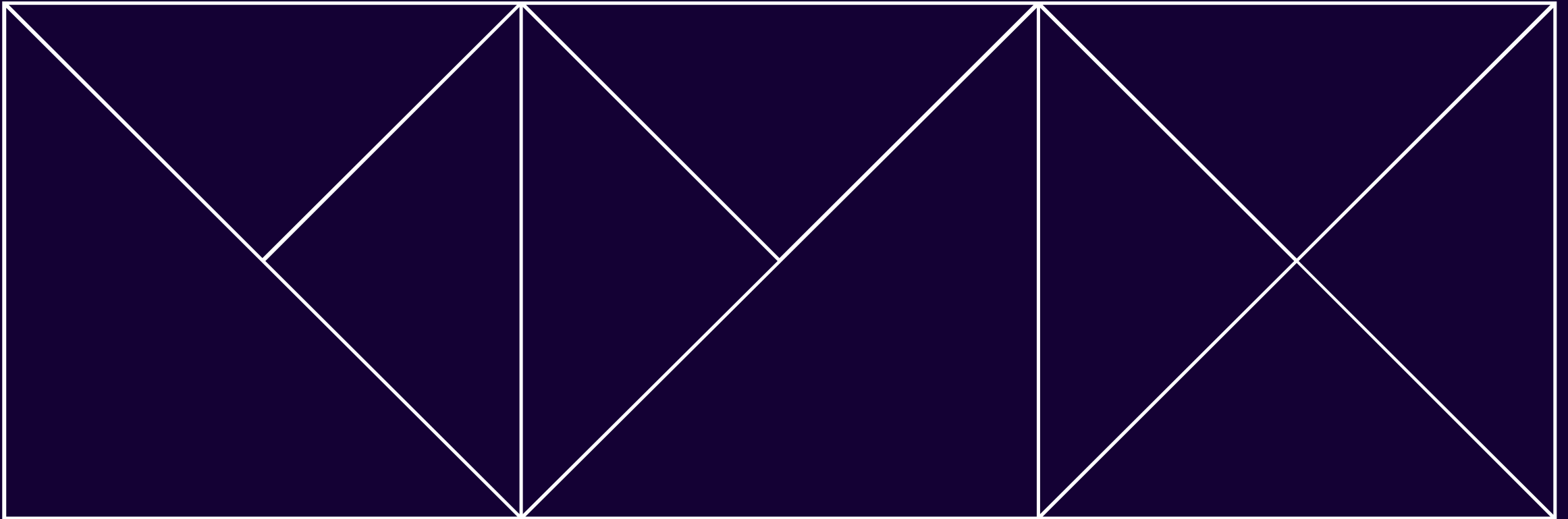
- The majority of projects concern the social factors within the greenlife industry, with consumer-focused programs and marketing, building the indoor plant and well-being campaign, urban greening in urban planning, management plans for businesses and career and leadership programs.
- Projects fitting under the economic and technological theme are the next most common, including costs and benefits projects, data and decision support projects, biosecurity / pest and disease, indoor plants and research and gap analysis about technology in the industry.
- As expected, growers are the most common target audience/beneficiary, followed by government and retail groups.
- The framework also shows areas where the fund has not been targeted:
 - Issues around Legislation have received less attention.
 - Environmental issues outside of the R&D and grower audience haven't been explored as much.
 - In terms of target audience/beneficiary, further downstream supply chain participants including processing/value-add entities and consumers are less targeted.
 - Growers are targeted but there are few long-term extension/adoption programs.
- These gaps do not necessarily mean investment is warranted in these areas. The Strategic Investment Plan details Hort Innovation's decision on the best use of the funds in the interests of levy payers. The investments in the Fund promoted demand for greenlife – such as the 2020 Vision/Greener Spaces Better Places campaign and Plant Life Balance Campaign – and in protection - biosecurity / pest and disease research, gap analysis, technologies and management and risk preparedness and planning.

Hort Innovation Nursery Fund (2 of 2)

Fig 7 Hort Innovation Nursery Fund in the PESTLE framework



Key issues for industry



Demand trends (1 of 2)

Data / Information gaps

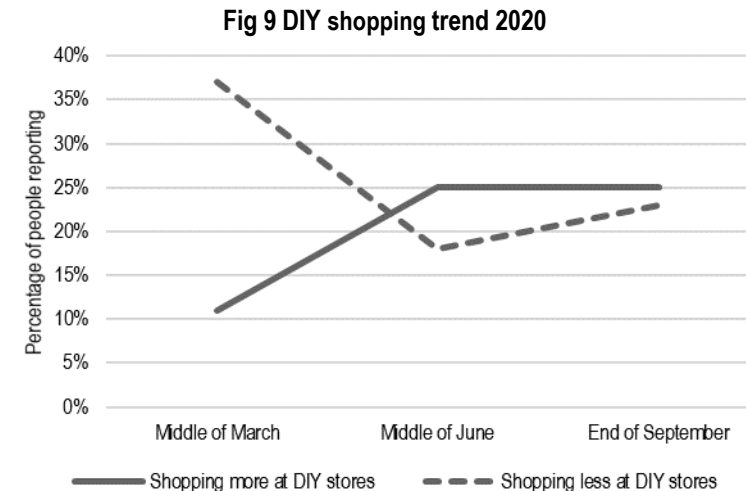
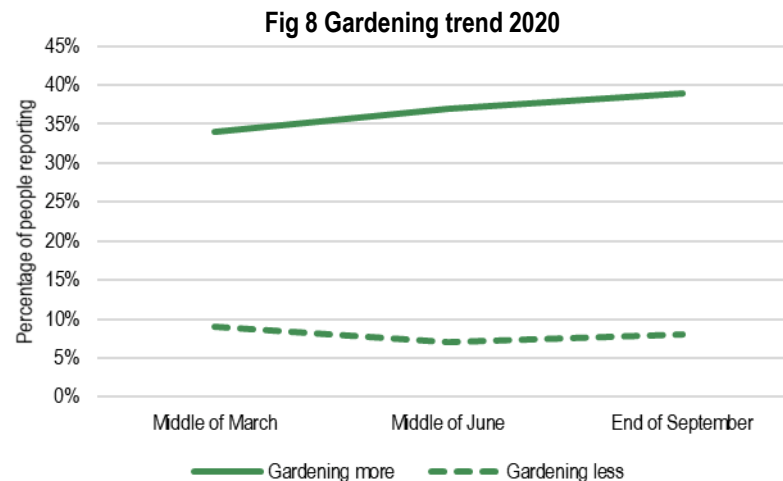
- Quantitative data on government and commercial greenlife spending trends
- As above for food production

Demand

- Generally, there are positive impacts from increasing demand in household and community spaces.
- Between March and September 2020 during the COVID-19 pandemic, consumers generally spent more time gardening, likely due to longer periods of time spent at home under lockdown and travel restrictions.
- The trend in DIY shopping exhibits an interesting convergence: in March 2020, more people stopped shopping at DIY stores, then the trend flipped in June, where consumers started shopping more at DIY stores. By the end of September, the percentage of people shopping more at DIY stores equalled those that are shopping less – in effect ‘cancelling out’ each other.
- Local councils operate an important role in the ‘streetscaping’ their suburbs but there are inconsistencies in the approaches taken across different local councils in Australia.
- Urban greening and green infrastructure interest from government and commercial developers, and strongly supported through the Hort Innovation Nursery Fund, offers opportunity for growers.

Meeting demand

- Attracting, developing and retaining suitable labour has been a challenge for many growers in recent years, becoming an even more heightened challenge now given the expectations for increasing demand. This is explored in more detailed in the Productive Workforce chapter [here \(slide 27-29\)](#).



GIA addresses this issue through advocacy and promotion work to government and with other industry bodies and investment in career development for the industry. Hort targets increased demand and sales as a strategic outcome, more effective marketing and promotion, and collaboration activities to improve career development in the industry.



Demand trends (2 of 2)

Table 2 Demand-side trends

Where?	Direction of short-term trend	Detail
In household spaces		Some evidence (quantitative from Fiftyfive5 and anecdotal) that more disposable income is being spent on gardening and indoor plants due to the greater amounts of time being at home for both homeowners and tenants.
In community spaces (including community gardens)		In recent years there has been increasing activity in greening community spaces with both edibles and non-edibles. Since the pandemic began, the benefits around mental health spurred interest further.
Public spaces		Investing in greenlife in public spaces is a priority for many local councils, however greater resources are being directed at the economic recovery and community resilience. Overall, there are inconsistencies in the approaches taken across different local councils in Australia.
In government and commercial spaces		Anecdotal evidence there is less expenditure on greenlife in some government and commercial customer groups, however urban greening and green infrastructure interest offers opportunity for growers.
Sales to large and corporate retailers		Sales to large and corporate retailers is trending up at a bit over half of sales into the retail segment (NY17008 survey). The decisions and preferences of the consumers have a large influence on the upstream parts of the supply-chain.
Dwelling builds		According to ABS data, dwelling commencement and approvals peaked in 2018, but the sector remains strong despite the COVID-19 pandemic Government stimulus measures and re-bounding demand (house prices fall, spurring increased local demand). The majority of commencements in June 2020 were split evenly between NSW and Victoria at around 30 per cent each. Almost 50 per cent of dwelling approvals not yet commenced in June 2020 are in NSW, suggesting greenlife demand associated with new builds could be greatest in NSW.

Table 3 Supply-side trends

Where?	Direction of short-term trend	Detail
Product types being produced		An increase in both substitutable and complementary products produced. This can be confusing for consumers.
Consolidation		The intention to sell the business or land within 5 years has increased from around 3.5 per cent in 2015-16 to over 6.5 per cent out of total survey respondents. Winding down – contracting and not closing – has also slightly increased.
Technology		Increasing use various emerging technologies such as digital systems, robotics and other kinds labour-replacing technology.
Productive Workforce		Some growers in the industry find it difficult to hire and retain suitable labour. This is explored more in the Productive Workforce chapter here .

Government supports and programs (1 of 3)

The Government responded to the COVID-19 pandemic crises with a suite of new stimulus measures including (detailed in the [Appendix](#)):

- **JobKeeper:** government subsidise businesses to retain employees,
- **JobMaker:** government subsidise businesses to onboard new employees,
- **JobTrainer:** government subsidise education and training providers:
- **Tax and insolvency relief:** government lower insolvency thresholds and reduce tax obligation
- **HomeBuilder:** government subsidise new home buyers

Lockdowns and reduced mobility means less cash for businesses and less opportunities for employment. These stimulus measures are designed to 'bridge' the gap until a new stable point is achieved as society learns to live with the virus in a less restricted way

Figures 10 & 11 summarise the impact of the pandemic on jobs and wages between March 2020 and January 2021:

- All states experienced a fall in jobs and wages, with NSW, WA and Victoria the top 3 most affected jurisdictions.
- The top 3 most negatively affected industries in terms of wages were mining (-23%), information media and telecommunications (-12%) and accommodation and food services (-12%).
- The impact on the agriculture and forestry sector was relatively low, ranking 14th out of the 19 industries, with around 7 and 3 per cent decline in jobs and wages, respectively.

Fig 10 Wages and Jobs change by state across all industries (March 2020 – January 2021)

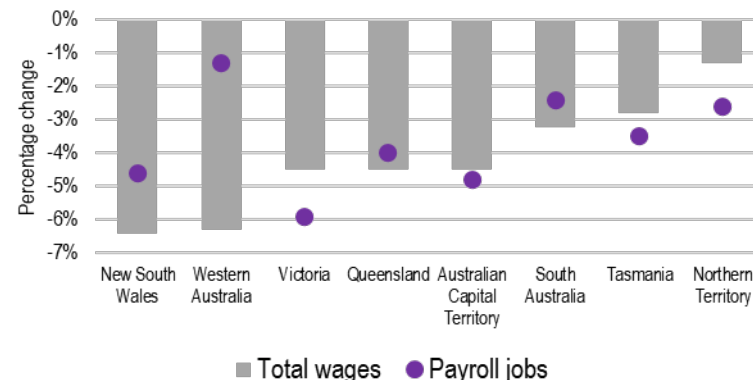
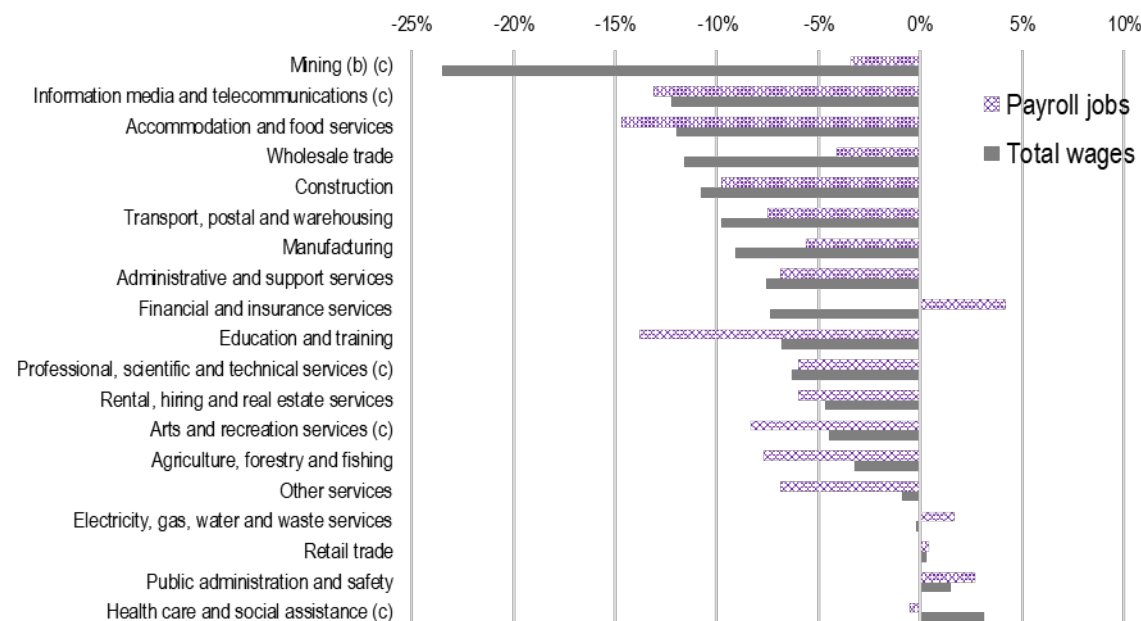


Fig 11 Wages and Jobs change by industry (March 2020 and January 2021)



Data / Information gaps

- Wage and job impact on the greenlife industry specifically
- Relative impacts compared to other similar industries

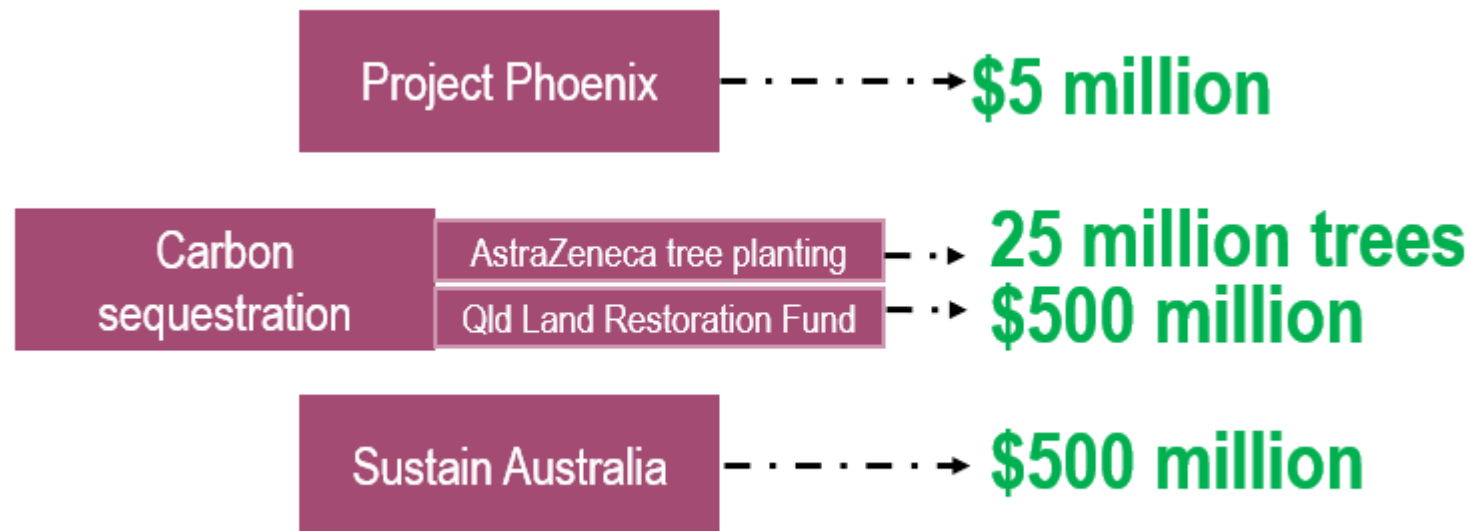
- Interest and opportunity for industry to take advantage of these programs and programs like these

Government supports and programs (2 of 3)

The greenlife industry is one of the most diverse industries within the agriculture sector, offering thousands of products and associated uses. The industry is a multi-billion industry in existing markets and attracts millions to hundreds of millions of dollars of value from different avenues, a few current ones highlighted below.

- Project Phoenix, also known as the Native Seed Strategy, involves the development of a strategic program to build and secure native seed and plant supply for landscape restoration, recovery and resilience in bushfire impacted areas.
- Large-scale tree planting has traditionally been a government activity – and while the Queensland Government has extended this in their Land Restoration Fund – private sector interest is also growing, such as pharmaceutical multi-national AstraZeneca's program for 25 million tree planting.
- Sustain Australia is seeking half a billion dollars to develop a National Edible Gardening Fund.

Fig 12 Examples of large-scale programs



Government supports and programs (3 of 3)

There is not a reliable timeline of how events will unfold

The cash value of government stimulus measures is reduced from January 2021 and a vaccine rollout began in February 2021.

We have an idea about the future week or two about most other government policies and economic events before they will change.

The government is committed to improving the conditions for communities and business

The government intends to have a positive impact in keeping the community safe and healthy and enabling businesses to operate.

However, there will always be some trade-offs as a consequence of their policies which will leave some people and businesses worse-off. The greenlife industry being recognised as an 'essential service' was a positive achievement – businesses can still operate even when strong lockdown measures are enacted.

A lot of lessons were learnt in 2020 which we can apply over the next few years

The pandemic forced us to deal with elevated levels of uncertainty - managing evolving lock-down restrictions, stricter controls on travel, doing 'more with less' and shifting consumer behaviour – and these lessons will be applied again in 2021 and beyond for the next several years.

GIA addresses this issue through advocacy and championing the industry to government and investment in career development for the industry. Hort invests in promotion and collaboration activities with training institutions to improve career and leadership development in the industry.



