

Final Report

Extending OliveCare to foster excellence in production of Australian olives

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AUSTRALIAN OLIVE ASSOCIATION LTD

Project code:

OL17006

Project:

Extending OliveCare to foster excellence in production of Australian olives OL17006

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Funding statement:

This project has been funded by Hort Innovation, using the olive 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.

Publishing details:

ISBN 978-0-7341-4774-5

Published and distributed by: Hort Innovation

Level 7

141 Walker Street

North Sydney NSW 2060

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www.horticulture.com.au

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Summary

Project objectives:

OL17006: “Extending OliveCare® to foster excellence in production of Australian olives” program aims to:

- Implement key industry capacity building strategies for Objectives 1 and 3 of the *Olive Strategic Investment Plan 2017-2021 (SIP)*¹;
- Support the objectives of project OL18000 ‘Australian Olive Industry Communications and Extension Program’, to promote world-best practice in grove management, to increase productivity and quality; promote world-best practice in olive oil production, storage and packaging aiming to enhance quality and increase consumer confidence; and to communicate and extend outcomes of industry R&D and other sources of innovation from around the world to Australian Olive Levy Payers aiming to enhance their skills, capacity and knowledge;
- Build the quality reputation of Australian olive oil, table olives and other olive products; set benchmarks for improving quality, thereby enabling the Australian olive industry to more effectively compete in the domestic market as well as in global markets based on product quality;
- Increase producer participation in the Australian Olive Industry OliveCare® Code of Best Practice program, including extending membership along the supply chain.
- Verify growing, harvesting, processing and oil storage practices, and product label integrity under OliveCare® certification, in particular where ‘Extra Virgin Olive Oil’ (EVOO), or other ‘premium’ or ‘credence’ claims are made with the aim of underpinning consumer confidence in olive products;

Target audience:

- The primary audience for OL17006 is Australian olive levy payers / olive producers / olive processors, olive product brand owners, and their supply chain partners, which includes food service, retailers, importers, and exporters.
- Whilst between 135 and 150 olive enterprises and their staff directly engage with the OliveCare® Code of Best Practice Program, other olive industry stakeholders can interface with project outputs through AOA’s multi-channel communication platforms which reach over 2,500 industry participants. Ref: [Appendix 3](#) & [Appendix 9](#).
- This project also directly engages with 40 Australian and international consultants, technical specialist and service providers who have provided invaluable technical input to the program, as well as receiving full access to project outputs.
- Through the consumer facing ²*Australian Extra Virgin Olive Oil Everyday* website, Australian consumers are also informed of the health benefits of consuming EVOO and of OliveCare® certified brands.

Key activities:

- Undertake project planning, including monitoring and evaluation, risk management, stakeholder engagement and program review in consultation with a Hort Innovation appointed Program Reference Panel (PRP).
- Undertake stakeholder communication, information and technology transfer activities, including e-newsletters, articles in industry publications, workshops, field days, webinars and conference presentations on olive production, olive oil and table olive processing and product quality and food safety, product storage, and product distribution best practice.
- Undertake stakeholder communications and technology adoption surveys, and industry event evaluation surveys in conjunction with OL18000.
- Undertake Australian market quality surveys of Australian and imported products labelled as EVOO.

1 Olive Strategic Investment Plan 2017-2021 (Hort Innovation): <https://www.horticulture.com.au/globalassets/hort-innovation/levy-fund-financial-and-management-documents/sip-pdfs/hortinnovation-olive-sip.pdf>

2 Australian Extra Virgin Olive Oil Everyday: <https://australianextravirgin.com.au/brands/>

- Promote olive grower and brand owner participation in the Australian International Olive Awards (AIOA)³ and other state and international olive competitions to benchmark performance against peers and facilitate provision of test data for *OliveCare*® product certification compliance.
- Develop *OliveCare*® Code of Best Practice information & training resources, review and streamline *OliveCare*® program documentation.
- Build *OliveCare*® Code of Best Practice membership, engagement and program compliance.

Key outputs:

- Reporting of the results of Australian market survey testing of products labelled as EVOO. During the OL17006 project period a total of 95 individual product samples comprising 52 Australian and 43 imported were included in the market surveys, plus 28 duplicate samples were purchased for laboratory calibration purposes, collectively a total of 123 product samples were tested.
- Publication of industry reports, training materials, product manuals and product quality templates, newsletters, webinars, outcomes of workshops, field days and other communications to Code of Best Practice Signatories and other industry stakeholders. These resources are detailed in [Appendices 3-10](#), including a consolidated list of Olive Production References which is also posted on the AOA website⁴.
- Updating and modularising Code of Best Practice documentation, including product manuals, HACCP style food quality / food safety plan templates, approved agri-chemical use lists, and other web-based olive production resource materials.
- Development of Best Practice Checklists which now number 182 items addressing key risk management strategies, including an Environmental and Community Responsibility Best Practice check list based on the *Australian-grown Horticulture Sustainability Framework*⁵, [Ref: Appendix 8](#).
- Registration of between 135 and 150 Code of Best Practice Signatories, including audit of *OliveCare*® certification compliance requirements – including grove best practice, food quality / safety plans, product storage and testing, and product label content. (Noting the target membership is 200 signatories).
- Building Code of Best Practice membership and engagement and establishing regular communication with members including through a monthly e-newsletter, annual compliance audits and providing constructive feedback to individual signatories.

Key outcomes:

OL17006 aims to enhance consumer confidence in Australian olive products in both domestic and export markets through:

- ***Lifting the quality of Australian olive oil, table olives and related products and set benchmarks for improving quality, underpinning consumer confidence and enabling the Australian industry to more effectively compete in global markets based on quality.***

Pleasingly the market survey data demonstrates that overall EVOO brand performance has improved during the OL17006 reporting period, with brand compliance (as measured against the Australian Standard AS5264-2011) of around 80% for both the 2018 and 2020 surveys up from 68% in the 2017 market quality survey and up from a low of 63% in the 2015/16 survey. Furthermore, olive oil products of the inferior Lampante classification olive oil (not fit for consumption without further processing) has all but disappeared from the Australian marketplace, whereas in the 2014/15 market survey over 30% of olive oil samples labelled as EVOO were reclassified as Lampante quality! (Further analysis is provided at Outcomes).

OliveCare® continues to promote the adoption of ‘Freshness Testing’ by olive oil producers and brand owners. To date there are 24 *OliveCare*® members with a total of 44 EVOO products who have been

³ Australian International Olive Awards (AIOA): <https://internationaloliveawardsaustralia.com.au/>

⁴ Consolidated list of olive production references: <https://australianolives.com.au/wp-content/uploads/2021/08/Olive-Production-References-1.pdf>

⁵ Australian-grown Horticulture Sustainability Framework: <https://www.horticulture.com.au/hort-innovation/our-work/horticulture-sustainability-framework/>

issued with current Freshness Tested Compliance Certificates.

Ref: Market survey metrics MS102, MS104, MS106, MS190, and [Appendix 2](#).

- ***Increase producer participation in the Code of Best Practice from 2018 onwards; the revised target is to achieve 200 Code of Best Practice® Signatories, and 100% Signatory compliance with testing against the Australian Standard (AS5264-2011).***

Despite issuing of 325 personal invitations to membership to prospective members, the participation metric was not achieved, rather membership has consistently remained between 135-150 members (further analysis is provided at Outcomes).

Ref: Participation data at MS190 Outcomes.

- ***Achieving a high level of participant compliance with Code of Best Practice requirements, including product quality testing, preparation of food safety / quality plans, and product label integrity, and compliance with the ANZFA Food Standards Code and Australian Consumer Law (ACL).***

Member compliance has been excellent, running at around 70-80% for Code of Best Practice requirements (further analysis is provided at Outcomes).

Ref: Compliance metrics at MS190 Outcomes.

- ***Increasing industry skills and capacity through adoption of industry best practice for production, processing, product storage and distribution (supply chain).***

One measure of increasing industry skills and capacity is performance in olive competitions, where *OliveCare*® Code of Best Practice members consistently outperform non-members (further analysis is provided at Outcomes and at [Appendix 11](#)).

The AOA 2021 Communications Survey Part A outputs establish that *OliveCare*® members demonstrate a higher level of awareness and use of industry resources than other survey participants.

Given the massive swings in grove production between ‘on crop years’ and ‘off crop years’, with the alternate bearing character of the olive tree, it is simply not possible to attribute any increase or decrease in grove productivity to other than season events and tree physiology.

Industry trends that are evident for boutique olive producers is their increased participation in on-line marketing as a pivot to the COVID-19 Pandemic, plus diversification of products with increased interest in table olives, flavoured olive oils, skin care products, and bio-actives (olive leaf and olive leaf extract).

Ref: Participant survey (base line reported at MS103) with follow up survey reported at MS190 Outputs.

OL17006 publication outputs:

OliveCare® program publications are documented at [Appendices 3 – 10](#).

Recommendations for future R&D and practical application to industry:

Market Quality Surveys:

Noting AOA's market quality survey, together with the AIOA and *OliveCare*® AEV® and 'freshness tested' certification help to position Australia as a high integrity producer of ultra-premium EVOO domestically and internationally supported by integrity of labelling (*Draft 2021 SIP Strategy 3.4*).

1. That given the measurable and significant improvement in the quality of both Australian and imported EVOO in the marketplace, and noting the high cost of product testing, that future Australian market quality surveys should be undertaken on an 'as required' basis.
2. That ongoing EVOO sensory panel training and calibration work be undertaken to reduce the current discrepancies between panels.
3. That the AIOA results continue to be used as a tool to monitor product quality.

***OliveCare*® Best Practice and Certification Program:**

4. That the *OliveCare*® best practice and certification programs be rolled into the broader AOA communication and technology transfer program and continue to be promoted as an 'opt in' program available to all olive supply chain participants.
5. That the Australian olive industry continue to promote 'freshness testing' and product certification to provide consumers of EVOO with objective guidance on product quality.
6. That consideration be given to AOA providing 'freshness testing' certification as a separate program to *OliveCare*®, on a fee for service basis including to participants of the AIOA.

AOA communication and technology transfer program:

To achieve optimised grove management strategies to address sources of yield variability (e.g. biennial bearing, water availability, frost, pest and disease control, canopy management, grove nutrition) (*Draft 2021 SIP Strategy 1.2*)

7. That future AOA communication and technology transfer programs continue its focus on risk management as detailed in the *OliveCare*® Best Practice Checklists.

In support industry-driven innovation and extension initiatives (based on the open sharing of knowledge and expertise from Australian and international networks and benchmarking initiatives) that help support positive change in the areas of sustainable production, biosecurity and meeting consumer quality expectations (*Draft 2021 SIP Strategy 1.1*).

8. That AOA review its website design and simplify navigation.
9. That AOA consider the communications content preferences from AOA communications survey reports.

Keywords

Australian Olive Association (AOA); *OliveCare*® Code of Best Practice; Hort Innovation; Australian Market Quality Survey; AS5264-2011; Voluntary Standard for Table Olives in Australia, Extra Virgin Olive Oil (EVOO); Agrumato; Freshness Testing; Compliance; Information and Technology Transfer.

Introduction

Historical background:

Olive oil has a history of use spanning millennia, originating in the eastern Mediterranean around 6,000 BC and gradually spreading west and into the 'New World'. Spain is now by far the largest producer in the world. Olive oil is a tried and proven product, its many uses include health and nutrition, skin care and cosmetics, and as a fuel for lighting (prior to the discovery of alternatives - whale oil, coal gas, petroleum oil and LPG).

As highly valued and versatile product olive oil has unfortunately been subject to a long and continuing history of fraudulent commercial activity, including misrepresentation of quality and adulteration with cheaper seed and nut oils, as detailed in the book *"Extra Virginity – The sublime and scandalous world of olive oil"* by Tom Mueller⁶.

The good news is that olive oil quality has improved markedly with modern science-based cultivation, processing, and storage methods. In parallel olive oil standards and testing methods have been developed to underpin quality and provenance assurances provided to consumers by olive oil producers and marketers.

Never-the-less, ongoing industry vigilance is required, with quality and provenance of olive oil continuing to be misrepresented by a minority of unscrupulous traders. Examples include older 'tired' and defective olive oils being deceptively-labelled as Extra Virgin Olive Oil; brands with Italian provenance style labels with small print 'bottled in Italy from olive oil sourced from Spain, Tunisia and other Mediterranean countries'; and the so called 'Tuscan Blend' olive oil (popular with food service) with labels decorated with olives and olive trees but with small print 'contains 95% canola oil'!

Olive oil is classified by defined quality grades: *Natural olive oil* is the oil pressed from the olive fruit without the use of heat or chemicals. The highest quality grade of *Natural olive oil* is 'Extra Virgin Olive Oil' (EVOO) that exhibits flavoursome well balanced fruity, bitter and pungency (FBP) attributes, without any taste or aroma (organoleptic) defects; followed by 'Virgin Olive Oil' (VOO), which is a lower quality olive oil which is permitted to have a limited score for defects, and 'Lampante Olive Oil' which is quite unpalatable, highly defected olive oil, generally regarded as not fit for human consumption without further processing, (however some of the older Mediterranean diaspora have developed a taste for this old world product; it also makes good soap).

Processed olive oils comprise 'Refined Olive Oil', which is a bland tasting heat-treated product from which all olive flavour and healthy antioxidants have been removed. This product is often blended with a small percentage (5%-15%) of VOO or EVOO to improve flavour; these product are labelled as 'olive oil'. Then there is 'Pomace Olive Oil' which is extracted using solvents from olive processing waste as an oil recovery operation; again it may be blended with VOO or EVOO to improve flavour. These lower quality olive oils are primarily used for cooking in food service (restaurant and hotel kitchens) sector which tends to be price sensitive, and in food manufacturing such as in baked products, and to make vegetable oil spreads.

According to the *Australian Competition & Consumer Commission (ACCC)*⁷: "Although there is no mandatory standard for extra virgin olive oil in Australia, it is widely accepted that it is the highest-grade oil obtained from the first press of the best quality olives, it is not blended with other oil and that there are no solvents or refining in the manufacturing process".

There are international and local voluntary industry reference standards that provide guidance for producers and consumers as to what chemical and flavour properties extra virgin olive oil should have. Australian Consumer Law prohibits labelling olive oil as *extra virgin* if it is not of this quality. Ref [Appendix 2](#).

In the Australian marketplace the most relevant reference standards under which olive oil grades are defined and test parameters specified are all voluntary industry standards:

- *Standards Australia Ltd. Australian Standard for Olive Oil and Olive-Pomace Oil AS5265-2011*⁸, (known as the Australian Standard), endorsed by the Australian Olive Association Ltd (AOA).

⁶ *Extra Virginity – The sublime and scandalous world of olive oil* by Tom Mueller: <http://www.tommuellers.co/extravirginity>

⁷ ACCC – Olive Oil: <https://www.accc.gov.au/media-release/moi-international-pays-for-misleading-olive-oil-claims>

⁸ *Standards Australia Ltd. Australian Standard for Olive Oil and Olive-Pomace Oil AS5265-2011*: <https://australianolives.com.au/australian-standard-5264-2011/>

- *International Olive Council (IOC)*⁹. *Trade Standard Applying to Olive Oils and Olive Pomace Oils COI/T.15/NC No 3/Rev.16 June 2021, (known as the IOC Standard), endorsed by the Australian Olive Oil Association (AOOA).*
- *EU Regulation No 1348/2013(EU)*¹⁰, which regulates trade of olive oil in the EU.

The *Australian Standard* is robust and consumer focused, with an emphasis on product quality and freshness; in contrast to the *IOC Standard* has a focus on 'facilitating international trade', however with its lower standards permitting inferior quality oils with a measurably reduced shelf life to be classified and traded as EVOO or VOO.

Australian market surveys of EVOO quality:

Systematic Australian market EVOO quality survey testing commenced in 2011, following the introduction of the Australian Standard (AS5264-2011). Through OL17006 over the past 3 years a further 95 Australian and imported olive oils labelled as EVOO were purchased from supermarkets, independent retailers, or 'on-line', with testing undertaken by NSW DPI Wagga Wagga, (a National Association of Testing Authorities, Australia (NATA) and American oil Chemists Society (AOCS) accredited laboratory, and International Olive Council (IOC) accredited sensory panel), for selected chemical and sensory parameters for compliance against both the Australian Standard and the IOC Standard. Some 28 samples were also purchased in duplicate and retested by the similarly accredited Modern Olives laboratory at Lara, Victoria, for laboratory calibration purposes.

Overall, 76 (80%) of the 95 products tested met the parameters for EVOO classification under each of the Australian, EU and IOC Standards. Pleasingly the data also demonstrates that overall EVOO brand performance has improved during the OL17006 period with brand compliance (as measured against the Australian Standard) of around 80% for both the 2018 and 2020 surveys up from 68% in the 2017 survey and up from a low of 63% in the 2015/16 survey. This improvement in quality can be attributed to the AOA's market quality survey work and associated media activity and industry development programs.

Note: In the July 2017 market survey (OL13007) 50 samples were screened by a government laboratory - the *National Measurement Institute (NMI)* for pesticide residues (*Supermarket Screen Lists 3 and 5 - Combined GCMS/LCMSMS*) covering contaminants, organochlorines, organophosphates, herbicides, acaricides, fungicides, phenols, carbamates, synthetic pyrethroids, insecticides, and plant growth regulators, and assessed against the *Australia New Zealand Food Standards Code Schedule 20 – Maximum residue limits*¹¹. Overall, pesticide residues and contaminants were NOT found to be a major problem with only 2 products exceeding an MRL), and another two olive oil products that had a label claim of 'certified organic' (1 imported and 1 Australian) were found to have measurable pesticide residues.

For this reason, in the 2018 survey, 9 of the samples that had made a label claim to organic certification, were purchased and screened by Modern Olives (MO), also a NATA, AOCS, IOC and AOA accredited laboratory, for 45 selected chemical residues, including organochlorines, organophosphates, herbicides, acaricides, fungicides, synthetic pyrethroids, and insecticides, and assessed against the *Australia New Zealand Food Standards Code Schedule 20 – Maximum residue limits*. Pleasingly, all 9 EVOO products tested were NOT found to have detectable residues, which is consistent with their organic certification claims.

⁹ *International Olive Council Trade Standard applying to olive oils and olive-pomace oils*, COI/T.15/NC No 3/Rev.16 June 2021: <https://www.internationaloliveoil.org/wp-content/uploads/2021/07/COI-T15-NC3-REV-16-2021-ENG.pdf>

¹⁰ *EU Regulation No 1348/2013*: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:338:0031:0067:EN:PDF>

¹¹ *Australia New Zealand Food Standards Code Schedule 20 – Maximum residue limits*: <https://www.legislation.gov.au/Details/F2017C00647>

Australian olive industry snapshot:

- Olives are grown throughout the temperate south eastern and south western seaboard regions of the Australian continent. However, two regions in particular account for an estimated 85 per cent of Australia's current production - north-central Victoria (70%) and north of Perth Western Australia (15%).
- Australian Industry estimates are around 10 million trees are grown on 450 commercial groves covering more than 30,000 hectares, with 70 per cent of the olive trees concentrated in 20 groves (Large Enterprise Group).
- Australian olive oil production in the 2021 production season is estimated at 21,000 tonne (24 million litres) processed from 126,000 fresh tonne of olives. This is a significant increase over production in the 2020 production season of 8,800 tonne (9.6 million litres), which in turn was half of that produced in the 2019 season at 19,736 tonne (21.5 million litres), clearly demonstrating the biennial bearing pattern of olive production in Australia.
- Australian olive oil production represents only 0.6% of total global production which for the 2019/20 year was 3,207,000 tonne of olive oil produced from 10 million hectares.
- Australian consumption of EVOO has risen to 65% of olive oil sales in 2019. The key drivers of this growth are health and quality.
- Imports of olive oil in 2019/20 was 36,600 tonne (40 million litres) and can be expected to increase in 'off crop years' of Australian production.
- Australian apparent consumption of olive oil in 2019 was 50,707 tonne (55 million litres). This equates to consumption of 2.1 litres per person per annum.
- Australian olive oil production is typically 85% to 90% EVOO classification, depending on seasonal events (in particular frost), this is in contrast to Mediterranean production where only 25% is EVOO, 25% VOO, and 50% Lampante (requiring further processing) classification, resulting from an inability to efficiently harvest olives from the trees before they fall to the ground and become contaminated.
- Table olive production in Australia is a very small boutique sector, with an estimated 125 table olive producers across Australia with a total grove area of around 1,000 hectares, producing an estimated 2,000 tonne of fruit per annum. Ours is largely a boutique industry, with 80% of table olive producers having less than 5 hectares, and only 5 known producers with more than 40 hectares. The major table olive production states are SA, WA, NSW and VIC. Australian table olive production represents only 0.06% of global production.

OliveCare® implementation:

The Australian Olive Industry's Code of Best Practice was developed as part of the Commonwealth's then Department of Agriculture Fisheries and Forestry (DAFF) *Australian Olive Industry Partnership / Industry taking Stock and Setting Directions* program between 2005 -2007, in the context of discussions with government regarding a proposed new Australian standard for olive oil, to underpin future product quality outcomes and enhance the high-quality reputation of Australian olive products and associated production processes.

OliveCare® fosters a compliance culture and incorporates the provisions of the *Australian Standard for Olive Oils and Olive Pomace Oils (AS5264-2011[®])* which was introduced in July 2011, and the *Voluntary Industry Standard for Table Olives in Australia (RIRDC 2012 – updated January 2020)*¹² which was introduced in 2012, as well as the Food Standards Australia New Zealand (FSANZ) Food Standards Code and related legislation, the Australian Consumer Law (ACL), and international rules and codes with similar aims, such as those of the American Oil Chemists Society (AOCS), International Standards Organisation (ISO), International Codex Alimentarius Commission (Codex) and the United States Pharmacopeia (USP). Evidence of the success of this culture is the rapid uptake and excellent compliance with the new CoOL requirements from July 2018.

¹² *Voluntary Industry Standard for Table Olives in Australia (RIRDC 2012 – updated January 2020)*: <https://australianolives.com.au/table-olive-standard/>

OliveCare® establishes a framework that encompasses good business practice, Good Agricultural Practice (GAP) & Good Manufacturing Practice (GMP) and Good Hygiene Practice (GHP), with Hazard Analysis Critical Control Point (HACCP) style production controls, embedded in *OliveCare*® HACCP style food quality plan templates.

The Code of Best Practice Program was rebranded as *OliveCare*® in 2017 and has been revised and extended to include certification of table olives and other olive products and encompasses the entire olive supply chain from growers to retailers.

OliveCare® Signatories are authorised to apply AOA Trademarks (TMs) to certified olive products, point of sale materials and websites, in accordance with the rules governing the use of these TMs which are regulated under Section 173 the *Trademarks Act 1995*¹³ and subject to approval by the ACCC.

OliveCare® utilizes AOA's multiple communication platforms (as detailed in Methodology) to engage with program stakeholders, including websites, publications, conferences, field days, workshops and webinars (which have proven to be useful and well received as part of the industry's COVID-19 pivot).

Project rationale and significance for industry:

As discussed in the *Olive Strategic Investment Plan 2017-2021 (SIP)*, a key aspiration of the olive industry is to develop a vibrant and sustainable olive industry in Australia.

OL17006 is essentially an information and technology transfer project that has implemented key objectives of the Olive SIP to identify and deliver innovative and effective R&D solutions to educate, inform and empower growers to manage issues, improve on-farm capability and maximise opportunities so olive growers can build profitable and sustainable businesses.

For the olive industry, there is an imperative to assist growers to address low yields, which contribute to poor enterprise profitability. It is also vital that all producers have a focus on quality, from growing, through processing, packaging, and storage, as the currently strong reputation of the entire industry could be severely damaged by poor quality management by just a small number of producers.

Project linkages to the Olive Industry Strategic Investment Plan (SIP):

This project builds on *OL13007 – Australian Olive Industry Code of Practice Implementation*, and aligns with the following objectives and strategies in the *Olive Strategic Investment Plan 2017-2021 (Hort Innovation)*:

In particular: **Outcome 1** of the *Olive Strategic Investment Plan 2017-2021 (Hort Innovation)*: “Improved on-farm productivity, sustainability and product quality” using the key strategies: “Promote world-best practice in grove management to increase productivity and quality” and “Promote world-best practice in olive oil production, storage and packaging to maintain quality and increase consumer confidence”; as well as on **Outcome 3** “Greater skills, capacity, and knowledge in the industry” and the key strategy to drive it: “Communicate and extend outcomes of industry R&D”.

Note: SIP Outcome 1 is closely linked to Outcome 3, which focuses on the building of skills and capacity in industry participants.

Outcome 1: Improved on-farm productivity, sustainability, and product quality:

- Strategy 1.1: Promote world-best practice in grove management to increase productivity and quality, through:
 - Industry extension program (High) - implementation of the *OliveCare*® Code of Best Practice program.
- Strategy 1.2: Promote world-best practice in olive oil production, storage, and packaging to maintain quality and increase consumer confidence, through:
 - Monitoring data on product quality in the marketplace (Medium) – the Australian market Survey includes monitoring EVOO brand compliance with the Australian, EU and IOC Standards for olive oil.
 - Active encouragement of brand owners of imported olive oils to comply with the Australian Standard for olive oil (Medium) – *as above*.

¹³Trademarks Act 1995: http://www.austlii.edu.au/au/legis/cth/consol_act/tma1995121/

- A review of existing R&D on best-practice storage conditions for olive oil and develop simple, consistent, and timely messaging to remind growers how best to store their EVOO. Messaging should also be developed for retailers and food-service industry on how to store/ present EVOO to ensure it has the best chance of reaching its best-before-date. (Medium) – *covered by Pablo Canamasis workshops, webinars, and review of R&D reports, and OliveCare® Best Practice Check Lists.*

Outcome 3: Greater skills, capacity, and knowledge in the industry:

- Strategy 3.1: Communicate and extend outcomes of industry R&D (High), through:
 - An extension / adoption strategy for the industry, potentially including:
 - Developing a continuing professional development (CPD) program to be undertaken by growers as a requirement of the *OliveCare®* Code of Best Practice - *implementation of the OliveCare® Code of Best Practice program.*
 - Developing extension packages and delivery models appropriate to the industry, including pest and disease management fact sheets and electronic reminders. (High) - *implementation of the OliveCare® Code of Best Practice program.*

Note: OL17006 program objectives and methodology also align strongly with the proposed Outcomes and Strategies as detailed in the Draft *Olive Strategic Investment Plan 2022-2026 (Hort Innovation)*.