Productive workforce (1 of 3)

30 – 50 %

wages % of revenue

Higher for smaller sized businesses

~13,500

full-time employees (70%) are working in larger (>\$4M) or medium sized (\$500k - \$2M) businesses

Fig 14 Full time employee distribution across the greenlife industry, 2019-20

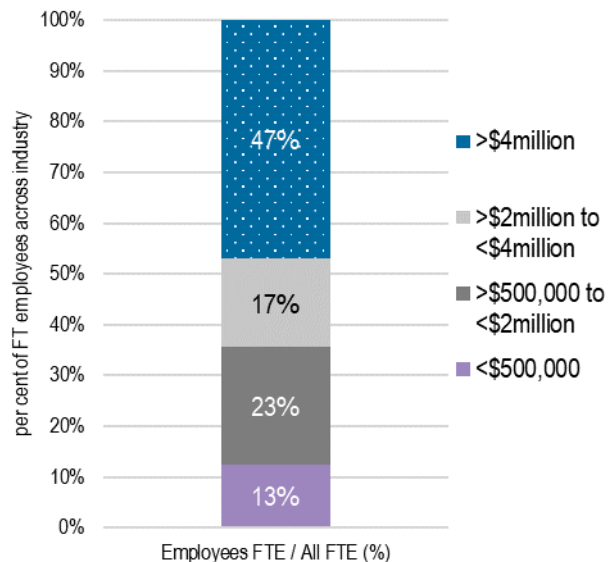


Fig 13 Wage proportion of Revenue in production nurseries

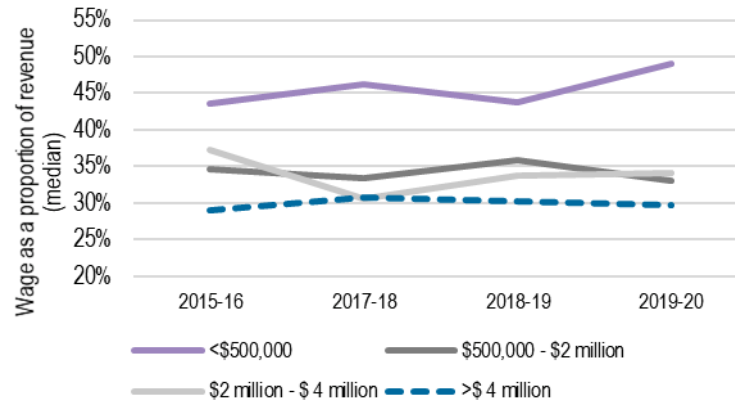
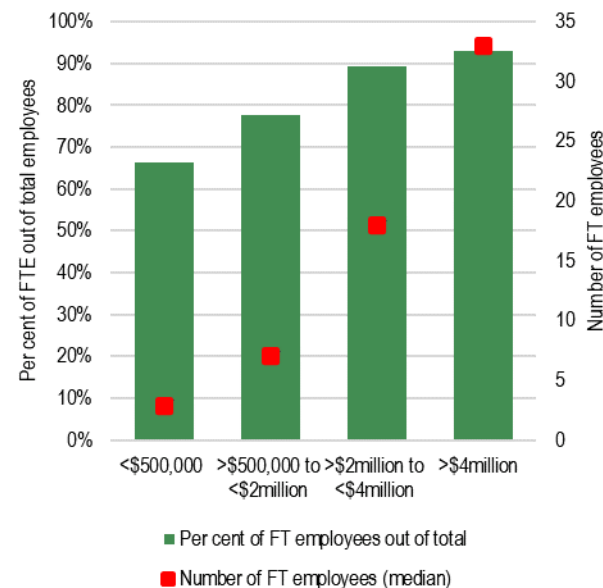


Fig 15 Full time employee vs total employees in production nurseries, 2019-20



Data / Information gaps

- Features of and access to the current labour pool
- How much more is the Industry willing to pay for labour?

Labour costs for production nurseries is a major area of interest, being one of the most often cited statistic collected from the industry surveys:

- Businesses with more than \$2 million in sales have a higher proportion of full-time employees within their business – they still employ casuals and part-time employees, but most of their employees work full-time.
- Businesses earning less than \$500,000 per year have the lowest proportion of full-time employees, with approximately 30-40 per cent of the workforce being casuals or part-time employees.

The nature of the labour is diverse and complex across greenlife businesses

The nature of the labour employed and various contracting arrangements means at a peer to peer level, direct comparisons of labour costs between businesses is difficult. One business may sub-contract a transport provider while another doesn't because it is more suitable for their needs. A more labour-intensive business could justify that arrangement because a high-margin product requires more labour than others. A business with low labour costs may actually benefit from employing more people to add value.

The most cost-effective arrangements depend on the needs and intentions of the business and this may change as conditions change, considering factors such as:

- How do each of my employees add value to the bottom-line?
- Could a different mix improve this productivity?
- What stage of business do I want to be in?
- How does this change my employee mix?
- What are realistic labour cost-saving measures that could developed?

Productive workforce (2 of 3)

24%

Employees in the Greenlife Industry have a tertiary qualification

~192,400

Apprentices and trainees employed in May 2020

~33% are between 15-20 years old

~3,780

Registered Training Organisations operating across ~6,700 locations in Australia

Long-term issue

Attracting and retaining labour with relevant qualifications and skillsets in the Industry is a common issue across production nurseries in Australia revealing longstanding problems that require long-term solutions. As shown in the figure below, the trend from 2014 shows the split of apprenticeships and trainees in all trades across different age groups narrowed by 2020. In other words, in 2020, there was a similar number people above 25 years registered as an apprentice or trainee as they were between 20 -24 years and 15 – 19 years.

Training and Education mismatch

Growers in the Industry have experienced a mismatch between what courses education and training institutions provide and what skills and competencies are required for the business.

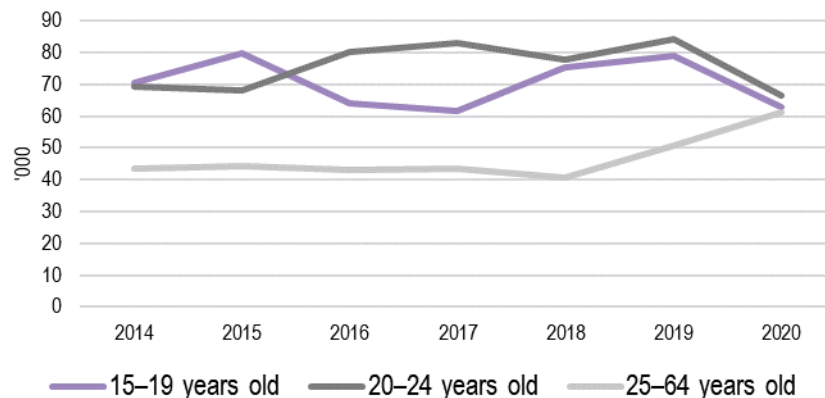
Difficulty retaining workers

The Greenlife industry offers a progressive career pathway through the business like many other agricultural businesses, however anecdotally many growers experience a labour 'drain,' where workers shift to other horticulture and landscape sectors before advancing to higher level management positions in the business.

Data / Information gaps

- The number and type of labour positions the Greenlife Industry requires to keep supplying at current volumes and what increase is needed to meet expected future demand
- The 'preferred providers' of courses well aligned with the Greenlife Industry's needs
- Collaboration between the Greenlife Industry and Training and Education providers creating fit-for-purpose courses

Fig 16 Number of apprentices and trainees by age group in all trades



Promotion strategies: positive developments but the Greenlife roles are not on the National Skills List – the closest is 'Landscape Gardener'

Both Greenlife Industry Australia and Hort Innovation include career promotion and development in their Strategic Plans. Currently, the Federal Government is offering an extra boost through the JobTrainer program (see [Appendix](#) for more details).

- Greenlife Industry Australia is currently working on a Nursery Careers Pathway strategy and represents the industry's interests across several committees within Skills Impact – a non-for-profit operating national to benchmark learning and skills standards.
- The Hort Innovation Nursery Fund has invested in three major projects developing a career roadmap for the industry, promoting careers and engaging leaders in the industry on this issue.
- In Partnership with the National Skills Commission, the JobTrainer Fund is subsidising over 300,000 training places (the number of places filled as at March 2021 is unknown). Some courses that relate to the greenlife industry are eligible such as Certificate III in Nursery Operations.

Productive workforce (3 of 3)

As well as improving labour productivity, future productivity can be improved through business investment in infrastructure and technology. Notably, businesses within the relatively smaller turnover ranges that employ a relatively lower share of total full-time employees across the industry (<\$2M), are investing more in infrastructure as a proportion of their revenue at between approximately 5 and 8 per cent in 2019-20. Comparatively, investment in technology is low at around 1 per cent of revenue.

Balance between investment and labour

The commercial decision about the optimal balance of investment and labour spend depends on:

- Expected returns to investment
- Opportunity cost
- Stage of the business – expanding, steady, winding down, etc
- Other practical constraints such as access to suitable land, etc
- Future expectations of demand

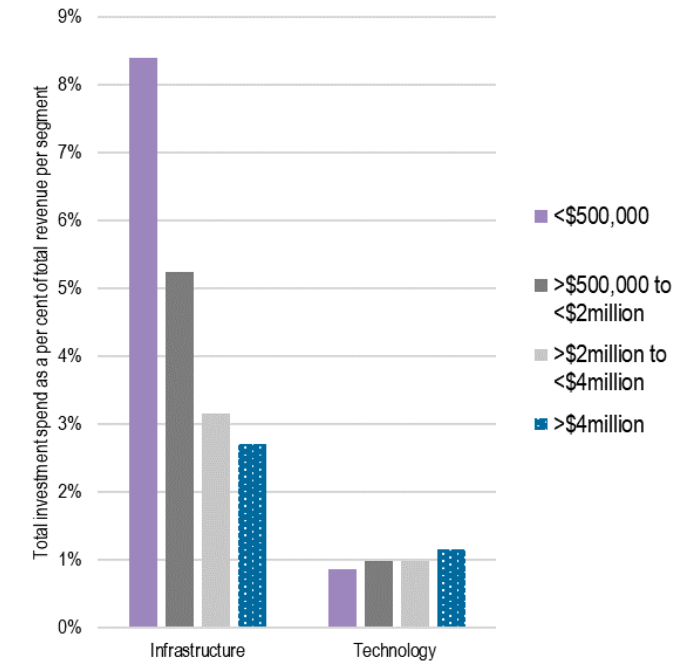
Some future expectations

- There are expectations of continued strong demand for greenlife in the wholesale and retail customer segments and there has been an increase in demand from the primary industry segment.
- The Hort Innovation Nursery Fund has invested strongly in motivating demand for urban green spaces and indoor plants and large-scale Federal Government programs are targeting the revegetation sector.

Data / Information gaps

- Trade-offs and pay-offs on labour vs business investment

Fig 17 Investment spend per turnover size in production nurseries, 2019-20



GIA addresses this issue through investment in career development for the industry by working with other organisations like Skills Impact, the educational sector and offering development programs. Hort invests in promotion and collaboration activities with training institutions to improve career and leadership development in the industry and updates the industry's best management practices to improve productivity, profitability and professionalism



Plant biosecurity (1 of 4)

High standards of plant biosecurity



Profit protection

Plant biosecurity in the greenlife industry is not a new concern, nor will it ever stop being one.

The industry's risk profile is changing

From the citrus canker incursion and response in 2018 heightened awareness of and measures against the brown marmorated stink bugs in shipping containers, to the recent detection of the serpentine leafminer in NSW and the fall armyworm in parts of northern Australia highlights that investment in biosecurity measures is a vital investment in the viability and prosperity of Greenlife industry itself.

The major sources of risk are:

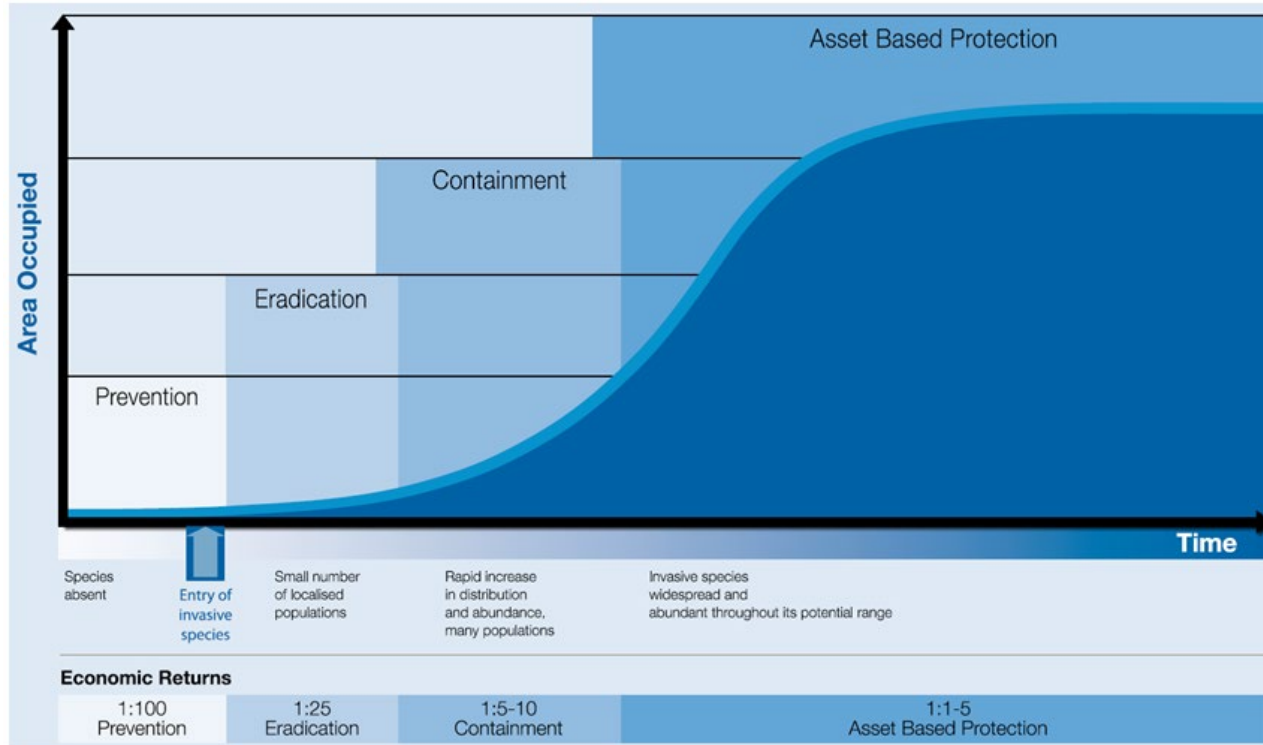
- The diversity of the industry with over 30,000 species/cultivars in cultivation and the natural complexity of host-pest relationships.
- Highly connected national supply chains and logistics across Australia.
- Multiple supply chains servicing ornamental, landscape, fruit, vegetable, forestry and regeneration greenlife clients.
- More travel and trade: 50 per cent increase in containers, 27 per cent increase in air cargo and 93per cent increase in passengers by 2025 (DAWE).
- State government biosecurity and market access protocols risk tolerances reducing.
- Reduced capacity and capability in plant biosecurity agencies in Australia.
- Management in production nurseries capable of identifying risk and skill levels within a predominantly permanent workforce.
- Low recognition and value placed on the importance of biosecurity across participants in the supply chain.

Data / Information gaps

- Value of biosecurity (\$ terms) across the supply chain: value of this 'insurance policy'
- Itemised business cost metrics to allow for a comparison of the value of biosecurity practices
- Trends in biosecurity measures on production sites
- Supply-chain traceability and grower monitoring register

Plant biosecurity (2 of 4)

Fig 18 Biosecurity continuum



Government performance

In recent years the investment and service delivery from government agencies has been arguably declining as noted in the Nairn Review 1996, The Beale Review 2008 and State Biosecurity Reviews with anecdotal commentary on issues such as:

- There has been downward trend government investment in plant biosecurity over the last 25 years, and at the same time an increase in the portfolio in which the budget is allocated. Biosecurity includes animals, plants and product integrity (pesticides and veterinary medicine control of use), a sub-component of plant biosecurity. Broadly defined invasive species and environmental biosecurity are also managed within the same agency in most jurisdictions
- This means the budget is spread more thinly over a range of issues and the budget allocation is not proportional to the complexity of the issues – animal biosecurity takes up approximately two-thirds of the budget.
- “In August 2015, the Victorian Auditor-General reported a reduction in the Victorian Government’s ability to detect, respond and prepare for an emergency response outbreak.” (Source: IGAB Draft Report December 2016)

As shown in the figure above the biosecurity continuum broadly occurs in four phases. Quickly acting in eradication stage will suppress the size of the area occupied and yield the highest economic returns for effort. If the incursion spreads, the area occupied and the time it takes to manage rises steeply.

- The capacity and capability of biosecurity officers across all four stages have fallen.
- The Regulator doesn’t accept self-assessed crop monitoring or site surveillance data records.
- An inspector must make an on-site assessment. Industry representatives note that growers need to give 72 hours’ notice to get a plant health inspector on-site in some jurisdictions.
- You are not guaranteed a plant health inspector – a pig inspector turned up to a grower’s production nursery
- The last remaining plant health officer in Sydney Basin was terminated. Shortly after, the pest, serpentine leaf miner was detected in NSW

Plant biosecurity (3 of 4)

Industry performance: adoption of best practice into business as usual

The industry currently offers best management practice and dedicated plant protection/biosecurity programs (BioSecure HACCP program) built from a long-standing plant production standard – the Australian Plant Production Standard (APPS) as below. A robust plant protection program is by default, a good plant biosecurity program. Biosecurity is more than just quarantining and market access. Self-monitoring is common but uptake of the more formal and systemised approach is less common among growers.

The industry can be better off by:

Working with government

Representatives at Greenlife Industry Australia are currently working with government on a structured program that places a high value on plant health and the financial implications for growers. One of the objectives of the program is to ensure growers are not financially worse off for undertaking measures to have high level of plant health. Further work is underway to secure the recognition by governments of on-farm monitoring and surveillance data captured to validate pest presence/absence to allow businesses to maintain continuity or return to trading in the event of a pest incursion and response.

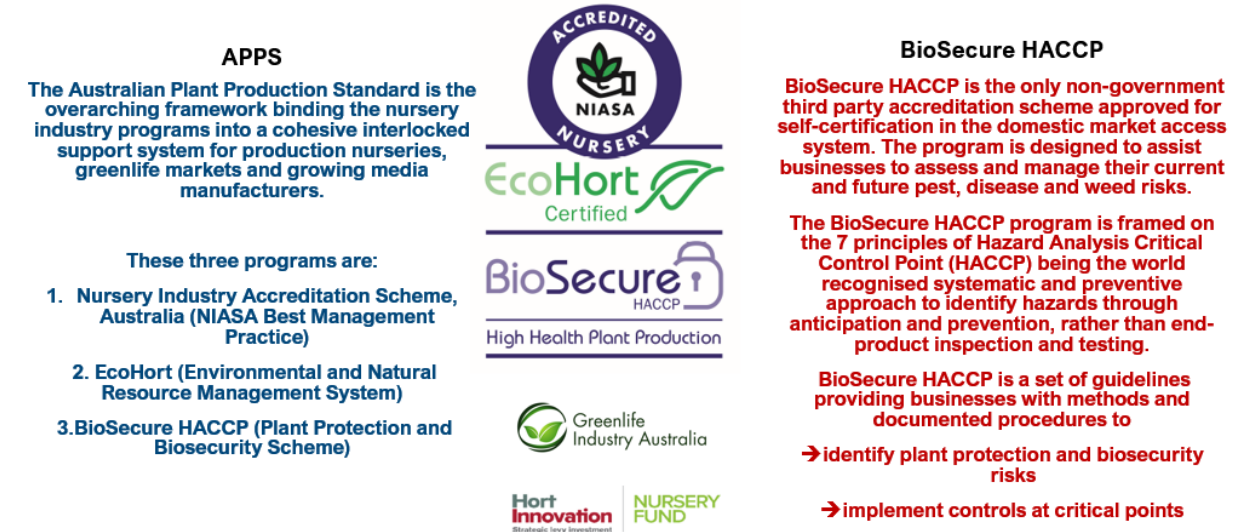
The industry can engage in open and transparent partnership with government, as evidenced by the co-operation in the examples above.