Methodology

Target Audience:

- The primary audience for OL17006 is Australian olive levy payers / olive producers / olive processors, olive product brand owners, and their supply chain partners, which includes retailers, importers, and exporters.
- This project has also directly engaged with 40 Australian and international consultants, technical specialist and service providers who have provided invaluable technical input to the program, as well as receiving full access to project outputs.
- Whilst between 135 and 150 olive enterprises and their staff directly engage with the *OliveCare*® Code of Best Practice Program, other olive industry stakeholders can interface with project outputs through AOA's multi-channel communication platforms which reach over 2,500 industry participants.

Ref: Appendix 3 & Appendix 9.

- Through the consumer facing *Australian Extra Virgin Olive Oil Everyday* website, Australian consumers are also informed of *OliveCare*® certified brands. According to Google Analytics the Certified Brands page receives around 5,000 visits per year.

AOA Communication Platforms:

OliveCare® utilises the following AOA communication platforms to provide information and extension activities to Code of Best Practice signatories:

AOA Websites:

There is no 'one-stop-shop' to access all topics of interest to olive industry participants, rather this is achieved through the following suite of AOA managed and linked websites:

- Australian Olive Association: <https://australianolives.com.au/> - includes lots of technical information in the AOA 'Members Lounge', and OliveCare Members Area, as well as links to the following informative websites:
- OliveBiz: <https://olivebiz.com.au/> - includes OGP, FOE, R&D Insights, Grove Innovation, and industry events, including webinars, workshops and field days.
- AOA National Industry Conference: <https://nationaloliveconference.com.au/> - program and registration.
- AIOA olive product competitions: <https://internationaloliveawardsaustralia.com.au/> .
- Australian Extra Virgin Everyday: <https://australianextravirgin.com.au/> - a consumer facing website, includes OliveCare® certified brand listings.

An evaluation of the usefulness of these industry websites is also provided at Outputs

A substantial portfolio of olive industry publication, reports and other resources is posted on AOA websites at: <https://australianolives.com.au/wp-content/uploads/2021/08/Olive-Production-References-1.pdf>

AOA Publications:

Friday Olive Extracts (FOE): Weekly (email)

FOE is free weekly e-news blast with a wide range of content. Distribution is to over 2,500 olive producers and processors (levy payers), marketers, service providers and other industry stakeholders. FOE is the vehicle for timely information to levy payers, with links to more detailed information housed on the OliveBiz website.

OliveBiz is also home to past editions of FOE. Link: <https://olivebiz.com.au/foe/>

Grove Innovation (GI): Monthly (email)

Publication second Tuesday of each month. Distribution is to over 2,500 olive producers and processors (levy payers), marketers, service providers and other industry stakeholders.

Grove Innovation (GI) is a monthly e-newsletter focused on R&D info and updates primarily related to Hort Innovation funded projects and HIA activities relevant to our industry. GI is the primary vehicle for project updates that enables the industry to engage readily with the project. Includes regular *OliveCare*® program contributions, (see [Appendix 10](#)).

Link: <https://olivebiz.com.au/category/grove-innovation/>

***OliveCare*® News: Monthly (email – members only)**

Distribution is to over 250 stakeholders. *OliveCare*® is an industry quality assurance system. The program's signatories produce about 80% of Australia's olives and win medals in EVOO shows all round the world.

OliveCare® produces a monthly e-newsletter for its members with a strong technical, and productivity focus. Back copies can be accessed in the *OliveCare*® Members Area: <https://australianolives.com.au/olivecare-members-area/>

Readership metrics are provided at [Appendix 4](#).

Olivegrower & Processor (OG&P) & R&D Insights: Quarterly subscription publication

OG&P is the olive industry's quarterly hard copy magazine that covers contemporary issues impacting on the industry, often with analysis and grower/expert commentary. The magazine is a subscription publication with a print and digital distribution of around 300 and an estimated 1,800 readers right along the supply chain. OG&P contains a lift out section known as R&D insights. This is the main platform that the Remote Sensing project will use for reporting to industry or announce extension activities etc. An electronic version of R&D insights is housed on the OliveBiz website all levy payers (not just subscribers) are able to access the content 24/7. Back copies can be accessed at: <https://olivebiz.com.au/rd-insights/>

Note: *OliveCare*® is a regular contributor of copy to OGP which provides a broader audience to the Best Practice program, (see [Appendix 10](#)).

AOA Update Newsletter: Quarterly email

The update newsletter is for AOA members, providing information on AOA advocacy and policy matters. Back copies can be accessed at: <https://australianolives.com.au/aoa-update/>

AOA Webinars|Videos: Ad hoc

The AOA promotes and runs webinars for the industry as required. AOA also provide professional video and podcast capability associated with projects, including the *OliveCare*® program. Registration for these events and copies of presentations are posted on the OliveBiz website at: <https://olivebiz.com.au/>

AOA Annual Olive Industry Conference: Annual

The AOA holds a national 3-day conference most years somewhere in Australia. The event generally includes a day of field visits and two days of plenary sessions. The program usually includes an *OliveCare*® program presentation.

- Due to ongoing COVID-19 travel restrictions, the 2020 AOA conference is postponed to October 2022 (further details TBA)

- 2019 AOA conference presentations are available on the OliveBiz website at: <https://olivebiz.com.au/2019-national-conference-trade-exhibition/>
- 2018 AOA conference presentations are available on the OliveBiz website at: <https://olivebiz.com.au/2018-national-conference-trade-exhibition/>
- AOA Conference presentations for each year from 2017 back to 2009 can also be accessed by logging into the 'Members Lounge' on the AOA website at: <https://australianolives.com.au/>

AOA Funded 2020 Virtual Olive Industry Conference: As required

- In lieu of the postponed 2020 Devonport TAS conference AOA convened a 4 day virtual conference event in October 2020. Details posted at: <https://olivebiz.com.au/aoa-2020-virtual-conference-recordings/>
- Due to a further postponement of the 2021 Devonport TAS conference, a second virtual conference will now be held in October 2021. Details posted at: <https://olivebiz.com.au/aoa-2021-national-virtual-conference/>
- The virtual conference approach remains an option for future conferences that need to be postponed due to exceptional circumstances.

AOA Field Days: Ad hoc

The AOA convenes industry field days in most years on various topics including IPDM & risk management, and Healthy Soils – Healthy and Productive Groves, both of which included an *OliveCare*® program presentation held at locations all over Australia. The industry is notified of timing and content via OGP Media channels well in advance of each event. Participant registration occurs via the OliveBiz website for each event. Outputs from these events are also posted on the OliveBiz website: <https://olivebiz.com.au/>

Workshops: Ad hoc

The AOA also convenes industry workshops on various topics including *Tastebook*® and *OliveCare*®, EVOO and table olive processing, held at locations all over Australia each year. The industry is notified of timing and content via OGP Media channels well in advance of each event. Participant registration occurs via the OliveBiz website for each event. Outputs from these events are posted on the OliveBiz website: <https://olivebiz.com.au/>

Note: Details of *OliveCare*® workshop, field day and webinar presentations and participant survey evaluation are available at [Appendix 5](#).

An evaluation of the usefulness of these industry communication channels is provided in Outputs

OliveCare® Code of Best Practice Certification:

OliveCare® Certification encompasses olive oil / flavoured olive oils / table olives / other products (pending)

AOA members who are OliveCare® Signatories are authorised to apply the following AOA Trade Marks to certified olive products, point of sale materials and websites, in accordance with the rules of use of these logos:



Australian Standard AS5264-2011® Compliant

A condition of use of the above certification logos is undertaking annual quality testing of your products.

This can be achieved either by having your products tested at an AOA approved laboratory, or by entering products in the AIOA competition or other complying olive competitions.

AOA Accredited EVOO Testing Labs

Both The Modern Olives and NSW DPI laboratories have equivalent accreditation through the National Association of Testing Authorities Australia (NATA); American Oil Chemists Society (AOCS), International Olive Council (IOC) and Australian Olive Association (AOA).

NSW DPI lab testing and sample submission form is available at:

<https://www.dpi.nsw.gov.au/about-us/services/laboratory-services/olive-oil-testing>

Modern Olives lab testing and sample submission form is available at:

<https://www.modernolives.com.au/olive-testing>

OliveCare® Signatory Compliance Requirements:

OliveCare® signatories are required to provide the following documentary evidence to the OliveCare® Administrator:

Compliance requirements for all OliveCare® Signatories:

- Provide a Product Risk Assurance or HACCP style food safety / food quality plan - either 'in-house' or as part of a proprietary third-party certification arrangement, (templates available), this should include:
 - Completing a declaration of food quality & food safety systems (*see Appendix 7*);
 - Use of retained representative samples for each batch prepared for sale should be kept by the producer / merchant for re-testing purposes should the need arise;
 - Documented product recall system in place, including product traceability records maintained involving unique batch codes and a record of where each batch of oil is sold.
- Comply with Food Standards Australia New Zealand (FSANZ) - Food Standards Code, Schedule 20 – Maximum residue limits, including use of a spray diary, correct storage of chemicals; and complete a *grower declaration of agri-chemical use* (*see Appendix 7*).
- Have product labels compliant with the relevant product standard, Australian Consumer Law (ACL) and OliveCare® (*copies of all product labels to be certified must be provided*); and complete a *declaration of product labelling* (*see Appendix 7*), Ref: Further information on olive product labelling (*see Appendix 9*).
- Implement an on-farm biosecurity plan using the *Farm Biosecurity Action Planner template for Olive Growers*¹⁴; and complete a *declaration of on-farm biosecurity preparedness* (*see Appendix 7*).

Additional compliance requirements for OliveCare® Signatories who are EVOO and favoured olive oil producers:

- Undertake annual product testing (at NSW DPI or Modern Olives), meeting AS5264-2011 requirements for classification for each product certified as required under the OliveCare® Code of Best Practice, including:
 - Mandatory: Minimum Oil Chemistry: Free Fatty Acids (FFA), Peroxide Value (PV), Ultra-Violet Absorption (UV) - (DK, K232 & K270). Wet chemistry is preferred; however, these parameters may be tested using NIR for Australian oils where the laboratory has robust calibration;
 - Mandatory Sensory assessment undertaken by NSW DPI or Modern Olives (or through participation in a recognised olive oil competition).
 - Highly recommended for EVOO: Oil Freshness Testing: Pyropheophytin a (PPP), 1,2 Diacylglycerols (DAG's), plus Oil Oxidative Stability Testing Rancimat® (Induction at 110 degrees C), tests which enable calculation of an objective BBD.

Note: A total of 27 OliveCare® Signatories and their 49 EVOO products are currently 'Certified Freshness Tested'.
- Complete a *declaration of EVOO storage conditions*, including control of Heat, Light and Oxygen (*see Appendix 7*).
- Apply product Best Before Dates (BBDs) supported by technical evidence (oxidative stability - FFA, FAP, IND, PPP, DAGs), and not exceeding 2 years from the date of packaging. The use of retained product samples will also assist in determining a realistic BBD after which time undesirable changes to the odour, colour, texture or flavour of the product may occur. (Ref: FSANZ – Food Standards Code Part 1.2.5).

¹⁴ Farm Biosecurity Action Planner for Olive Growers: <https://australianolives.com.au/wp-content/uploads/2018/12/Farm-Biosecurity-Action-Plan-for-Olive-Growers-Version-2.0-December-2019.pdf>

Additional requirements for OliveCare® Signatories who are table olive producers:

- Undertake annual product testing at a NATA accredited laboratory, meeting the requirements of *The Voluntary Industry Standard for Table Olives in Australia (RIRDC 2012-Revised January 2020)* for each product to be certified under the OliveCare® Code of Best Practice (further details at AOA Certified Australian Table Olive Compliance)¹⁵, including:
 - Physico-chemical parameters (eg for natural olives - pH < 4.3, salt > 6.0 g/100ml);
 - Microbiological testing for *E coli* (below level of detection < 3 cfu); *Clostridium perfringens* (below level of detection < 10 cfu; for pasteurised products the laboratory also tests for *Lactobacillus*, to measure effectiveness of pasteurisation (below level of detection < 10 cfu);
 - Sensory assessment undertaken by Modern Olives (or through participation in the AIOA or other recognised table olive competition).
- Complete a declaration of table olive storage conditions, (see [Appendix 7](#)).
- Apply product Best Before Dates (BBD), not exceeding 2 years from the date of packaging, as determined by the producer. The use of retained product samples will assist in determining a realistic BBD after which time undesirable changes to the odour, colour, texture or flavour of the product may occur. (Ref: FSANZ – Food Standards Code Part 1.2.5).

Australian Market EVOO Quality Surveys:

OliveCare® undertakes Australian market EVOO quality survey testing (contracted to deliver a total of 120 samples tested over 3 years) including certified Code oil assessing - selected chemical and sensory parameters for compliance against the Australian Standard for Olive Oil and Olive-Pomace Oil AS5265-2011 (AS), as well against the International Olive Council Trade Standard applying to olive oils and olive-pomace oils (IOC), COI/T.15/NC No 3/Rev.16 June 2021, and EU Regulation No 1348/2013(EU). Testing includes:

- Oil Chemistry: Free Fatty Acids (FFA), Peroxide Value (PV), Ultra-Violet Absorption (UV) - (ΔK , K232 & K270) – (using wet chemistry for imported samples, and IR for Australian samples),
- Oil Freshness: Pyropheophytin 'a' (PPP), 1,2 Diacylglycerols (DAGs), plus
- Sensory Analysis for defects undertaken in accordance with the *International Olive Council Method for the Organoleptic Assessment of Virgin Olive Oil*, COI/T.20/Doc. No 15/Rev. 7, February 2015¹⁶, by an accredited panel.

In the 2018 survey, 9 of the samples that had made a label claim to organic certification, were screened by Modern Olives (MO), also a NATA, AOCS, IOC and AOA accredited laboratory, for 45 selected chemical residues, including organochlorines, organophosphates, herbicides, acaricides, fungicides, synthetic pyrethroids, and insecticides, and assessed against the *Australia New Zealand Food Standards Code Schedule 20 – Maximum residue limits*.

Visual checks for label compliance with the *Australian Standard for Olive Oil and Olive-Pomace Oil AS5265-2011*, the *ANZFA Food Standards Code*, and *Australian Consumer Law (ACL)*, are undertaken by the OliveCare® Administrator

The OliveCare® Administrator provides constructive feedback on test results provided to the responsible party - Signatories, other producers and distributors - including how to achieve improved quality outcomes. Where there are persistent problems with particular brands and the relevant company is unwilling to take corrective action, the matter may be reported to the ACCC for action.

Further details of the market Survey are provided at Outputs, and further detail on the market survey test parameters is provided at [Appendix 2](#).

¹⁵ AOA Certified Australian Table Olive Compliance: <https://australianolives.com.au/aoa-certified-table-olive-compliance/>

¹⁶ International Olive Council Method for the Organoleptic Assessment of Virgin Olive Oil, COI/T.20/Doc. No 15/Rev. 7, February 2015: www.internationaloliveoil.org/documents/viewfile/3685-orga6

Data collection metrics:

Increase industry participation in OliveCare®

Metrics for evaluation of this objective:

- *Number of OliveCare® Signatories (primary targets) – growers & supply chain.*
- *Number of industry participants (secondary targets), provided with access to program outputs through AOA communication channels – growers & supply chain.*

Providing a formal mechanism for certification of quality Australian olive products.

Metrics for evaluation of this objective:

- *Industry coverage of OliveCare® Code of Best Practice (% by number and by production).*
- *Product testing compliance.*
- *Product traceability – use of batch codes.*
- *Product label compliance and use of CTMs.*
- *Food Quality Plans in place.*
- *Grove best practice compliance.*

Supporting and monitoring industry compliance with Australian Standard AS5264-2011, ANZ Food Standards Code and Australian Consumer Law (ACL).

Metrics for evaluation of this objective:

- *Number of olive products tested.*
- *EVOO quality improvement measured via the AOA's AIOA database.*
- *Analysis of survey test results for compliance against relevant trade standards.*
- *Participation and performance in Australian and international olive product competitions*
- *Compliance / breach letters sent to brand owners.*

Implement industry communications strategy

Metrics for evaluation of this objective:

- *Number of editions of OliveCare® News published and distribution.*
- *Number of articles published in other industry communication channels.*
- *Metrics for electronic communication channels will be tracked via Constant Contact (email):*
 - For Olivecare® News:*
 - *Open rate (%)*
 - *Click-through rate (%)*
 - *Click-to-open rate (%)*
 - *Hard bounce rate (%)*
 - *Unsubscribe rate (%)*
- *Evaluation of each technology transfer / training event with participant questionnaires supplemented with personal interviews; each event evaluated with the aim of continuous improvement throughout the project.*
- *Awareness and effectiveness will be measured by a stakeholder base-line survey and again after 30 months to monitor style, content, format, and frequency of communications and preferred channels.*
- *Knowledge and adoption increases will be measured via changes identified via the participant surveys.*

Outputs

AOA Market Survey of EVOO Quality:

Ref: MS102, MS104 and MS106 Achievements.

- Extra Virgin Olive Oil (EVOO) now enjoys 46% of the Retail Sales Value (RSV)¹⁷ of the cooking oil category, with refined olive oil at 17%, making total olive oil sales 63% of the RSV. This exceeds its competitors with seed oils having 24% of the RSV, and coconut oil at only 4%. The growth in the EVOO category means it is important for industry to maintain consumer confidence by monitoring the market to ensure consumers are getting what's on the label.
- Due to the biennial (alternate) bearing nature of the olive tree,¹⁸ Australian EVOO supply alternates between around 10 million and 20+ million litres p.a. which presents significant logistical challenges for brands to maintain year around presence of quality product in the marketplace.
- As a key component of OL17006 the Australian Olive Association (AOA) undertakes routine market surveys of olive oil products offered for sale in Australian retail and food service sectors. The program aims to support quality, authenticity and consumer confidence in the Australian olive industry and its products.
- During OL17006 funding period, a market survey was undertaken in 3 tranches involving a total of 95 product samples comprising 52 Australian and 43 imported labelled as EVOO being purchased for testing, including all EVOO brands / styles sold by the supermarket majors, Coles and Woolworths as well as selected brands from IGA, Foodland, Aldi, Harris Farms and some minor retail outlets in South Australia, Western Australia and New South Wales.
- The provenance of the 43 imported products tested is Spain 25, EU 2, Italy 16, (noting 12 of the 16 Italian products were actually 'packaged in Italy using imported and local ingredients').
- All samples were selected and dispatched in accordance with AOA OliveCare® Code of Best Practice market survey protocols, and were tested by NSW DPI Wagga Wagga Oil Testing Service (OTS) a NATA and AOCS accredited government laboratory against the *Australian Standards for Olive Oil and Olive-Pomace Oil AS5265-2011 (AS)*, as well against the *International Olive Council Trade Standard applying to olive oils and olive-pomace oils (IOC)*, *COI/T.15/NC No 3/Rev.14 November 2019 (updated in June 2021)*, and the *European Union Regulation No 1348/2013 (EU)*.
- In addition, 28 duplicate samples (14 Australian and 14 imported) were tested by Modern Olives laboratory at Lara (MO), this represents 29% of the total samples tested by OTS.

YEAR	OTS	MO	TOTAL
2018	43	10	53
2020	52	18	70
TOTAL	95	28	123

- The MS106 report covered market survey testing undertaken during the 2020 period; the 2018 market survey was reported at MS102; a summary report on the overall OL17006 market survey work is provided in this final report at MS109.
- Laboratory testing included: Free Fatty Acids (FFA), Peroxide Value (PV), Ultra-Violet Absorption (UV) - (deltaK, K232 & K270), Induction - Rancimat® (IND), Pyropheophytin 'a' (PPP), 1,2 Diacylglycerols (DAGs), plus Sensory Analysis undertaken in accordance with the *International Olive Council Method for the Organoleptic Assessment of Virgin Olive Oil, COI/T.20/Doc. No 15/Rev. 10, October 2018*; as well as visual checks for label compliance with ANZFA Food Standards and Australian Consumer Law (ACL).

¹⁷ IRI Scan Data, Australian Grocery, MAT 16/8/20.

18 2019/20 Australian Horticulture Statistics Handbook: <https://www.horticulture.com.au/globalassets/hort-innovation/resource-assets/ha18002-australian-horticulture-statistics-handbook-2019-20-fruit.pdf>

Market Survey Results:

Based on OTS testing of the 95 products in the OL17006 market survey period making a label claim to be of 'extra virgin olive oil' classification - (*EVOO Product Group*):

- **EVOO Classification:** Overall 76 (80%) of the 95 products tested met the parameters for EVOO classification under each of the Australian, EU and IOC Standards.

Pleasingly the data also demonstrates that overall EVOO brand performance has improved during the OL17006 period with brand compliance (as measured against the Australian Standard) of around 80% for both the 2018 and 2020 surveys up from 68% in the 2017 survey and up from a low of 63% in the 2015/16 survey.

- **VOO Classification:** Overall 17 (18%) of the 95 products tested were re-classified as VOO under the Australian Standard and 18 (19%) under the EU and IOC Standards.
- **Lampante Classification:** Only 2 (2%) of the 95 products tested was re-classified as Lampante (lamp oil - not fit for human consumption without further processing) as measured against the Australian Standard, failing chemistry, sensory, and freshness testing, however one of these products was reclassified as VOO under the less exacting EU and IOC standards.

Pleasingly olive oil products of the inferior Lampante quality have all but disappeared from the Australian marketplace, whereas in the 2014/15 market survey over 30% of olive oil samples were reclassified as Lampante quality!

Reasons for product failure and re-classification in the OL17006 market survey period:

- **Sensory Analysis of Defects** (all standards): A total of 12 (13%) of the 95 survey products tested by OTS exhibited negative sensory attributes (defects), including: 'fusty / muddy sediment', 'winey', and 'rancid', reflecting poor fruit quality and / or poor product processing and storage conditions. These results compare favourably with the 2017 survey in which a total of 9 (18%) of the products tested failed sensory assessment.
- **Chemical Analysis** (all standards): A total of 5 (5%) of the 95 survey products tested by OTS failed one or more of the chemical test parameters: Free Fatty Acids (FFA), Ultra-Violet Absorption (UV - K232, or K270), variously reflecting poor fruit quality, poor processing methods, poor product storage conditions, and secondary oxidation of the oils. These results are a marginal improvement over the 2017 survey in which a total of 4 (8%) of the products tested failed sensory assessment.
- **Freshness Analysis** (Australian standard only): A total of 10 (11%) of the 95 survey products tested by OTS failed Pyropheophytin 'a' (PPP), and / or 1,2 Diacylglycerols (DAG's), which are proven and useful measures of determining EVOO quality and freshness, validation of Best Before Dates, as well as for the detection of deodorised oils. These results compare very favourably with the 2017 survey in which a total of 15 (30%) of the products tested failed on freshness parameters.

Laboratory calibration:

- It is noted that both OTS and MO undertake regular laboratory and sensory panel accreditation audits with multiple agencies involving 'Process' and 'Proficiency' elements which in turn apply to both 'Chemical' & 'Sensory' analysis.
- Pleasingly there is a high level of agreement between OTS and MO regarding Chemistry and Sensory analysis (96.5% agreement)
- Of concern are significant discrepancies identified between the sensory assessment results from the OTS and MO laboratories involving 28 duplicate samples which serve to cast some doubt over the reliability of product re-classification of defective survey samples (56% agreement). AOA is working with the 2 laboratories with a view to resolving these sensory testing discrepancies.

Product Label Compliance with Australian Consumer Law:

"The term 'extra virgin' is widely understood by consumers to mean a premium product. Consumers should be able to trust that what's on the label is what's in the bottle," according to the Australian Competition and Consumer Commission (ACCC). The making of unsubstantiated 'premium' or 'credence' claims' is regarded by the ACCC as misleading and deceptive conduct.

In the 2020 market survey One Australian product made unsubstantiated 'premium claim' using the term 'Premium EVOO', implying this product was of even higher quality, when testing found this product to be of the lesser Virgin Olive Oil Classification.

Two Australian products claimed to be produced according to International Olive Council quality standards, but were found to be of the lesser Virgin Olive Oil Classification when assessed against the IOC Standard. Ref: ACCC Advertising and selling guide.¹⁹

Best Before Dates (BBDs) on 20 (38%) products labelled as EVOO were not supported by objective 'freshness testing' (Australian Standard only). EVOO brand owners should base label BBDs on objective testing rather than using a 2 year 'rule of thumb', this is especially the case for milder oils that have lower oxidative stability.

Country of Origin Labelling (CoOL):

Country of Origin Labelling (CoOL)²⁰ laws have applied to Australian food products since 1 July 2016 and became mandatory on 1 July 2018.

Pleasingly there is now a very high level of compliance with CoOL Regulations for olive products as can be seen from the following survey data:

- For the 2020 market survey a total of 52 samples comprising 27 Australian and 25 imported olive oils labelled as EVOO were included in the market survey, pleasingly ALL 52 samples used the required CoOL logo format on their labels.
- Whereas for the 2018 market survey a total of 43 product samples comprising 25 Australian and 18 imported labelled as EVOO were included in the market survey, noting six (24%) Australian EVOO product labels were found NOT to be compliant with the required CoOL logo format.

Chemical Residue Screening:

In the 2018 survey, 9 of the samples that had made label claims to organic certification, were screened by Modern Olives (MO), also a NATA, AOCS, IOC and AOA accredited laboratory, for 45 selected chemical residues, including organochlorines, organophosphates, herbicides, acaricides, fungicides, synthetic pyrethroids, and insecticides, and assessed against the *Australia New Zealand Food Standards Code Schedule 20 – Maximum residue limits* ²¹.