Working across the supply-chain to incentivise action based on a highly valued plant health objectives

Management by growers is essential but only one part of the supply-chain. Businesses across the supply chain can value plant health more highly with the shared responsibility and continuity of supply therefore cost sharing is managed across both upstream and downstream components of the supply-chain.

Fig 19 Australian Plant Production Standard and BioSecure HACCP

The entire data recording resources collection is currently being digitised for use on smartphones/tablets in the field, rolling out in 2021. This will enable people to interrogate the information and use in every day business decisions.



GIA addresses this issue through offering the BioSecure HACCP accreditation and resources. Hort invests in management preparedness R&D and raising awareness of the importance of biosecurity with stakeholders and working with state governments on their systems of moving plants across states.



Plant biosecurity (4 of 4)

Table 4 Plant biosecurity risk and actions summary

Rank (most important =1)	Risk	What actions are growers and GIA taking to minimise this risk?	What actions would you like to see further upstream or downstream in the supply-chain to help minimise the risk?
1	More travel and trade: 50% increase in containers, 27% increase in air cargo and 93% increase in passengers by 2025 (DAWE)	- Monitoring the COVID-19 pandemic impacts on passenger travel - Lobbying Government on imports – particularly around plant material (cut flowers) and general cargo - Working closely with State Agencies	- Lobbying of government to better police the risk, increased vigilance on plant pests and diseases - Lobby government to reduce restrictions on low risk seeds & tissue culture imported - Better protocols implemented at origin to minimise the impact from imported goods
2	Reduced capacity and capability in plant biosecurity agencies in Australia	- Working closely with State Agencies - Building Industry capacity	- Overall more professional well skilled industry to compensate government performance - Increased budget allocation to Government biosecurity resources
3	Highly connected national supply chains and logistics across Australia serving multiple supply chains servicing ornamental, landscape, fruit, vegetable, forestry and regeneration Greenlife clients	- Using quality and consistent suppliers - Working with other state specific commodity groups. - On-going communication of issues to growers	Improving industries traceability capability
4	The diversity of the industry with over 30,000 species/cultivars in cultivation and the natural complexity of host-pest relationships	On-going communication of issues to growers	- More streamlined communication between national and state agencies - Lobby government for more funding and more industry consultation
5	State government biosecurity and market access protocols risk tolerances reducing	- Working closely with State Agencies - Engagement with Government agencies through EPPRD and Plant Health Australia	- A need for better and greater harmonization of protocols of plant movements across the country - Lobby government on economic impact of overly conservative policies
6	Management in production nurseries capable of identifying risk and skill levels within a predominantly permanent workforce	Communications program across the Industry to highlight the importance of plant health and biosecurity.	Overall more professional well skilled industry to compensate government performance

Water and climate (1 of 3)

55 % full

Australia's total water capacity as at 3 March 2021

Equivalent to 44,600 GL

Water in the supply-chain

Water use is a critical part of the greenlife industry across the entire supply-chain starting from a production input for the growers, maintaining the production as it goes to market and to the enjoyment and success for the end consumers - tighter water restrictions can lead to higher rates of plant failure.

Data / Information gaps

- The costs and benefits of different levels of water restrictions to production nursery businesses
- Consistency of water restriction implementation across agencies in different states and territories

Restrictions and Policy

- There are approximately 80 water agencies and over 20 types of water restrictions in name across Australia. A descriptive summary of the restrictions by state is shown in the figure to the right:
 - The majority of states and territories are under some kind of permanent restriction
 - Tasmania has the lowest level of restriction
 - NSW and QLD have the most variation in restrictions
 - WA's major market is Perth which has had strict 'roster' system Permanent Water Efficiency Measures for over ten years.
- Water restrictions typically operate on a 'trigger' basis. This means when the accessible storage levels of a primary dam reaches a certain point, such as 30 - 40 per cent, then more severe restrictions are 'triggered' and enforced for businesses and households.

Fig 20 Proportion of state under the different levels of water restriction descriptions (February 2021)

	NSW	ACT	QLD	VIC	SA	TAS	WA	NT
Extreme	7%	0%	0%	0%	0%	0%	0%	0%
Very High	0%	0%	8%	0%	0%	0%	0%	0%
High	3%	0%	17%	0%	0%	0%	0%	0%
Medium	3%	0%	0%	6%	0%	20%	33%	0%
Permanent restrictions	27%	100%	8%	94%	0%	0%	33%	50%
Water Wise	10%	0%	8%	0%	100%	0%	0%	0%
Low	20%	0%	8%	0%	0%	20%	0%	0%
No restrictions	30%	0%	50%	0%	0%	60%	33%	50%

Community education – 'Which Plant Where'?

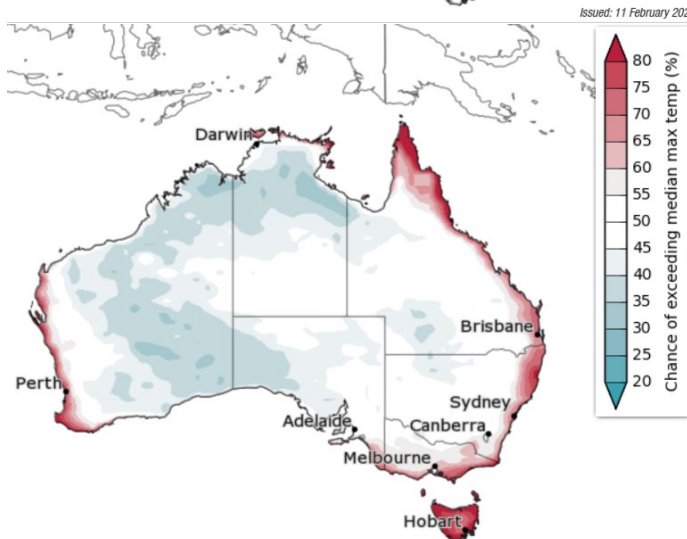
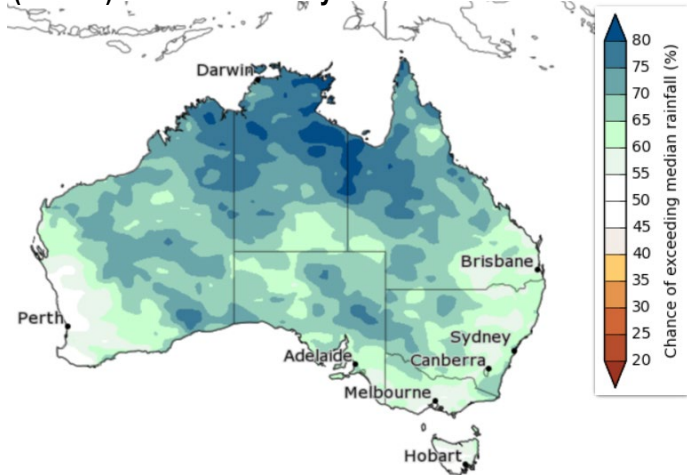
Selecting the right plants for the right urban space with an eye on the future

The Hort Innovation Nursery Fund has invested in multiple research projects over the years building the knowledge base on the suitability of plant species under current and future environmental conditions and climate scenarios (NY16005, NY17000, NY18002, NY18003, NY18009).

A current ongoing project is 'Which Plant Where?' (GC15002) in partnership with Macquarie University, Western Sydney University, NSW Office of Environment and Heritage. This 5-year project investigates which plant species will thrive the best in different locations across Australia under different environmental stressors that can be expected in the future. The team has held numerous educational workshops across Australia, presenting the findings and exploring the opportunities for greenlife to thrive anywhere in Australia.

Water and climate (2 of 3)

Fig 21 Chance of above median rainfall (top) and temperature (second) from March to May 2021



Issued: 11 February 2021

As at March, the 2020-21 summer season is largely wet and cold on the east coast, hot and dry with bushfires on the west and southern coast. The follows a hot, dry and catastrophic bushfire season last summer 2019-20, particularly for the east coast.

The Bureau of Meteorology (BoM) provides 3-monthly probability forecasts across Australia.

- BoM generally predicts hotter and rainier weather across Australia for the autumn season in 2021, with more rain in Northern Territory and Queensland in particular, and hotter temperatures in Tasmania.

Rainfall and temperature are two key environmental factors in the climate change story. The regularity and strength of extreme weather events such as cyclones, floods and other storms are another part.

In light of this, proposed actions generally fall into 3 groups; resilience, adaptation and mitigation:

Resilience

Example: Climate Future Plots revegetated with specific genetic diversity

Adaptation

Example: shifting geographic locations, changed systems and practices

Mitigation

Global and National effort on sources of energy, transport, carbon sinks

Data / Information gaps

- Projected impact / risk metrics for nursery sites across Australia for negative climate events
- Detailed data on the Greenlife industry's potential role in climate change intervention and response efforts (greening, cooling, carbon sinks)

Water and climate (3 of 3)

Fig 22 Fire Danger seasons across Australia



Catastrophic bushfires during the 2019-20 summer season burned over 17 million hectares of land in Australia, over one billion animals, over 3,000 properties and 33 deaths.

Bushfire threat and preparedness

- Bushfires pose an immediate threat to production nurseries sites and access roads. Each state's fire authority has a process of developing a bushfire management plan with individuals and businesses to reduce the risk to acceptable levels.
- The Hort Innovation Nursery Fund invested in a project in 2019 assessing the potential for natural disasters and severe weather events to impact upon the Australian production nursery industry and helping to develop strategies and resources for better preparedness, speedier recovery and stronger resilience (Industry Natural Disaster Risk Mitigation and Recovery Plan NY18008).

Data / Information gaps

- Industry participant figures on level of preparedness and management in case of natural disasters
- Industry involvement with other agents on bushfire recovery and preparedness opportunities

Bushfire recovery management

Revegetation and plant selection as a result of and in preparation for bushfires has greater community and government attention since this recent natural disaster. Detailed further in under Government Supports, is the recently announced large-scale Federal funded program, Project Phoenix; a national strategy to regenerate the landscapes after a bushfire.

The Country Fire Authority provides guides and tools to help people select plants suitable for high bushfire risk areas:

- Plant Selection Key: online tool to select plants based on information about plant characteristics and flammability
- Landscaping for bushfires guide: a practical guide about landscaping to minimise the effects of direct flame contact and radiant heat on a house during a bushfire.

GIA addresses this issue through development of an industry sustainability framework. Hort updates the industry's best management practices to improve productivity, profitability and professionalism and invests in extension activities to drive adoption of these practices.



Technology (1 of 1)

Technology solutions in the greenlife industry are occurring at pace in 2 main areas:

- Robotics / Automation
- Biological / Genetics

The Department of Industry, Science, Energy and Resources has been funding the program, Early Stage Venture Capital Limited Partnerships. Out of the program, at least 2 horticulture start-ups have been funded:

- NextGen plants: plant design at the genetic level
- Ageriss: Digital Farmbot Assistant, crop and pasture monitoring bot, crop intelligence
- Another innovation that has been in the making for many years, funded by a similar Federal government initiative – Accelerating Commercialisation grant - automated tissue culture production to be cost-competitive with low-cost import options.

Data / Information gaps

- Trends in uptake of new technologies across supply chain participants in industry
- Enabling best use of technology in the Industry
- The alignment / gaps with emerging technology and tech the industry wants
- Data on 'transformative' vs 'incremental' technology
- Activities of large technology providers like Powerplants and Transplant Systems

TC Lowes production aims to be cost competitive with imports and double current production volumes

Tissue Culture Innovation

Greg Lowe at Lowes TC Group, a plant micro-propagation company, is developing a system to automate tissue culture production to produce low-cost tissue culture locally.

The technology around liquid media temporary immersion system bioreactor utilises has existed for fifty years but has not been successfully automated. Greg's new, patented materials handling process enables high volumes of plant transfer out of the bioreactor.

"We realized what we could do with the automation is improve the materials handling process. Every time we touch the bioreactor, we are moving 150 or 400 plants, so we are not touching them one at a time. We touch them in mass, and we produce them in mass," Greg says. Lowes TC automated propagation involves a simple materials handling process using conveyors and pick and place tools. It does though have the potential to be fully automated with robots.

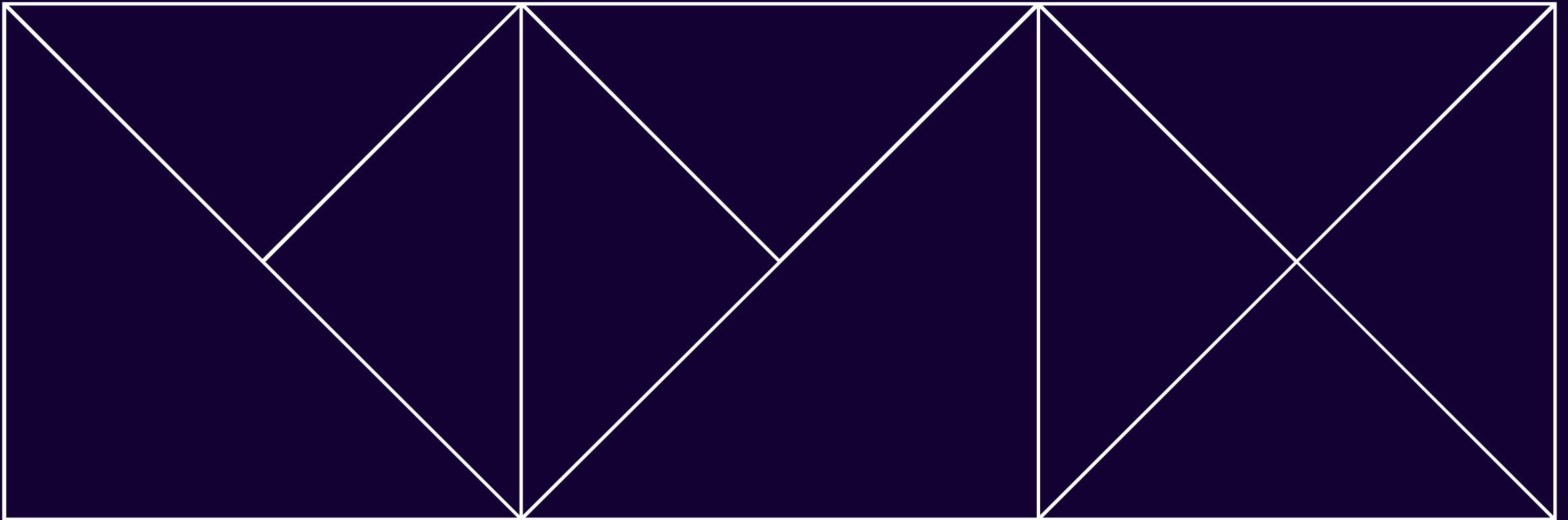
Currently in Australia, TC production costs more than 50 cents per plant, while other countries can produce at a cost of between 5 – 10 cents thanks to low wages, plus freight. This technology will drastically upscale production – much higher than the current estimate of 200 plants per hour.

Viewed February 2021: [HTTPS://WWW.LOWESTC.COM.AU/](https://www.lowestc.com.au/)

GIA addresses this issue through advocacy activities to government to support technology innovation and adoption in the industry. Hort invests in early stage and up to commercialisation-ready technology research, development, extension and adoption programs.



Appendix



Government supports

	Description
JobKeeper	From 28 September 2020 to 3 January 2021, the payment rate is \$1,200 per fortnight for all eligible employees and from 4 January 2021 to 28 March 2021, the payment rate will be \$1,000 per fortnight for all eligible employees.
JobMaker	– \$200 per week for each eligible employee aged 16 to 29 – \$100 per week for each eligible employee aged 30 to 35. For the employer to be eligible, new employees must: – be aged 16 to 35 years – be in receipt of income support payments (such as JobSeeker Payment, Youth Allowance (Other), or Parenting Payment) for at least one of the three months before they were hired. Employers will register with us and make claims quarterly, with claims commencing in February 2021. Eligible employers will have access to a JobMaker Hiring Credit for each new job they create over the 12 months from 7 October 2020.
JobTrainer and Apprenticeship wage subsidies	<i>JobTrainer Fund:</i> up to 320,000 new training places will be delivered through the fund as a mix of national accredited qualifications and short courses, including part qualifications and skillsets. The JobTrainer Fund will deliver training courses in areas of genuine skills needs, based on the agreement between participating states and territories and the National Skills Commission. <i>Supporting Apprentices and Trainees wage subsidy</i> will ensure apprentices and trainees already in work remain engaged and are in a position to support the economic recovery. From July 2020 to 31 March 2021, the subsidy will be available to support small and medium businesses with fewer than 200 employees, including those using a Group Training Organisation, who retain an Australian Apprentice engaged as at 1 July 2020. Eligible employers can apply for a wage subsidy of 50 per cent of the apprentice's or trainee's wage paid during the 9 months from 1 July 2020 to 31 March 2021, up to a cap of \$7,000 per quarter. <i>Boosting Apprenticeship Commencements Wage Subsidy</i> to boost the number of new apprenticeships and traineeships. This will support up to 100,000 new apprentices and trainees by paying a 50 per cent wage subsidy for commencing apprentices and trainees at businesses of all sizes, in all industries, and in all locations. Businesses will receive the 50 per cent wage subsidy, up to a cap of \$7,000 per quarter, for commencing apprentices and trainees, including those employed by Group Training Organisations, until 30 September 2021.
Temporary relief for financially distressed businesses	A new, quicker and lower-cost process will be introduced to allow small businesses to restructure their debts, while they stay in control of their company. In 'normal' times they would be considered insolvent but the thresholds have relaxed. For small businesses that unfortunately cannot survive, there will be a new, quicker and lower-cost simplified liquidation process. Both new processes will commence on 1 January 2021. They will be available to incorporated businesses with liabilities of less than \$1 million.
Temporary full expensing and Temporary loss carry-back	The Government is introducing temporary full expensing of eligible depreciable assets for businesses with turnover up to \$5 billion from 7:30pm (AEDT) on 6 October 2020 until 30 June 2022. Companies with turnover up to \$5 billion will also be able to temporarily, up to June 2022, offset tax losses against previous profits and tax paid in or after 2018-19. Temporary full expensing creates a strong incentive for businesses to bring forward investment to access the tax benefit before it expires. Temporary loss carry-back further assists companies that would experience a loss to take advantage of the temporary full expensing measure.
HomeBuilder	HomeBuilder provides eligible owner-occupiers, including first home buyers, with a tax free grant of \$25,000 to build a new home or to rebuild. Expanded First Home Loan Deposit Scheme: An additional 10,000 places will be provided in an extension to our First Home Loan Deposit Scheme in 2020-21 to support first home buyers to build a new home or purchase a newly built home. The Government is also implementing reforms to reduce the time taken for consumers to apply for credit and simplify the application process.

Methodology

How this report was developed

ACIL Allen firstly undertook a desktop review of available information from a variety of sources in the public domain and resources shared through industry channels.

Survey information and data from the Hort Innovation funded projects NY16004 (2015-16) and NY17008 (2017-18 to 2019-20) 'Nursery and Gardens Industry Statistics' projects were used in generating outputs for this report.

Greenlife Industry Australia and Down To Earth Research were active partners in these projects.

The PESTLE (Political, Economic, Social, Technological, Legislative and Environmental) technique was used as diagnostic and framing tool to identify issues and express the implications of the issues across these themes.

Special thanks to the generous volunteers who gave their time and knowledge to develop and review the report in collaboration with ACIL Allen (listed alphabetically):

Alex Newman from Bunnings

Brendan O'Keefe from Hort Innovation

Brett Sargeant from Andreason's Green

Colin Groom from Domus Nursery

Craig Taberner from Nursery and Garden Industry- Victoria

Karen Connaughton from the Australian Bureau of Statistics

Mark Jackson from Southern Advanced Plants

Michael Rogers from Australian Fresh Produce Alliance

Peter Vaughan from Greenlife Industry Australia

For more information

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Consultant
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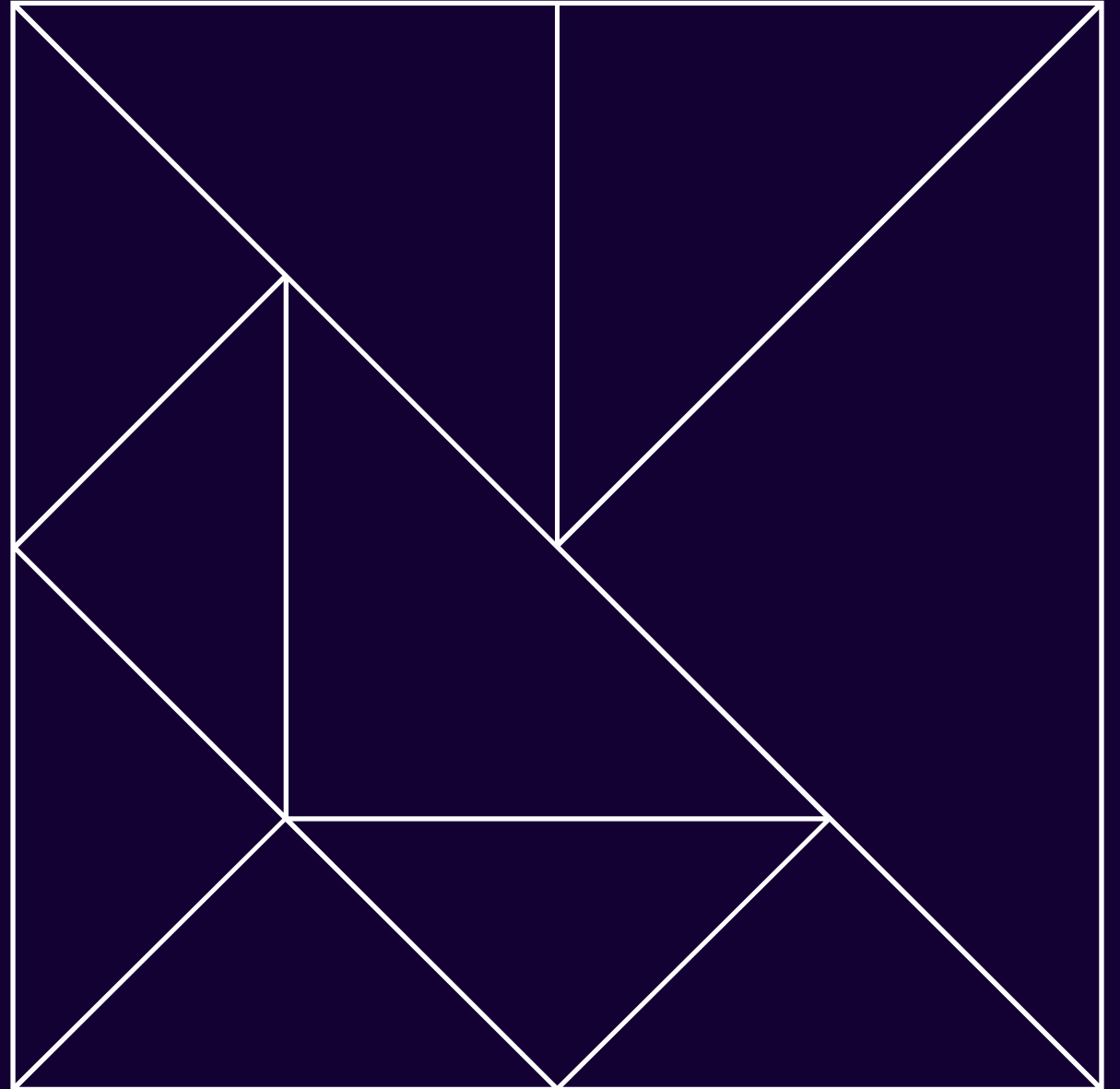
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ACIL ALLEN



Appendix S

Minutes of Project Team and PRG Meetings (2018/2019)

Meeting Notes

NY17008 Nursery Industry Statistics 16/17-19/20

Project Team Meeting

Date:	Tuesday 31 July 2018
Location:	GOTO Meeting
Attendees:	Pam Watson, Daniel Watson, Jan Paul Van Moort, Peter Vaughan, Kobie Keenan
Apologies	Rebecca Moriarty

11.00 am Welcome and objectives: Peter Vaughan

PV confirmed the contract had been signed and welcomed everyone back to the team for the next three years.

Item 1 Letters of Engagement

Item 2 Budget Allocations

KK advised that the activities spreadsheet (originally reflecting three stages in each year) had been adjusted to align to the Hort Innovation contract, being two stages in each year.

KK advised that milestone payment schedule was being finalised to reflect the outputs and workloads of each stage and would be circulated for consideration by the end of the day. She indicated that once the schedule had been agreed to by the Project Team, the Letters of engagement would be finalised and include the revised outputs/activity plan and payment schedule.

ACTION: KK to forward draft milestone payment schedule to Project Team for approval.

ACTION: KK to send letters of engagement asap.

Item 3 Activities/Outputs – clarifications

Project team worked through the Activities and Outputs for Year 1 with the following areas highlighted:

- Formation of the Project Reference Group (PRG)
PV confirmed that the first meeting of the PRG would be face to face in the offices of AAC on 27 August 2018. He informed the Team that David Jakobs and Hamish Mitchell had confirmed their involvement and support for the project ongoing. Further, a third member had been invited being Emily White from Boomaroo information PV of her industry in nursery industry data. Confirmation from Emily would be forthcoming of the next week or so.
- Engagement Plan
KK advised that the bones of a plan were already in existence from the previous project. This would be adjusted to reflect the new contact. Further, a meeting would be had with Cox Inall Communications to discuss the next 12 months. JpVM indicated a need to ensure we include in the plan a way to encourage businesses to use the data tool.

ACTION: Draft Engagement Plan included in meeting papers for 27 August.

- Data tool survey of users

The Team thought it would be valuable to have already conducted the 12 in depth interviews of data tool users prior to the meeting on 27/8. The Team noted it was important to capture information around the usefulness of the tool, user needs etc. It was felt that 12 conversations were more informative than a survey.

ACTION: JpVM to liaise directly with Adam Briggs around contacting those businesses who have requested the data tool for the interviews

- Supply Chain data for 17/18 collection

Following a long discussion the Project Team decided that the most important supply chain information to capture in Yr1Stg1 was Retail and Landscape. It was agreed this information would be fed into the PRG meeting for assistance on the best way to capture this information and how to get a stakeholder database.

It was also agreed that validation of the greenlife data using the supply chain data needed to be robust and that the methodology needed to be the same across the data sets.

ACTION: KK to arrange sharing of the retail and greenlife databases with DTER.

Item 4 Expectations of the Project Reference Group

The group discussed the need to identify PRG and Hort Innovation expectations early on in the project.

Specifically, the Team wants to understand how the NY17008 data will be aligned to the HortStats data and this needs to be established as soon as possible.

DTER advised that they had extended an offer to Adam Briggs to provide him a set of mock data and to provide a demonstration/explanation of the management of empty cells in the collection. The Team discussed the benefits of possibility of including ABS (and perhaps Fresh Logic) in this discussion.

ACTION: DTER to liaise directly with Adam Briggs on a demonstration/explanation as discussed above.

Item 5 General Business

A short discussion on the name of the data tool followed. PV said that perhaps an alternative name be considered to help accurately describe its function, ie benchmarking.

Next meeting

10.30am, 27 August 2018

Project Reference Group Meeting

AGENDA

NY17008 Nursery Industry Statistics Project Reference Group Meeting

Date:	Monday 27 August 2018
Location:	ACIL Allen Consulting – Level 1 50 Pitt Street Sydney
Invitees:	David Jakobs (Oasis), Emily White (Boomaroo), Pam Watson (DTER), Daniel Watson (DTER), Jan Paul Van Moort (AAC), Rebecca Moriarty (AAC), Peter Vaughan (NGIA), Kobie Keenan (NGIA), Adam Briggs (Hort Innovation), Louis Williams (Hort Innovation)
Apologies	Hamish Mitchell (Speciality Trees)

10:30 am - Welcome and objectives: Peter Vaughan

PV welcomed the group and invited PRG members to provide introductions. PV provided a short introduction on behalf of Hamish Mitchell.

Item 1 Governance (NGIA)

Conflicts of interest

No conflicts were provided.

Item 2 Brief review of NY16004 recommendations and NY17008 Project Expectations (A1)

PV ran through the recommendations from NY16004 and then sort comments from the PRG.

PW noted the explanations used in the questionnaire need to be clearly defined such as FTE and what tht means in terms of hours and whether it includes the owners; whether super is an inclusion in salary information; how 'operating profit' is defined. This will ensure the project manages differences in data.

JP felt it was important to continue to manage the expectations of the survey results and tool and around the heritage between the datasets. He noted it that increasing participation and reducing empty cells by forwarding the entire survey to contributors in advance.

PW also emphasised the need for attitudinal data.

Future alignment of NY17008 data with Hort Stats (Hort Innovation)

AB provided an update from Hort Innovation for the HortStats Handbook. He noted the information from HortStats is informed by levy projects where available. Where not available, it is alternatively sourced. He noted that 10 industries have their own data and the remaining industries are sourced by Fresh Logic.

AB referred to the data of NY16004 being included in the handbook noting the validation exercise of the current process will support the collection for this and future years.

He further advised that the handbook will have final values locked in November (for 17/18) and noted the first collection of this project may not align with the 17/18 publication.

Finally, he noted the future of the handbook is being considered by Hort Innovation as the contract is currently up for review.

Ongoing liaison with ABS and ABARES regarding methodology (Hort Innovation)

AB referred to his relationship ABS and ABARES. He has spoken with ABS on their handling of the empty cells where they advised they use the 'nearest neighbour' technique. He noted that DTER and he and Louis had met (prior to the PRG meeting) to discuss the empty cell strategy of the NY16004 and this project.

He advised that ABARES prepare a data release (around each) March and have indicated they are Interested in receiving more information on the nursery data.

AB talked about the resource availability within the ABS and ABARES teams indicating the resources continue to get tighter and are often looking for ways to collaborate. KK advised NGIA would be keen to

discuss the nursery industry with ABARES and also advised NGIA is keen to keep up the relationship with ABS noting how valuable it had been in working to change the VACP collection questionnaire.

Finally, AB introduced Louis Williams indicating he joins the Hort Innovation team as an analyst and will be working on aspects of the nursery data project.

ACTION: AB to liaise with ABS/ABARES for meeting with NGIA and Hort Innovation

Item 3 NY17008 project overview

Project Activities and Outputs (A2) (NGIA)

PV referred to the action checklist provided noting it was an overview of the next three years of activities. The PRG was advised that the difference between this and the previous project was that, going forward each year's collection will happen in two phases rather than three.

The group also discussed the focus on the validation process each year of the collection and

Methodology (DTER)

PW provided an explanation on need for consistent collection methodology between NY16004 and this project in order to compare data reliably (apples with apples). PW further noted that to be able to reliably compare the green life data to the supply chain data (validation) the same methodology needed to be used across the data sets. This results in the need to conduct random sample surveys of both greenlife and supply chain sectors.

It was noted that the two biggest buyers of greenlife (from NY16004) were retailers and landscapers and so this would be the focus for the validation collection. There were some discussions around the need to capture Bunnings input into the retailer information but multiple members of PRG indicated serious concerns about what Bunnings wanted in return for that data. In this regard, specific reference was made to an earlier meeting with Bunnings where it was indicated they wanted to know the profit margins of greenlife producers. The PRG overwhelmingly felt this information could interfere with grower/supplier negotiations and it was not the role of this project to compromise the relationships in this way.

Further the PRG discussed the need for managing perceptions around the data collection. It is critical for businesses to feel confidence in data security. This is a strong theme from the in-depth interviews conducted under NY16004 and remained strong throughout the collection.

Greenlife & Validation collection

DW advised the group that the project is again aiming for 300 random telephone interviews. He advised they had met with the field agency (Market Metrics) to determine all efficiencies in order to assist both the respondents and interviewers.

The group discussed the stakeholder database, and the need to get the right contact in the stakeholder database. An example was provided where at a meeting of a group of large employers, only one or two of the attendees were aware of the collection project. It was felt this was due to the database not having the correct contact to access this information.

The random sample concept was discussed at length. Some of the group felt that it was critical for certain greenlife businesses to be captured in the collection to ensure reliability of the data. PW and DW explained the theory and how these issues are managed with in the methodology.

JP felt that good data distribution would come with increased participation and analysis of the data and that driving participation to increase the greenlife collection from 221 to 300 was critical.

The group discussed the timing for both greenlife and supply chain collection. For growers it was felt that November would be the better time this year for the 17/18 collection.

Initially, May 2019 was indicated as the better time to capture the retail and landscape validation collection however, AB indicated that the intent of the first validation collection was to support the 17/18 greenlife collection and therefore ideally would be done to align with each other. The PRG discussed this further and revised the timing to October 2018 before the 17/18 greenlife collection.

AGREED: Retail & Landscape validation collection to begin in October 2018 with Market Metrics and DTER assessing response rate (noting this timing sits right in the middle of Spring).

AGREED: Greenlife collection to commence in November 2018.

Some discussion was had regarding the importance of understanding the industry in order to understand the market. This led into a discussion around the desire to reach at least 30 contributors, which can be considered a robust sample size, by region and by turnover group, allowing the data to be broken down further than 'nationally'. It was noted that States such as TAS and/or NT are unlikely to ever have their own figure due to the numbers of businesses in those states. It was also noted that these figures are usually always joined with a larger state. A discussion over randomised stratified sample and consideration over quota sampling by State and Size followed. *(Further discussion around sampling was had – see minutes for Benchmarking tool below)*

AGREED: Throughout the collection, DTER will advise the PRG if additional information is required for the greenlife and validation collections by region and turnover.

A discussion around the databases followed noting greenlife and retail databases could be provided imminently. A landscape database would need to be sourced.

ACTION: NGIA to liaise with AILA for stakeholder database.

ACTION: NGIA to send greenlife database back to DTER

Survey review (see page 72 of A1)

DW informed the group of the need to compare year on year and so for the survey to remain mostly unchanged. He noted the maximum length of the survey interview would be 20 mins and he asked the group to keep this in mind when considering any additions, exclusions.

KK reminded the PRG that the survey is serving many masters, noting that some information not relevant to growers may still be very relevant to the industry bodies and key industry stakeholders.

Greenlife Survey

It was noted that in addition to surveying retailers directly, validation opportunities existed in the greenlife collection by asking a breakdown on retail and landscape supply questions.

DJ advised the four main categories of retail included: Grocery, Discount Department Store, Bigbox - (Bunnings) and Independents. The alternative was to ask growers a retail % split of *Bunnings or other*. The group noted that serious consideration should be given to how this information is reported, if it is reported at all.

EW questioned the opportunity to identify an average sell price by product group. PW explained that there are limitations of software and this would be difficult to survey (near impossible) as they are near the limit questions. PW also expressed concern that this line of questioning would increase the empty cells (rubber).

Validation Surveys

It was acknowledged that many of the questions of the validation survey would be the same as greenlife but asked in reverse. These surveys also need to be kept to 20 mins.

The group discussed whether 'Florists' would/or should be included in the retail capture. Further, the use of 'brokers' and 'market sellers' were also discussed noting they differ from production that sells to wholesale. This discussion prompted a range of questions. The reconsidered the intent of the validation collection- which was to validate the earlier collection. It was acknowledged that its purpose was to place some certainty around the earlier collection rather to deeply explore the retail supply chain.

PW did note that the greenlife survey did capture and 'other category' where some of these sales would sit. She also noted a need to reduce the length of the survey introduction.

AGREED: The retail validation would focus on independent retail.

- ACTION: DTER to draft greenlife and validation surveys and circulate to the PRG by mid-September for feedback.
- ACTION: DTER to review and update the confidentiality agreement, survey introduction and emails for both collections and circulate to the PRG by mid-September for feedback.
- ACTION: DTER to review and update definitions with the survey drafts.

Industry Benchmarking tool (AAC)

JP provided a presentation on tool usage and comments for the 2017 data tool noting they had begun the interviews noting an invitation to provide feedback had been sent by AB to approximately 30 businesses who had specifically requested it from Hort Innovation.

He noted that they had not completed their interviews at this point however some common themes were emerging including:

- Wants to see share of business sales to end market channel
- Reconsider sizing of the business turnover categories
- Lots of interest in Bunnings and considering splitting this category
- There remain some literacy issues on the data – familiarisation is important
- Response rate (goes to understanding of random sampling)
- Confidentiality (critical)
- Benefits of understanding data are important – therefore engagement is critical.
- Can see the project escaping the dashboard format. People want finer detail but still a simpler tool.

The group discussed the opportunity to ask about use of the tool in the greenlife collection survey.

ACTION: DTER to consider included use of the tool question in the 2018 greenlife collection survey.

KK advised that the engagement around participating in the survey is difficult. The benefits of the next project are that we have a tool and data to use in the communication activities but the idea of asking businesses to participate – but only if you are selected - is a difficult call to action.

The group noted this difficulty and referred again to the random sample discussion. DTER advised that in an instance where more data is needed for a region/business size, there is opportunity to 'top up' the random sample. This is possible, because the random data can be isolated from the 'top up' data. Both data sets can then be weighted appropriately before being collated and analysed. The group agreed that this approach would assist both the collection and the engagement activities.

AGREED: DTER to conduct random survey first. A request for participation can then be circulated to 'top up' the collection where needed.

JP advised that he and RM will have finalised the surveys in the next week and can circulate the finding by mid-September for consideration with the survey drafts.

ACTION: ACC to circulate in-depth finding on the data tool to the PRG by mid-September.

DJ noted the importance of collaborating with the State Associations to promoting of the project to help with participation. The group felt it was important to emphasis the value proposition.

1.00pm DJ left the meeting .

Item 4 Project Administration & Industry Engagement

KK advised that the Project Team was made up of ACC, DTER and NGIA. She advised the group it was not uncommon for the project team to liaise on the administration of the project outside of PRG meetings.

PV indicated that there were 7 meetings of the PRG scheduled across the life of the project with 3 in the first year and 2 each following year. Those meetings would involve at least one face to face per year. The

idea of a meeting at a nursery was proposed noting that it would help give the PRG an complete picture of the nursey industry in relation to the data collection and the group agreed.