Pleasingly, all 9 EVOO products tested were NOT found to have detectible residues, which is consistent with their organic certification claims.

In the 2020 market survey no residue testing was undertaken.

¹⁹ ACCC Advertising and selling guide: <https://www.accc.gov.au/publications/advertising-selling/advertising-and-selling-guide/marketing-claims-that-require-extra-care-premium-and-credence-claims/premium-claims>

²⁰ Country of Origin Labelling (CoOL): <https://www.accc.gov.au/publications/country-of-origin-food-labelling>

²¹ Australia New Zealand Food Standards Code Schedule 20 – Maximum residue limits: <https://www.legislation.gov.au/Details/F2017C00647>

Communications with Stakeholders:

OliveCare® News

Including publication of a total of 35 editions of the monthly *OliveCare® News* (July 2018 to August 2021), including readership *metrics for electronic communication channels tracked via Google Analytics (website); and Constant Contact (email)*. Ref: [Appendix 4](#)

Noting the 'open rate' for *OliveCare® News* is consistently above 70%, which according to *Cox Inall Communications* is 50% points higher than the average open rate for the public relations industry at around 19%.

The 'click through rate' has fluctuated around 20% to 25%, well above the industry average for public relations of 1.4%. This shows good engagement of subscribers with the output and the content.

OliveCare® documentation updating and modularization:

A list of *OliveCare®* program resources revised and published is provided at [Appendix 3-10](#), and are posted in the AOA website *Members Lounge*: <https://australianolives.com.au/>, and in the *OliveCare® Members Area* <https://australianolives.com.au/olivecare-members-area/> and many resources are also posted open access at *OliveBiz*: <https://olivebiz.com.au/>

Modularisation, revision and simplification of Code documentation is critical to the success of this project. The revised Code of Best Practice documentation released under the *OliveCare®* include:

- [An index to and back issues of OliveCare® News editions](#)
- [OliveCare® product certification logos in various file formats](#)
- [OliveCare® Code of Best Practice Manual & Appendices \(Third Edition\)](#)
- [OliveCare® HACCP style food quality plan templates for EVOO and Table Olives](#)
- *OliveCare®* product guides for EVOO and Table Olives (in preparation)
- [Australian Olive Industry Export Manual and Workbook \(HIA 2016\)](#)
- [OliveCare® workshop presentations](#)
- [OliveCare® best practice checklists](#)

A consolidated list of Olive Industry Resources is also provided at [Appendix 3](#).

OliveCare® Code of Best Practice Participation & Compliance:

Desk audits are undertaken of all *OliveCare®* signatories, including membership, product compliance certificates issued; current *OliveCare®* certified brands; removal of brands from the *OliveCare®* certified brand register; membership invitations issued to potential signatories; olive oil and table olive storage declarations; an audit of signatory compliance with ANZFA Schedule 20 - including of spray diary records and chemical storage facilities; and a declaration on biosecurity awareness and preparedness – including adoption of an on-farm biosecurity plan.

Code of Best Practice membership:

- Noting that one of the goals of OL17006 is to increase producer participation in the Australian Olive Industry *OliveCare®* Code of Best Practice program from a base of 150 to 200 over 3 years, including extending membership along the supply chain. Apart from the option of full participation, elements of the program are regularly made available to all levy payers through AOA communication channels including Grove Innovation, R&D Insights, Friday Olive Extracts, Olivegrower & processor magazine (OGP), and on the OliveBiz website.
- The *OliveCare®* membership profile is 60% Level 1 <10,000 lit, 35% Level 2 <100,000 lit, and 5% Level 3 >100,000 lit.

- Since the commencement of OL17006 in July 2018 there has been a loss of 25 *OliveCare*® members from the certified brand register: <http://australianextravirgin.com.au/brands/>
 - 2018/19: 11
 - 2019/20: 13
 - 2020/21: 01
- New *OliveCare*® memberships during the same period are 24
- This is consistent with the pattern of loss of memberships over the past 8 years totaling 90 enterprises or 11 each year, primarily due to rationalisation of supply chains, drought and crop failures, low productivity and profitability of smaller producers as well as several larger groves around Australia, with a similar number of new memberships each year.
- Stated reasons for leaving the program in the OL17006 project period:
 - No longer growing olives / sold grove / sold olive business: 10
 - Don't want to continue membership – mostly in NSW - indicative of the effects of prolonged drought and tight economic conditions: 8
 - Commercial in confidence reasons (all traders): 3
 - Change in family circumstances (death of spouse): 1
 - Unknown: 3
- Since the commencement of OL17006 in July 2018, Code of Best Practice membership has fluctuated between 135 and 150 Signatories (comprising 125 to 140 grower members plus 10 olive traders), which represents around 45% of the 310 AOA financial grower members (as of 30 June 2021), and about 30% of the estimated 450 commercial olive industry enterprises in Australia.
- Targeted invitations are regularly issued to prospective members, including olive competition entrants, participants in AOA events including webinars, workshops, Tastebook™ sensory training program, and AOA conference.
- Code of Best Practice membership continues to represent at least 85% of total Australian olive oil production, largely due to the active participation of Cobram Estate Pty Ltd / Boundary Bend Ltd (Cobram Estate and Red Island brands) which comprise around 70% of Australian olive oil production. Membership levels are weakest in WA for historical reasons.

Signatory compliance data collected (to 31 August 2021):

- The *OliveCare*® Administrator maintains a register of *OliveCare*® certified brands, which is listed on the consumer facing Australian Extra Virgin website at: <http://australianextravirgin.com.au/brands/>
- As of the date of this MS190 report, there are 135 *OliveCare*® Certified brands, of which 128 are currently listed on the Australian Extra Virgin website:
 - NSW / ACT: 35 (+3 not listed) – 28%
 - QLD: 2 – 1.5%
 - SA: 26 (+3 not listed) – 22%
 - TAS: 12 – 9%
 - VIC: 43 – 32%
 - WA: 6 – 4.5%
 - Imported / International: 3 (+2 not listed) – 4%

Note 1: The 7 non-listed brands are either bulk oil traders, establishing the business / new members.

Note 2: There are 13 (10%) retail brand listed for which olive oil is solely purchased from third parties. In low crop years other olive producers may also top up their EVOO supply from third parties.

Note 3: 88 (65%) of the 135 signatories currently use the Australian Extra Virgin (AEV®) certification on their product labels and / or websites.

- Since July 202, membership invitations have been individually issued to over 325 potential members – however the response has been quite limited, possibly due to the extended drought across much of

Australia that has severely impacted on olive production and profitability. Another factor is smaller producers appear to be resistant to spending time on program compliance activities.

- During the OL17006 project period a total of 198 *OliveCare*® certified brand certificates have been issued comprising: 37 Freshness Tested EVOO Brand Compliance Certificates covering 62 products, 101 EVOO Brand Compliance Certificates covering 215 products, 38 Flavoured Olive Oil Brand Compliance Certificates covering 98 products, 22 Table Olive Brand Compliance Certificates covering 77 products:

Year	Certified EVOO Freshness Tested	Certified Australian EVOO	Certified Australian Flavoured Olive Oil	Certified Australian Table Olives	Totals
2021 (to 30 August)	13 (28)	25 (68)	4 (11)	1 (10)	43 (117)
2020	11 (16)	51 (109)	10 (32)	9 (37)	81 (194)
2019 (certificates expired)	9 (14)	19 (31)	17 (38)	10(27)	55 (110)
2018 (certificates expired)	4 (4)	6 (7)	7 (17)	2 (3)	19 (31)
Total Signatory Participation	37 (62) 27%	101 (215) 75%	38 (98) 28%	22 (77) 16%	198 (452)

Key: 13 (28) = 13 *OliveCare*® Signatories / Total of 28 products were Certified EVOO Freshness tested in 2021

Red highlight indicates these certificates are now expired

Note 1: The 2021 season test reports are only now being processed, and with a big crop year it is expected that total compliance certificates issued for 2021 will exceed those issued in 2020.

Note 2: The above data records the most recent compliance certificate(s) issued to each signatory.

- The data demonstrates that for EVOO producers there is a total of 100 signatories with current EVOO compliance Certificates (AEV plus Freshness Tested) or 74% of the current 135 participants.
 - For flavoured olive oil 14 of the 38 flavoured oil producer members (37%) have current certification.
 - For table olives 10 of the 22 table olive producers members (45%) have current certification.
 - OliveCare*® Member compliance - a desk audit has been undertaken of the current 135 *OliveCare*® signatories, comprising: declarations of olive oil and table olive storage conditions; signatory compliance with ANZFA Schedule 20 requirements, including spray diary records and chemical storage facilities; declaration of food safety systems; declaration of biosecurity preparedness; and a declaration of product labelling compliance with Australian Consumer Law. Ref: [Appendix Z](#).
 - Individual Letters / emails sent to Code of Practice Signatories – Re: Audit of Code Compliance Requirements.
 - Olive oil storage declaration forms submitted: 105 (78%), with key issues identified and addressed in *OliveCare*® News and one-on-one with signatories as necessary.
 - Agri-chemical use declarations forms returned to date: 60 of the 123 producer signatories (48%), with key issues identified and addressed in *OliveCare*® News and one-on-one with signatories as necessary.
- Note:** The agri-chemical use declaration indicates around 95% compliance in terms of use and storage of approved agri-chemicals
- Biosecurity preparedness declarations forms returned to date: 31 of the 123 producer signatories (25%), with key issues identified and addressed in *OliveCare*® News and one-on-one with signatories as necessary.

- Signatory declaration of food quality / food safety systems 33 of the 135 signatories (25%).
Note: LGA registration is mandatory for all food businesses in NSW, VIC and TAS, yet many olive producers in these states are not yet registered.
- Branded product labelling declaration forms submitted to date: 30 of the 135 signatories (22%).

Note: these is excellent compliance with Country of Origin Labelling (CoOL) requirements:

Which of the following Country of Origin Labelling (CoOL) compliance logos do you use on your olive products? (please tick all options that apply):

Please note that it is no longer sufficient to simply state 'Product of Australia' or 'Grown in Australia' or 'Made in Australia' on your product labels, the Country of Origin statement must now be in the prescribed format:



- **60%** use Product of Australia (with kangaroo and content 100% bar)
- **15%** use Grown in Australia (with kangaroo and content 100% bar)
- **25%** use Made in Australia from at least x% Australian ingredients (with kangaroo and content x% bar)
- **0%** use Packed in Australia from at least x% Australian ingredients (~~no kangaroo~~, with content x% bar)

Noting that Country of Origin Labelling (CoOL) Regulations have applied to most Australian food products since 1 July 2016, and became mandatory on 1 July 2018, the Australian Olive Association (AOA) has strongly promoted compliance with CoOL Regulations since its introduction.

AOA regularly checks olive product compliance with CoOL Regulations as part of its annual supermarket surveys, as well as through its *OliveCare*® Best Practice Program, and competition entries. Any CoOL labelling deficiencies are followed up individually with brand owners.

Pleasingly there is now a very high level of compliance with CoOL Regulations for olive products as is evident from the following data:

AOA market surveys:

The AOA undertakes annual market surveys of olive oil products labelled as Extra Virgin Olive Oil (EVOO) across the Australian retail and food service sectors.

- For the 2018 market survey a total of forty three (43) product samples comprising 25 Australian and 18 imported labelled as EVOO were included in the market survey, noting six (24%) Australian EVOO product labels were found NOT to be compliant with the required CoOL logo format.
- For the 2020 market survey a total of fifty two (52) samples comprising 27 Australian and 25 imported olive oils labelled as EVOO were included in the market survey, pleasingly all 52 samples from the 2020 market used the required CoOL logo format on their labels – demonstrating a significant improvement over the 2018 market survey.

Signatory engagement with the *OliveCare*® program:

Many *OliveCare*® signatories are enthusiastically engaged and fully compliant with the program as is evident from the following feedback comments:

The compliance documents are very useful. Over the years they have prompted me to make continuous improvements to my grove and product management. Allen Baird, The Village Olive Grove (TAS)

Many thanks for all of your work in keeping us informed and on track in pursuit of a what makes a quality product, Jude Cazaly, Flinders Island Olives

Peter works hard on the OliveCare program to continually improve the professionalism of everybody in the Industry in food safety, processing documentation, labelling and meeting Government legislation. Owen & Dianne Carrington Smith, Bruny Island Olives

However, it is evident that not all signatories are fully engaging with the program:

- 8 (6%) are identified as not engaging meaningfully with the program – these members are highly likely to drop out of the program at some future stage.
- 25 (18%) of signatories have not submitted product test results for the last 2 years (likely due to drought conditions experienced over recent years)
- 15 (11%) of signatories rarely open an edition of the monthly *OliveCare*® News

Olive Competition participation and performance

The value of the *OliveCare*® Best Practice Program is evident from the results of olive competitions which demonstrate outstanding success for *OliveCare*® members at state, national and international events:

In the 2020 AIOA competition the 43 *OliveCare*® member exhibitors won 111 (72%) of the 155 EVOO awards, winning 75% of the Major and Gold Awards.

OliveCare® members consistently win between 70% and 80% of the major awards in Australian olive competitions (with the exception of WA where *OliveCare*® program participation is limited).

OliveCare® members also do very well in international competitions where they consistently comprise between 80% and 100% of the Australian exhibitors who win awards. Ref: [Appendix 11](#).

Webinar, Workshop & Field Day Participation:

Ref: [Appendix 5](#).

2021 *OliveCare*® Best Practice webinars

- The 3 recent *OliveCare*® Best Practice webinars attracted between 78 and 97 registration per event.
- Total webinar viewing was 125. Each webinars had similar participation, with the most popular topic being table olives (45 views).
- Usefulness of each webinar was rated between 4.1 and 4.8 out of 5.
- Indicated 'learned new information' ranged from 80% to 100% of participants.
- Indicated 'will change practices' ranged from 66% to 100% of participants.

Participant Feedback:

- *Whilst processes won't change it is because seminar confirmed that our practices are in line with OliveCare.*
- *Found Shane's comments awesome though - and there is ALWAYS a take-home gem in every presentation put on. Would love to know more and more about how to create great oil - connecting what we do the field with what we do when processing. There is so much we don't know. So thank you.*
- *We've learnt a lot from this and the previous webinar especially re the regulatory environment and ensuring a high standard for Australian growers. It'd be good if you would also run a webinar on*

sales and marketing pointers/tips including to wholesale distributors, transporting and regulations for inter-state selling, etc. Thanks again, really interesting webinars.

- *Well presented, best explanation of water activity I have seen.*

2021 Healthy Soils Healthy & Productive Groves Field Days:

The 2021 Healthy Soils Healthy & Productive Groves Field Day Series comprised 6 events held across Australia in February / March 2021 as part of OL18000 and attracted a total of 159 participants representing 96 olive businesses.

The program included a presentation on “Setting the Scene (Grove Productivity) / *OliveCare* Best Practice” which was rated by participants 4.3 to 4.8 /5.0.

Participant Feedback:

- There were several positive comments on *OliveCare* checklists and setting KPIs.
- *“I am still not sure of the purpose of OliveCare as opposed to AOA.”*
- *“Will join OliveCare for more regular information.”*
- *“Would have liked more information on OliveCare best practice program.”*
- *“The overview of the services that we don’t currently use.”*
- *“Perhaps an update on new resources on the AOA website.”*
- *“Honestly we are actually not as good as we think on a worldwide comparison.”*

2019/20 *OliveCare*® / *Tastebook*® sensory training best practice workshops:

A series of 8 workshops were held across Australia from May 2019 to March 2020 run as part of OL17004 and attracted a total of 153 participants. *OliveCare*® contributed a presentation and discussion on EVOO and table olive product quality testing and certification.

Generally high level of satisfaction with participants rating the usefulness and relevance of the workshops between 3.6 (Perth) and 4.6 (Adelaide) stars out of a possible 5 stars.

Overall, 70% of the 153 workshop participants identified as olive producers, 24% as olive competition judges, 22% as olive processors, with 30% indicating other industry involvement / interests.

Grower participation in the workshops ranged from 33% in the Hunter Valley to 100% at Wangaratta. As an observation the more mixed the group, the more difficult it becomes to satisfactorily meet all needs.

Overall satisfaction with the organization and usefulness of the *OliveCare*® session was high, ranging from a low of 4.4 out of 5 to 4.9 out of five.

Overwhelmingly positive survey feedback, indicating the presentations and discussion “hit the target”. Participants value the *Tastebook* sensory training as demonstrated by 2 companies each sending 5 staff to the recent Adelaide workshop.

However, non-producer participants tended to find the *OliveCare*® presentations and discussion to be too technical, and not useful for their needs. Several participants would have preferred separate olive growing, olive processing and sensory training courses, others have mentioned separate days for beginners and experienced producers, and EVOO vs table olive producers; however, the presenters believe this is outweighed by the efficiency of having the combined training day.

The *OliveCare*® workshop focus was on EVOO given a separate workshop program was provided by Linda Costa on table olive production.

2020 OL18000 table olive best practice workshop series with South African table olive specialist Linda Costa:

The 6 table olive best practice workshops were held across Australia in February / March 2020 as part of OL18000 and attracted a total of 113 participants. *OliveCare*® contributed a presentation on table olive food safety.

A total of 59% of participants were commercial table olive producers, with a further 35% of participants (olive oil producers) planning to become table olive producers.

24% of workshop participants rated all sessions as equally valuable. The standout presentation was Principles of Table Olive Fermentation, different methods of processing olive fruit which was delivered across 2 sessions rated best by up to 87% of participants; followed by the Cultivar Conundrum at 51% and Spoilage Issues & Corrective Actions at 41%, and Table olives as a Functional Food at 34%.

Three presentations were nominated as the least interesting by 12% of workshop participants:

- Economic Context – market overview, cost structures. (AOA)
- Australian Food Safety Requirements. (*OliveCare*®)
- Table Olives as a functional food. (Linda Costa)

The data reflects the primary motivation for table olives producers for attending the workshop – they want to learn / confirm the best methods for making their table olives.

Podbooth also recorded a video production of the SA workshop presentations:

<https://olivebiz.com.au/2020-linda-costa-table-olives-sa-workshop-videos/>

2018 / 2019 AOA Risk Management and IPDM field days:

A series of 10 field days were held across Australia between August 2018 and February 2019, as part of OL17001 and the OL18000 program, attracting a total of over 300 participants.

The IPDM Field Day presentations include a segment on “Food Safety & Product Quality Risk Management (OL16011): *OliveCare*® Code of Best Practice” (Ref: [Appendix 5](#))

The OL 17001 IPDM regional field days were organized by AOA in collaboration with Western Sydney University to explore appropriate IPDM extension services focused particularly on black scale, olive lace bug and anthracnose:

Note: OL18000 AOA and OL17001 IPDM field day presentations (video and PowerPoint) are posted on the *OliveBiz* website at: <https://olivebiz.com.au/ipm-project/field-days/ipdm-videos-presentations/>

Note: *OliveCare*® has also prepared the following industry fact sheets - *Significant pests and diseases of the olive tree* (AOA 2020): <https://australianolives.com.au/significant-pests-and-diseases-of-the-olive-tree/>

Outcomes

Intended outcomes of this project:

1. ***Lifting the quality of Australian olive oil, table olives and related products and set benchmarks for improving quality, underpinning consumer confidence and enabling the Australian industry to more effectively compete in global markets based on quality. (2017 SIP Outcome 1 – Strategy 1.2)***

Ref: Market survey metrics MS 102, MS104 and MS106

Pleasingly the market survey data demonstrates that overall EVOO brand performance has improved during the OL17006 reporting period, with brand compliance (as measured against the Australian Standard AS5264-2011) of around 80% for both the 2018 and 2020 surveys up from 68% in the 2017 survey and up from a low of 63% in the 2015/16 survey. Furthermore, olive oil products of the inferior Lampante classification olive oil (not fit for consumption without further processing) has all but disappeared from the Australian marketplace, whereas in the 2014/15 market survey over 30% of olive oil samples were reclassified as Lampante quality!

The Australian Standard and the Code of Best Practice have driven improved performance of AEVOO since the Standard was established in 2011. Evidence is provided in 'outputs' detailing 2020 performance vs earlier market survey results; plus data from AOA / AIOA 2009 - 2020 EVOO Competition average quality scores clearly demonstrate AEVOO quality improvement from an independent and more robust data set as follows:



Indicating average quality scores have increased from mid Bronze to mid Silver over the past 10 years of competition:

- Gold Award (86-100 points)
- Silver Award (76–85 points)
- Bronze Award (65–75 points)

AOA market quality surveys also indicate that the standard of imported EVOO has also improved significantly to now match the quality of AEVOO. Australian consumers are the big winners. High quality EVOO at reasonable prices.

AEVOO can be differentiated from imported EVOO through subjective AIOA competition results, and the Australian industry adoption of objective freshness testing with associated logos that enable consumers to identify the ultra-premium quality and integrity of AEVOO.

The significant resources previously allocated for the market survey testing program may also deliver strategic outcomes when invested in other program elements such as online training courses, accreditation and “student” support. The training/capacity development and Code of Best Practice components of *OliveCare*® (with or without product certification) should be included in future iterations

of OL18000 communication and extension program.

The certification components could be moved to a new AOA certification program that provides QA certification for quality program implementation with increased audit activity. The flagship certification would be ‘freshness testing’ to AS5264-2011 with mandatory PPP, DAGs and IND test parameters enabling an objective determination of potential BBD (in future blockchain may be a useful tool/cost-effective way to validate certification).

2. Increasing producer participation in the OliveCare® Code of Best Practice based on current level from 2018 onwards; the (revised) target is to achieve 200 OliveCare® Signatories, with 100% compliance with testing against the Australian Standard (AS5264-2011)

- The participation metric was not achieved. Since the commencement of OL17006 in July 2018, Code of Best Practice membership has fluctuated between 135 and 150 Signatories (comprising 125 to 140 grower members plus 10 olive traders), which represents around 45% of the 310 AOA financial grower members (as of 30 June 2021), and about 30% of the estimated 450 commercial olive industry enterprises in Australia.
- The OliveCare membership profile is 60% Level 1 <10,000 lit, 35% Level 2 <100,000 lit, and 5% Level 3 >100,000 lit.
- Apart from the option of full program participation, elements of the program are regularly made available to all levy payers through AOA communication channels including Grove Innovation, R&D Insights, Friday Olive Extracts, Olivegrower & processor magazine (OGP), and on the OlizeBiz website, with collective distribution to over 2,000 olive producers and processors (levy payers), marketers, service providers and other industry stakeholders.
- Since the commencement of OL17006 in July 2018 there has been a loss of 25 OliveCare® members from the certified brand register: <http://australianextravirgin.com.au/brands/>
- New OliveCare® memberships during the same period are 24
- This is consistent with the pattern of loss of memberships over the past 8 years totaling 90 enterprises or 11 each year, primarily due to rationalisation of supply chains, drought and crop failures, low productivity and profitability of smaller producers as well as several larger groves around Australia, with a similar number of new memberships each year.
- Targeted invitations are regularly issued to prospective members, including olive competition entrants, participants in AOA events including webinars, workshops, Tastebook™ sensory training program, and AOA field days and annual conference.
- Code of Best Practice membership continues to represent at least 85% of total Australian olive oil production, largely due to the active participation of Cobram Estate Pty Ltd / Boundary Bend Ltd (Cobram Estate and Red Island brands) which comprise around 70% of Australian olive oil production. Membership levels are weakest in WA for historical reasons.

Ref: Updated participation data at MS190 Outputs.

3. A high level of participant compliance with OliveCare® Code of Practice requirements, including product quality testing, preparation of food safety / quality plans, and product label integrity, and compliance with the ANZFA Food Standards Code and Australian Consumer Law (ACL). (SIP Outcome 1 – Strategies 1.1 & 1.2)

As detailed in the updated compliance metrics at MS190 Outputs:

- The data demonstrates that for EVOO producers there is a total of 100 signatories with current EVOO compliance Certificates (AEV plus Freshness Tested) or 74% of the current 135 participants.
- For flavoured olive oil 14 of the 38 flavoured oil producer members (37%) have current certification.
- For table olive producers 10 of the 22 (45%) table olive producer members have current certification.

Noting the 2021 season test reports are currently being processed, and with 2021 being a big ‘on crop’ year it is expected that total compliance certificates issued for 2021 will exceed those issued in 2020.

In regard to the desk audit of signatory compliance with best practice declarations:

- Olive oil storage declaration forms submitted: 105 of the 135 signatories (78%), with key storage issues identified (exclusion of air, light and heat, plus use of racking and purging to remove sediment and water) and addressed in *OliveCare*® News and one-on-one with signatories as necessary.
- Agri-chemical use declarations forms submitted: 60 of the 123 producer signatories (48%), with key issues identified and addressed in *OliveCare*® News and one-on-one with signatories as necessary - key points:
 - 29% practice conventional pest and disease management using approved agri-chemicals as required.
 - 70% practice Integrated Pest & Disease Management (IPDM) focussing on improving soil and tree health with strategic and minimal use of approved agri-chemicals.
 - 13% are organic certified / In conversion to organic certification, (meaning only agri-chemicals approved by the organic certifier can be used in the grove).

Note: The declaration indicates around 95% compliance in terms of use and storage of approved agri-chemicals

- Biosecurity preparedness declarations forms returned to date: 31 of the 123 producer signatories (25%), with key issues identified and addressed in *OliveCare*® News and one-on-one with signatories as necessary - key points:
 - 50% of respondents have prepared an on-farm biosecurity action plan or checklist
 - 50% of respondents display a farm biosecurity sign at the entrances to their property
 - 80% of respondents have access to vehicle wash down facilities
 - 100% of respondents regularly monitor their groves for pests and diseases
 - 80% of respondents believe they are able to identify key biosecurity threats
 - 100% of respondents know how to report any suspicious findings to authorities
- Signatory declaration of food quality / food safety systems 33 of the 135 signatories (25%), key points:
 - Evidence of Product Food Quality / Risk Assurance Plans provided: 86 (65%)
 - Third party audited (SQF / HACCP / BRC - IFS): 18 (14%)
 - Third party Organic Certified (NASAA / ACO / Bio-dynamic): 16 (12%)
 - Other (VIC Food Smart / FreshCare® / other formal certificates): 5 (4%)
 - *Local Government / State Food Authority registrations: 26 (20%)
 - *OliveCare*® or other internal HACCP style food quality plans: 52 (39%)
 - Olive oil traders (purchasing finished product from certified suppliers): 12 (9%)

Note: LGA registration is mandatory for all food businesses in NSW, VIC and TAS, yet many olive producers in these states are not yet registered.

- Branded product labelling declaration forms submitted to date: 30 of the 135 signatories (22%), key points from the declaration form:
 - Compliance with FSANZ and ACL requirements:
 - There is close to 100% compliance with mandatory labelling information. The exceptions being for product storage information for which there is 67% compliance, and listing of ingredients for which there is 80% compliance.
 - Excellent compliance with Country of Origin Labelling (CoOL) requirements

A supermarket exemplar:

An August 2020 survey of all olive products sold at a single South Australian ‘Foodland’ supermarket revealed excellent compliance for both Australian and imported olive products with CoOL Regulations, only 1 (3%) of 35 olive products displayed in this supermarket was incorrectly labelled:

16 Australia EVOO brands: 7 Grown in Australia; 5 Product of Australia, 4 Made in Australia, with only 1 brand incorrectly labelled with a Made in Australia statement without the kangaroo logo and content scale bar.

- 5 Imported EVOO brands all correctly labelled with their country of origin: 3 Product of Spain and 2 Packed in Italy from imported ingredients.
- 4 Australian flavoured olive oil brands: 2 Grown in Australia and 2 Made in Australia (allowing for the imported flavouring) – all correctly labelled
- 1 Imported flavoured olive oil brand: Produced and Packed in Spain – all correctly labelled
- 5 Australian table olive brands: 1 Product of Australia, 1 Made in Australia from Australian ingredients, 2 Made in Australia from Australian and Imported ingredients, and 1 packed in Australia from imported ingredients – all correctly labelled.
- 4 Imported table olive brands: All Product of Spain or Product of Greece – all correctly labelled.

Signatory product range:

- All respondents sell EVOO products
- 50% of respondents also sell flavoured olive oil and table olive products
- 15% of respondents also sell skin care products
- 5% of respondents also sell olive leaf products

E-commerce:

- 80% of respondents have an on-line e-commerce facility

Establishing Best Before Dates:

- 80% of respondents use the BBD 'rule of thumb' of 2 years- the maximum allowable under the Australian Standard
- 40% of respondents use the BBD on the *OliveCare*® compliance certificate
- 20% of respondents use the BBD established by 'Freshness Testing' (PPP,DAGs, IND) or other objective methods (FFA, FAP, Rancimat®)
- 25% of respondents establish the BBD through experience (eg use of retained samples)

4. Increasing industry skills and capacity through adoption of industry best practice for production, processing, product storage and distribution (supply chain). (SIP Outcome 3)

One measure of increasing industry skills and capacity is performance in olive competitions, where *OliveCare*® Code of Best Practice members consistently outperform non-members (further analysis is provided at 1 above and at [Appendix 11](#)).

The AOA 2021 Communications Survey Part A outputs establish that *OliveCare*® members demonstrate a higher level of awareness and use of industry resources than other survey participants, (see following analysis).

Given the massive swings in grove production between 'on crop years' and 'off crop years', with the alternate bearing character of the olive tree, it is simply not possible to attribute any increase or decrease in grove productivity to other than season events.

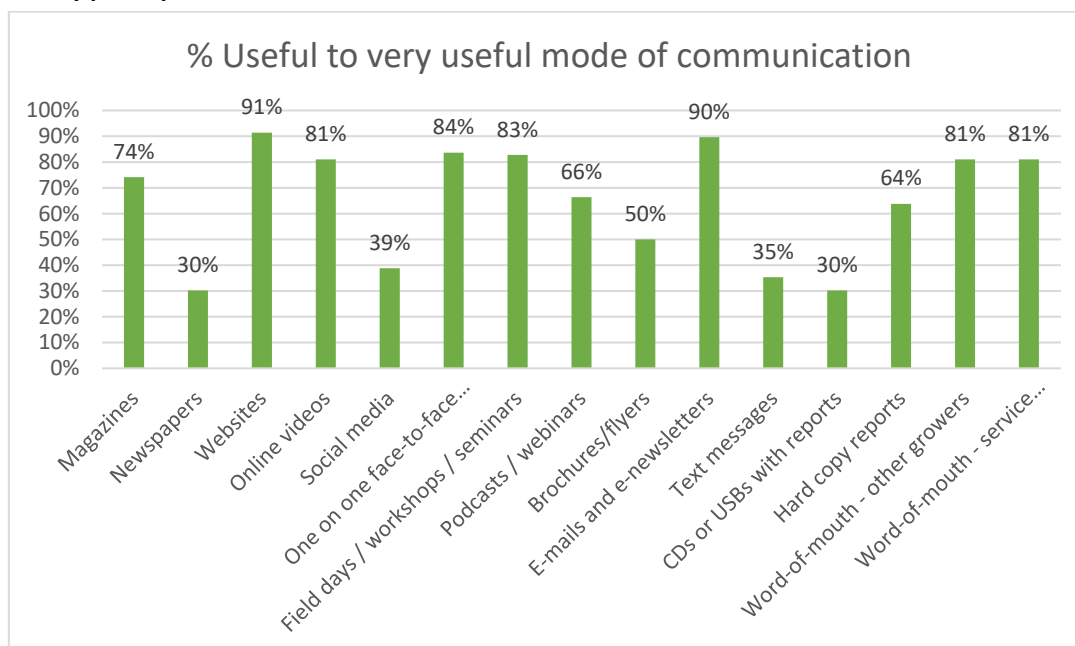
Industry trends that are evident with boutique olive producers is their increased participation in on-line marketing as a pivot to the COVID-19 Pandemic, plus diversification of products with increased interest in table olives, flavoured olive oils, skin care products, and bio-actives (olive leaf and olive leaf extract).

Ref: Participant survey (base line reported at MS103) with follow up survey reported at MS190 Outputs.

Communication Survey Results:

Undertaken in conjunction with OL18000

Survey participants useful modes of communication:



Noting that the preferred modes of communication were similar for the 2019 and 2021 surveys, and that *OliveCare*® members comprise 29% of the 2021 survey participants, the most useful modes of communication nominated were:

All survey participants (116)

- Websites (91%)
- E-mails and E-Newsletters (90%)
- One to one face to face discussions (84%)
- Field days / workshops / seminars (83%)
- On-line videos (81%)
- Word of mouth – other growers (81%)
- Word of mouth – service providers (81%)
- Magazines (74%)
- Podcasts / webinars (66%)
- Hard copy reports (64%)

OliveCare® survey participants (34)

- E-mails and E-Newsletters (100%)
- Websites (97%)
- Field days / workshops / seminars (95%)
- On-line videos (95%)
- One to one face to face discussions (91%)
- Word of mouth – other growers (91%)
- Word of mouth – service providers (88%)
- Magazines (88%)
- Podcasts / webinars (88%)
- Hard copy reports (68%)

The least preferred methods of communication were:

All survey participants (116)

- Brochures / Fliers (50%)
- Social Media (39%)
- Text messages (35%)
- CDs or USBs with reports (30%)
- Newspapers (30%)

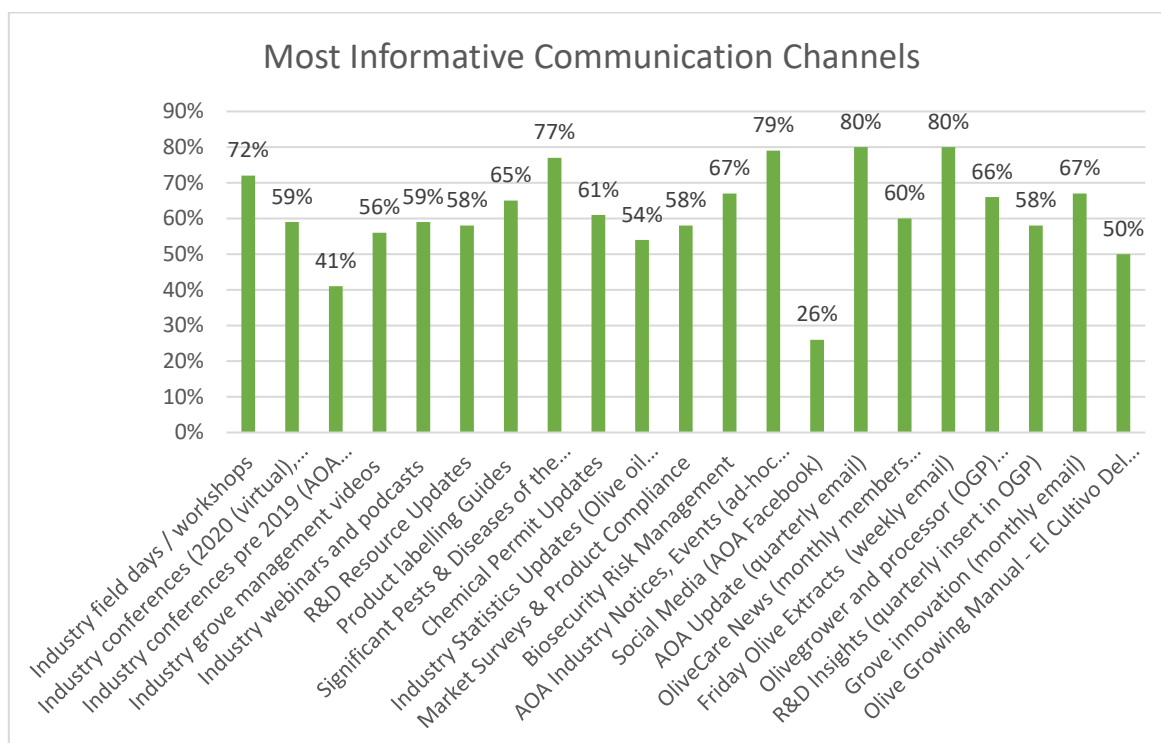
OliveCare® survey participants (34)

- Brochures / Fliers (59%)
- Text messages (47%)
- CDs or USBs with reports (38%)
- Newspapers (26%)
- Social Media (24%)

OliveCare® participants recorded a high level of interest in a broader range of communication channels. Pleasingly E-mails and E-Newsletters which are the major *OliveCare*® program communication channel were rated 100%.

The major changes from the base line survey were an increased preference for podcasts/webinars, from 45% in 2019 to 66% (88% for *OliveCare*® participants) in 2021; and for on-line video, which increased from 60% in 2019 to 81% (95% for *OliveCare*® participants) in 2021. This likely reflects the increased use of webinars and on-line videos during the current COVID-19 pandemic period, validating the AOA’s decision to provide webinars as an alternative, and addition, to face-to-face events.

Most informative communication channels:



Looking at specific industry communication channels and resources, 2021 survey participants rated the following highly:

All survey participants (116)

- AOA Update (quarterly email) (80%)
- Friday Olive Extracts (weekly email) (80%)
- AOA Industry Notices (ad hoc email) (79%)
- Significant pests & diseases of the olive tree (web page) (77%)
- Industry field days and workshops (events) (72%)
- Grove Innovation (monthly email) (67%)
- Biosecurity Risk Management webpage (67%)
- OGP Magazine (quarterly subscription) (66%)
- AOA Product Labelling Guides (65%)
- Chemical Permit Updates (61%)
- *OliveCare*® News (monthly) (60%) – available to Code Signatories and technical service providers
- Industry webinars and podcasts (59%)

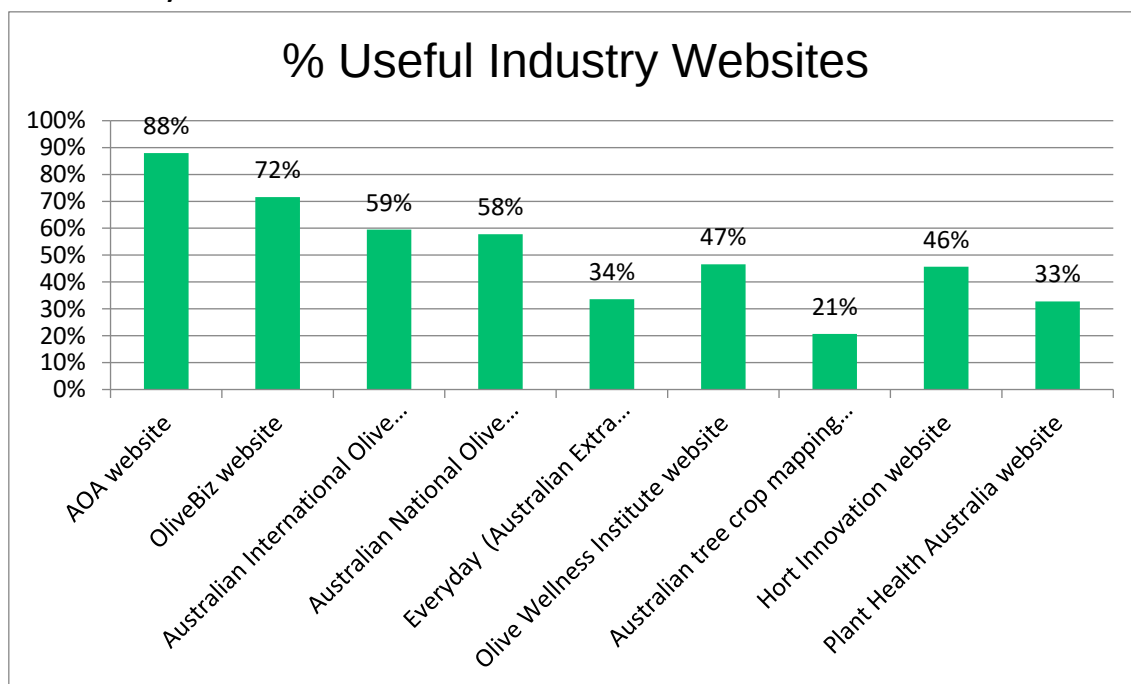
OliveCare® survey participants (34)

- *OliveCare*® News (monthly) (94%) – available to Code Signatories and technical service providers
- AOA Update (quarterly email) (94%)
- Friday Olive Extracts (weekly email) (94%)
- Significant pests & diseases of the olive tree (web page) (94%)
- Industry field days and workshops (events) (94%)
- OGP Magazine (quarterly subscription) (91%)
- AOA Product Labelling Guides (91%)
- AOA Industry Notices (ad hoc email) (91%)
- Grove Innovation (monthly email) (82%)
- Industry webinars and podcasts (82%)
- Industry virtual conference 2020 (82%)
- Industry grove management on-line videos (82%)

- Industry virtual conference 2020 (59%)
- R&D Insights (quarterly) (58%)
- Reviewed RIRDC Resources (58%)
- Market Surveys & Product Compliance (58%)
- Industry grove management on-line videos (56%)
- Industry statistical updates (annual) (54%)
- Olive Growing Manual (reference book) (50%)
- Industry conferences pre 2019 (AOA Members Lounge) (41%)
- AOA Social Media (Facebook) (26%)
- Biosecurity Risk Management webpage (82%)
- Chemical Permit Updates (74%)
- Industry statistical updates (annual) (74%)
- Market Surveys & Product Compliance (68%)
- R&D Insights (quarterly) (65%)
- Reviewed RIRDC Resources (65%)
- Olive Growing Manual (reference book) (62%)
- Industry conferences pre 2019 (AOA Members Lounge) (62%)
- AOA Social Media (Facebook) (21%)

OliveCare® participants recorded a significantly higher level of interest in a broader range of specific communication channels and resources than is reflected in the overall participants rating. This is not surprising as all the above resources are heavily promoted to *OliveCare*® members through the monthly *OliveCare*® Newsletter. This data confirms the value of AOA's multi-channel approach to industry communications and information transfer.

Useful industry websites:



Looking at specific industry websites, survey participants rated AOA websites the most useful:

All survey participants (116)

- AOA Website (88%) – much content being members access only – up from 69% in 2019
- OliveBiz Website (72%) – open access
- Australian International Olive Awards Website (59%) – open access
- AOA National Conference Website (58%) – open access
- Olive Wellness Institute Website (47%) – aimed

OliveCare® survey participants (34)

- AOA Website (94%) – much content being members access only
- OliveBiz Website (88%) – open access
- Australian International Olive Awards Website (82%) – open access
- AOA National Conference Website (76%) – open access
- Olive Wellness Institute Website (65%) –

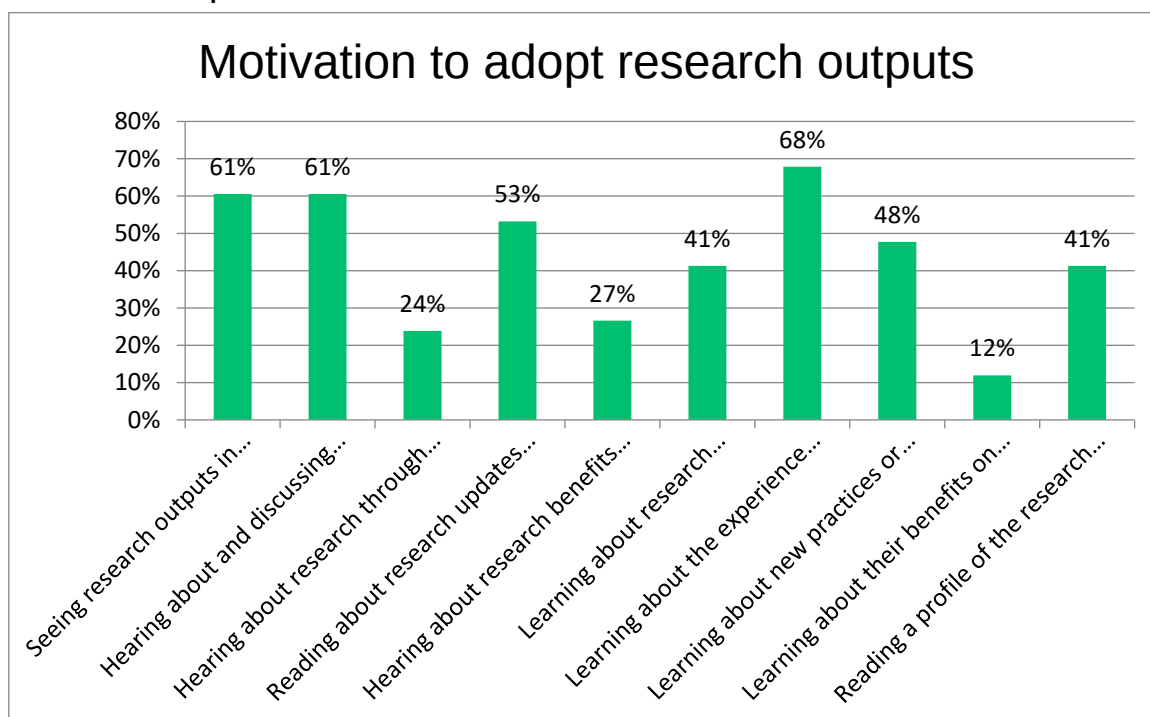
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| <ul style="list-style-type: none"> at health practitioners • Hort Innovation Website (46%) – open access multi-industry • Everyday Australian Extra Virgin Website (34%) – aimed at consumers • Plant Health Australia Website (33%) – open access multi industry • Australian Tree Crop Mapping Project Website (21%) – a new website | <ul style="list-style-type: none"> aimed at health practitioners • Hort Innovation Website (56%) – open access multi-industry • Everyday Australian Extra Virgin Website (50%) – aimed at consumers • Plant Health Australia Website (41%) – open access multi industry • #Australian Tree Crop Mapping Project Website (24%) – a new website |
|---|--|

#Australian Tree Crop Mapping Project Website (24%) – AOA plans to host a link to this website later in 2021 which is expected to increase industry awareness and use of this useful mapping application.

This data confirms that AOA communication channels add significant value to Hort Innovation investment of the Olive Levy.

OliveCare® participants recorded a high level of interest in a broader range of industry websites.

Motivation to adopt R&D:



Motivation to adopt R&D:

54% of survey participants said they had implemented R&D in their business after seeing or hearing about it in any olive industry events / communications. This is higher than in the 2019 survey where 38% of participants responded in the affirmative, indicating AOA's communication & extension program has gained traction.

Whereas 64% of *OliveCare®* member survey participants said they had implemented R&D in their business after seeing or hearing about it in any olive industry events / communications.

Survey participants stated they are most motivated to adopt research outputs through:

All survey participants (109)

- Learning about the experience of a grower who has implemented research on-farm (68%)
- Hearing about and discussing research benefits at a seminar or workshop (61%)
- Reading about research updates in an e-newsletter or website (53%)
- Learning about new practices or technology from an agronomist (48%)
- Learning about research benefits through a video or webinar (41%)
- Reading a profile of the research project in a magazine (41%)
- Hearing about research benefits from a friend or neighbour (27%)
- Hearing about research through news media (24%)
- Learning about their benefits on social media (state platforms - eg Facebook, Twitter) (12%)

OliveCare® survey participants (33)

- Learning about the experience of a grower who has implemented research on-farm (76%)
- Hearing about and discussing research benefits at a seminar or workshop (75%)
- Learning about new practices or technology from an agronomist (61%)
- Reading a profile of the research project in a magazine (58%)
- Learning about research benefits through a video or webinar (55%)
- Reading about research updates in an e-newsletter or website (52%)
- Hearing about research benefits from a friend or neighbour (36%)
- Hearing about research through news media (24%)
- Learning about their benefits on social media (state platforms - eg Facebook, Twitter) (6%)

Note: These results are broadly in line with the 2019 survey and confirm the value of ‘face to face’ learning.

OliveCare® participants recorded a high level of motivation to adopt R&D when exposed to a range of information sources (other than through Social Media).

31% of the 2021 survey participants said they willing to share their personal experiences with R&D adoption on their farm with other growers through articles in olive industry publications.

Accessing Olive R&D Reports:

Most 2021 survey participants access post 2013 (olive levy funded) R&D reports via the OliveBiz website (48%), up from 33% in the 2019 survey, followed by the Hort Innovation website (40%), up from 36% in the 2019 survey, again demonstrating how AOA communications channels add value to Hort Innovation investment of the olive levy.

Pre 2013 R&D reports are now accessed equally via the OliveBiz website (23%) and Agri-futures website (24%), up from 18% in the 2019 survey.

OliveCare® participants reported a higher level of access to R&D reports through all available channels, than did survey participants in general, noting access channel options are heavily promoted through the monthly *OliveCare®* Newsletter.

All survey participants (109)

- Agrifutures (previously RIRDC) - projects to 2013 (24%)
- Agrifutures (previously RIRDC) – reviewed and updated project reports 2020/21 (23%)
- Hort Innovation website - projects since 2013 (40%)
- OliveBiz website - projects since 2013 (48%)
- Have not accessed any of the above (39%)

OliveCare® survey participants (33)

- Agrifutures (previously RIRDC) - projects to 2013 (27%)
- Agrifutures (previously RIRDC) – reviewed and updated project reports 2020/21 (30%)
- Hort Innovation website - projects since 2013 (52%)
- OliveBiz website - projects since 2013 (70%)
- Have not accessed any of the above (15%)

Most useful Hort Innovation resources:

The 2021 survey participants nominated the most useful Hort Innovation resource to be 'Growing Innovation News' at 45%. It is also possible that survey participants are confusing this general horticultural newsletter with the olive specific 'Grove Innovation News' – which rated highly in a previous survey question.

Other Hort Innovation resources are rated as follows, noting most survey participants indicating they do not access these resources rather than not finding the resources useful.

All survey participants (104)

- 'Growing Innovation News' (45%)
- Hort Innovation Olive Fund web page (38%)
- Olive Strategic Investment Plan 2017-2021 (29%)
- Ag Chemical regulatory support and coordination (29%)
- Hort Innovation Insights Webinars (26%)
- Australian Horticulture Statistics Handbook 2019/20 (26%)
- Growing Matters Podcasts (16%)

OliveCare® survey participants (32)

- 'Growing Innovation News' (56%)
- Hort Innovation Olive Fund web page (47%)
- Australian Horticulture Statistics Handbook 2019/20 (41%)
- Olive Strategic Investment Plan 2017-2021 (41%)
- Hort Innovation Insights Webinars (38%)
- Ag Chemical regulatory support and coordination (34%)
- Growing Matters Podcasts (22%)

1. Increased industry participation in OliveCare®:

Metrics for evaluation of this objective:

- Number of OliveCare® Signatories – growers / supply chain: 150
- Number of OliveCare® Signatories participating in 'the olive route' export program: 9

2. Providing a formal mechanism for certification of quality Australian olive products:

Metrics for evaluation of this objective:

- Industry coverage of CoP (% by number and by production): 33% of commercial producers, 90% of production.
- Product testing compliance in 2017: 83% of 150 Signatories (noting 5 Signatories had no crop in that year)
- Product traceability compliance – use of batch codes. 94% of 47 certified brands surveyed.
- Product label compliance and use of CTMs. 77% of signatories have provided OliveCare® compliant labels, with 60% of Signatories using OliveCare® certification trade mark(s) on their products and/ or websites.
- Food Safety / Food Quality Plans in place: 64% of Signatories have provided evidence of having some level of food safety / quality plan in place. This ranges from the basic OliveCare® template through to third party accredited HACCP plans.