ACTION: KK to liaise with levy representatives of the PRG to conduct and nursery site meeting for the project.

PV advised the Program Logic and M&E plan; Risk Management Plan for the project were currently being drafted as there are requirements for the first milestone. AB noted these would be great tools in assiting project over the next three years. KK advised she was using the Hort Innovation project templates.

KK advised the PRG that the Stakeholder Engagement and Communications Plan was currently being drafted. She explained the two projects which would extend the project to industry and different types of outputs that are intended under this plan.

ACTION: NGIA to circulate draft PL, M&E and Risk Management and Stakeholder Engagement and Communication Plans early October for feedback from the PRG.

Levy Payer requirements and expectations (DJ, EW, HM)

EW commented that she felt the project was heading in the right direction noting the communication was critical to manage the expectations of the releases in the first years. She noted that engagement with levy payers should involve 'dangling the carrot' to help with participation.

She felt it was important to explaining to levy payers how the first few years work in order to validate and capture longitudinal information and trends. She felt that retailer input is a great incentive.

She felt that organisations in an expansion phase would want to be involved in the project but that the collection needed other nurseries involved too and so highlighting the benefit was important.

She suggested that the engagement cover the reasons why finer detail cannot be captured up front.

The group discussed new messages for communications including:

- We have process for capturing data
- We are updating and improving the tool and it will include longitudinal data

Further the group discussed the need to build the commentary around the collection and dive into the data for more stories. Further EW suggested other Hort Innovation initiatives should look to embracing the data such as PLB consumer engagement and Green Industry Leaders program noting the data supports these initiatives.

KK suggested case study opportunities may come from data tool users who were also contributors. AB indicated that one or two businesses on the Hort Innovation list may fit this profile

ACTION: AB to identify and contact data tool users who were also contributors regarding participation in data case studies. AB to advise KK by mid- September.

Item 5 General Business

PV outlined the action items from the meeting which are detailed below by date:

Now	NGIA to send greenlife database back to DTER
Early-Sep	NGIA to liaise with AILA for stakeholder database.
Early Sep	AB to identify and contact data tool users who were also contributors regarding participation in data case studies. AB to advise KK by mid- September.
Mon 17 Sep	DTER to draft greenlife and validation surveys and circulate to the PRG by mid-September for feedback.
Mon 17 Sep	DTER to review and update the confidentiality agreement, survey introduction and emails for both collections and circulate to the PRG by mid-September for feedback.
Mon 17 Sep	DTER to review and update definitions with the survey drafts.

Mon 17 Sep	ACC to circulate in-depth finding on the data tool to the PRG by mid-September.
Prior to next meeting	NGIA to circulate draft PL, M&E and Risk Management and Stakeholder Engagement and Communication Plans early October for feedback from the PRG.
Prior to next meeting	KK to liaise with levy representatives of the PRG to conduct and nursery site meeting for the project.
Due course	AB to liaise with ABS/ABARES for meeting with NGIA and Hort Innovation

Item 6 Next meeting

The group noted the timing for the next meeting to be early/mid October (Milestone due 31 October 2018).

Meeting close: 2.00pm

MINUTES

NY17008 Nursery Industry Statistics Project Reference Group Meeting

Date:	Thursday 18 October 2018
Location:	Boardroom, Boomaroo Nurseries, 105 St Andrews Dr, Lara VIC 3212
Invitees:	Emily White (Boomaroo), Hamish Mitchell (Speciality Trees) Daniel Watson (DTER), Jan Paul Van Moort (AAC), Rebecca Moriarty (AAC), Peter Vaughan (NGIA), Kobie Keenan (NGIA), Louis Williams (Hort Innovation),
Apologies	David Jakobs (Oasis), Pam Watson (DTER), Adam Briggs (Hort Innovation)

Welcome and objectives: Peter Vaughan

PV opened the meeting by providing thanks on behalf of the PRG for the tour of the Boomaroo facility and to Boomaroo staff, Ian Dwyer, Emily White, Josh Kyne and Koen Eidhof for their insights, information and hospitality. PV also acknowledged Eric Jacometti for his presentation on the new site in QLD and for his views on the industry generally and in relation to industry data.

PV provided apologies for David Jakobs, Pam Watson and Adam Briggs and advised the group that HM would arrive to the meeting imminently.

Item 1 Governance - Conflicts of interest arising

No conflicts of interest were raised.

PV also sought other agenda items. No other items were posed.

Item 2 Minutes

The action items from the Minutes of the PRG meeting from 27 August were reviewed noting all items were completed or were in progress. No comments were received regarding the minutes so they were taken as accepted by the group. Specific comments on the action items from 27 August meeting were:

NGIA to send greenlife database back to DTER	COMPLETED
NGIA to liaise with AILA for stakeholder database.	PV advised that ALIA interested in supporting. KK advised the group that NSW, VIC and QLD Landscape Associations have agreed to provide member databases to DTER with QLD and VIC already having done so and NSW to provide it to DTER by 25 October.
AB to identify and contact data tool users who were also contributors regarding participation in data case studies. AB to advise KK by mid-September.	COMPLETED Case studies with Josh Vanderuit of Tall Trees and Peter Jong of Jongs Nursery underway.
DTER to draft greenlife and validation surveys and circulate to the PRG by mid-September for feedback.	COMPLETED. Greenlife survey has been finalised and Purchaser survey for discussion in this meeting.
DTER to review and update the confidentiality agreement, survey introduction and emails for both collections and circulate to the PRG by mid-September for feedback.	COMPLETED.
DTER to review and update definitions with the	COMPLETED

survey drafts.	
AAC to circulate in-depth finding on the data tool to the PRG by mid-September.	COMPLETED Report for review in this meeting.
NGIA to circulate draft PL, M&E and Risk Management and Stakeholder Engagement and Communication Plans early October for feedback from the PRG.	COMPLETED Provided for review in this meeting.
KK to liaise with levy representatives of the PRG to conduct and nursery site meeting for the project.	COMPLETED – Boomaroo Nursery visit for this current meeting.
AB to liaise with ABS/ABARES for meeting with NGIA and Hort Innovation	Via LW, he advised that AB has liaised with ABARES and have a proposed meeting date for 12 November with Charlie Xia. They are interested in including a nursery piece in the Ag Commodities Report.

Item 3 NY17008 project overview

Project Activities and Outputs (A2) (NGIA)

Provided for information only, KK advised that in accordance with the timeline all actions were either completed or in progress. It was noted the incorrect spreadsheet had been sent as it had exclude the 'status' of actions.

ACTION: KK to send updated spreadsheet with the minutes

Hamish Mitchell joined the meeting.

Brief review of Data Tool User feedback (A3) (AAC)

RM provided the group with an overview of the feedback provided on the data tool. In general the comments included:

- Love the data and want more
- Wanting additional breakdowns and greater granularity captured in the questionnaire
- Comments around the tool and how it is visually presented
- Wanting greater promotion of the tool to encourage greater participation and amplify the message.
- Users were mostly realistic about what can be captured but want to get the most out of the outputs.
- Access to the full research report should be more easily available. As discussion followed on the opportunities for promotion where the group recognised the influence that State Associations have with members who are data users and key influencers. Other opportunities included:
 - Customers requesting their suppliers be involved to achieve pull through on participation
 - John Vatikiotis at Hort Innovation for including of the survey in HortLink (promotion across all of industry)
- Dashboard – some people need further explanation of the definitions and that AAC will consider the layout and ensure the glossary is understandable. One suggestion was to turn the Dashboard image into graphics for promotion.

Brief overview of collection methodology (DTER)

DW provided an overview of the status of the collection plan. He advised the following:

- survey is going into field on 29 October.

- greenlife producer survey and validation purchaser survey will be running concurrently. He noted this should lead to efficiencies in surveying.
- The team will be briefed to make first contact and then provide a couple of days to prepare, rather calling back immediately.
- A self-completion version of the surveys will be compiled and sent which can be emailed or posted back to DTER. This form will contain features that means businesses who have self-completed the survey will not be contacted by the callers again.
- Greenlife questionnaire is essentially complete.
- The validation/purchasers survey needs to be finalised with regards to supply chain and any additional questions of value.

KK advised that Landscape VIC had provided supply chain advice as:

- Residential – landscape installed with a new build
- Residential – landscape installed as part of an existing space/renovation
- Commercial – public spaces (playgrounds, parks, etc)
- Commercial – civil works/earthworks
- Commercial – wetlands/reclamation
- Council works - streetscapes
- Residential - Maintenance & soft landscaping
- Commercial - Maintenance & soft landscaping

Further they had indicated they would be interested in:

- Value of soft v's hardscape vs. maintenance annually - %age splits
- Annual turnover of the business
- Number of horticultural / landscaping qualifications in the business?
- Number of business qualifications in the business?

DW acknowledged AB's comments around asking turnover and advised the group those questions were needed as they indicate business size and assist in analysis of the information. LW noted AB indicated he would be guided by the PRG on that point.

Following AB's feedback in the questionnaire, LW asked for more information around the draft Q15 about how greenlife could be reconciled in the turnover stated for businesses. The group noted that this question was to indicate business size and assist in analysis and wouldn't inform the greenlife buy in specifically. They also noted however that the questions about purchases from wholesale greenlife suppliers would provide the necessary validation point.

The group discussed the language used within. Members of the PRG felt that using more professional language would assist in changing how the industry positions itself and how it is perceived by those working in or with it. The example given was the changing a reference of 'labouring' to 'nursery production'. HM noted that a benefit of asking the questions is having the businesses think about those questions.

KK raised the need to maximise the opportunities within levy projects to support other levy projects. She noted the data project was a good example of having opportunity to benefit other projects.

General discussion followed about other opportunities for information including demand, crossing results with census data eg dwelling type, assessing trends, attitudinal information etc.

Again, the PRG considered the small sample sizes of the purchaser survey and the need to be cautious of 'wanting' to collect more and more detail. They were reminded to keep the objective of validation in mind.

There was a discussion about the inclusion of 'lathhouse' in the survey.

AGREED: Maintain 'lathhouse' in the survey definitions

ACTION: Revised validation/purchaser survey to be circulated for final comment.

Item 4 Project Administration & Industry Engagement

Program Logic and M&E plan & Risk Management Plan

KK referred to the draft plans and sought feedback from the group.

DW requested one change in the M & E on page 4 under Audience for Year 2 Stage 2 and Year 3 Stage 2, to remove 'and supply chain'.

ACTION: KK to amend M&E Plan as per requested change.

No other feedback was provided by the group in relation to the two documents.

PV asked for LW to revert to Hort Innovation, on how the information in the plans is utilised by Hort Innovation. He expressed concern over duplication of tasks as much of the detail from the plans was already provided in the proposal/contract. LW noted the comments and explained that the idea is to assist in assessing the value of a project at its conclusion.

AGREED: The group accepted the plans, with amendments' as guiding documents for the project.

POSTSCRIPT: LW provided the plans internally to Alison Anderson at Hort Innovation for feedback.

EW noted that these documents are a useful tool for industry to embrace in the careers and skills gap projects. LW noted the comment to provide feedback to Hort Innovation.

Stakeholder Engagement and Communications Plan

The group acknowledged the plan as drafted and KK provided an outline of the activities. It was suggested that information could be shared also at Tree & Shrub Growers Meetings, State Board Meetings, in State Weekly emails and communications to NextGen groups.

Item 5 General Business

KK raised the links to Australian Horticulture Statistics Handbook (HortStats) noting that Fresh Logic had sought input from NGIA regarding an increase to the 16/17 reported figure of 1% based on population growth. The group discussed the comparisons briefly noting a need to be conservative given this is only the second year of the data collection.

The group agreed that it was unfortunate the timelines for the project and HortStats did not align.

LW offered to liaise directly with FreshLogic regarding the figure and noted that if HortStats is delayed for any reason, then NY17008 figures could be included.

ACTION: LW to discuss increases with FreshLogic directly

POSTSCRIPT: Following the meeting LW liaised with Fresh Logic. See transcript below.

... I've spoken to Martin Kneebone regarding the GVP adjustment for this year's Hort Stats handbook. We both agree that the adjustment should be made based on inflation for the following reasons:

- *The GVP (estimate) would not decline in real terms, ie when taking inflation into account the GVP will remain steady*
- *The figure will rise by ~2% which is neither too small (1% population growth) or too big/risky (3% economic growth)*
- *The adjustment follows the same process that ABARES takes (multiplying actuals by CPI to arrive at estimates)*
- *The process is repeatable*

*We both suggest using CPI excluding volatile items (commonly referred to as underlying inflation) – which for the period in question is **1.8%**.*

...I confirmed that with Martin, if there is a delay with the handbook we will incorporate the NY17008 figures if possible.

Item 6 Next meeting

The next meeting will be in early February, in order to provide a review of the results. The milestone for that period is due 28 February 2019. This will be a remote meeting.

Meeting close: 2.30pm

MINUTES

NY17008 Nursery Industry Statistics Project Reference Group (PRG) Meeting

Date:	Tuesday 19 February 2019 1pm-2.30pm
Location:	GOTO Meeting
Invitees:	Hamish Mitchell (Speciality Trees) Daniel Watson (DTER), Jan Paul Van Moort (AAC), Rebecca Moriarty (AAC), Peter Vaughan (NGIA), Kobie Keenan (NGIA), Adam Briggs (Hort Innovation)
Apologies	Emily White (Boomaroo), David Jakobs (Oasis), Louis Williams (Hort Innovation), Pam Watson (DTER),

Welcome and objectives: Peter Vaughan

PV welcomed the group to the third meeting of the PRG and thanked DW for providing the reports for review.

Item 1 Governance –

Conflicts of interest arising

No conflicts of interest were raised.

Additional Agenda items

PV also sought other agenda items. No other items were posed.

Item 2 Minutes

The action items from the Minutes of the PRG meeting of 18 October 2019 were reviewed noting all items were completed or were in progress. PV noted some typographic errors for amendment.

ACTION: Minutes to be provided to KK for amendment.

PV followed up with AB regarding ABARES interest in the data project. AB advised ABARES had originally expressed interest in using the data but their interest has eased. He noted Hort Innovation had provided them with additional data cuts and that they maintained a relationship with ABARES and were available if they needed any further information.

PV also noted that splits between ABS data and the data project were different, asking the PRG to be conscious of this point.

An outline of the action items from the meeting of 18 October are detailed below.

KK to send updated activities spreadsheet with the minutes	COMPLETED
Revised validation/purchaser survey to be circulated for final comment.	COMPLETED
KK to amend M&E Plan as per requested change.	COMPLETED
LW to discuss increases with FreshLogic.	COMPLETED – see postscript in the minutes 18/10.

Item 3 NY17008 project overview

DTER feedback on collection period

DW provided some comments on the overall results of the collection and survey period detailed below:

Results

- The second survey results are often anticipated for the validation of the first.
- The survey has found great consistency especially in the overall findings.
- In many of the categories there is comparable data between the 15/16 and 17/18 data.

- Attitudinal measures are also comparable to 15/16 and sit with the overall result.
- A couple of findings that need discussing are around
 - Bounces in the landscape/government category.
 - Impacted by the smaller samples and sampling errors.

Survey period

- It appears that giving the complete questionnaire prior to survey is more likely to achieve greater accuracy and participation.
- Setting appointments remained a challenge as is growers keeping the appointments.
- DW noted: DTER's previous recommendations to consider online surveys has been revised on the basis that email responses had a higher rate of missing data vs the phone interviews which have the ability to clarify information.
- Regarding the retail and landscape responses, he noted initially they were more challenging but over the course of the collection period, the numbers indicate they were no more difficult than greenlife.

Market Metrics

Sadly one of the three owners of Market Metrics passed away over the weekend.

ACTION: DW to keep the PRG informed of any likely impacts on Market Metrics operations (if any) as he becomes aware of them.

Review and discussion of Greenlife Collection

DW raised specific questions that required clarification in relation to the draft report, being:

- Query on how to report the data captured from production businesses that is also retail, asking if there is a risk that we are double counting.
Comments from the group were that the number of businesses operating in this way would be minimal and not significant to the data. Further that the larger businesses which operate both production and retail business have different business entities resulting in the distinction of data
- Query on employment statistics noting the significant difference between 2017 and 2018. He further noted the 17/18 questionnaire encourage accuracy and so the difference may be a result of more 'accurate' data
Comments from the group included possibilities for the difference such as the variance in the types of businesses sampled (noting larger businesses have greater staff efficiencies) and/or the decrease in total number of production businesses.
JP and AB both noted that there were no overwhelming thoughts as to why the employment may be down and that the point needed to be noted for the next survey when trend data can be considered further. .
- Query on the differences YoY for the categories greenlife is sold into while noting that the smaller sample sizes and bounce are brought about by the different sample surveyed.
Again the group felt the point needed to be noted for the next survey when trend data can be considered further. The group also felt that improving the contact database would assist suggesting it could be done via relationships with the respective associations for production horticulture (citrus, avocados, macadamia).

The group then provided comments on the report.

RM sought clarification on the Landscape figures noting a missing figure

ACTION: DW to amend the figure.

AB noted the differences for the Primary Industry figures. DW noted the fluctuation in the data and suggested it was again due to the different group sampled.

A brief discussion followed on attempts to get a price point for different plant categories. The group acknowledged the diversity of the industry and that an accurate price point is very difficult to pin point given the pot sizes and species. RM noted that more detail will support the development of the data tool. JP referred to the in depth interviews for the tool noting that users wanted everything broken down finer with categories that allowed like for like businesses comparison. He noted the group needed to ensure the tool is more and more useful, without surveying everyone.

AGREED: The group did agree that the national level data remains accurate.

The group discussed the sensitivities around including the chapters of 'profitability' and 'operating costs' in the report also noting the discussion in the meeting of 27 August to leverage the detail of the report. It was noted that Hort Innovation had a number of measures in place to control the access to the information and RM noted that many of those figures would enhance the data tool.

The group discussed a process which would support the needs of all parties as follows:

- AGREED: A **public version** of the greenlife report would be made available to download from Hort Innovation website following release of data tool and associated communications for those interested in 'the detail'.
- AGREED: A **confidential version** of the greenlife report will be submitted via the MS103 milestone report (that retains chapter 7.5 and 9)
- ACTION: PRG to provide marked up version of the greenlife report to DW by Friday 22 Feb.
- ACTION: DW to prepare two versions of the greenlife report being a public and confidential version.

Review and discussion of Supply Chain Validation Data Collection

The group referred to the report on the supply chain noting it had achieved its purpose of validating the greenlife collection. A number of the comparisons were briefly discussed.

It was noted that the validation report was to be provided to the associations that supported the survey. The group briefly discussed how the information was to be used by them noting it was likely they would produce their own communications for their members. The PRG then agreed on a process for report access and communications.

- AGREED: Purchaser validation report will be shared with associations that supported the collection.
The report not intended for dissemination directly to their members
If the information is used for developing a release or communications piece, those communications should be reviewed by NGIA/Hort prior to release.
This should occur after greenlife results and data tool are communicated to industry.

Final collection Reports

KK advised the PRG the final data reports were required for the milestone due 28 February 2019.

- ACTION: DW to provide final reports for inclusion in the milestone by Tuesday 26 February.

Extension – Engagement activities

KK briefly ran through the tracking sheet for engagement activities noting the remaining activities would be rolled out between now and June 2019.