3. Building olive industry skills and capacity through development and delivery of competency based training modules and provision of other teaching and learning resources:

Metrics for evaluation of this element:

- Training modules developed: 6 modules comprising 10 on-line self-paced presentations posted on the RMT website.
- Enterprise trainers accredited: six
- Regional training programs delivered: None to date – will require additional funds.
- Participation in training program. One to date – will require additional promotion of e-learning modules.
- Participants achieving competency based training accreditation: None to date – will require additional time.
- Participation in the Tastebook™ sensory training program: 50 (33%) of the 150 Code Signatories.
- OliveCare® Newsletter editions: 15 to June 2018.
- Resources published AOA / OliveBiz websites: 20

4. Supporting and monitoring industry compliance with Australian Standards, ANZ Food Standards Code and Australian Consumer Law (ACL):

Metrics for evaluation of this element:

- Number of olive products tested: 185 EVOO products, 8 olive oil blends, 4 vegetable oil spreads, 38 table olive products.
- Changes in EVOO quality measured via the AOA's AIOA database: This data is yet to be statistically analysed, however feedback from the AOA head judge is that a measurable improvement in the performance of EVOO exhibits has occurred over the past 3 years moving average scores from bronze to silver medals.
- Analysis of Australian market survey test results for compliance against relevant trade standards: Of the 382 EVOO samples purchased and tested between July 2012 and September 2017 (63 months), 26 (22%) of the 129 *OliveCare*® certified brands failed to comply with AS5264-2011, compared with a failure rate of 42 (41%) for the 102 non-certified Australian brands tested, and a failure rate of 135 (89%) for the 151 imported brands tested.
- Compliance / breach letters sent to brand owners: All brand owners are contacted with individual results of the Australian market survey, and constructive feedback is provided. In total 130 brand owners including 50 *OliveCare*® certified brand owners have been contacted regarding survey test results.

Monitoring and evaluation

AOA communications and stakeholder engagement strategies continue to be effective, relevant, process appropriate and efficient.

Ref: OL17005 MS102 & MS105

Program logic framework:

As reported at MS102.

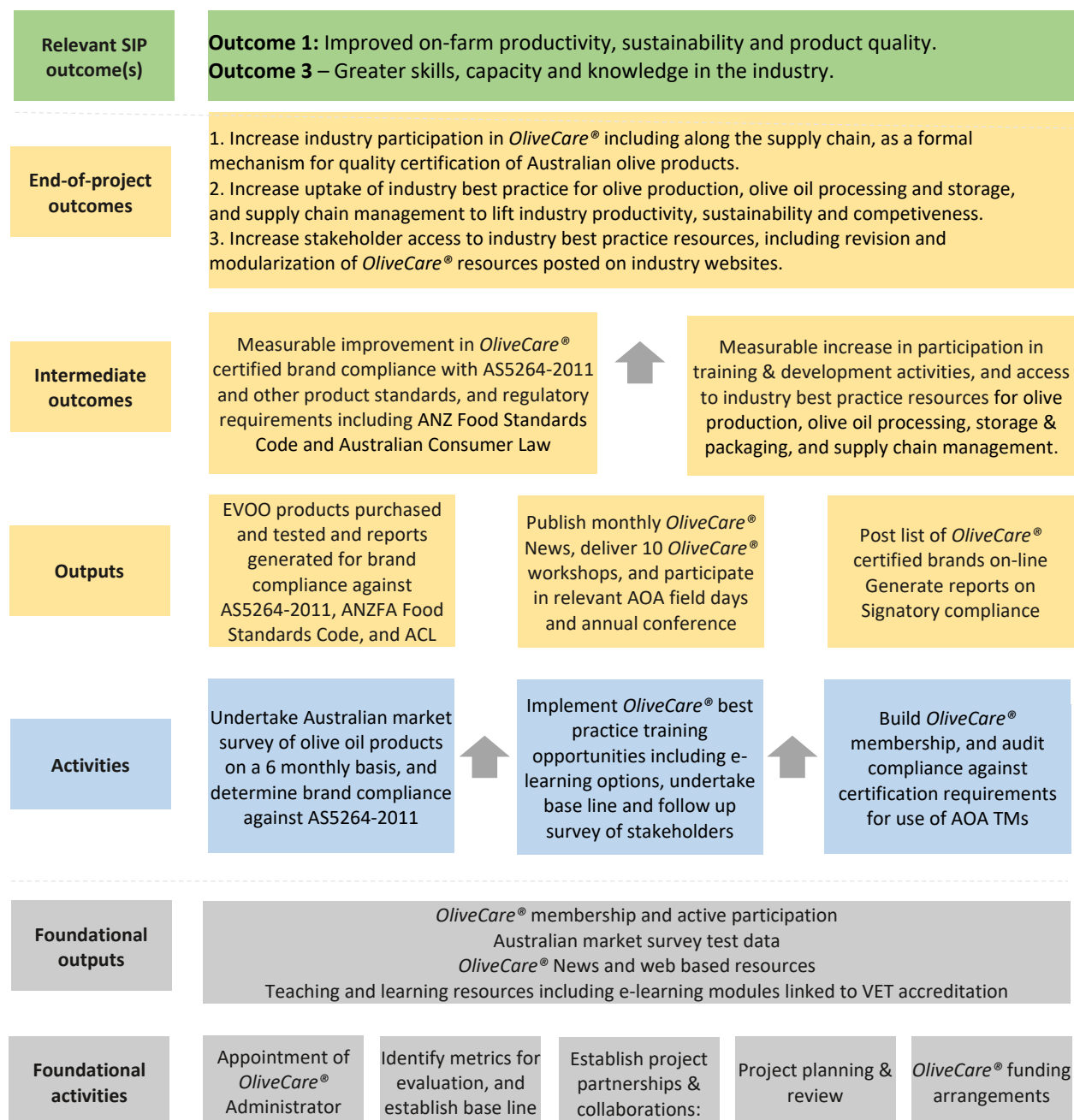


Figure 1: OL17006 Key Evaluation Questions

Stakeholder engagement plan:

The primary audience for OL17006 is *OliveCare*® signatories who must ‘opt in’ to this program. Participants are primarily olive growers, processors and brand owners, with the objective of increasing participation of supply chain partners, including, warehouse, providores, retailers, food service (hotels and restaurants), importers and exporters.

Who	Stakeholder	Growers / Processors / Brand owners	Supply chain (Warehouse, Providores, Retailers, Food service, Importers and Exporters)	Technical: Consultants, Agronomists, Researchers	AOA: PIB and co-investor / Project team	Hort Innovation / Project reference panel	Government / NGOs
Why	Why engage with this group	<i>Delivery of improved knowledge & understanding; Demonstrate an effective ROI; Support industry efficiency & sustainability; Build consumer confidence in olive products; Increase grower participation in OliveCare®</i>	<i>Delivery of improved knowledge & understanding; Support industry efficiency & sustainability; Build consumer confidence in olive products; Increase supply chain participation in OliveCare®</i>	<i>Leverage delivery of improved knowledge & understanding; Support industry efficiency & sustainability</i>	<i>Enhance delivery of industry communication, and improved knowledge & understanding; Support industry efficiency & sustainability</i>	<i>Enhance delivery of improved knowledge & understanding; Enhance delivery of communication of outcomes of levy funded R&D projects</i>	<i>Enhance engagement and compliance with government programs and regulation</i>
How	What is the level of engagement	<i>*Inform, Consult, Involve, Empower</i>	<i>*Inform, Consult, Involve, Empower</i>	<i>*Consult, Involve, Collaborate</i>	<i>*Consult, Involve, Collaborate</i>	<i>*Consult, Involve, Collaborate</i>	<i>*Consult, Involve, Collaborate</i>
	Proposed method of engagement	<i>Direct one-on-one engagement, OliveCare® News, AOA conference presentations, workshops, field days, contribute industry journal articles & content on industry websites, Survey Monkey</i>	<i>Direct one-on-one engagement, OliveCare® News, AOA conference presentations, workshops, field days, contribute industry journal articles & content on industry websites, Survey Monkey.</i>	<i>Direct one-on-one engagement, OliveCare® News, AOA conference presentations, workshops, field days, contribute industry journal articles & content on industry websites.</i>	<i>Direct engagement with AOA CEO and Directors, OliveCare® News distribution, contribute industry journal articles, industry websites; Collaboration with OL18000</i>	<i>Engagement with Industry relationship manager, R&D program managers; Collaboration with Hort Innovation funded projects OL18000, OL17001, OL17002, OL17003, OL16000, OL16001, OL16004, OL16010, OL16011, OL14008</i>	<i>ACCC FSANZ APVMA Austrade PHA</i>
	Timing of engagement	<i>Ongoing throughout the year</i>	<i>Ongoing throughout the year</i>	<i>Periodic as necessary</i>	<i>Ongoing throughout the year</i>	<i>PRG meetings Milestone reports</i>	<i>As appropriate</i>

						SIAP meetings Personnel as necessary	
	Resources required	AOA database & networks; Access to internet with high bandwidth	AOA database Expand industry networks	Established industry networks, partnerships and collaboration	Project funding	Project funding	Established agency contacts
	Responsibility	Peter McFarlane	Peter McFarlane	Peter McFarlane	Greg Seymour	Greg Seymour	Greg Seymour
	Key messages to communicate	Adoption of olive industry best practice for grove production, processing and olive oil storage practices; Adopt 'freshness testing' to enhance olive oil quality for consumers	Adoption of olive industry best practice for olive oil storage and distribution; Adopt 'freshness testing' to enhance olive oil quality for consumers	Support adoption of olive industry best practice	Engage whole of industry; Provide value to olive levy payers	Available information and technology transfer avenues to enhance adoption of levy funded R&D	Industry engagement with government programs and compliance with regulations
Special Considerations	Risk management issues, engagement barriers, audience characteristics	Grower engagement: Need to ensure regional program delivery occurs in each state	Supply chain engagement: Need to build involvement, through identification and recruitment of key opinion makers	Declining availability of government agency technical resources; need to establish networks with private providers	Industry support for AOA, need to balance service delivery to large and small growers.	Olive grove biennial bearing, collection of levy funds collection and available funding	Change of government, change of policy, personnel turnover

Table 1: OL17006 Stakeholder engagement plan

**Inform – To provide information to assist stakeholders to better understand the issue, and/or identify alternatives, opportunities and/or solutions to the issue.*

Consult – To obtain feedback from key stakeholders on the issue, alter natives and/or outcomes.

Involve – To engage directly with key stakeholders throughout the project to ensure that major concerns and needs are understood and considered.

Collaborate – To partner with key stakeholders to develop/evaluate solutions to problems, to make decisions, provide advice and to identify preferred solutions.

Empower – To deliver solutions and/or the ability for informed decision-making in the hands of the stakeholder. Stakeholders are then enabled to directly contribute to the achievement of project outcomes.

Key evaluation questions:

As reported at MS102, revised at MS105, and updated at MS190.

Domain*	Key evaluation questions
Effectiveness	1 To what extent is the project achieving its expected outcomes? 2018 and 2020 Market Surveys (completed): During OL17006 funding period, a market survey was undertaken in 3 tranches involving a total of 95 product samples comprising 52 Australian and 43 imported labelled as EVOO purchased for testing, including all EVOO brands / styles sold by Coles and Woolworths supermarkets as well as selected brands from IGA, Foodland, Aldi, Harris Farms and some minor retail outlets in South Australia, Western Australia and New South Wales. All samples were selected, dispatched in accordance with AOA <i>OliveCare</i>® Code of Best Practice market survey protocols, and were tested by NSW DPI Wagga Wagga Oil Testing Service (OTS). In addition 28 duplicate samples (14 Australian and 14 imported) were tested by Modern Olives laboratory at Lara (MO), which represents 29% of the total samples tested by OTS. Pleasingly the data demonstrates that overall EVOO brand performance has improved during the OL17006 period with brand compliance (as measured against the Australian Standard) of around 80% for both the 2018 and 2020 surveys up from 68% in the 2017 survey and up from a low of 63% in the 2015/16 survey. Communications with Stakeholders (ongoing): Including presentations on '<i>OliveCare</i>® and Food Safety & Product Quality Risk Management' delivered (in collaboration with OL17001 and OL17003) at 9 IPDM days and a further 9 <i>OliveCare</i>®/ <i>Tastebook</i> workshops held in NSW, QLD, SA, TAS and WA. Two presentations were delivered at the AOA 2018, and one presentation at the 2019 National Conference covering '<i>OliveCare</i>® certification of Table Olives and EVOO' and the AOA National market Survey of EVOO Brands; plus a total of 35 editions of '<i>OliveCare</i>® News' have been published to date in this project ; Several webinars on <i>OliveCare</i>® Production Best Practice for EVOO and Table Olives were delivered in the MS190 reporting period, demonstrating an overall high level of stakeholder engagement. <i>OliveCare</i>® Signatory participation and compliance (ongoing): Currently there are 135 <i>OliveCare</i>® Certified Members; Desk audits have been undertaken for all <i>OliveCare</i>® signatories. During the OL17006 project period a total of 205 <i>OliveCare</i>® certified brand certificates have been issued comprising: 37 Freshness Tested EVOO Brand Compliance Certificates covering 62 products, 110 EVOO Brand Compliance Certificates covering 220 products, 36 Flavoured Olive Oil Brand Compliance Certificates covering 90 products, 22 Table Olive Brand Compliance Certificates covering 77 products: Membership invitations have been issued to 325 potential members – unfortunately the response has been limited largely due to the extended drought across much of Australia that has severely impacted on olive production and profitability, with associated reluctance to take on additional compliance responsibilities; membership and compliance metrics are reported in full at MS190 'outputs'. A participant survey on 'olive oil storage practices' has been undertaken and reported at MS102; and updated at MS190. Participant surveys for, 'on-farm agrichemical use', 'on-farm biosecurity preparedness, 'food quality/food safety systems' and 'product labelling' are reported at MS106 and updated at MS190; Adoption of industry best practice for production, processing, product storage and distribution (supply chain) has been monitored through a base-line stakeholder survey reported at MS103, with the results of the recent follow up survey included in this final report MS190.
Relevance	2 How relevant is the project to the needs of intended beneficiaries? Anecdotally this project remains relevant to the needs of intended beneficiaries, through providing a quality systems approach to improve the performance of olive producers and the quality of their products, with the aim of meeting consumer quality expectations for Australian olive products.

	The AOA 2021 Communications Survey Part A outputs establish that <i>OliveCare</i>® members demonstrate a higher level of awareness and use of industry resources than other survey participants, (see following analysis).
Process appropriateness	3 How well have intended beneficiaries been engaged in the project? There is a high level of engagement of the <i>OliveCare</i>® administrator with signatories – individually, primarily through email and telephone contact, and collectively primarily through the monthly <i>OliveCare</i>® NEWS, and via AOA field day and workshop activities, AOA webinars, publications and websites. 4 To what extent are engagement processes appropriate to the target audience/s of the project? The project methodology is consistent with the outcomes of the previous industry needs analysis undertaken as part of OL16006. Because of time and cost considerations, project beneficiaries are primarily engaged electronically; However it is recognized that many olive producers do prefer face to face contact; this objective is being addressed by convening regional activities in conjunction with OL17001, OL17003 and OL18000 field days and workshops. Unfortunately some of the proposed <i>OliveCare</i>® and AOA face to face information transfer and training events have need to be pushed back into 2022 because of current COVID-19 operational restrictions.
Efficiency	5 What efforts is the project making to improve efficiency? The Australian market survey program has operated smoothly and efficiently, but is very expensive to deliver, primarily due to sample testing costs. OL17006 planning activities and communications outputs are harmonized with OL18000. This project also has a high level of engagement and collaboration with other R&D project teams including working with and promoting outputs from: <i>OL17001, OL17002, OL17003, OL16000, OL16004, OL16010, OL16011 and OL 14008, and the multi-industry Remote Sensing Project.</i> The current compliance audit process is time consuming and can be expected to become even more so with membership growth; To assist with compliance audit efficiency the <i>OliveCare</i>® administrator has developed check lists for growers to self-evaluate, noting however that procuring documents for desk audit requires significant time to follow-up signatories, especially with those who don't participate in olive competitions, which provide product chemistry testing and sensory assessment results to cross reference for <i>OliveCare</i>® compliance. That said overall compliance with <i>OliveCare</i>® system is very encouraging.

Table 2: OL17006 Key Evaluation Questions

Recommendations

Recommendations for future R&D and practical application to industry:

Market Quality Surveys:

Noting AOA's market quality survey, together with the AIOA and *OliveCare*® AEV® and 'freshness tested' certification help to position Australia as a high integrity producer of ultra-premium EVOO domestically and internationally supported by integrity of labelling (*Draft SIP Strategy 3.4*).

1. That given the measurable and significant improvement in the quality of both Australian and imported EVOO in the marketplace, and noting the high cost of product testing, that future Australian market quality surveys should be undertaken on an 'as required' basis.
2. That ongoing EVOO sensory panel training and calibration work be undertaken to reduce the current discrepancies between panels.
3. That the AIOA results continue to be used as a tool to monitor product quality.

OliveCare® Best Practice and Certification Program:

4. That the *OliveCare*® best practice and certification programs be rolled into the broader AOA communication and technology transfer program, and continue to be promoted as an 'opt in' program to all olive supply chain participants.
5. That the Australian olive industry continue to promote 'freshness testing' and product certification to provide consumers of EVOO with objective guidance on product quality.
6. That consideration be given to providing 'freshness testing' certification as a separate program to *OliveCare*®, on a fee for service basis including to participants of the AIOA.

AOA communication and technology transfer program:

To achieve optimised grove management strategies to address sources of yield variability (e.g. biennial bearing, water availability, frost, pest and disease control, canopy management, grove nutrition) (*Draft SIP Strategy 1.2*)

7. That future AOA communication and technology transfer programs continue its focus on risk management as detailed in the *OliveCare*® Best Practice Checklists.

In support industry-driven innovation and extension initiatives (based on the open sharing of knowledge and expertise from Australian and international networks and benchmarking initiatives) that help support positive change in the areas of sustainable production, biosecurity and meeting consumer quality expectations (*Draft SIP Strategy 1.1*).

8. That AOA review its website design and simplify navigation.
9. That AOA consider the communications content preferences from AOA communications survey reports:
 - Grove nutrition best practice (67%)
 - Grove canopy management best practice (66%)
 - Olive harvesting best practice (58%)
 - Processing best practice – olive oil (51%)
 - Olive oil storage best practice (50%)
 - Grove irrigation best practice (50%)
 - New olive products (42%)
 - Grants and support (41%)
 - Benchmarking and grove productivity best practice and product standards (38%)
 - Processing best practice – table olives (38%) – noting this has been well covered in recent years

- Table olive storage best practice (38%)
- Understanding laboratory test reports (36%) – noting this is well covered through *OliveCare*®
- Domestic sales & marketing (32%)
- On farm biosecurity best practice (28%) – noting this has been well covered in AOA communications in recent years.
- IPDM best practice (26%) – noting this has been well covered in AOA communications in recent years.
- Regulatory issues (25%)
- Grove establishment best practice (22%)
- Olive nursery best practice (21%)
- Supply chain management best practice (20%)
- Business skills (19%)
- Export market research (17%) –confirming the domestic market focus of the Australian olive industry.

Refereed scientific publications

None to report

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Intellectual property, commercialisation and confidentiality

Assignment of IP by the Research Provider to Hort Innovation:

The IP created in this project is the copyright © to written, audible, and visual assets created for the extension program throughout the life of the project. This IP is assigned by the Research Provider to Hort Innovation, notwithstanding the rights of the Research Provider to use and sub-license this IP to others royalty free for its internal purposes or by consent by Hort Innovation its use for specified purposes for the benefit of the Australian horticultural industries.

The Australian Olive Association Ltd (AOA) has agreed to host information resources created during this project, on the AOA and OliveBiz websites, which enables this information to be made available to all olive industry participants on an ongoing basis. These resources include publications and training materials listed in a previous section of this report.

AOA Pre-existing IP:

The AOA owns the following pre-existing IP as utilised in this project:

- *OliveCare*® Certification Trade Marks including Certified Australian Extra Virgin®,
- Certified Australian Table Olives®, Certified Australian Flavoured Olive Oil®,
- *OliveCare*® Manual and Product Guides®,
- *OliveCare*® HACCP based templates for EVOO and Table Olives®,
- ANZ OliveGrower & Processor Magazine® (OG&P) – quarterly printed (hardcopy) and e-magazine;
- Olive Industry Directory®.
- Friday Olive Extracts® (FOE) – weekly e-newsletter,
- OliveBiz® website,
- AOA website.

The AOA also owns industry databases created and maintained using AOA resources. These databases enable the AOA to communicate with all participants in the olive industry supply chain.

Acknowledgements

The author acknowledges the constructive support provided throughout the project by staff and directors of the Australian Olive Association Ltd, staff of the Department of Primary Industries NSW and Modern Olives oil testing laboratories and sensory panels, specialist in olive production, olive oil and table olive processing, Hort Innovation funding and program staff support, and *OliveCare*® Signatories who have so enthusiastically participated in OL17006.

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Appendix 1: OL17006 Project Team:

Project reference committee (PRC) – as of June 2021:

The OL17006 and OL18000 project reference committee comprises:

- Marlies Eicher Saluté Oliva Pty Ltd (olive levy payer - VIC)
- Alan Smith, Shalumar, (olive levy payer NSW)
- Nick Whiting, Pendleton Olives Estate Ltd (olive levy payer - SA)
- Isabelle Okis, Yaribelle Braes Olive Farm (olive levy payer - WA)
- Bianca Cairns, Hort Innovation
- Lauren Jones, Hort Innovation

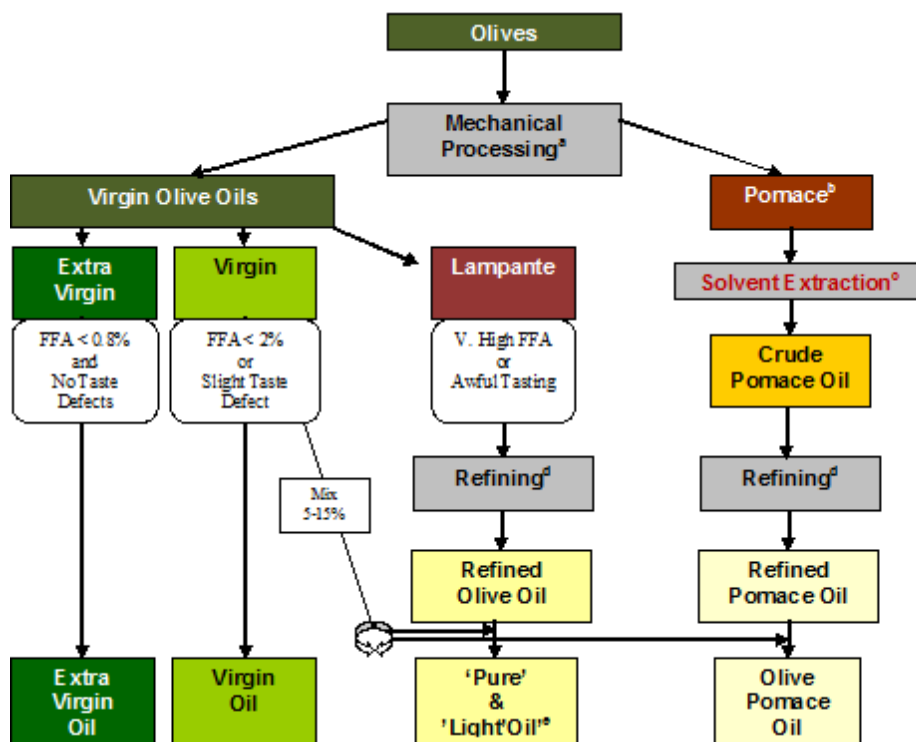
Project team – as of June 2021:

The OL17006 project team comprises:

- Project leader: Michael Southan (AOA CEO)
- Project Administration Manager: Elizabeth Bouzoudis (AOA)
- Technical adviser: Leandro Ravetti (Modern Olives)
- Technical adviser: Michael Thomsett (Earthbound Horticulture Consultancy)
- Sub-Contractor: Peter McFarlane (McFarlane Strategic Services / Australian Food Integrity Certification Services Ltd)
- Sub-contractor: Jamie Ayton (NSW Department of Industry)
- Sub-contractor: Claudia Guillaume (Modern Olives)

Appendix 2: Australian Standard for Olive Oil and Olive-Pomace Oil AS5265-2011, and AOA Market Survey Quality Testing.

The Australian Standard (AS5264-2011[®]) Classification of EVOO:



(Image: Slick Extra Virgin: www.aromadictionary.com) Olive Oil Grades Explained

A Comparison of International Olive Oil Quality Standards:

Note: In the tables below, **Red** = divergence from the Australian Standard:

The Australian Standard for Olive Oils and Olive Pomace Oils (AS5264-2011[®]) is a consumer focussed standard that incorporates chemical and sensory parameters for oil quality, authenticity and freshness testing for classification of Extra Virgin Olive Oil (EVOO).

In contrast *IOC Standard* has a focus on regulating international trade, doesn't recognise freshness testing, and allows lower quality oils with reduced shelf life and organoleptic defects to be marketed as Virgin Olive Oil (VOO) and Ordinary Virgin Olive Oil (OVOO).

The specific differences between testing against the Australian Standard, the EU Standard, the IOC Standard, the Codex Standard, and China Standard are:

- *IOC and Codex Standards* (currently under review) provide for an additional classification between VOO and Lampante olive oil (Ordinary Virgin Olive Oil): Meaning fewer oils are classified as 'lampante' – meaning not fit for consumption without further processing.
- *IOC and EU Standards* have a weaker standard for organoleptic faults: Meaning severely faulted oils still qualify as fit for sale.
 - VOO classification for *MeD* – IOC ≤ 3.5 (EU ≤ 3.5), (AS ≤ 2.5), (Codex ≤ 2.5), (China ≤ 2.5) / *MeF* for all standards is >0
 - Lampante classification for *MeD* – IOC > 6.0 faults, (Codex > 6.0) (EU > 3.5), (AS > 2.5), (China > 2.5) / *MeF* for all standards is N/A

- *IOC Standard* has a higher threshold for FFA: Meaning severely oxidised oils with an expired shelf life are deemed fit for sale.
 - Lampante classification IOC > 3.3 % cf (AS and EU and China > 2.0 %)
- *IOC and EU Standards* have a higher threshold for PV for:
 - Lampante classification IOC & EU > No Limit (AS & Codex > 20)
- *IOC and Codex Standards* have a weaker standard for Absorbency in UV K270: Meaning severely oxidised oils with an expired shelf life are deemed fit for sale.
 - OVOO classification – Codex and IOC ≤ 3.0 - which means high K270 oils are classified as OVOO not Lampante.
 - Lampante Classification K232 – Codex, IOC, EU and China N/A cf (AS > 2.60)
- *IOC Standard* has a weaker standard for Absorbency in UV K270: Meaning adulterated oils may be misclassified as olive oil.
 - Lampante Classification IOC - N/A, (AS, EU, Codex and China > 0.25)

Overall the weaker *IOC Standard* serves to limit the number of oils classified as 'Lampante' and increase the number of oils classified as VOO and OVOO.

- The *IOC, EU, Codex Standards* (currently under review) and China do NOT recognise "Freshness Testing" PPP or DAGs - which are actually more accurate determiners of the state of oxidation, hydrolysis and potential shelf life of olive oil.

The other significant issue for Australia is the issue of naturally higher Campesterol and Stigmasterol levels in 'New World Olive Oils' which are disallowed in the *IOC Standard*.

There are also differences with testing of Refined Olive Oil Blends and Olive Pomace Oil Blends where there is no limit on defects in the *IOC, EU, Codex and China Standards*, and only the *Australian Standard* requires these blends to have a Fruitiness score MeF>0

The United States Pharmacopeia (USP), published two draft standards in its Food Chemicals Codex (FCC) on June 30 2021 – a new one for extra virgin and virgin olive oil and a minor revision for its standard for refined olive oil. This is important as USP has a strong connection with the FDA, and the FCC is utilised in the food industry around the world for quality assurance and as a general reference. USP is also represented as an observer at Codex Alimentarius. USP has also put out a document for comment in its FCC Forum on June 30 2021 – Appendix XIX: Olive Oil Guidance, Methods, and Applicable Resources. This document is designed to explain what is in olive oil standards and how the parameters can work as tools, this is a first such accompaniment to an olive oil standard. These standards aligns with the objectives of AS5254-2011.

Olive Oil Reference Standards:

- *Australian Standard for Olive Oil and Olive-Pomace Oil AS5265-2011 (AS)*: <http://www.australianolives.com.au/article-detail/australian-standard-5264-2011>
- *Olive Council Trade Standard applying to olive oils and olive-pomace oils, COI/T.15/NC No 3/Rev.16 June 2021 (IOC)*: <https://www.internationaloliveoil.org/wp-content/uploads/2021/07/COI-T15-NC3-REV-16-2021-ENG.pdf>
- *EU Regulation No 1348/2013 (EU)*: <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R1348&from=EN>
- *CODEX Standard for Olive Oils and Olive Pomace Oils Codex Stan 33-1981, Adopted in 1981. Revision: 1989, 2003, 2015, 2017. Amended: 2009, 2013 (CDX)*: www.fao.org/input/download/standards/88/CXS_033e_2015.pdf
- *United States Pharmacopeia (USP) Draft Standard for Olive Oil, Extra Virgin and Virgin, and Appendix XIX: Olive Oil Guidance, Methods, and Applicable Resources*, can be accessed at: <https://online.foodchemicalscodex.org/uspfcc> Register and Log in at: <https://login.usp.org/cas/login?service=https%3A%2F%2Fonline.foodchemicalscodex.org%2Fcas%2Flogin>

The Australian Standard (AS5264-2011)

Classification under the Australian Standard (AS5264-2011) <i>July 2011</i> Explanations	Test Parameters	Extra Virgin Olive Oil (EVOO)	Virgin Olive Oil (VOO)	Lampante Olive Oil	Refined Olive Oil	Olive Oil (Blend of Refined and Virgin Olive Oils)	Crude Olive Pomace Oil	Refined Pomace Oil	Refined Pomace Oil and Olive Oil Blend
Reflects care taken in producing oil, condition of fruit before crushing, & oil storage conditions	Free Fatty Acid (FFA) %m/m	≤0.8	≤2.0	>2.0	≤0.3	≤1.0	N/A	≤0.3	≤1.0
Measure of oil oxidation during processing and storage	Peroxide Value (PV) meqO₂/kg oil	≤20.0	≤20.0	>20.0	≤5.0	≤15.0	N/A	≤5.0	≤15.0
Measure of secondary oxidation of oil	Absorbency in UV K232	≤2.50	≤2.60	>2.60	N/A	N/A	N/A	N/A	N/A
Measure of heat and other treatments of oil	Absorbency in UV K270 nm (cyclohexane)/268 nm (iso-octane)	≤0.22	≤0.25	>0.25	≤1.10	≤0.90	N/A	≤2.00	≤1.70
Measure of addition of refined olive oil	Absorbency in UV Delta K	≤0.01	≤0.01	>0.01	≤0.16	≤0.15	N/A	≤0.20	≤0.18
Measure of thermal or age related degradation	Pyropheophytins a (PPP) %	≤17	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Good indicator of initial quality of oil, storage conditions and freshness	1,2 Diacylglycerides (DAGs) %	≥35	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Negative sensory attributes include: fusty, muddy sediment, musty, rancid, winey-vinegary	Median of Defects (MeD)	=0.0	0.0<MeD≤2.5	>2.5	≤2.5	≤2.50	N/A	≤2.50	≤2.50
Positive sensory attributes include: Fruitiness, Bitterness, Pungency(FBP)	Median of Fruitiness Attribute (MeF)	>0.0	>0.0	N/A	N/A	>0.0	N/A	N/A	>0.0
Indicator of poor processing	Moisture and volatile matter (MOI) %m/m	≤0.2	≤0.2	≤0.3	≤0.1	≤0.1	≤1.5	≤0.1	≤0.1

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Measure of solid contaminants	Insoluble impurities (INI) %m/m	≤0.1	≤0.1	≤0.2	≤0.1	≤0.1	N/A	≤0.1	≤0.1
#Sterols (steroid alcohols) are a subgroup of steroids	Total sterol content mg/kg	≥1000	≥1000	≥1000	≥1000	≥1000	≥2500	≥1800	≥1600
#Used to determine the presence of pomace oil or seed oil	Wax content mg/kg C40+C42+C44+C46 C42+C44+C46	≤250	≤250	≤300 Note 1	≤350	≤350	>350 Note 2	>350	>350
# Used to determine if any processing has occurred eg deodorization or de-colouring	Trans fatty acids % C18:1 T	≤0.05	≤0.05	≤0.10	≤0.20	≤0.20	≤0.20	≤0.40	≤0.40
	C18:2 T + C18:3 T	≤0.05	≤0.05	≤0.10	≤0.30	≤0.30	≤0.10	≤0.35	≤0.35
#Detects small amounts of seed oils (rich in linoleic acid), verified authenticity and origin of oils	Max difference between actual and theoretical ECN42 triacycglycerol (TAGs) content	≤/0.2/	≤/0.2/	≤/0.2/	≤/0.3/	≤/0.3/	≤/0.6/	≤/0.5/	≤/0.5/
#Detection of presence of refined vegetable oils in virgin olive oils	Stigmastadienes mg/kg	≤0.10	≤0.10	≤0.50	N/A	N/A	N/A	N/A	N/A
#Test to determine if oil has been re-esterfied by synthetic means or addition of animal fat.	Content of 2-glyceryl monopalmitate %	≤1.5	≤1.5	≤1.5	≤1.8	≤1.8	≤2.2	≤2.2	≤2.2

Ref:

Australian Standard for Olive Oil and Olive-Pomace Oil AS5265-2011:
<http://www.australianolives.com.au/article-detail/australian-standard-5264-2011>

Bol d

Indicates tests routinely

undertaken in the AOA market survey

Additional test parameters which detect product adulteration and refining processes including soft deodorisation will be undertaken on selected olive oil products in future market surveys.

Note 1 When oil has a wax content between 300 and 350 mg/kg, it is considered a Lampante olive oil if the erythrodiol + uvaol content is ≤3.5% and the total aliphatic alcohol content is ≤350 mg/kg.

Note 2 When oil has a wax content between 300 and 350 mg/kg, it is considered a Crude olive pomace oil if the erythrodiol + uvaol content is >3.5% and the total aliphatic alcohol content is >350 mg/kg.

Fresh and Well Made EVOO

In *OliveCare*® we push for adoption of the parameters of a ‘fresh and well made’ oil as explained by Modern Olives, and for Gold Award medals as per AIOA, which exceed the minimum parameters set in AS5264-2011 and other international olive oil standards:

EVOO Limits: AS5264-2011®	EVOO (fresh & well made): Modern Olives	EVOO (top award winning Australian EVOO observed in competitions)
- Free Fatty Acid (FFA) %m/m: ≤0.8 - Peroxide Value (PV) meqO₂/kg oil: ≤20.0 - Absorbency in UV K232: ≤2.50 - Absorbency in UV K270: ≤0.22 - Absorbency in UV delta K: ≤0.01 *Pyropheophytins a (PPP) %: ≤17 *1,2 Diacylglycerides (DAGs) %: ≥35 - Median of Defects (MeD): =0.0 - Median of Fruitiness Attribute (MeF): >0.0	- Free Fatty Acid (FFA) %m/m: ≤0.4 - Peroxide Value (PV) meqO₂/kg oil: ≤12.0 - Absorbency in UV K232: ≤2.00 - Absorbency in UV K270: ≤0.18 - Absorbency in UV delta K: ≤0.01 - Pyropheophytins a (PPP): 1% increasing 6%-8% pa 1,2 Diacylglycerides (DAGs): 90% decreasing 20%-25% pa - Median of Defects (MeD): =0.0 - Median of Fruitiness Attribute (MeF): >0.0	- Free Fatty Acid (FFA) %m/m: ≤0.2 - Peroxide Value (PV) meqO₂/kg oil: ≤4 - Absorbency in UV K232: ≤1.6 - Absorbency in UV K270: ≤0.11 - Absorbency in UV delta K: ≤0.01 - Pyropheophytins a (PPP): <1% increasing 6%-8% pa 1,2 Diacylglycerides (DAGs): 98% decreasing 20%-25% pa - Median of Defects (MeD): =0.0 - Median of Fruitiness Attribute (MeF): >3.0



What makes a gold medal EVOO?

“When first smelling a gold medal extra virgin olive oil it is fresh and clean (fault free). It shows excellent fruit intensity with a variety of different aromas and scents. In the mouth the aromas transfer to the palate and are as intense, or more intense than on the nose. It tastes fresh, vibrant and clean. The oil feels light and creamy (not oily) on the palate. Depending on oil style, bitterness, pepper and/or astringency are present in varying degrees. A mild oil has little or no level of pepper and pungency whilst a robust oil has significantly higher levels. Either way, they are in balance and do not overpower the fruit or mouthfeel. A gold medal oil has a flavourful lingering finish. To finish, the oil is fresh, balanced, complex and harmonious. You will want to drink it.”
(AIOA)

AOA Accredited EVOO Testing Labs:

Currently both The Modern Olives and NSW DPI laboratories have equivalent accreditation through the National Association of Testing Authorities Australia (NATA); American Oil Chemists Society (AOCS), International Olive Council (IOC) and Australian Olive Association (AOA).

NSW DPI lab testing and sample submission form is available at:
<https://www.dpi.nsw.gov.au/abot-us/services/laboratory-services/olive-oil-testing>

Modern Olives lab testing and sample submission form is available at:
<https://www.modernolives.com.au/olive-testing>

AOA Market Survey EVOO Test Parameters:

As indicated in bold text in the above table the following AS5264-2011 test parameters are used in AOA's market surveys:

1. LOT IDENTIFICATION/BATCH NUMBER:

This is important for traceability. Olive oil needs to be traceable back to the grove in order to comply with HACCP regulations.

IOC STANDARD: **10.1.6 Lot Identification states.** each container shall be embossed or otherwise permanently marked in code or in clear writing to identify the producing factory and the lot.

AUSTRALIAN STANDARD: **12.2.6 Lot Identification states....** each container shall be embossed or otherwise permanently marked in code or in clear writing to identify the producing factory and the lot in accordance with the Australian New Zealand Food Standards Code.

2. NET CONTENTS; NAME AND ADDRESS, and COUNTRY OF ORIGIN:

All oils tested comply with both the requirements of the IOC Standard and the Australian Standard AS 5264-2011, which incorporates the FSANZ Food Standards Code labelling requirements.

3. BEST BEFORE DATE/DATE OF MINIMUM DURABILITY:

A best before date (BBD) is a producer's guarantee that the product being sold will remain of that grade up until the BBD. FSANZ has stated that all food is required to be date marked and this obligation is stated clearly in the Australia New Zealand Food Standards Code (The Code): Standard 1.2.5 Date Marking of Packaged Food. There are some date marking exceptions but olive oil does not fall in to those exemption categories.

Industry Definition: Shelf-life is the length of time, under normal storage conditions, within which no off-flavours or defects are developed and quality parameters such as peroxide value and specific absorbance are retained within accepted limits of the relevant standards.

IOC STANDARD **10.1.7.1 Date of minimum durability states** in the case of pre-packaged products intended for the end consumer, the date of minimum durability (preceded by the words "*best before end*") shall be declared by the month and year in un-coded numerical sequence. The month may be indicated by letters in those countries where such use will not confuse the consumer; if the shelf life of the product is valid to December, the expression "*end (stated year)*" may be used as an alternative.

Note: The IOC Standard makes no reference as to how this date of minimum durability is to be objectively determined.

AS STANDARD **4.3 Best-before date states...** a date that signifies the end of the period during which the intact package of oil, if stored in accordance with stated storage conditions, will remain fully marketable and will retain any specific qualities for which express or implied claims have been made.

Note: According to the AS STANDARD:

The best-before date shall be supported by technical evidence.

Methods used to determine oil durability may include:

(a) Oil oxidative stability index in accordance with Clause 13.20 (AOCS Cd 12b-92 – Rancimat®)

(b) Fatty acid profile in accordance with Clause 13.3 and antioxidant content in accordance with Clause 13.18:

(Tocopherols and tocotrienols contents, using high-performance liquid chromatography, shall be determined in

accordance with ISO 9936.)

Note: OliveCare® has adopted the Modern Olives methodology to objectively determine Potential 'Shelf Life' from the lowest value derived from the following 3 estimations: Induction time (IND), Pyropheophytins a (PPP) % and 1,2 Diacylglycerides (DAGs) % testing:

- hours of induction time (IND) at 110°C x 1 = expected shelf life (in months)
- (17.0% - PPP) / 0.6% = expected shelf life (in months)
- (DAGs – 35.0%) / FFA* factor = expected shelf life (in months)

*FFA factor = 1.7% (if FFA < 0.4%); 2.1% (if 0.4% < FFA < 0.6%); or 2.5% (if FFA > 0.6%)

Note: The higher the FFA level the faster the oil will oxidise, and the shorter the potential shelf-life..

Note: An alternative method for shelf-life prediction is described in the following articles:

²²*Shelf-Life Prediction of Extra Virgin Olive Oils Using an Empirical Model Based on Standard Quality Tests* by Claudia Guillaume and Leandro Ravetti, Modern Olives (Journal of Chemistry Volume 2016). Also published in the September 2017 edition of Australian & New Zealand Olivegrower & Processor© magazine as ²³*Determining shelf life: how can small growers do it on a minimum budget?*

4. FREE FATTY ACIDS (FFAs):

Free fatty acidity is a chemical parameter of olive oil which is an indicator of its quality. For extra virgin olive oils, it ranges from 0 to 0.8%, with the lower the percentage the better. Free acidity levels increase through breakdown of the major oil molecules in the fruit (triglycerides) early in the production process. Higher quality oils will exhibit low free acidity. The content of free fatty acids in grams per 100 grams is expressed as a percent of free oleic acid.

IOC STANDARDS state ...that the oil must be less than or equal to 0.8% m/m expressed in oleic acid AUSTRALIAN STANDARDS state... that the oil must be less than or equal to 0.8% m/m expressed in oleic acid

5. PEROXIDE VALUE (PA's):

Peroxides, which are flavourless, are generated from the oxidation of polyunsaturated fatty acids in the oil. Peroxides are unstable, usually building up slowly and leading to oil rancidity.

The likelihood of peroxides becoming rampant increases during storage. Peroxide Value identifies the early stages of oxidation and is a measure of the oxidation of olive oil expressed as milliequivalents of active oxygen per kilogram of oil. In very old oils peroxide levels can drop as the peroxide is converted into further compounds.

IOC STANDARDS states ... that the oil must be less than or equal to 20 in milleq. Peroxide oxygen per kg/oil.

AUSTRALIAN STANDARDS states... that the oil must be less than or equal to 20 in milleq. Peroxide oxygen per kg/oil.

6. ABSORBENCY IN ULTRA-VIOLET:

UV tests determine the ultraviolet light absorbance measured by shining UV light through the oil at several specific wavelengths. Absorbance at K232 nm (nanometers), K270 nm and Delta (Δ)K2 correlate with the state of oxidation by detecting specific oxidized compounds, some generated from secondary oxidation, and may also indicate adulteration with refined oils.

ABSORBANCY IN ULTRA VIOLET- K232 nm

IOC STANDARD states... limit of less than or equal to < 2.50, however commercial partners in the country of retail sale may require compliance with these limits when the oil is made available to the end consumer.

AOA STANDARD states... limit of less than or equal to < 2.50 Absorbance (K) of a 1% (m/v) solution of the oil in the specified solvent, with reference to pure solvent in a 1 cm path length cell.

²² *Shelf-Life Prediction of Extra Virgin Olive Oils Using an Empirical Model Based on Standard Quality Tests* by Claudia Guillaume and Leandro Ravetti, Modern Olives (August 2016): <https://www.hindawi.com/journals/jchem/2016/6393962/>

²³ *Determining shelf life: how can small growers do it on a minimum budget?* by Leandro Ravetti, technical director BBL, September 2017 edition of Australian & New Zealand Olivegrower & Processor© magazine: <https://olivebiz.com.au/magazines/olivegrower/back-issues/>

ABSORBENCY IN ULTRA-VIOLET – K270 nm (cyclohexane)/268 nm (iso-octane)

IOC STANDARD *states*... limit of less than or equal to < 0.22.

AOA STANDARD *states*... limit of less than or equal to < 0.22

ABSORBENCY IN ULTRA-VIOLET – Delta K

IOC STANDARD *states*... limit of less than or equal to < 0.01

AOA STANDARD *states*... limit of less than or equal to < 0.01

7. PYROPHEOPHYTIN a (PPP's):

Chlorophyll pigments break down to pheophytins and then 'pyropheophytin a' (PPP) upon ageing and/or thermal degradation of olive oil. An elevated level of 'pyropheophytin a' is an indicator for oil that is oxidized and/or adulterated with cheaper refined oils. Thermal treatment of oil at elevated temperatures increases the pyropheophytin A content. PPP greater than 17% are an indicator of unpermitted thermal treatments, old oil or the presence of refined oil.

IOC STANDARD: The International Olive Council does not recognise this effective method of detecting adulterated and refined olive oils. However Australia, Germany, South Africa and major retailers in Europe all make use of this technique.

AUSTRALIAN STANDARDS *states*... 'pyropheophytin a' (PPP) less than or equal to 17%

8. DIAGLYCERIDES (DAG's):

Triacylglycerols (TAGs) are the principal components (98%) of olive oil; during the breakdown of triacylglycerols, diacylglycerols (DAG's) are formed. In fresh olive oils made from sound olives 1,2-diacylglycerols are the predominant form of the DAG component of olive oil. Ageing and/or processing damaged olives increases the proportion of 1,3-diacylglycerols in the DAG component of olive oil. The measure used in this test is the ratio of 1,2 to 1,3 diacylglycerols.

The higher the ratio the better the oil. An elevated level of 1,3 DAGs indicates that the oil is old, oxidized, of poor quality, and/or badly processed. This test is useful for assessing the genuineness of virgin olive oils throughout their life.

IOC STANDARD: The International Olive Council does not recognise this effective method of detecting adulterated and refined olive oils. However Australia, Germany, South Africa, Italy and major retailers in Europe all make use of this technique.

AUSTRALIAN STANDARDS *states*... the ratio of 1,2/1,3 -Diacylglycerols (DAG's) greater than or equal to 35%

9. OXIDATIVE STABILITY (IND):

AUSTRALIAN STANDARDS *states*... Oxidative stability index is an indicator of stability and shelf life properties of oils. The determination entails speeding up the oxidation process in the oil under heat and air current and monitoring volatile substances associated with rancidity.

Note: All oils and fats have a resistance to oxidation which depends on the degree of saturation, natural or added antioxidants, pro-oxidants or prior abuse. Oxidation is slow until this resistance is overcome, at which point oxidation accelerates and becomes very rapid. The length of time before this rapid acceleration of oxidation is the measure of the resistance to oxidation and is commonly referred to as the "induction period", or Oxidative Stability Index, measured in hours, where each hour of resistance equates to a potential shelf life of 1 month. This method is useful to determine potential shelf-life when used in conjunction with PPP and DAG testing. Used alone the method tends to overestimate potential shelf life in older oils.

IOC STANDARD: Makes no reference to oxidative stability

10. ORGANOLEPTIC / SENSORY:

IOC STANDARDS *states*... EVOO should have zero organoleptic defects, and a discernable level of the fruitiness attribute (MeF): >0.0

AUSTRALIAN STANDARDS *states*... EVOO should have zero organoleptic defects, and a discernable level of the fruitiness attribute (MeF): >0.0

Samples that exhibit negative sensory attributes (defects), commonly muddy sediment, rancid or frosted, or having

zero fruity attribute; reflecting poor fruit quality and or processing methods, or poor product storage conditions.

11. INCORRECTLY LABELLED AS EVOO:

Brands of olive oil labelled as Extra Virgin Olive Oil, are reclassified against the relevant standards according to the above test results.

Appendix 3: Consolidated Olive Production References: (Links)

Updated: 28 August 2021

Olive Industry Communications Platforms:

Whilst there is no 'one-stop-shop' to access all olive industry subjects, AOA utilises multiple communications platforms, including:

Websites:

- Australian Olive Association: <https://australianolives.com.au/> - includes lots of technical information in the AOA 'Members Lounge', as well as links to the following informative websites:
- OliveBiz: <https://olivebiz.com.au/> - includes OGP, FOE, R&D Insights, Grove Innovation and Industry Events.
- AOA National Industry Conference: <https://nationaloliveconference.com.au/> - program and registration (back again in 2022).
- AIOA Olive Competitions: <https://internationaloliveawardsaustralia.com.au/> - current competition entry and previous competition results.
- Australian Extra Virgin Everyday: <https://australianextravirgin.com.au/> - a consumer facing website, includes OliveCare® certified brand listings.
- Olive Wellness Institute: <https://olivewellnessinstitute.org/> - a health practitioner facing website, packed with information on what makes olive products healthy.
- Hort Innovation: <https://horticulture.com.au/growers/olive-fund/> - includes olive levy funded project details.
- Plant Health Australia: <http://planthealthaustralia.com.au/industries/olives/> - all about biosecurity preparedness and awareness.