Item 4 Data Tool

Development Plan, Testing, Distribution - Timeline

RM commented on the excellent set of data received from DTER and noted she continues to review the information and was considering new ideas around the presentation of the tool

Referring to the feedback on the data tool, she sought input from the group on splitting the data in the >\$2M category by turnover splits \$2M-4M, \$4M-6M and >\$6M.

The PRG considered the point that additional splits would provide more value to data tool users but that it comes at the risk of diluting the data. DW noted DTER's preferred sample sits above 30. The group reviewed the sample sizes within those breakdowns of 29, 15 and 13 respectively and determined that two splits would be ok.

- AGREED: The data tool will split the turnover breakdowns further to include \$2M-\$4M and >\$4M as well as \$0-\$0.5M and \$0.5M-\$2M.

JP noted that AAC will continue to work though the data to see how fine it can be taken and are also looking to work on the clarity and presentation of the information. They are looking to maintain the purpose and feel and to strengthen the user guides and make it more user friendly.

He explained the next step is to develop a prototype for feedback and he sought information from the group of who will test the tool.

- ACTION: AAC will test the tool using previous tool users, case study participants Peter Jong and Joel van der Ruit as well as grower members of the PRG.

Timing of the data tool development to release was discussed as follows:

AGREED:	Draft tool for PRG review	late Feb/early March
	Data tool testing by growers	March
	Tool release (and report)	late March/Early April
	Webinar preparation	April
	Webinar delivery	April/May

Item 5 General Business

Milestone Draft Report (due 28 February 2019)

The group acknowledged the milestone due date of 28 February 2019.

They also noted that Year 2 collection planning would commence July 2019 for roll out early October 2019. The early October commencement would hopefully facilitate better response rate.

AGREED: Aim for survey commencement in Year 2 to be 15 October 2019.

Item 6 Next meeting

The next meeting is planned for early August noting the Milestone report date of 31 August 2019.

Meeting close: 2.40pm

POSTSCRIPT

Year 2 Data and Industry National Conference

Following the meeting PV and KK discussed the 2020 National Conference dates of 3-5 March 2020 in Perth. It was felt that if the Year 2 results and data tool could be ready for the conference; this would be an ideal opportunity for extension. It could be made possible if the collection is brought forward as proposed for early October.

Next face to face

KK and PV also considered whether it would be more valuable to have the next Face to Face meeting to review the results of Year 2 and commence planning of Year 3, rather than for survey development. It is prepared to have the August meeting by teleconference and the February meeting in 2020 Face to Face.

Appendix T

Minutes of Project Team and PRG
Meetings (2019/2020)

MINUTES

NY17008 Nursery Industry Statistics Project Reference Group Meeting

Date:	Thursday 15 August 2019, 10am-12.30pm
Location:	GOTO Meeting
Attendees:	Hamish Mitchell (Speciality Trees), David Jakobs (Oasis), Nick Jacometti (Boomaroo), Josh Kyne (Boomaroo) , Daniel Watson (DTER), Jan Paul Van Moort (AAC), Rebecca Moriarty (AAC), Peter Vaughan (Greenlife Industry Australia), Kobie Keenan (Greenlife Industry Australia), Adam Briggs (Hort Innovation)

Welcome and objectives

PV welcomed to the group and acknowledged Nick Jacometti's first meeting which follows the departure of Emily White. Nick provided the group an overview of his background and advised that Josh Kyne was also present in the meeting.

Item 1 Governance

Greenlife Industry Australia Update

PV provided the group with an update on the decision of Members to establish a new national organisation, Greenlife Industry Australia. He advised there are a number of transitional activities underway including discussions with Hort Innovation on the transition of projects. He noted that projects concluding in the current financial year will remain under NGIA and those with additional years remaining such as NY17008, will be transferred over in due course.

Conflicts of interest arising

No conflicts of interest were declared.

Item 2 Minutes

Minutes of 19 February 2019

PV sought clarification from DW on Market Metrics position following the sad passing of one of their directors. DW confirmed that Market Metrics was continuing as usual under two directors. He had seen no impact to the business and advised that the NY17008 collection had been tentatively scheduled with them.

DJ sought clarification on Item 4 regarding turnover splits and the reason there wasn't a split of a higher turnover. RM advised that the inclusion of the 2-4m and >4m splits were welcomed by users but noted that splits higher than \$4m were not possible because of sample sizes. It was confirmed that only 27 contributing businesses were greater than >\$4m. The group agreed that as a result the tool becomes less meaningful for the larger businesses.

A short discussion followed acknowledging the need to improve 'usefulness' to all businesses. The group agreed that greater insights need to be drawn from the data collection that weren't reliant upon capturing more participants.

It was also noted that one of the tool's objectives was to contribute to improving the professionalism of the industry. KK touched on the need to incorporate messages and information into the engagement plan to support tool adoption.

The group reviewed the action items and accepted the minutes of 19 February 2019.

Item 3 NY17008 project overview

The group reviewed the outputs schedule for the project with no further questions.

Item 4 In-depth Interviews

RM provided an overview of the feedback report from ACIL Allen which focused on data priorities for 19/20 and feedback on the data tool.

The key items were:

- Finer segmentation is always sought. Recognising the limitations of the survey such as the number of questions and desire for survey consistency, RM again noted that greater insights needed to be drawn from the collection that weren't reliant upon capturing more participants.
- More interest in capturing costs (such as waste) for better KPI's
- External agencies such as ABS are happy with the collection and following it.
- In some instances, people expressed concern about the verification of the data. RM clarified saying that this concern is predominately in the mirco-businesses and the very large businesses.
- Clearer definitions. There is a need to improve the literacy around market understandings.

A discussion followed regarding other areas of literacy with some feedback providers wanting to predict growth when the tool was not a 'forecasting tool'. Further, while recognising finer segmentation is important, it is also important to educate industry on how to maximise their ability to interrogate the tool.

- Some desire to see geographic detail.
- Gender ratios

RM also referred to the report capturing some characteristics of feedback providers.

PV sought information from AB regarding the details of benchmarking tool among other industries. AB advised that NY17008 is a unique project for its output. He indicated some benchmarking projects incorporated more business financial information, while in other research projects contributors simply received an overview report. He confirmed he would advise the group if he becomes aware of any opportunities which could be incorporated into the tool.

It was noted that the benchmarking tool, as an output, was designed initially to drive participation in the collection which over the last two years has become a useful tool for industry.

The group also recognised that the industry is significantly diverse and as such capturing our value has unique challenges. It was agreed that the project is tracking well in achieving its outputs and participation from industry.

Item 5 18/19 Collection Plan

DW provided a short overview of the survey noting its longitudinal nature and that anecdotally, the main reason for non-participation was the complexity of the survey.

He provided an overview of the methodology which remains unchanged from 2017/2018 noting adjustments:

- Changes to year collection
- Some definitions and wording in the survey
- A slightly longer survey period to 7 weeks
- That market metrics, their third year of this collection, collect notes which Dan receives to help inform the survey accuracy.

- They will make the email questionnaire more inviting and clarify some of the information further.

Dan sought feedback from the group on any questions or data outputs that weren't being used and therefore could be dropped.

PV sought comments from the group on survey adjustments:

- Suggestion to split or define 'primary industry' further. Whether it be done now or a couple of years.
- Introducing an excel template to send it in place of the advancing questionnaire. DW advised that data entry is relatively straight forward however, the challenge was developing a spreadsheet small enough or simple enough to enable completion.
- It was noted approximately one quarter of businesses in the 17/18 collection also contributed under NY16004. A discussion followed on the concept of sampling rather than building the participant numbers. DW advised that the collection team call every business in the course of sampling process and as such they all have the opportunity to participate.
- Understanding the need to 'swap' questions out rather than adding additional questions. It was noted that the survey is at capacity but possible inclusions for consideration are:
 - Gender ratios. Data from the WGEA report was suggested as a possibility.
 - Collection of waste.
- Suggestion to forewarn industry of collection updates through communications in the previous year. Some questions (such as waste) could be including in Year 3 and communicated to prepare industry for the capture of the information in advance.
- Maximising the opportunities through both the surveying and in-depth interviews to understand adoption of the information and the tool.

HM expressed concern that the tool and the project is not judged too quickly noting that it will take 5-10 years for professionalism in businesses to improve to a level of data literacy before the tool could be valued. While there was general agreement on this point it was also agreed that the measurement and evaluation plan for the project could be incorporated into the in-depth interviews in advance of the 3rd collection (2020) to capture an understanding of the adoption of the tool and information.

AGREED: M&E questions to be considered within the in-depth interview process.

AGREED: Consider survey adjustment in Year 3 to capture a measurement of adoption.

AGREED: Engagement activities to prioritise tool adoption.

The group reviewed the proposed survey timeline noting:

- the collection period was scheduled for 8 October to 22 November.
- the date for circulation of the second survey draft to the PRG was set at 13 September.
- mid-January was the expected timing for the draft results report to the PRG
- the milestone with results is due 29 February.

AB advised that the cut off for the Hort Stat Handbook was October this year with a view to publishing in December. AB confirmed that the 17/18 information would be included in the handbook and they had process for this.

ACTION: PRG to review the draft questionnaire and provide feedback to DTER by 30 August 2019. Included in the feedback should be any questions viewed as potentially not required and any additions for consideration.

Item 6 Project Administration

18/19 Communications & Engagement Plan

KK provided a brief overview of the engagement for 17/18 noting it exceeded the initial plan.

With regards to the infographic which was circulated with the meeting agenda she advised it had not been utilised as yet due to the larger more detailed document 'Facts at a Glance' having been circulated and promoted. KK advised that the Nursery SIAP had requested Facts at a Glance be circulated again. The infographic will be used in the course of promoting the next round of surveying and perhaps in the invitation letter from DTER.

Another addition to the 17/18 engagement plan was the delivery of a podcast interview with JpVM.

ACTION: KK to circulate the podcast.

Reviewing the draft plan for 18/19 it was noted that the additions included

- Facts at a glance
- Podcast
- Conference

The group discussed some opportunities for engagement (activities and messages) which could be incorporated into the 18/19 plan.

- Conference booth – 1 on 1 appointments with RM how to use the tool for your business and to commence planning for this in advance of February.
- Demonstrate improvements in the data being collected now.
- Obtain statements of support for ABS, ABARES or other agencies on the collection
- Highlight more opportunities for business from within the tool.

Review of Program Logic, M&E Plan, Risk Management Plan

KK advised and AB confirmed the program logic, M&E plan and Risk Management Plan had been drafted or relevance across the life of the project. AB again emphasised the need to refer to the M&E plan now to collect the evidence for it thought the project activities.

ACTION: KK to revise the dates on the plans to reflect the balance of the project.

Item 7 General Business

DW referred the group to the additional considerations provided with the draft survey and sought input when providing the survey feedback to him by 30 August.

KK advised the next milestone for the project is due 31 August.

Item Next meeting

The next meeting will be a face to face with the intent of reviewing the interim results of the 18/19 collection and providing feedback to DTER and AAC. It will be held in early February noting the milestone is due 29 February 2020.

Meeting close: 12.00pm

POSTSCRIPT: The WGEA survey information was considered. This link attached details agriculture. While there is an opportunity to capture nursery and floriculture – this link is not connected. <https://data.wgea.gov.au/industries/283>

Minutes

NY17008 Nursery Industry Statistics Project Reference Group Meeting

Date:	Tuesday 5 February 2020 10am – 2.00pm
Location:	ACIL Allen Consulting Level 9 (Note office relocation to Level 9) 50 Pitt Street, Sydney
Invitees:	Hamish Mitchell (Speciality Trees), Josh Kyne (Boomaroo Nurseries), Daniel Watson (DTER), Jan Paul Van Moort (AAC), Rebecca Moriarty (AAC), Peter Vaughan (GIA), Kobie Keenan (GIA), Brendan O’Keefe (Hort Innovation)
Apologies	Nick Jacometti, David Jakobs

Welcome and objectives

PV welcomed the group and thanked ACIL Allen for hosting the meeting at their new premises. He noted the apologies for Nick Jacometti acknowledging Josh Kyne in his place; and David Jakobs. JK provided an overview of his role at Boomaroo. PV acknowledge the difficult times experienced by the industry recently including fire, flood, extreme temperatures and some areas experiencing drought and that it will be interesting to see whether they will have affected the data in the next collection.

Item 1 Governance

No conflicts were declared.

Item 2 Minutes & Planned Activities

Acceptance of Minutes from 15 August 2019 (A1),

The minutes of 15 August 2019 were reviewed. PV referred to the minutes noting Adam Brigg’s (Hort Innovation) suggestion to consider benchmarking tools from other industries. BO mentioned the macadamia benchmarking tool which has been in operation for around 10 years and, the recently launched vegetable tool. JpVM also referred to the egg industry ‘self-assessment tool’

ACTION: BO to provide examples of the other tools to the steering committee.

The group also noted that the next round of in-depth interviews on the benchmarking tool should link to the questions in the measurement and evaluation plan for the project.

ACTION: RM to incorporate the M&E questions into the in-depth interviews.

The group accepted the minutes of 15 August 2019.

Year 2 Activities update

The group reviewed the activities for Year 2 of the project noting they were on track, concluding with the milestone due 28 February 2020.

Year 3 Activities progress

The group considered the activities for Year 3 noting they were underway with the commencement of the tool development.

There was question about whether the collection needed to complete another validation survey of either the same or a different greenlife customer group. This was discussed further under general business.

When considering the survey period, DW suggested that based on the survey numbers achieved in 18/19 survey they would aim for a similar timeframe in October-November 2020.

The group noted NY17008 is scheduled to conclude in February 2021. They also acknowledged that the roll out of each year's collection activities are not completed until approximately April and so the idea of a potential extension of the project to April 2021 for review. The group indicated that a variation to the project would be needed if it was to be extended to April 2021.

Item 3 NY17008 project overview

DW provided a page by page overview of the collection draft report for 18/19.

- **Background and methodology**

The background and methodology remained predominately the same as for NY16004 and Year 1 NY17008. The differences included:

- A comprehensive communications/awareness campaign
- DTER have retained similar interviewers on the project with Market Metrics
- Interviewers with challenges in collecting, were removed from the survey team
- 18/19 included an updated email questionnaire to assist participants prepare for the survey or respond online.

DW noted that project management time had increased noting that the survey is challenging, and interviewers don't enjoy the collection process. He also noted that it is the hardest survey they conduct.

DW advised that for the first time the project achieved 305 completed surveys. This was made up of 249 telephone surveys and 56 completed email forms. DW advised that 690 expressed interest (up from 560). The group congratulated Dan, DTER and Market Metrics on achieving the great result of 300 surveys.

The group again questioned why it's difficult to get the information from the businesses noting at the same time we are aware that they don't capture it or if they do, don't compile it the way the survey asks. HM reiterated a benefit of the survey is that it encourages businesses to become familiar with the data.

- **Demographics & Organisation size**

Demographics and business size across the industry sample remained similar even with 50% of respondents having not previously completed the survey in 2018.

DW noted that Market Metrics are making contact up to 9 times to get a completed survey. The group discussed how this could be improved suggesting a different message in communications to make the conversion rate better.

- **Production Area**

There was no significant change in area of production however estimated turnover per hectare was trending up. The group discussed how this information is being used, for example looking at water use per hectare. For example, is there an approach to justify the water use per hectare against productivity to ensure water use is not restricted in production nurseries.

- **Industry workforce**

DW noted that overall, the figure was steady but there was significant fluctuation across surveys between full time/part time/casual. The group considered why this would be and JK gave the

example of 10 people running their QLD operation verses 100 people running the VIC operation following investment in automation.

The group suggested conducting qualitative research of auto/tech companies for industry including Powerplants and Transplant Systems noting this conversation would help validate the idea that automation is the reason for the fluctuation.

DW advised that the gender ratios reflected the WGEA information with 44% of industry being females and that this was higher than other agricultural industries.

8 in 10 businesses have qualified Horticulturalists however over all the figure of qualified people is low at 17%. JP noted this was an opportunity to discuss the research with businesses. HM and KK also noted whether the survey should ask about non-horticultural qualifications and to seek more information about them such as the type of qualification – diploma, cert, higher ed, trade apprenticeship.

Wages paid by industry businesses are more than 1billion per year all with a similar average way to the last few years. DW noted that anecdotally, variation could be due to owners taking wages or not, based on profitability of business.

The group also noted that over time, we may see a move in costs from wages to capital as businesses automate.

- Sales and supply

Overall, the information extrapolated to similar values as previous years with 18/19 being slightly higher than last financial year. Importantly DW noted that there were 30 participants within each segment giving the data a confidence level of 95%+/-

The group reiterated the requests from tool users for greater granularity. They also noted the difficulties faced by the collection in that we don't have a standard product. JPvM again suggested that it's how we position the information to users of the data - Are the splits usable (yes) and if we use them, do they give us usable trends?

The group discussed the drop in propagation and felt it could be attributed to several reasons including growers bring the role inhouse and doing their own propagation; also, that there were different contributors in the sample. The group did not consider the drop was related to an environmental reason. JPvM noted there are plausible reasons as to why data is changing and suggested it was another opportunity to speak to growers. For example, 'here are the reasons we think it is changing, do they apply to you? What opportunities are there for your businesses, could you consider 'vertical integration'?

The group discussed previous feedback on the size of the Perennials/Trees/Shrubs category and considered whether it should be split. If so, they all considered whether the category should be split by pot size or species, noting that the existing categories are by product type.

AGREED: There is merit in splitting the Perennials, Trees/ Shrubs category.

ACTION: ACIL Allen to survey the potential breakdowns during the Greenlife Industry Australia conference (March 2020) and during in-depth interviews for the next collection.

- Sales to big box

DW suggested the results relating to big box will be interesting to track over time noting a decrease in overall sales to independents.

The group briefly noted that some global impacts (coronavirus) could benefit retailers particularly with noting a couple of campaigns to 'holiday here this year' and "holiday at home". It is generally considered a positive thing with consumers choosing to spend money on their homes rather than holidaying.

- Other comments included:
 - Number of plants for immediate resale is trending downwards and this figure is influenced largely by the bigger businesses in the survey.
 - Operating costs continue to be harder for respondents to provide but the information is consistent with other years.
 - 'Businesses investing' has an upward trend overall however there is a downwards trend in the medium business category.
 - Interestingly, 81% of businesses made a profit in 18/19 which had a correlation to 78% of businesses employing a qualified horticulturalist.
 - Confidence is widespread – increase proportion of respondents
 - Of 132 people in survey who have received the tool, usage was up overall to 34% from 20% nationally. Also, that while not statistically significant, the figures show that small and medium businesses use the tool the most. The group noted the tool is useful for people who like the detail and that it continued to be important to give examples of how the data can be used to make better business decisions.

The group congratulated DW and the DTER Team for achieving over 300 responses and agreed that the data made sense with no obvious outlying figures or concerns. A request was made to emphasise further in the report that 18/19 was the third collection of data on the industry.

KK asked whether in the 18/19 collection, was able to be considered at the highest level, for industry size noting State Associations would like to know the size of their industry. DW advised that State levels had not been considered but he would look at the data to see the options, if any.

ACTION: DW to review the data to assess whether size of the industry by State can be obtained.

AGREED: The group accepted the 18/19 draft report for the nursery research and statistics project.

ACTION: DW to amend summary to emphasise the collection was their third capture of data on industry and to forward two final reports (public and non-publishable) to NGIA/GIA for the milestone report.

Item 4 Data Tool - Development Plan, Testing (February), Distribution (March)

The group discussed the development of the data tool and proposed that it is not launched for the industry conference, 3-5 March in Perth.

JPvM advised the development plan would consider tool usability and the interface and that testing would occur in the later part of February with a beta version available at the conference also. The group noted this complimented the Year 3 Activity schedule and the plan to launch the tool mid to late March.

The group discussed the benefits and importance of the tool and different ways to communicate its value to industry businesses. They noted that YoY the information within the tool doesn't changes substantially and so the focus for adoption (and communications) should be on attracting new users (rather than returning users). JPvM also recommended that the data higher level insights also be used in a

demonstration of the benefits of the collection and translating that information into what it means for business

The group sought information from Hort Innovation on benchmarking tools of other industries. BO provided some input in relation Vegetable (WA only with E30 users), Macadamia (E100 users), Turf with 95/183 surveyed (a decrease in previous years). The group did acknowledge the primary difference between nursery and other industries is the diversity in product which has an impact on the benchmarking tool development. It is very difficult to define a standard production for the nursery industry.

It was noted that Year 3 of the project included the development of two tools. This was originally based on the length of the contract with Hort Innovation which is scheduled to conclude in February 2021. The group felt there maybe a need to vary the project end date and Final Report to May 2021 given the operating timelines the data collection and the need to report on all outputs/outcomes of the project.

AGREED: GIA to submit a project variation Hort Innovation to extend to May 2021 to ensure all outputs/outcomes are captured in the final report.

Item 5 Extension/Communications Update (A5)

The group reviewed the status update of communications activities for the project noting the timeline of activities was on track and that additional activities (over the planned strategy) had been undertaken.

KK advised that social media would continue as planned with the release of the data tool. Further, she advised that the levy communications project was hoping to do a second (additional) case study profiling a business which has used the tool and actioned a finding with benefit.

The media release is scheduled for release in March (hopefully during the conference) and the Nursery Paper is scheduled for release in April. The webinar extension will also occur following release of the tool in April/early May.

The group then discussed a strategy for the presentation by JPvM and DW at the industry conference noting it should include: the credibility of the collection process to highlight confidentiality within confidence in the data; industry insights covering demand opportunities, participation drivers and profiling the data features of the industry; and comparing facts with other available data sets and industry information.

The presentation would also provide industry examples of how the data can be/has been used including in the GIA Transition Team, PLB and GSBP in the future, Strat Plan and motivating influencers. Finally, the presentation would also encourage people to visit the exhibition stand where RM will be able to have one on one appointments to test the benchmarking tool and demonstrate how it can be interpreted for benefits to business.

ACTION: JPvM to prepare the first draft of the presentation for DW to review.

Item 6 General Business

Report accessibility. (NY16004 and Year 1 and Year 2 of NY17008)

KK asked about accessibility of each year's data report and of the validation reports. It was understood that the reports are available on request so that a record could be kept of who was using information. Further, in relation to the validation reports, that as the information was captured for validation purposes only, that it should be shared with caution.

KK also noted that the capture points and privacy issues around who has requested the tool, made it difficult to obtain feedback on the tool and to source tool users for developing communications content including for case studies, podcasts etc.

KK asked BO whether GIA can provide the tool and public data reports to levy payers if requested.

ACTION: BO to investigate opportunities for reports to be publicly available and for GIA to be able to provide the information if requested.

Milestone Draft Report (due 29 February 2020)

The group acknowledge the next milestone date.

Year 3 collection planning (July/August 2020) for roll out early October/November 2020

Noted. Discussed under Item 2

Project Transfer from NGIA to Greenlife Industry Australia.

PV confirmed to the group that NGIA contracts with Hort Innovation has been novated to Greenlife Industry Australia.

KK advised the group that publication of the 18/19 report should be done under NGIA's name as the collection was commenced under NGIA. However, 19/20 should be updated to reflect Greenlife Industry Australia.

Hort Innovation Update

BO provided a general update on Hort Innovation highlighting the Extension & Adoption Team. Of particular note, BO advised that a part time staff member was starting in QLD this month (Feb 20) and that other regions are still being recruited. BO reiterated that the E&A Team won't carry out extension and adoption activities, rather they will facilitate it. Finally, he indicated that as Nursery and Turf are the only industry considered truly national, they are likely to need to interact with the entire extension and adoption team.

Referencing the move of Hort Innovation to establish industry annual investment plans is being trialled with the Papaya industry. He noted the idea is for at one point in the year, the entire industry investment decision process is scheduled. HM emphasised the need to remember the nursery industry is very complex and that the Industry believes it to be very important to continue to hold meetings regularly. He cautioned against applying a 'single lens' over all industries given their diversity.

Horticulture Statistics Handbook

PV referred to an 'Expression of Interest' email which was forwarded in relation to the Handbook. BO advised that it was Hort Innovation's most viewed publication and as such they were seeking sponsorship to cover the costs of the document. BO advised that a few consulting firms and banks were interested in having their logos on the publication (for exposure).

A couple of members of the group questioned the ethics around seeking funding for a publication which is funded by industry levies and matched government funding. Concern was also expressed about whether sponsorship of the publication would cheapen the quality of the report. PV noted that BO could provide feedback to Hort Innovation and that he would also provide the feedback to Brad Mills, Nursery's strategic partner.

ACTION: PV to advise Hort Innovation of the concerns around sponsorship of the Horticulture Statistics Handbook.

ABS and the industry collection

KK sought clarification about discussions between Hort Innovation and ABS about the collection and the ABS's desire to access identified data. RM explained that ABS use the information to validate their information but would like a greater level of detail.

The group acknowledged the industry's ongoing concerns about providing data and the confidence that has been established in the project over the last three collections in order to achieve over 300 completed surveys for the first time this year. It also noted guarantees provided by DTER in the confidentiality statement.

DW and KK expressed concern and the group agreed that the suggestion or request for permission (to provide data to ABS) would put the project at risk.

AGREED: The next collection would not seek permission to provide data to any third party.

Validation survey of customers

PV returned to an early discussion regarding validation of a customer group noting, it wasn't contracted, but seeking further discussion on whether it was needed. DW advised that a validation survey, like the 17/18 survey would cost in the vicinity of 60-70K.

The group considered the options and prioritised a further validation of the retail and landscape sectors with a view to looking at primary production in the following year.

AGREED: GIA to seek a variation to the project to conduct a second validation of retail and landscape sectors.

ACTION: The recommendation to be included in the milestone report due 29 Feb.

Next data project

The group also discussed the future of the collection project beyond February 2021 agreeing on the continued importance and necessity of capturing industry data

ACTION: PV to raise the recommendation for additional validation surveying and future of the collection at the next SIAP meeting.

Item 6 Next meeting - Planning Year 3 (19/20) Collection

The group noted the next meeting would be in early August via GOTO with the project milestone due 31 August 2020.

Meeting close: 2.00pm

Appendix U

Minutes of Project Team and PRG Meetings (2020/2021)

Meeting Notes

NY17008 Nursery Industry Statistics

Project Team Meeting

Date:	Thursday 20 August 2020
Location:	GOTO Meeting
Attendees:	Daniel Watson (DTER), Jan Paul Van Moort (AAC), Rebecca Moriarty (AAC), Peter Vaughan (GIA), Kobie Keenan (GIA)

3pm (EST) Welcome and objectives: Peter Vaughan

Item 1 Overview of NY17008 Project Variation process

Extension of project end date to 31 May 2021

Budget variation

- COVID-19 data collection
- Incorporation of a market analysis report for growers
- Per minutes of 5 Feb – GIA to seek project variation for second validation of retail and landscape sectors

- Project Team (PT) acknowledged that the original intent of the PT Meeting was to prepare in advance of submitting the project variation to Hort Innovation.
- The variation (as provided) received input from the PT prior to submission on 11 August for inclusion the papers of the SIAP meeting on 21 August 2020.
- PT discussed:
 - Amended final project date to 31 May 2021
 - PESTLE report for adding value to the data collection from both the perspective of stakeholders and growers, by providing context in the commentary and may possibly support forecasting,
 - Option of also representing the data collected differently such as through application of values through the supply chain. PT considered the supply chain (attached) and places where data could be applied.
 - The retail and landscape supply chain survey and options for providing additional value to the landscapers and retailers through survey questions.

ACTION: Provide overview to the PRG on 25/8 to discuss reporting and benefits in more detail.

Item 2 Opportunities to amend Greenlife Collection

PT discussed

- Opportunities to capture data of landscapers and retailers including possibility of broadening the landscape survey to include other States (would be difficult in light of N=30).

COVID-19

Can be considering under a PESTLE scan and also within the survey.

ACTION: Refer the question to the PRG on 25/8

Accredited Businesses

- Inclusion of question related to Business Accreditation with the aim of understanding whether accredited businesses are more profitable than non-accredited businesses.
 - For transparency purposes, it was recommended that the survey specifically ask whether a business was accredited rather than marrying up different data
 - 167/1651 businesses are accredited could we achieve the statistically reliable data? This is difficult to say but the survey could report on sentiment.
 - Given PRG position around reporting on profit, could it be reported without compromising the businesses?
 - Concern that it could be viewed as GIA using the project to benefit internal objectives, though it was noted that the accreditation program underpins the Biosecurity project.

It was agreed that it was possible.

ACTION: Refer the question to the PRG on 25/8

Waste

- Discussion on asking a question around polypropylene (plant pots) following a lack of data to inform a closed loop recycling project for horticultural plant packaging. Questions could include volume.

It was agreed that it was possible.

ACTION: Refer the question to the PRG on 25/8

Careers

- Potentially surveying for non-horticultural qualifications (eg Business) and potentially surveying type of qualification (Cert, Dip, Apprenticeship etc)

It was agreed that it was possible.

ACTION: Refer the question to the PRG on 25/8

Other areas discussed included:

- Regarding
 - Assessment on whether automation is a reason for fluctuation in full/part/casual employment figures, DW advised further data is required.
 - Opportunity to breakdown data by State, DW advised further data is required. Also suggested including this as an area of opportunity under any future project.
 - The description of Perennials, Trees and Shrubs – anecdotal feedback suggests ornamentals, trees and shrubs.
- Broadly, the group discussed the number of questions and length of the survey in the context of respondent burden.
- Opportunity to rotate questions in alternate years.
- DW advised the group that while Market Metrics would happily complete the job (as they have quoted), they are likely to be out of pocket approximately 3-4K in 19/20 collection as a result of COVID restrictions.

ACTION: PV to raise at the SIAP Meeting on 21/8

Item 3 Planning for submission of new data project

- PV advised the group that Brendan had also placed a new project proposal into the SIAP for consideration on 21/8.
- Short discussion on some recommendations around online/email survey opportunities.
- Possibly a need to increase the allocated value in light of Market Metrics comments and assessment of PESTLE scan.

AGREED: The PT all indicated an interest to resubmit in the RFP process.

Item 4 General Business

None.

Next meeting – Project Reference Group Meeting

11.00am, 25 August 2020

AGENDA

NY17008 Nursery Industry Statistics Project Reference Group Meeting

Date:	Tuesday 25 August 2020 - 11am-1pm EST 9am-11am WST
Location:	REMOTE VIA GOTO
Invitees:	Hamish Mitchell (Speciality Trees), Josh Kyne (Boomaroo Nurseries), Daniel Watson (DTER), Jan Paul Van Moort (AAC), Rebecca Moriarty (AAC), Peter Vaughan (GIA), Kobie Keenan (GIA), Brendan O'Keefe (Hort Innovation)
Apologies	David Jakobs (Oasis)

Welcome

PV welcomed the group and acknowledged the different circumstances under which we are all operating. He ran through the objectives for the meeting as per the agenda noting the primary focus on planning for the upcoming 2019/20 collection.

Item 1 Governance

No conflicts of interest were declared.

Item 2 Project Variation

PV advised that GIA submitted a variation to the project which requested an extension to May 2021 to ensure the delivery of communications and extension of outputs; a request to conduct a repeat of the 2017/18 validation survey of retail and landscape supply channels; and a desire to conduct a PESTLE (political, economic, social, technological, legal, environmental) scan of industry .

BO explained the request was taken to the SIAP on 21 August who have supported the variation request. He explained that the next steps would be for GIA to provide an updated mandatory response table (MRT) which included timings and budget.

BO advised the variation requires Hort Innovation Investment Committee approval. DW indicated that it would need to be received shortly given the supply chain collection would need to commence in October. BO advised the investment committee meets monthly and so we would work to seek approval at the September meeting.

ACTION: BO to provide format MRT to be completed.

ACTION: BO to confirm the September meeting date for the investment committee.

ACTION: Project Team to submit a revised MRT in time for the September meeting

Item 2 Minutes

The group referred to the minutes of the last meeting noting the actions were addressed or covered in the current meeting.

AGREED: PRG Meeting minutes of 5 February 2020 accepted by the group.

The group reviewed the activities schedule for Year 3, Stage 1 noting the adjustment in the timeline for activities with the project extension through the variation.

This activities schedule would require review for the submission of the abovementioned MRT.

Item 3 Data Priorities 19/20

The group referred to the feedback report prepared by AAC around comments on the benchmarking tool and data priorities for the 19/20 collection.

RM ran through the report referring to:

- the positivity around both the sharing of the positivity about the data sharing and general use of the data for industry.
- a comparison of the nursery benchmarking tool to other tools including vege and macadamia was conducted. Different approach used as vege and macadamia are based on production and yield of produce – nursery is more diverse and complicated.
- We will never achieve the data perfection that people are asking for because they are seeking data for their individual situation, more granular data and wanting specific advice.
- Findings included that
 - o Most are interested in labour costs
 - o They are also interested in the definitions of categories and the definition of 'operational costs'
 - o People want a more general understanding of business metrics
 - o Users have a cost focus – want better understanding of cost of goods (CoGs)
 - o Lots of positive comments on the tool but what is not being said tells us more.
- The feedback provides an opportunity to shift focus
 - o Include more narrative
 - o Trend analysis and YoY variance
- On the definition of 'Perennials Trees and Shrubs – an alternative suggestion was 'ornamentals, trees and shrubs
- The feedback has informed new thinking around the tool and will inform the approach for the next version. RM noted we currently have a complex tool which could be more simplistic, for example by demonstrating one metric at a time. It was an opportunity to present the information in a different way.

The group discussed the merits of complex and simple tools noting there still remains scope to educate people around use of the tool. Micro businesses not likely to use the information.

Comments included the need for consistency in data to support greater engagement. They also noted that businesses contributing to the project had cause to look at their data which also support help with the tool. Face to face education is also considered valuable in tool extension.

Anecdotal feedback and information captured through the survey indicate the tool is valued by around 20% of growers.

JP & BO also provided examples of industries (egg, grain, vege WA) who incorporate financial ratios into their tools. The group also discussed obtaining feedback on the tool from an accountant.

JP also explained the process of simplification involved layering of information so that users get early value that makes them seek more detail.

AGREED: Any changes can be trialled during testing for the next edition of the tool.

ACTION: AAC to seek feedback on the benchmarking tool from an accountant

ACTION: AAC will work to simplify the tool and share concepts with the PRG for review at the next meeting.

Item 4 19/20 Collection Plan (A5)

DW referred to the proposed collection plans provided noting they are following the collection timing from 2019 which worked well. He sought comments on the timing and possible areas for amending the survey.

AGREED: The group agreed with the proposed timing for the greenlife collection.

The only foreseeable challenge to survey participation was potentially an increase in trade given the ongoing COVID response to greenlife and therefore growers may have less available time to

participate. The group all agreed that the challenges around COVID would hopefully capture greater engagement with both the collection and the tool. KK advised that the engagement plan would use this theme in the messaging.

DW sought some feedback on how to measure the impact of COVID. The group discusses opportunities to compare information in both qualitative and quantitative formats.

The group thought that:

- although fraught with some issues, State comparative data would be good given the differences in restrictions.
- Seeking responses to questions around labour costs and availability will be good though results are likely to be seen across the next two years, not only in the 19/20 collection.
- Capturing quarterly data would be interesting but would mean four times increase in scale of the survey (in this format) which would be prohibitive.
- There was an opportunity to do targeted interviews as part of the PESTLE scan.
- Free text (open ended) responses would be interesting to work with and RM indicated that the volume of comments would not be a problem.

KK also raised areas for consideration including

- Questions on nursery waste
- Questions about qualifications in horticulture, business or other in the business

The group considered that there may be opportunities to capture data every second year for some questions. DW noted it was a common technique which also helped to capture more information.

HM felt that for the most part the survey should remain as it is, with a view to reviewing the approach under the next project. He cited the drop in propagation as an example of capturing anomalies through the consistency of the collection.

DW also sought questions and evaluative questions from BO around monitoring of the project. BO advised he will come back to the group after discussing it with their M&E specialist at Hort Innovation.

ACTION: BO to advise DW of any areas for questioning which address the M&E for the project.

ACTION: DW to review survey and provide recommendations to the group regarding any redundant questions, or opportunities to ask in alternate years.

ACTION: Group to review survey and make suggestions to DW.

Supply chain questionnaire – 17/18 survey attached FYI (A7)

The group supported the proposed timeline in the document which was subject to investment committee approval of the extension.

KK advised that following a discussion with the landscape sector they would like to see greater benefit for them in support of this process. It was noted that in the 2018 survey, the report was provided to the CEO's for them to translate into benefits for their organisations and members.

In 2018, the survey was restricted to NSW, VIC and QLD supply. DW referred to a request to try to make the supply survey national. He noted that it would be difficult to get the volume of numbers in each State.

AGREED: 2020 supply chain survey to focus on NSW, VIC and QLD.

ACTION: DW to review survey and provide recommendations to the group.

ACTION: KK to provide draft survey to the landscape associations and Garden Centres of Australia for input on the questionnaire and provide feedback to DW.

The group also discussed trying to validate some of the other supply channels through existing research.

ACTION: BO to provide other industry stats reports which could support validation of the other channels.

PV sought clarification on who was running the Hort Stats project. BO advised Martin Kneebone of Fresh Logic was continuing with the project which was validated using levy information and advice from PIB's. The group discussed the AusCitrus example – where an understanding of planting stock (budwood and rootstock seed) to nurseries but not the demand from nurseries by growers.

Item 5 Extension/Communications

KK advised the tracking update for extension activities was provided for reference only. She advised the next activity was a case study which was planned for release in September ahead of the next collection.

Feedback was sought on the 19/20 Communications & Extension Plan with no comments received. KK advised that the draft plan would need to be amended to incorporate extension elements for retail and landscape.

ACTION: KK to update the draft 19/20 Communications & Extension Plan

Item 6 Future of industry data collection

PV explained that the project was considered valuable by the Nursery SIAP. BO advised that a proposal for an industry collection for 2021-2023 had been submitted to the SIAP and supported. He considered that an open tender RFP would be released in early 2021, after the final release of data under NY17008.

The group acknowledged that a new project creates an opportunity to review the survey, understand the value of the data, work out a way forward and improve the process. HM indicated that the SIAP believe the project is well received but that it needed to keep improving.

The PRG considered the February 2021 meeting would be the best opportunity to extract the recommendations for future projects for inclusion in the final report.

ACTION: Time to be allocated at February meeting to identify recommendations for nursery data collection.