AOA Publications:

- Friday Olive Extracts (FOE): Is a free weekly e-news blast with a wide range of content. FOE is the vehicle for timely information to levy payers, with links to more detailed information housed on the OliveBiz website: <https://olivebiz.com.au/foe/>
- Grove Innovation (GI): Is a free monthly e-newsletter focused on R&D info and updates primarily related to Hort Innovation funded projects and HIA activities relevant to our industry: <https://olivebiz.com.au/category/grove-innovation/>
- OliveCare® News: Is a free (members only) monthly e-newsletter with a strong technical, and productivity focus. Back copies can be accessed at: <https://australianolives.com.au/olivecare-members-area/>
- Olivegrower & Processor (OG&P) & R&D Insights: Is a quarterly subscription 'hard copy' magazine that covers contemporary issues impacting on the olive industry, also includes R&D Insights supplement. Electronic copy and back issues of OG&P are also available to subscribers on the OliveBiz website.
 - OGP Subscriptions: <https://olivebiz.com.au/magazines/olivegrower/>
 - R&D Insights is also hosted on the OliveBiz website where all levy payers are able to access the content 24/7. Back copies can be accessed at: <https://olivebiz.com.au/rd-insights/>
- AOA Update Newsletter: Is a quarterly e-newsletter for AOA members, providing information on AOA advocacy and policy matters. Back copies can be accessed at: <https://australianolives.com.au/aoa-update/>

Other AOA Communication Channels:

- AOA Webinars: These events are run as required. Registration for these events and copies of presentations are posted on the OliveBiz website at: <https://olivebiz.com.au/>
- AOA Annual Olive Industry Conferences / Virtual Industry Conferences: AOA convenes a national 3-day conference most years somewhere in Australia, or if this is not possible a Virtual Industry Conference is held. Current Conference Event details are posted at: <https://nationaloliveconference.com.au/> or <https://olivebiz.com.au/>

- AOA Field Days: AOA convenes industry field days in most years held at multiple locations across Australia on specialist topics. Participant registration details and outputs from these events are posted on the OliveBiz website: <https://olivebiz.com.au/>
- AOA Seminars and Workshops: AOA convenes industry seminars and workshops on specialist topics also held at multiple locations across Australia each year. Participant registration details and outputs from these events are posted on the OliveBiz website: <https://olivebiz.com.au/>

Olive Technical Resources:

The following texts, presentations and videos are available to assist Australian olive producers to implement Good Agricultural Practice (GAP), Good Manufacturing Practice (GMP), Good Hygiene Practice (GHP) and to comply with AOA's *OliveCare*® certification requirements:

General Olive Production References:

- 'Olive Growing' manual (El Cultivo Del Olivo) Ch 18 'Processing Olives' (RIRDC 2010): <https://australianolives.com.au/olive-growing-manual/>
- 'Hunter Olive Handbook' (e-book) Hunter Olive Association 2018: <https://www.hunterolives.asn.au/how-to-obtain/>
- 'Growing Olives in Western Australia' by Richard Taylor & John Burt (DPIRDWA 2007): <https://researchlibrary.agric.wa.gov.au/cgi/viewcontent.cgi?article=1136&context=bulletins>
- 'Organic Olive Production Manual' by Paul Vossen, available for purchase through various on-line booksellers (approx \$20)
- 'Handbook for a sustainable management of the olive groves' (olive4climate 2019): <https://olive4climate.eu/wp-content/uploads/Olive4Climate-Handbook- ENG AUGUST.pdf>

Olive R&D Project Reports:

- Hort Innovation olive levy funded technical reports can be found on the OliveBiz website at: <https://olivebiz.com.au/magazines/olivegrower/rd-reports/> or search at: <https://www.horticulture.com.au/growers/olive-fund/>
- RIRDC (now Agrifutures Australia) technical reports and review updates can be found on the OliveBiz website at: <https://olivebiz.com.au/rirdc-resource-updates/>

International Olive Newsletters & Resources:

- Resources from South African olive specialist Linda Costa: <https://olivesinfact.com/>
- University of California Davis Olive Centre Newsletter: <https://olivecenter.ucdavis.edu/newsletter> and resources at: UC Davis Publications and Reports
- California Olive Council Resources: <https://www.cooc.com/>
- Olive Oil Times Weekly Newsletter: <https://www.oliveoiltimes.com/subscribe>
- International Olive Council (IOC) Monthly Newsletter: <http://www.internationaloliveoil.org/>

Industry Statistics:

- 2020 Olive Industry Overview: <https://olivebiz.com.au/2020-olive-industry-overview/>
- Australian Olive Oil – An Overview (AOA 2020): <https://olivebiz.com.au/wp-content/uploads/2021/04/AOA-Olive-Oil-Overview-2020-3.pdf>
- Australian Table Olives – An Overview (AOA 2020): <https://olivebiz.com.au/wp-content/uploads/2021/04/AOA-Table-Olive-Overview-2020-1.pdf>
- Hort Innovation Olive Industry Statistics: <https://australianolives.com.au/statistics/>

Soils Resources:

- Healthy Soils Field Days Resources (AOA 2021): <https://olivebiz.com.au/healthy-soils-resources/>
- Compost and Composting Resources (AOA 2020): <https://australianolives.com.au/compost-and-composting/>

IPDM Resources:

- AOA 2021 Best Practice Webinars: <https://olivebiz.com.au/2021-technical-webinars/>
- Pest & Disease Management with Alison Mathews – To be held 31 August 2021 / Link TBA.
- Significant pests and diseases of the olive tree (AOA 2020): <https://australianolives.com.au/significant-pests-and-diseases-of-the-olive-tree/>
- IPDM project resources and how to access them, by Dr Robert Spooner-Hart and Len Tesoriero (AOA webinar 2020): <https://olivebiz.com.au/webinar-ipdm-project-resources/>
- Field Guide to Olive Pests, Diseases and Disorders in Australia (Robert Spooner-Hart et al (Hort Innovation Revised 2020): https://olivebiz.com.au/wp-content/uploads/2020/09/Field-Guide-2nd-edn-revised_2.pdf
- Approved Agri-Chemicals for use in Olive Groves: <https://australianolives.com.au/chemical-permits/>
- OliVera an informative website on olive pests, diseases and disorders by plant pathologist Dr Vera Sergeeva: <https://olivediseases.com/>

Biosecurity Awareness & Preparedness Resources:

- Xylella Fastidiosa subspecies pauca (Olive Quick Decline Syndrome – OQDS, and Xylella Fastidiosa subspecies multiplex (Leaf Scorch) (AOA 2021): <https://australianolives.com.au/xylella-olive-quick-decline-syndrome-oqds-leaf-scorch-xylella-fastidiosa/>
- Biosecurity Risk Management (AOA 2019): <https://australianolives.com.au/bio-security-plan/>
- Farm Biosecurity Action Plan for Olive Growers (AOA 2018): <https://australianolives.com.au/wp-content/uploads/2018/12/Farm-Biosecurity-Action-Plan-for-Olive-Growers-Version-2.0-December-2019.pdf>
- On-farm Clean-down (Ausveg 2018): https://australianolives.com.au/wp-content/uploads/2018/06/Vehicle_cleaning_fact_sheet.pdf
- Farmgate Biosecurity Signage (Ausveg 2017): https://ausveg.com.au/app/uploads/2017/05/Farm_Gate_Biosecurity_fact_sheet.pdf

Olive Oil Standards, HACCP Templates and Labelling Guides:

- AOA OliveCare® – Product Guide for Olive Oil (First Edition), (pending) available in the OliveCare® Members Area on the AOA website: <https://australianolives.com.au/olivecare-members-area/>
- The Australian Standard AS5264-2011® Olive oils and olive-pomace oils (Standards Australia 2011): <http://www.australianolives.com.au/content/as5264-2011-olive-oils-and-pomace-oils>
- Australian Product Label Guide: EVOO (AOA August 2020): <https://australianolives.com.au/wp-content/uploads/2020/08/LABELLING-GUIDE-EVOO-Updated-August-2020.pdf>
- Australian Product Label Guide: Flavoured Olive Oil (AOA August 2020): <https://australianolives.com.au/wp-content/uploads/2020/08/LABELLING-GUIDE-FOO-Updated-August-2020.pdf>
- HACCP Style Food Quality Plan Template for the Production of Australian EVOO and flavoured olive oil (AOA Aug 2020): https://australianolives.com.au/wp-content/uploads/2021/05/COP-HACCP-Style-FOOD-SAFETY_FOOD-QUALITY-PLAN-EVOO-Edition-3.0-August-2020_OPT.pdf

- OliveCare® Risk Assurance Template – Safety and Quality Small Grower Version – EVOO (AOA 2019): https://australianolives.com.au/wp-content/uploads/2018/06/CoP-Assurance-Template_EVOO.pdf
- Food Safety Requirements for Table Olives and Infused Olive Oil (Olives SA, 2007): A monograph prepared by Jim Smyth: https://australianolives.com.au/wp-content/uploads/2018/06/Food_Safety_Requirements_for_Table_olives_Infused_olive_oil_-_AUG_07.pdf
- Critical Control Points – EVOO (AOA 2016): <https://australianolives.com.au/critical-control-points-evoo/>
- Tastebook™ Sensory Assessment Resources (AOA 2020 - olive oil and table olives): <https://australianolives.com.au/tastebook/>
- Olives and Olive Oil in Health and Disease Prevention, (Second Edition) by Victor Preedy & Ronald Watson: <https://www.elsevier.com/books/olives-and-olive-oil-in-health-and-disease-prevention/preedy/978-0-12-819528-4> (for purchase)
- Olive Wellness Institute Science Repository (OWI 2021): <https://olivewellnessinstitute.org/>
- Olive Wellness Institute Health Implications of Rancid Fats & Oils (OWI 2020): <https://olivewellnessinstitute.org/resource/health-implications-of-rancid-fats-and-oils/>

Table Olive Standards, HACCP Templates and Labelling Guides:

- AOA OliveCare® – Product Guide for Table Olives (First Edition 2021), (pending) available in the OliveCare® Members Area on the AOA website: <https://australianolives.com.au/olivecare-members-area/>
- The Voluntary Industry Standard for Table Olives in Australia (RIRDC 12-111 – Revised January 2020): <https://australianolives.com.au/wp-content/uploads/2020/02/RIRDC-12-111-Australian-Table-Olive-Standard-Kailis-Final.pdf>
- AOA Certified Australian Table Olive Compliance (AOA 2020): <https://australianolives.com.au/aoa-certified-table-olive-compliance/>
- Food Safety Requirements for Table Olives and Infused Olive Oil (Olives SA, 2007): A monograph prepared by Jim Smyth: https://australianolives.com.au/wp-content/uploads/2018/06/Food_Safety_Requirements_for_Table_olives_Infused_olive_oil_-_AUG_07.pdf
- HACCP Style Food Quality Plan Template for the Production of Australian Table Olive Products (AOA 2020): https://australianolives.com.au/wp-content/uploads/2020/12/COP-HACCP-Style-FOOD-SAFETY_FOOD-QUALITY-PLAN-TABLE-OLIVES-Edition-3.1-December-2020_OPT.pdf
- OliveCare® Risk Assurance Template – Safety and Quality Small Grower Version – Table Olives (AOA 2019): https://australianolives.com.au/wp-content/uploads/2018/06/CoP-Assurance-Template_Table-Olives.pdf
- Table Olive Production Manual (RIRDC 2012 – Revised October 2020) by James Smyth, revision by Prof Stan Kailis: https://australianolives.com.au/wp-content/uploads/2020/12/AOA-SK-Table-Olive-Manual_Final-Copy_November-2020_REDUCED-1.pdf
- Reducing Phenolics Related to Bitterness in Table Olives by R.L. Johnson & A.E. Mitchell (Journal of Food Quality Volume 2018): https://australianolives.com.au/wp-content/uploads/2021/07/Reducing-Phenolics-Related-to-Bitterness-in-Table-Olives.._0.pdf
- Establishing Protocols and Guidelines for Table Olives processing in Australia (RIRDC 2004) by Professor Stan Kailis and David Harris: <https://www.agrifutures.com.au/wp-content/uploads/publications/04-136.pdf>
- Producing Table Olives (Landlinks Press 2007) by Professor Stan Kailis and David Harris: <https://www.publish.csiro.au/book/5466> (description only)
- How to make table olives by Prof Stan Kailis: <https://australianolives.com.au/how-to-table-olives/>
- Australian Product Label Guide: Table Olives (AOA August 2020): <https://australianolives.com.au/labelling-information/>
- Health Benefits of Table Olives (OWI 2021) by Prof Stan Kailis, Australian Mediterranean Olive Research Institute: <https://olivewellnessinstitute.org/table-olives/health-benefits/>

- Nutritional and Sensory Quality of Table Olives by Barbara Lanza (IntechOpen July 2012): <https://www.intechopen.com/books/olive-germplasm-the-olive-cultivation-table-olive-and-olive-oil-industry-in-italy/nutritional-and-sensory-quality-of-table-olives>
- National Table Olive Committee (AOA 2020): <https://australianolives.com.au/national-table-olive-committee/>

Consumer Resources / Market Reports:

- Growers & Processors Market Resources (Olive Wellness Institute): <https://olivewellnessinstitute.org/resources/growers/>
- Common Consumer Questions and Infographics (AOA): <https://australianolives.com.au/infographics/>
- OliveCare® Certified Australian olive product brands (AOA 2021): <https://australianextravirgin.com.au/brands/>
- Extra Virgin Olive Oil Category by Andrew Burgess BBO (AOA 2019): <https://olivebiz.com.au/wp-content/uploads/2019/11/Andrew-Burgess-Olive-Market-By-Numbers.pdf>
- Table Olive Market in Australia with Mimmo Lubrano (Sandhurst Fine Foods) (AOA 2018)
 - Presentation Slides: <https://olivebiz.com.au/wp-content/uploads/2018/12/Mimmo-Lubrano-Table-Olive-Market-in-Australia.pdf>
 - Video: <https://vimeo.com/304078741>
- Australian Extra Virgin Olive Oil Everyday Campaign Report 2018 by Will Fuller (AOA 2018): <https://olivebiz.com.au/wp-content/uploads/2018/12/Will-Fuller-EVERYDAY-Consumer-Marketing-Campaign-Report.pdf>
- Australian Extra Virgin Olive Oil Everyday Website (AOA 2017): <https://australianextravirgin.com.au/>
- Australian Extra Virgin Olive Oil Everyday Facebook (AOA 2017): <https://www.facebook.com/AustralianExtraVirgin/>
- Australian Extra Virgin Olive Oil Everyday Instagram (AOA 2017): <https://www.instagram.com/australianextravirginoliveoil/>
- Project Popeye Olive Oil Usage Quantitative Report – Part A & Part 2 (Hort Innovation 2016/17): <https://australianolives.com.au/project-popeye/>

OliveCare® Best Practice Presentations / Workshops / Videos:

Grove Management Best Practice Presentations:

- 2021 OliveCare® Best Practice Webinars with Peter McFarlane, AOA Code of Practice Administrator: <https://olivebiz.com.au/olivecare-best-practice-webinar-series/>
 - Grove Management Best Practice – held 15 June 2021 - access presentation and webinar recording [here](#).
- 2021 Healthy Soils Healthy & Productive Groves Field Day - Increasing Grove Productivity with Peter McFarlane, AOA Code of Practice Administrator: https://olivebiz.com.au/wp-content/uploads/2021/02/Healthy-Soils-Program-Notes_OliveCare.pdf
- 1018/19 IPDM Field Day Series - 'Risk Management, Biosecurity, Continuous Improvement and Technical Support', with Greg Seymour, AOA CEO and Peter McFarlane, AOA Code of Practice Administrator:
 - Download the presentation at: <https://olivebiz.com.au/wp-content/uploads/2018/12/Pomonal-IPDM-Field-Day.pdf>
 - View the video recording at: <https://vimeo.com/305653345>

Olive Oil Production Best Practice Presentations:

- 2021 OliveCare® Best Practice Webinars with Peter McFarlane, AOA Code of Practice Administrator: <https://olivebiz.com.au/olivecare-best-practice-webinar-series/>
- EVOO & Flavoured Olive Oil Production Best Practice – held 29 June 2021 - access presentation and webinar recording [here](#).
- Make a Commitment to EVOO Quality by Peter McFarlane, AOA Code of Practice Administrator (AOA 2019): https://australianolives.com.au/wp-content/uploads/2019/12/PMF_OliveCare_EVOO-Freshness-Testing-Notes_OPT.pdf
 - EVOO Freshness Testing by Peter McFarlane, AOA Code of Practice Administrator (AOA 2019): https://australianolives.com.au/wp-content/uploads/2019/12/PMF_OliveCare_EVOO-Freshness-Testing-Notes_OPT.pdf
 - OliveCare® - Upping the Ante on Quality by Peter McFarlane, AOA Code of Practice Administrator (AOA Conference 2019):
 - Presentation slides: <https://olivebiz.com.au/wp-content/uploads/2019/11/Peter-McFarlane-OliveCare-Upping-The-Ante-On-Quality.pdf>
 - Video recording: <https://vimeo.com/374837180>
 - OliveCare® Certification of EVOO by Peter McFarlane, AOA Code of Practice Administrator (AOA Conference 2018):
 - Presentation Slides: <https://olivebiz.com.au/wp-content/uploads/2018/12/Peter-McFarlane-OliveCare-Certification-of-EVOO.pdf>
 - Video: <https://vimeo.com/304311082>

Table Olives Production Best Practice Presentations:

- 2021 OliveCare® Best Practice Webinars with Peter McFarlane, AOA Code of Practice Administrator: <https://olivebiz.com.au/olivecare-best-practice-webinar-series/>
 - Table Olives / Olive Paste Production Best Practice – held 13 July 2021. Access presentation and webinar recording [here](#).
- Table Olive Testing / Make a Commitment to Table Olive Quality by Peter McFarlane, AOA Code of Practice Administrator (AOA 2019): https://australianolives.com.au/wp-content/uploads/2019/12/PMF_OliveCare_Table-Olive-Testing-Notes_OPT.pdf
- OliveCare® Certification of Table Olives by Peter McFarlane, AOA Code of Practice Administrator (AOA 2018):
 - Presentation Slides: <https://olivebiz.com.au/wp-content/uploads/2018/12/Peter-McFarlane-OliveCare-Certification-of-Table-Olives.pdf>
 - Video: <https://vimeo.com/304773045>

OliveCare® e-training resources:

Olive industry e-learning modules (outputs of OL13007) are hosted on the RMT website at: <http://www.r-m-t-online.com>

To access these modules you need to firstly [register](#) with River Murray Training: admin@r-m-t.com.au to be issued with a username and password to log onto website.

Note: A nominal enrolment fee may be charged for participants accessing these modules.

- Module 1 - Introduction to the Code of Practice and Market Surveys
- Module 2 - Quality and Food Safety Plans
- Module 3 - Managing Quality Along the Supply Chain

- Module 4 - The Export Program
- Module 5 - Sensory Assessment of Extra Virgin Olive Oil
- Module 6 - Sensory Assessment and Judging of Table Olives

AOA Webinars / Workshops / Videos:

The Grove:

- Grove management videos (AOA 2021): <https://olivebiz.com.au/grove-management-videos/>:
 - Weather Stations, Remote Sensing and Automation – with Jon Lockwood & Tass Peters – OneTemp, Mel Hollock – access video [here](#)
 - Principles of Canopy Management / Tree Pruning – with Andrew Taylor – access video [here](#)
 - Making Compost – with Peter Wadewitz (Peats Soils) – access video [here](#)
- AOA Webinars: Remote Sensing Series with Professor Andrew Robson et al (with links to Vimeo recording and presentation pdf)
 - Webinar 1: Overview of the remote sensing project – held 5 May 2020: <https://olivebiz.com.au/webinar-1-overview-of-remote-sensing-project/>
 - Webinar 2: National grove mapping project – held 12 May 2020: <https://olivebiz.com.au/webinar-2-national-olive-grove-mapping-project/>
 - Webinar 3: Update on the irrigation trials / oil accumulation results – held 19 May 2020: <https://olivebiz.com.au/webinar-3-update-on-the-irrigation-trials/>
 - Australian Tree Crop Industry Engagement Web App: [National Olive Grove Map](#)

Olive Oil:

- 2021 AOA Best Practice Webinars: <https://olivebiz.com.au/2021-technical-webinars/>

Olive oil Storage Issues with Pablo Canamasas – held 3 August 2021.

- Click here to access the recording.
- Click here for the PDF of the presentation slides.

- 2021 AOA Best Practice Webinars: <https://olivebiz.com.au/2021-technical-webinars/>

Olive oil Storage Considerations with Jamie Ayton – **To be held 5 October 2021 / Link TBA.**

AOA Webinar: Protected: Technical Aspects of EVOO making with Pablo Canamasas – held 25 March 2021: <https://olivebiz.com.au/technical-aspects-of-evoo-making/>

(Password: AOAEVOOTechWeb2)

- AOA Webinar: Protected: Pre-season considerations for EVOO processing with Pablo Canamasas – held 10 March 2021: <https://olivebiz.com.au/pre-season-considerations-for-evoo-processing/>

(Password: AOAProcWebinar1)

- AOA Webinar: Evaluation of Processing Aids for Olive Oil Extraction & Quality Improvement with Pablo Canamasas – held 16 June 2020: <https://olivebiz.com.au/webinar-evaluation-of-processing-aids/>

Table Olives:

- 2021 Best Practice Webinars: <https://olivebiz.com.au/2021-technical-webinars/> Table Olive Cultivars with Professor Stan Kailis – **To be held 28 September 2021 / Link TBA.**
- Upscale your Table Olives Operation with Peter Reaich, Australian Olive Company (AOA 2020): <https://olivebiz.com.au/webinar-update-your-table-olives-operation/>
- Talking Table Olives with Linda Costa, Olives in Fact (AOA 2020): <https://olivebiz.com.au/webinar-talking-table-olives/>
- Linda Costa Table Olive SA Workshop Videos (AOA 2020): <https://olivebiz.com.au/2020-linda-costa-table-olives-sa-workshop-videos/>

General:

- AOA Webinars: Digital Marketing Series with Lauren Hamilton from Digital Narrative: (with links to Vimeo recording and presentation pdf): <https://olivebiz.com.au/digital-marketing-series/>
 - Webinar 1: How to establish an online business – held 26 May 2020.
 - Webinar 2: How to drive online sales using free digital marketing – held 2 June 2020.
 - Webinar 3: How to grow your online business using paid digital marketing – held 9 June 2020.

AOA Conference / Virtual Conference Presentations:

- AOA 2021 Virtual Conference program & recordings: <https://olivebiz.com.au/aoa-2021-national-virtual-conference/>
 - Day 1 (12/10/2021): The Big Picture
 - Day2 (13/10/2021): Biosecurity
 - Day 3 (14/10/2021): Factors Influencing Olive Yields
 - Day 4 (15/10/2021): Olives and Olive Oil in Food
- AOA 2020 Virtual Conference recordings: <https://olivebiz.com.au/aoa-2020-virtual-conference-recordings/> , including
 - Day 1 (13/10/2020): Soil management: (Password: AOAVirtualSoil157)
 - Day2 (14/10/2020): Grove management: (Password: GroveMAOAVirtual276)
 - Day 3 (15/10/2020): Olives & health: (Password: O&HAOAVirtual134)
 - Day 4 (16/10/2020): Olive marketing: (Password: OMarketAOAVirtual489)
- AOA 2019 Conference presentations and video recordings: <https://olivebiz.com.au/2019-national-conference-trade-exhibition/>
- AOA 2018 Conference presentations and video recordings: <https://olivebiz.com.au/2018-national-conference-trade-exhibition/>
- AOA 2017 Conference presentations and video recordings: <https://australianolives.com.au/2017-presentations/>
- AOA 2016 Conference presentations and video recordings: <https://australianolives.com.au/2016-conference-presentations/>
- AOA 2015 Conference presentations and video recordings: <https://australianolives.com.au/2015-conference-presentations/>
- AOA 2014 Conference presentations and video recordings: <https://australianolives.com.au/2014-conference-presentations/>
- AOA 2013 Conference presentations and video recordings: <https://australianolives.com.au/2013-conference-presentations/>
- AOA 2012 Conference presentations and video recordings: <https://australianolives.com.au/2012-conference-presentations/>
- AOA 2011 Conference presentations and video recordings: <https://australianolives.com.au/2011-conference-presentations/>
- AOA 2010 Conference presentations and video recordings: <https://australianolives.com.au/2010-conference-presentations/>
- AOA 2009 Conference presentations and video recordings: <https://australianolives.com.au/2009-conference-presentations/>

ENDS

Appendix 4: OliveCare® News Editions and Readership Metrics:

Click on the index and months below to access issues of the OliveCare® newsletter.

OL17006 Editions (35):

- 2A: OliveCare® News – Consolidated Index: <https://australianolives.com.au/wp-content/uploads/2021/07/OliveCare-Newsletter-Index-22.pdf>
- 2B: OliveCare® News – August 2021 Edition: <https://australianolives.com.au/wp-content/uploads/2021/07/OliveCare-News-August-2021-Edition-FINAL.pdf>
- 2C: OliveCare® News – July 2021 Edition: https://australianolives.com.au/wp-content/uploads/2021/07/OliveCare-News-July-2021-Edition_FINAL.pdf
- 2D: OliveCare® News – June 2021 Edition: https://australianolives.com.au/wp-content/uploads/2021/05/OliveCare-News-June-2021-Edition_FINAL.pdf
- 2E: OliveCare® News – May 2021 Edition: https://australianolives.com.au/wp-content/uploads/2021/04/OliveCare-News-May-2021-Edition_FINAL.pdf
- 2F: OliveCare® News – April 2021 Edition: https://australianolives.com.au/wp-content/uploads/2021/04/OliveCare-News-April-2021-Edition_FINAL.pdf
- 2G: OliveCare® News – March 2021 Edition: https://australianolives.com.au/wp-content/uploads/2021/03/OliveCare-News-March-2021-Edition_FINAL.pdf
- 2H: OliveCare® News – February 2021 Edition: https://australianolives.com.au/wp-content/uploads/2021/01/OliveCare-News-February-2021-Edition_FINAL.pdf
- 2I: OliveCare® News – December 2020 Edition: https://australianolives.com.au/wp-content/uploads/2020/12/OliveCare-News-December-2020-Edition_FINAL2.pdf
- 2J: OliveCare® News – November 2020 Edition: https://australianolives.com.au/wp-content/uploads/2020/11/OliveCare-News-November-2020-Edition_Final.pdf
- 2K: OliveCare® News – October 2020 Edition: https://australianolives.com.au/wp-content/uploads/2020/10/OliveCare-News-October-2020-Edition_Final2.pdf
- 2L: OliveCare® News – September 2020 Edition: https://australianolives.com.au/wp-content/uploads/2020/08/OliveCare-News-September-2020-Edition_Final.pdf
- 2M: OliveCare® News – August 2020 Edition: https://australianolives.com.au/wp-content/uploads/2020/08/OliveCare-News-August-2020-Edition_Final.pdf
- 2N: OliveCare® News – July 2020 Edition: https://australianolives.com.au/wp-content/uploads/2020/07/OliveCare-News-July-2020-Edition_Final.pdf
- 2O: OliveCare® News – June 2020 Edition: https://australianolives.com.au/wp-content/uploads/2020/06/OliveCare-News-June-2020-Edition_Final.pdf
- 2P: OliveCare® News – May 2020 Edition: https://australianolives.com.au/wp-content/uploads/2020/05/OliveCare-News-May-2020-Edition_Final.pdf
- 2Q: OliveCare® News – April 2020 Edition: <https://australianolives.com.au/wp-content/uploads/2020/04/OliveCare-News-April-2020-Edition-FINAL.pdf>
- 2R: OliveCare® News – March 2020 Edition: https://australianolives.com.au/wp-content/uploads/2020/03/OliveCare-News-March-2020-Edition_FINAL3.pdf
- 2S: OliveCare® News – February 2020 Edition: <https://australianolives.com.au/wp-content/uploads/2020/03/OliveCare-News-February-2020-FINAL.pdf>
- 2T: OliveCare® News – December 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2019/12/OliveCare-News-Dec19.pdf>
- 2U: OliveCare® News – November 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2019/11/OliveCare%C2%AE-News-November-2019-edition.pdf>
- 2V: OliveCare® News – October 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2020/02/OliveCare-News-October-2019-2.pdf>

- 2W: OliveCare® News – September 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2019/09/OliveCare-newsletter-Sep19.pdf>
- 2X: OliveCare® News – August 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2019/08/OliveCare-newsletter-Aug19.pdf>
- 2Y: OliveCare® News – July 2019 Edition: https://australianolives.com.au/wp-content/uploads/2019/07/OliveCare-News-July-2019-Edition_CCFinal.pdf
- 2Z: OliveCare® News – June 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2019/08/OliveCare-newsletter-June19.pdf>
- 2AA: OliveCare® News – May 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2019/08/OliveCare-newsletter-May19.pdf>
- 2BB: OliveCare® News – April 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2019/08/OliveCare-newsletter-April19.pdf>
- 2CC: OliveCare® News – March 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2019/08/OliveCare-newsletter-March19.pdf>
- 2DD: OliveCare® News – February 2019 Edition: <https://australianolives.com.au/wp-content/uploads/2019/08/OliveCare-newsletter-Feb19.pdf>
- 2EE: OliveCare® News – December 2018 Edition: <https://australianolives.com.au/wp-content/uploads/2019/08/OliveCare-newsletter-Dec18.pdf>
- 2FF: OliveCare® News – November 2018 Edition: <https://australianolives.com.au/wp-content/uploads/2018/11/OLIVECARE-NEWS-NOVEMBER-2018.pdf>
- 2GG: OliveCare® News – October 2018 Edition: <https://australianolives.com.au/wp-content/uploads/2018/11/OLIVECARE-NEWS-OCTOBER-2018.pdf>
- 2HH: OliveCare® News – September 2018 Edition: <https://australianolives.com.au/wp-content/uploads/2018/12/OLIVECARE-NEWS-SEPTEMBER-2018.pdf>
- 2II: OliveCare® News – August 2018 Edition: <https://australianolives.com.au/wp-content/uploads/2018/12/OLIVECARE-NEWS-AUGUST-2018.pdf>
- 2JJ: OliveCare® News – July 2018 Edition: <https://australianolives.com.au/wp-content/uploads/2018/12/OLIVECARE-NEWS-JULY-2018.pdf>

OliveCare® News Readership Metrics (OL17006): 29 Editions

OliveCare® News readership metrics for electronic communication channels as tracked via Google Analytics (website); and Constant Contact (email).