BO also advised the group that the current Strategic Investment Plans (SIP) are coming to an end with planning to commence imminently. He advised this current project will help inform the new Strategic Investment Plan (SIP) and the future project will likely be measured against it but could not provide details on the proposed approach to developing the next nursery SIP.

Item 7 General Business

PV advised the group the next milestone report was due 31 August 2020.

KK noted that the Project Team would need to meet offline to discuss the scheduling for the PESTLE report and alignment of release for with the collection.

Item 8 Next meeting

Review of 19/20 collection results and recommendations for inclusion in the Final Report is planned for early February 2021. The PRG intention was for a face to face review of the collection, however this will be monitored given the COVID-19 restrictions.

PV noted that another meeting might be required to progress the changes to MRT, and this would be managed in due course, if required.

Meeting close: 1.00pm

FINAL REPORT RECOMMENDATIONS

- Final report to include a vision for the evolution of industry data
- Consider additional face to face extension support for benchmarking data tool.

MINUTES

NY17008 Nursery Industry Statistics Project Reference Group Meeting

Date:	Tuesday 9 February 2021- 9am-11.30am EST 6am-8.30am WST
Location:	REMOTE VIA GOTO
Invitees:	Hamish Mitchell (Speciality Trees), David Jakobs (Oasis), Josh Kyne (Boomaroo Nurseries), Daniel Watson (DTER), Jan Paul Van Moort (AAC), Rebecca Moriarty (AAC), Peter Vaughan (GIA), Kobie Keenan (GIA), Brendan O'Keefe (Hort Innovation)

Welcome

PV welcomed the group and acknowledged the many activities completed since the last meeting. He thanked the team for their efforts over the last six months particularly in relation to the collection of data and the development of the PESTLE analysis.

Item 1 Governance

No conflicts of interest were declared.

Item 2 Minutes

Group accepted the minutes of 25 August 2020 noting an amendment was required to change the heading of the document from 'agenda' to 'minutes'. The group noted that items requiring follow up were included in the agenda.

Schedule of activities to conclude project were acknowledged.

Item 3 19/20 Collection

PV acknowledged the greenlife data collection and supply chain reports prepared by DTER.

DW provided insights into the collection process noting:

- It continues to be difficult to achieve the required sample numbers (n=300). It took an additional two weeks for the 2020 greenlife collection to reach an acceptable sample size. It was noted the impact of COVID-19 on the greenlife market contributed to challenge.
- Contributor numbers were on par with the 2018 collection and it this is considered a good result under the circumstances.
- 292 greenlife surveys were completed with 97 of them completed via email.
- 100 retail nurseries completed the supply chain survey.
- 101 landscapers completed the supply chain survey.
- As soon as the follow up calls end, the return of email surveys also stops.
- They received anecdotal feedback of additional interest in the data tool.
- Both the greenlife and supply chain survey results reflect a similar story with all three sectors positive with a substantial number of businesses growing.

Greenlife collection

DW provided a summary of the report. Key findings for the greenlife collection included:

Volume of greenlife sold	1.6 billion plants
Value of greenlife sold	\$2.6 billion
Production Area	6,278 ha
Employees (greenlife production)	23,880 or 19,701 FTE
% businesses with a least 1 tertiary qual	92%
Business investment	67%
Industry sentiment (fairly to very positive)	90% of business

The group discussed the results of the greenlife collection including:

- acknowledging a 6% YoY increase in production nursery sales from 18/19 with an upwards trend since the 15/16 collection.
- before excluding sales to production nurseries (double count) 2.2 billion plants were traded at a value of \$3.3 billion.
- the confidence levels within the data and differences between the categories. It was again acknowledged that the data is intended to be viewed at a national level and that caution is needed when reviewing the category breakdowns. At a national level, the sampling margin for error is $\pm 5.2\%$ on national results, a confidence level of 95%.
- Plant categories
 - Respondents continue to find the breakdowns by plant category a challenge.
 - The category of **Perennials/Trees/Shrubs** dominate the category splits and the group discussed splitting the category:
 - It was considered that splitting would possibly provide insights into the drivers for growers (noting significant differences in growing cycles between trees and some perennials); understanding links between shrubs and trees in relation to carbon sequestration etc.
 - Consider splitting trees from the category. The group noted this would make sense however, it would result in impacts on comparative data and we would need to exercise caution if implemented.
 - Consider the definition of **'bedding' plants**.
 - Consider moving herbaceous perennials into the bedding plants category. Consider surveying individually for 12 months before combining the category move into bedding plants.
 - The **other** category is predominantly made of big businesses who don't categorise.
- Greenlife sales to big box outlets are trending up
- Consider a review of the business size breakdown. The group noted the larger category is split up in the benchmarking tool. Provided sample sizes within the category split is large enough consider having a 'greater than \$4m category'.
- It was suggested that the existing data could be recalibrated in line with the proposed amendments to categories and business size. DW advised this was possible, but it would be a substantial and costly exercise.
- A suggestion to consider how business size categories could be reclassified to align with industry's growth, to keep the information meaningful.
 - BO suggest a CPI adjustment but noted it would not capture the structural change within the industry.
 - JP proposed a overlaying bell curve approach by looking at the distribution year on year which would enable a visual representation.
- A reminder that with all recommendations the group needed to maintain the privacy and confidentiality of the businesses within each category.
- COVID impacts on growers.
 - 49% estimated an increase in sales.
 - 1 in 5 estimated a decrease in sales.

Importantly, the figures of the greenlife collection correlate with the landscape and retail survey results.

Supply chain collection

DW explained achieving the survey results for the supply chain was easier than the greenlife completions.

It was highlighted that Victoria's lockdown occurred after the 19/20 financial year, so the group discussed the awareness of the business understanding which year of the collection related to. DW confirmed the interview process was thorough and respondents were responding with information for the 19/20.

Key findings of the supply chain survey were:

	Retail	Landscape
Purchase of greenlife (National extrapolation range)	\$657m	\$426m (\$386-466)
Estimated national value of big box	\$710m	
Volume of plants	217,892,757	76,384,440
% of turnover spent on greenlife purchases	29%	10%
Business investment		
Industry sentiment (fairly to very positive)	95%	95%
% businesses with a least 1 horticulture qual	75%	88%
% businesses with a least 1 business qual	54%	78%

COVID-19 impacted each sector differently.

- 71% of retailers reported an **increase** in turnover because of COVID-19. The average increase in turnover among those businesses was 31%.

In contrast:

- 56% of landscapers reported a **decrease** in turnover because of COVID-19. The average decrease in turnover among those business was 22%.

DW concluded noting that all three sectors are expecting to grow during the next financial year.

AGREED: The Project Reference Group unanimously accepted the reports provided by Down to Earth Research.

ACTION: Group to provide additional questions on the reports to DW by Tuesday 16 February 2021.

AGREED: Subject to any questions, Reports are to be made public from Wednesday 17 February (per extension plan).

Item 4 PESTLE Analysis

PV invited RM to provide an overview of the PESTLE analysis.

RM explained the intention of the report is to provide a complimentary evidence-based narrative to support the industry data collections.

ACIL Allen had identified a framework to identify the key political, economic, sustainable, technological, legislative and environmental factors facing the industry. The factors would be sense checked and examined more deeply using a 'Delphi' process, which involves two rounds of a qualitative discussion with a group of key industry stakeholders.

RM explained during the first round of feedback, the group received a list of thirty barriers/challenges for industry and were asked to rank them in priority order. The group discussion was very productive with everyone being open and generous with their time and willing to discuss the market.

There was from several stakeholders including ABS and Hort Innovation, participation from Michael Rogers of Australian Fresh Produce Alliance and Alex Newman from Bunnings.

The primary areas of challenge highlighted by the group include:

- Skilled labour
- Plant Biosecurity

- Water and climate
- Demand and supply-side trends (which was expected to dip after COVID)
- Technology
- Government: supports and programs

The focus group also helped identify specifics of each area. For example:

- people were keen to get into the details of climate but with further discussion it became more about water.
- Split view around demand
- Plant Biosecurity - understanding both how industry can work with the institutions and also the more pragmatic side of what can be done within a nursery to help them be biosecure.
- There were also interesting discussions around apprenticeships and the complexity of working with the TAFE system.
- The group believe the industry should be positioned as progressive and modern and there are good careers to be had.

RM asked about the project's use of the term 'big box' in the report to alleviate some sensitivities around the language with Bunnings. A discussion followed around the definition of the term noting it included, Mitre 10, Woolworths, IKEA etc. It was acknowledged that the term was used internationally and wasn't a reference to one large retailer specifically. A glossary of terms was suggested to help with interpretation.

ACTION: RM to ask Bunnings how they refer to themselves.

RM explained the next step was to circulate the revised delphi presentation to the group for a second-round feedback be with finalisation of the report scheduled roughly for the same time as the Benchmarking tool in April.

A short discussion was had about the relationship with the industry and the ABS noting their lack of understanding of how the industry works. KK explained that it had improved in recent years with the ABS adopting the industry survey categories for their Value of Agricultural Commodities report with the intent of aligning the data with industry.

BO requested that the report be available for the Hort Innovation strategic investment plan renewal process which was planned to be conducted in waves over the next couple of months.

Item 5 Business Benchmarking Tool

RM provided a brief overview. She indicated that work was being conducted with the numbers and she was awaiting additional data. The presentation of the tool will incorporate feedback and RM had identified additional inclusions across the course of the meeting.

The draft tool will be circulated for feedback and finalisation out of session. It was expected the tool would be launched in April.

ACTION: RM to circulate the draft tool in the next two weeks.

Item 6 Future of industry data collection

BO advised that he will draft the new request for proposal in the next month. It will be sent to market with an independent panel to consider the proposals and identify the delivery partner.

PV noted there was a SIAP planned for March approval of the RFP.

The group discussed briefly ways to improve the project including:

- whether additional supply chains should be validated.
- consider a valuation of all supply chains *post* nursery gate.
- consider the end value of the nursery industry in total how it relates to different agricultural sectors. This was discussed particularly considering the structure of the Hort Innovation Hort Stats report where nursery does not have a significant value of export. The greenlife industry

contributes to the growth of horticulture products, many of which originated in a production nursery. Concern was expressed about how nursery industry was represented in the report.

- acknowledgement of many of techniques which could be employed during a census year to improve the collection.

Item 5 Extension/Communications

KK provided a brief overview of the outstanding items for communication as provided in the tracking sheet.

DW suggested acknowledging the delay in the tool and reporting for 2021 as a result of COVID.

Item 7 General Business

PV reminded the group that Hort Innovation were holding a Webinar on the launch of the Hort Stats Handbook.

ACTION: PV to circulate link to webinar.

The group briefly considered improvements/innovation for future programs:

- how do we make it easier for people to contribute to the project?
- aim for better engagement in the smaller sample size eg targeting of comms to specific groups.
- promote the strategic benefit of data in the medium to long term.
- leveraging the State Association relationship
- work to achieve better data at a state level to demonstrate the local value.
- Encourage discussion, talk about the project and the data.
- consider an online option. Work to keep the random nature of the sample surveying but allow growers the opportunity to complete the survey in sections and online. DW agreed with a need to consider online options which would hopefully support increased participation and ease pressure on the budget. He cautioned the group however reiterating his point that when follow up calls end, the collection team stop receiving email responses.
- Need to get the data to be meaningful at lower levels.

Item 8 Next meeting

Date for the final meeting in April 2021 to be finalised.

AGREED: Meeting would not be held in the short weeks around Easter.

Minutes

NY17008 Nursery Industry Statistics Project Reference Group Meeting

Date:	Wednesday 5 May 2021 – 10.30am-12.30pm EST 8.30am-10.30am WST
Location:	https://global.gotomeeting.com/join/368316053
Invitees:	Hamish Mitchell (Speciality Trees), David Jakobs (Oasis), Daniel Watson (DTER), Jan Paul Van Moort (AAC), Rebecca Moriarty (AAC), Peter Vaughan (GIA), Kobie Keenan (GIA), Brendan O’Keefe (Hort Innovation)
Apologies	Josh Kyne (Boomaroo Nurseries)

	Welcome and objectives: Peter Vaughan PV welcomed the group to the final NY17008 acknowledging Josh’s apologies and advised the group of his departure from Boomaroo. PV acknowledged the consistency of representatives and the support provided by the reference group noting it has assisted the smooth running of the project. PV explained the purpose of the meeting was to discuss the recommendations for future greenlife industry data collections to be made in the final report.
Item 1	Governance (GIA) No conflicts of interest were submitted.
Item 2	Minutes & Project Activities PV worked through the actions from the February meeting. BO advised the draft RFP had progressed through the Hort Innovation system. BO advised it was not able to be presented at the March 21 SIAP because that meeting was intended for engagement on the strategic investment plan. He hopes it will be presented to the next SIAP and that this PRG meeting was well timed to help inform the RFP. PV commented that the PESTLE report has been well regarded and has supported the Industry investment planning. JP felt the process went well and the contribution from the DELPHI participants was strong. Policy aspirations also worked well and has added another dimension to industry data and research. The group were advised that the report had already been used in the investment planning process and to inform other Hort Innovation projects (Levy Communications, Republic of Everyone, Careers etc as recommendations are made for future projects. AGREED: Minutes accepted. The Activities Spreadsheet was acknowledged noting only a handful of extension activities were to be completed and that the project was scheduled to conclude per the variation on 31 May 2021.

Item 3	General Project Overview KK referred to the Measurement & Evaluation Plan developed at the start of the project noting that the final report can address each of the evaluation questions comprehensively. The only query was around survey numbers for 2020, however this is expected given the challenges of the year and is easily explainable. The group discussed the tool and its adoption by the industry. The group felt that education of the industry was well underway with many 'touchpoints' with industry businesses on the data collection pathway. The opportunities for further engagement around the project outputs were identified, including the inclusion of tools/factsheets etc at the commencement of each collection. The group still felt that some businesses were possibly intimidated by the data available in the tool and felt that engagement and extension needed to be maintained during the next project. A short discussion on the tool and engagement on the webinar (4/5/21) followed, noting there were no questions from webinar participants. KK explained that 26 people registered and 19 participated. All 19 stayed on the webinar for the entirety of the session. The group also noted that while there were no questions on this occasion, historically the questions have been arguing the data points of the presentation. This was not the case here. KK also advised that most of the attendees were also first-time participants on the webinar. The group agreed the best engagement with the tool comes with one-on-one, face to face extension, such as through the conference. KK provided examples of the many times the data had been quoted. BO asked that the information be provided in the Final Report. ACTION: KK to include examples of where the data has been used in the final report. DJ raised the opportunity to provide the businesses with a 'template' or 'spreadsheet' of expectations for the collection. This would enable growers to capture the information as they go and have it ready for the annual collection, should they be called up. KK noted that this was an original concept from the 2011 attempt to capture data, where only 36 businesses participated. She further suggested with the level of understanding and response for data collection in 2021 this was an option to revisit that would also support continued data education of industry. The group discussed the improvement in participation. JP talked about a more cohesive and responsive industry that have supported the process when requested. There is also a critical awareness of both the project and the need for industry data and the industry is much more data competitive than in 2015. The industry is attractive, and there is a lot more investment and businesses have confidence in their ability to meet the demand. The group also considered the need to continually communicate the benefits of the data tool and research to potential respondents by demonstrating how and where the data has been used.
Item 4	Recommendations PV sought comments from the group around the recommendations they would make in the final report. He pointed to the discussion document which also contained idea/recommendations from previous meetings for the group to discuss. The group collectively proposed the following recommendations: <u>Future project - Generally</u> 1. Continued levy funding for the regular collection greenlife/nursery industry statistics and research. 2. Must continue collection in a census year (2021). This is a year that the nation has the best collection of data available for analysis alongside the industry statistics and research results to generate deeper insights.

3. Use the data gaps identified in the PESTLE to inform the project objectives.
4. Continued need for a phone/in person survey to ensure that representative sample is captured.
5. Validation of the data should be conducted every two years.
6. Consider opportunity for co-investment. That is consider commercial investment to achieve the granular detail. *Note, industry representative concerns around the independence and integrity of the data if it is 'sponsored'.*
7. Consider the timing of the survey to improve survey fatigue on businesses.
8. Consider the representation of primary production nurseries in the data. How can we access those business and what will be the implications on the data? The capture of the nursery component from orchards/vegetable producers should be considered.

Data Tool

9. Continue to develop an annual benchmarking tool. The helps educate the industry, elevate professionalism, encourage survey participation. However, the tool should not be used as part of the measurement of the success because of the variability in business capability.
10. Enhance data tool support using case study videos. Incorporate the budget for this into the extension. Videos will create FOMO and enhance peer to peer learning.
11. We have reached the maximum capability of excel. Excel is practical and addresses confidentiality and privacy issues. Consider alternative platforms for the data tool in the future that also address industry requirements for confidentiality.
12. Important for integration of the information in the tool to drive strategic thinking in production nurseries.

Questionnaire & Data Analysis

13. Consider breaking up sectors of 25% or more to help make the data more meaningful to businesses, for example break down perennials trees and shrubs.
14. Consider opportunities to enhance the granularity of data.
15. Consider methods to support continuity of data to support prediction and forecasting into the analysis.
16. (Per above) Consider opportunity to provide the businesses with a 'template' or 'spreadsheet' of expectations for the collection. This would enable growers to capture the information as they go and have it ready for the annual collection, should they be called up.
17. Review definitions of categories and sub-groups to enhance segmentation understanding.
18. Consider opportunities for mixed-mode, randomised sample to support streamlining and efficiency of the collection. *Note: DTER's advice of the need to follow up businesses and to secure survey completion and to maintain random nature to ensure robust collection of data.*
19. Consider the scripting of the collection agency (Market Metics) to assess business interest in participating in future collections. POSTSCRIPT: also consider the collection scripting for how language affects perception of project.
20. Prepare for increased collection agency costs.

	<u>Communication – extension & adoption</u> 21. Enhance the communication on the project to consider all touchpoints with levy payers, from first contact with researcher thought to extension of peer-to-peer learning. 22. Intensify communication around the benefits of the industry collection prior to launch. 23. (Per recommendation above) Enhance data tool support using case study videos. Incorporate the budget for this into the extension. Videos will create FOMO and enhance peer to peer learning. 24. Increase the proportion of the budget allocated to engagement and education to be in lined with other data projects such as Native Seed Project which is implementing 14 face to face workshops. <u>Additional Research for industry</u> 25. Research the value of greenlife post farm gate and in the whole supply chain: - All plant industries should be examined to understand the risks to food production or export should the industry not be able to meet the needs of primary production. - Begin to consider the socio-economic value of plants in retail and landscape nationally, (ie expanding the current validation survey and extending its reach nationally). 26. Conduct a deep dive into external market factors affecting industry businesses and supply chain and provide a commentary for businesses. This concept has potential to value add to the data tool and engage more businesses in the survey. BO advised that Hort Innovation is considering a five (5) year project for the nursery data collection in the future. He encouraged the Project Team to aim to avoid project variations and be future thinking. In reference to avoid the need of project variations KK suggested an allocation in the budget to enable flexibility. This would be beneficial in a longer project, allowing it to adapt to industry needs. Finally, he noted that ‘economic contribution analysis’ would usually be considered as a separate project but considered there may be efficiency benefits of including it a new project.
Item 5	Closing Comments PV again thanked the group for the time on the project noting they would them informed on the RFP process.

Meeting close: 12.30am