- For the OliveCare® e-newsletter-newsletter:
 - Open rate (%)
 - Click-through rate (%)
 - Click-to-open rate (%)
 - Hard bounce rate (%)
 - Unsubscribe rate (%)

Note: Bounce Rate is the percentage of visitors to a particular website who navigate away from the site after viewing only one page. A rising bounce rate is a sure sign that your homepage is boring or off-putting.

Note: The December 2018 edition of *OliveCare® News* was the first to be distributed through *Constant Contact* enabling collection of analytical data on readership.

The open rate *OliveCare® News* is consistently above 70%, which according to *Cox Inall Communications* is 50% points higher than the average open rate for the public relations industry at around 19%.

The click through rate has fluctuated around 20% to 25%, well above the industry average for public relations of 1.4%. This shows good engagement of subscribers with the output and the content.

<i>OliveCare® News</i> Readership Metrics	May 2021 Edition	June 2021 Edition	July 2021 Edition
<i>OliveCare®</i> Member Opens	141	150	143
Total sent	276 stakeholders	280 stakeholders	280 stakeholders
Open Rate	53.2%	56.0%	53.6%
Total Unique Opens			
Mobile Open Rate	17.3%	21.2%	19.5%
Desktop Open Rate	82.7%	78.8%	80.5%
Click Through Rate	14.9%	19.3%	17.5%
Total Unique Clicks			
Bounce Rate	4.0%	4.3%	4.6%
Total Bounces	11	12	13
Unsubscribe Rate	0.0%	0.4%	0.0%
Total Unsubscribe	0	1	0

<i>OliveCare® News</i> Readership Metrics	February 2021 Edition	March 2021 Edition	April 2021 Edition
<i>OliveCare®</i> Member Opens	150	150	163
Total sent	268 stakeholders	270 stakeholders	277 stakeholders
Open Rate	58.4%	58.8%	61.3%
Total Unique Opens			
Mobile Open Rate	26.5%	21.9%	23.7%
Desktop Open Rate	73.3%	78.1%	76.3%
Click Through Rate	12%	17.3%	15.3%
Total Unique Clicks			
Bounce Rate	4.1%	5.6%	4%
Total Bounces	11	15	11
Unsubscribe Rate	0.4%	0	0.4%
Total Unsubscribe	1	0	1

<i>OliveCare</i>® News Readership Metrics	October 2020 Edition	November 2020 Edition	December 2020 Edition
<i>OliveCare</i> ® Member Opens	98/133 (74%)	97/133 (73%)	99/132 (75%)
Total sent	262 stakeholders	266 stakeholders	271 stakeholders
Open Rate	63.2%	59.2%	58.6%
Total Unique Opens	156	151	150
Mobile Open Rate	23.6%	24.0%	23.2%
Desktop Open Rate	76.4%	76.0%	76.8%
Click Through Rate	23.1%	16.6%	17.3%
Total Unique Clicks	36	25	26
Bounce Rate	5.7%	4.1%	5.5%
Total Bounces	15	11	15
Unsubscribe Rate	0.4%	0%	0%
Total Unsubscribe	1	0	0

<i>OliveCare</i>® News Readership Metrics	July 2020 Edition	August 2020 Edition	September 2020 Edition
<i>OliveCare</i> ® Member Opens	92/136 (68%)	99/136 (73%)	97/134 (72%)
Total sent	257 stakeholders	261 stakeholders	262 stakeholders
Open Rate	55.6%	59.0%	58.7%
Total Unique Opens	135	147	148
Mobile Open Rate	31.8%	30.8%	19.7%
Desktop Open Rate	68.2%	69.2%	80.3%
Click Through Rate	14.1%	25.2%	20.3%
Total Unique Clicks	19	37	30
Bounce Rate	5.4%	4.6%	3.8%
Total Bounces	14	12	10
Unsubscribe Rate	0%	0%	0%
Total Unsubscribe	0	0	0

<i>OliveCare® News</i> Readership Metrics	April 2020 Edition	May 2020 Edition	June 2020 Edition
Total sent	258 stakeholders	261 stakeholders	261 stakeholders
Open Rate	60.8%	54.5%	59.7%
Total Unique Opens	152	138	148
Mobile Open Rate	23.8%	25.1%	24.1%
Desktop Open Rate	76.2%	74.9%	75.9%
Click Through Rate	20.4%	26.8%	21.6%
Total Unique Clicks	31	37	32
Bounce Rate	3.1%	3.1%	5.0%
Total Bounces	8	8	13
Unsubscribe Rate	0%	0%	0%
Total Unsubscribe	0	0	0

<i>OliveCare® News</i> Readership Metrics	December 2019 Edition	February 2020 Edition	March 2020 Edition
Total sent	252 stakeholders	248 stakeholders	254 stakeholders
Open Rate	60.6%	56.0%	60.7%
Total Unique Opens	151	135	148
Mobile Open Rate	30.4%	32.3%	22.7%
Desktop Open Rate	69.6%	67.7%	77.3%
Click Through Rate	7.9%	22.0%	26.4%
Total Unique Clicks	12	30	39
Bounce Rate	1.2%	3.0%	3.9%
Total Bounces	3	8	10
Unsubscribe Rate	0%	0%	0%
Total Unsubscribe	0	0	0

<i>OliveCare® News</i> Readership Metrics	September 2019 Edition	October 2019 Edition	November 2019 Edition
Total sent	247 stakeholders	245 stakeholders	251 stakeholders
Open Rate	61.9%	54.2%	48%
Total Unique Opens	151	129	119
Mobile Open Rate	30.1%	24.9%	32.7%
Desktop Open Rate	69.9%	75.1%	67.3%
Click Through Rate	11.9%	7.8%	8.4%
Total Unique Clicks	18	10	10
Bounce Rate	1.2%	2.9%	1.2%
Total Bounces	3	7	3
Unsubscribe Rate	0%	0%	0%
Total Unsubscribe	0	0	0

<i>OliveCare® News</i> Readership Metrics	June 2019 Edition	July 2019 Edition	August 2019 Edition
Total sent	237 stakeholders	239 stakeholders	244 stakeholders
Open Rate	50.2%	47.6%	56.9%
Total Unique Opens	115	110	136
Mobile Open Rate	29.7%	27.4%	20.2%
Desktop Open Rate	70.3%	72.6%	79.8%
Click Through Rate	9.6%	7.3%	26.5%
Total Unique Clicks	11	8	36
Bounce Rate	3.4%	3.3%	2.0%
Total Bounces	8	8	5
Unsubscribe Rate	0%	0%	0%
Total Unsubscribe	0	0	0

<i>OliveCare® News</i> Readership Metrics	March 2019 Edition	April 2019 Edition	May 2019 Edition
Total sent	239 stakeholders	237 stakeholders	237 stakeholders
Open Rate	55.9%	51.5%	66.7%
Total Unique Opens	127	121	154
Mobile Open Rate	22.9%	28.1%	36.2%
Desktop Open Rate	77.1%	71.9%	63.8%
Click Through Rate	20.5%	21.5%	21.4%
Total Unique Clicks	26	26	33
Bounce Rate	5.0%	0.8%	2.5%
Total Bounces	12	2	6
Unsubscribe Rate	0.4%	0%	0%
Total Unsubscribe	1	0	0

<i>OliveCare® News</i> Readership Metrics	December 2018 Edition	January 2019 - no edition	February 2019 Edition
Total sent	224 stakeholders		224 stakeholders
Open Rate	43.1%		53.5%
Total Unique Opens	93		114
Mobile Open Rate	18.9%		29.9%
Desktop Open Rate	81.1%		70.1%
Click Through Rate	18.3%		19.3%
Total Unique Clicks	17		22
Bounce Rate	3.6%		4.9%
Total Bounces	8		11
Unsubscribe Rate	0%		0%
Total Unsubscribe	0		0

Note: The December 2018 edition was the first to be distributed through *Constant Contact* enabling collection of analytical data on readership.

Appendix 5: OliveCare Best Practice Presentations, Webinar, Workshop and Field Day Participant Feedback:

Grove Management Best Practice Presentations:

- 2021 OliveCare® Best Practice Webinars with Peter McFarlane, AOA Code of Practice Administrator: <https://olivebiz.com.au/olivecare-best-practice-webinar-series/>
 - Grove Management Best Practice – held 15 June 2021 - access presentation and webinar recording [here](#).
- 2021 Healthy Soils Healthy & Productive Groves Field Day Series – ‘Increasing Grove Productivity’ with Greg Seymour AOA CEO, and Peter McFarlane, AOA Code of Best Practice Administrator: https://olivebiz.com.au/wp-content/uploads/2021/02/Healthy-Soils-Program-Notes_OliveCare.pdf
- 1018/19 OL17001 IPDM Field Day Series - ‘Risk Management, Biosecurity, Continuous Improvement and Technical Support’, with Greg Seymour, AOA CEO and Peter McFarlane, AOA Code of Best Practice Administrator:
 - Download the presentation at: <https://olivebiz.com.au/wp-content/uploads/2018/12/Pomonal-IPDM-Field-Day.pdf>
 - View the video recording at: <https://vimeo.com/305653345>

Olive Oil Best Practice Presentations:

- 2021 OliveCare® Best Practice Webinars with Peter McFarlane, AOA Code of Practice Administrator: <https://olivebiz.com.au/olivecare-best-practice-webinar-series/>
 - EVOO & Flavoured Olive Oil Production Best Practice – held 29 June 2021 - access presentation and webinar recording [here](#).
- Make a Commitment to EVOO Quality by Peter McFarlane, AOA Code of Practice Administrator (AOA 2019): https://australianolives.com.au/wp-content/uploads/2019/12/PMF_OliveCare_EVOO-Freshness-Testing-Notes_OPT.pdf
- EVOO Freshness Testing by Peter McFarlane, AOA Code of Practice Administrator (AOA 2019): https://australianolives.com.au/wp-content/uploads/2019/12/PMF_OliveCare_EVOO-Freshness-Testing-Notes_OPT.pdf
- OliveCare® - Upping the Ante on Quality by Peter McFarlane, AOA Code of Practice Administrator (AOA Conference 2019):
 - Presentation slides: <https://olivebiz.com.au/wp-content/uploads/2019/11/Peter-McFarlane-OliveCare-Upping-The-Ante-On-Quality.pdf>
 - Video recording: <https://vimeo.com/374837180>
- OliveCare® Certification of EVOO by Peter McFarlane, AOA Code of Practice Administrator (AOA Conference 2018):
 - Presentation Slides: <https://olivebiz.com.au/wp-content/uploads/2018/12/Peter-McFarlane-OliveCare-Certification-of-EVOO.pdf>
 - Video: <https://vimeo.com/304311082>

Table Olives Best Practice Presentations:

- 2021 OliveCare® Best Practice Webinars with Peter McFarlane, AOA Code of Practice Administrator: <https://olivebiz.com.au/olivecare-best-practice-webinar-series/>
 - Table Olives / Olive Paste Production Best Practice – held 13 July 2021 - access presentation and webinar recording [here](#).

- Table Olives Food Safety by Peter McFarlane, AOA Code of Practice Administrator (AOA 2020): https://australianolives.com.au/wp-content/uploads/2020/03/PMF_OliveCare-Linda-Costa-TO-Workshop-Presentation_WEB.pdf
- Table Olive Testing / Make a Commitment to Table Olive Quality by Peter McFarlane, AOA Code of Practice Administrator (AOA 2019): https://australianolives.com.au/wp-content/uploads/2019/12/PMF_OliveCare_Table-Olive-Testing-Notes_OPT.pdf
- OliveCare® Certification of Table Olives by Peter McFarlane, AOA Code of Practice Administrator (AOA 2018):
 - Presentation Slides: <https://olivebiz.com.au/wp-content/uploads/2018/12/Peter-McFarlane-OliveCare-Certification-of-Table-Olives.pdf>
 - Video: <https://vimeo.com/304773045>

2021 Webinar Participant Evaluation:

OliveCare® Best practice Webinar Series Viewing Summary:

#	Name	Date of Webinar	Webinar Registrations	Webinar Participants	Vimeo Views (post webinar)	Total Webinar + Vimeo views	Olivebiz Pageviews (post webinar 1)
1	Grove Management Best Practice	15/06/2021	78	30	13	43	
2	EVOO & Flavoured Olive Oil Production Best Practice	29/06/2021	84	28	9	37	
3	Table Olives / Olive Paste Production Best Practice	13/07/2021	97	37	8	45	
	Totals		259	95	30	125	284

The 3 OliveCare® Best Practice webinars attracted between 78 and 97 registration per event.

Total webinar viewing was 125.

All three webinars had similar participation, with the most popular topic being table olives (45 views).

Usefulness of webinar was rated between 4.1 and 4.8 out of 5

Indicated 'learned new information' ranged from 80% to 100% of participants

Indicated 'will change practices' ranged from 66% to 100% of participants

Participant Evaluation: Grove Management Best Practice

	Total Survey Respondents	Grower / Processor	Other (Industry Assoc, Technical, Marketer)	Usefulness of Webinar	Learned New Information	Will Change Practices	Webinar Registrations / participants	Post webinar recording views / visits
Webinar 1	5	5 (100%)	-	4.8/5	5 (100%)	5 (100%)		

Participant feedback:

- Looking forward to (receiving) the webinar recording.

Participant Evaluation: EVOO & Flavoured Olive Oil Production Best Practice

	Total Survey Respondents	Grower / Processor	Other (Industry Assoc, Technical, Marketer)	Usefulness of Webinar	Learned New Information	Will Change Practices	Webinar Registrations / participants	Post webinar recording views / visits
Webinar 2	12	11 (92%)	1 (8%)	4.1/5	10 (83%)	9 (75%)		

Participant feedback:

- *Whilst processes won't change it is because seminar confirmed that our practices are in line with OliveCare.*
- *Found the timing of seminar really difficult - EoFY and harvest happening simultaneously.*
Was hoping that the seminar would have gone a bit deeper, was really great and always good to refresh, but with all that is going on - felt it was more aimed at entry to early level growing and processing. Perhaps future seminars could indicate the level of experience on the spectrum the presentation is aiming for. IE "this seminar, while open to all, is ideally suited to growers who have some or no experience" or "ideally suited to those who have been in the industry a while and looking for" The wording isn't quite right - but the concept might have merit.
Found Shane's comments awesome though - and there is ALWAYS a take-home gem in every presentation put on. Would love to know more and more about how to create great oil - connecting what we do the field with what we do when processing. There is so much we don't know. So thank you.
- *Missing was: a) information on the simple and easy to follow traditional olive oil of the healthy Mediterranean diet, b) the role of modern inaccurate and deceptive terminology that creates enormous confusion to consumers, traders and food writers, c) modern reduction of polyphenols due to recent production practices and d) the effect of these actions in considerable increase in production costs that are an impediment for successful promotion and implementation of the healthy, pro-environment and low cost traditional Mediterranean diet. (Teacher, presenter, writer and promoter of the traditional Med. Diet, olive oil and olives).*
- *Thanks - well paced, great content and a really good overview to keep us focussed.*
- *We've learnt a lot from this and the previous webinar especially re the regulatory environment and ensuring a high standard for Australian growers. It'd be good if you would also run a webinar on sales and marketing pointers/tips including to wholesale distributors, transporting and regulations for inter-state selling, etc. Thanks again, really interesting webinars.*
- *Thankyou, very informative, especially the question and answer session.*

Participant Evaluation: Table Olives / Olive Paste Production Best Practice

	Total Survey Respondents	Grower / Processor	Other (Industry Assoc, Technical, Marketer)	Usefulness of Webinar	Learned New Information	Will Change Practices	Webinar Registrations / participants	Post webinar recording views / visits
Webinar 3	12	10 (83%)	2 (17%)	4.5/5	12 (100%)	8 (67%)		

Participant feedback:

- *I missed the first 5 mins of the seminar but in the slides i don't see anything in particular about producing Olive paste. Was there something specific about this activity?*
- *Well presented, best explanation of water activity I have seen.*
- *Hope you can keep up the pool of information as it is informative and helpful.*

- *A font of knowledge, thank you.*
- *If the slides were sent out beforehand there would be more time to discuss questions and share ideas within the group.*

2021 Healthy Soils Healthy & Productive Groves Field Days Evaluation:

The 2021 Healthy Soils Healthy & Productive Groves Field Day Series of 6 events were run as part of OL18000 included a presentation on “Setting the Scene (Grove Productivity) / OliveCare Best Practice”, the following is a summary of field day participant feedback:

Field day	Grower participants	Surveys returned
TAS (14/2/2021)	12 (9 enterprises)	2 (forgot to hand survey out on the day!)
SA (28/2/2021)	30 (20 enterprises)	24
NSW-Hunter (7/3/2021)	40 (24 enterprises)	23
QLD (14/3/2021)	8 (5 enterprises)	9
VIC (21/3/2021)	41 (22 enterprises)	31
WA (28/3/2021)	28 (16 enterprises)	18
Total	159 (96 enterprises)	107 (67%)

Setting the Scene (Grove Productivity) / OliveCare Best Practice: **Score = 4.3 to 4.8 /5.0**

- There were several positive comments on OliveCare checklists and setting KPIs
- It seems many participants are not really aware of OliveCare and where it fits with AOA
- *“I am still not sure of the purpose of OliveCare as opposed to AOA*
- *“Will join OliveCare for more regular information*
- *“Would have liked more information on OliveCare best practice program*
- *“The overview of the services that we don’t currently use*
- *“Perhaps an update on new resources on the AOA website*
- *“Honestly we are actually not as good as we think on a worldwide comparison*

2019/20 OliveCare® / Tastebook® sensory training best practice workshops:

A series of 8 workshops were held across Australia as part of the OL17004 program, attracting a total of 153 participants.

OliveCare® contributed a presentation and discussion on EVOO and table olive product quality testing and certification.

- Adelaide, SA: 24 May 2019
- Geelong, VIC: 14 June 2019
- Wagga Wagga, NSW: 30 June 2019
- Perth, WA: 18 August 2019
- Wangaratta, VIC: 31 August 2019
- Hunter Valley, NSW: 27 October 2019
- Campbell Town, TAS: 29 February 2020
- Adelaide, SA: 6 March 2020

Analysis - Workshop Participants:

70% of workshop participants were olive producers, 17% olive processors, 19% olive competition judges, and 30% other interested persons. Participants indicated in general that they just want to learn more about olive oil and olives.

Generally high level of satisfaction with participants rating the usefulness and relevance of the workshops between 3.6 (Perth) and 4.6 (Adelaide) stars out of a possible 5 stars.

The lowest level of satisfaction was at the Perth workshop – this was the result of a failure of the AV system, and a high proportion of experienced olive judges registering for what was advertised as an introductory level workshop, meaning their expectations were not met.

A high level of satisfaction with event organization, venue and catering arrangements scoring between 3.7 (Perth) and 4.4 (Geelong) out of a possible 5 stars.

Overall, 70% of the 153 workshop participants identified as olive producers, 24% as olive competition judges, 22% as olive processors, with 30% indicating other industry involvement / interests.

Grower participation in the workshops ranged from 33% in the Hunter Valley to 100% at Wangaratta. As an observation the more mixed the group, the more difficult it becomes to satisfactorily meet all needs.

Overall satisfaction with the organization and usefulness of the OliveCare® session was high, ranging from a low of 4.4 out of 5 to 4.9 out of five.

Participant Category	Adelaide SA	Geelong VIC	Wagga Wagga NSW	Perth WA	Wangaratta NSW	Hunter Valley NSW	Campbell Town TAS	Adelaide SA	Total
Grower / producer	8	14	14	13	14	3	11	13	90 (70%)
Olive oil judge	4	1	4	10	1	1	0	3	24 (19%)
Olive processor	2	0	5	3	3	0	4	5	22 (17%)
Other: Consumer, enthusiast, industry professional, researcher, supplier	4	2	2	5	2	7	7	10	39 (30%)
Survey Returns / Participants	16 18	18 28	16 16	24 28	14 16	9 12	14 17	17 18	128 153

Overwhelmingly positive survey feedback, indicating the presentations and discussion “hit the target”. Participants value the *Tastebook* sensory training as demonstrated by 2 companies each sending 5 staff to the recent Adelaide workshop.

However, non-producer participants tended to find the *OliveCare*® presentations and discussion to be too technical, and not useful for their needs. Several participants would have preferred separate olive growing, olive processing and sensory training courses, others have mentioned separate days for beginners and experienced producers, and EVOO vs table olive producers; however, the presenters believe this is outweighed by the efficiency of having the combined training day.

The *OliveCare*® workshop focus was on EVOO given a separate workshop program was provided by Linda Costa on table olive production.

Constructive criticism / suggestions for improvements for the *OliveCare*® workshop content and presentation include (*with annotations*):

- The (A4 example) work sheet I couldn’t read it – the numbers were tiny (*PMCF: We now print as A3*)
- The exercises were great, but the second one (calculate BBD) was a bit difficult – maybe I’m just not great at maths (*PMCF: We have now revised and simplified the BBD calculation sheet*)
- A bit overlapping with Claudia’s presentation (*PMCF: Agree but didn’t know in advance what Claudia was presenting at the Geelong workshop*)
- The mathematics (*PMCF: A few people having difficulty with the mathematics – I can try to improve the worksheet, but I believe it is important that participants understand how the numbers work even if they don’t have to do the calculations themselves*)
- Crash course in technical / horticultural aspects of olive growing, processing etc, a little overwhelming for someone like me (only 4 years in olives) (*PMCF: Yes perhaps we need to trim the breadth of the presentation?*)
- Long (detail) pertaining to olive oil – not table olives (*PMCF: We have the option of doing either an EVOO or a Table Olive OliveCare® presentation*)
- Table olives – as we are not table olive producers (but it was interesting anyway)
- Had little (group) interaction at the Wagga workshop – (*PMCF agree – we ran out of time*)
- Time constraints and talking interrupting what was getting discussed (*PMCF: We need a smoother transition to the afternoon tastings so it doesn’t interrupt the flow of discussion*)
- Several of the slides were not able to be read from our seats. The purple / other dark colours and the small font were the culprits. Don’t know if it is possible to divide into several slides with larger information, or alternatively provide the handout document to refer to. (*PMCF: Have now split some of the slides. Also the projection facilities at Adelaide were not A1 so there were some readability issues*).
- Provide dot points in a booklet so participants can read along (*PMCF: This will certainly help where slide print density is high - a pdf of the presentation is provided post workshop*)
- This was a general discussion, perhaps better to pick 1 topic for discussion / workshop (*PMCF: Yes perhaps we need to trim the breadth of the program?*)
- More team (table) interaction, incorporate small groups of people (*PMCF: Good suggestion*)
- Shortening the workshop (*PMCF: The workshop program was advertised a full day program*)
- Maybe a more ‘layman’ presentation for newbies like me (*PMCF: Presentation notes are provided post workshop*)
- More on table olives please (*PMCF: We have the option of doing either an EVOO or a Table Olive OliveCare® presentation – but we don’t have time to do both*)
- More interaction with people attending – (*PMCF agree – need more time*)
- Applied sample documents – (*PMCF - again this is a reference to needing practical activities*)
- Have the AV working – the Perth workshop presentation was not able to be displayed on the large screen – (*PMCF - very unfortunate- the venue was organized by the local committee*)
- Need shorter session
- Fewer less complex slides - (*PMCF yes need to trim the presentation*)
- Better understanding of skill level of participants to direct specific parts of the presentations – eg new producers, new judges vs experienced producers and experienced judges – (*PMCF -the workshops were advertised as entry level*)

- Need to advertise for those new to the industry as a bit basic for those who have been producing for 10+ years – *(PMCF the WA workshop had the greatest diversity of participants – less growers and more judges, so hard to pitch to an appropriate level)*
- Pre-reading of some basic content / chemistry allowing next level discussion – *(PMCF - good suggestion)*
- Should have a concise food safety program with detailed modules as addendums – *(PMCF - good suggestion)*
- Have checklist documentation that growers / processors can tick and document checks, recordings – *(PMCF – checklists are available to OliveCare members)*
- Have regular breaks instead of long sessions – *(PMCF - good suggestion)*
- Run a small course for processors – *(PMCF - AOA has an annual processing workshop held at Boort in Victoria – the challenge is getting WA processors to travel east!)*
- Maybe keep table olives separate from olive oil – worthy of consideration – *(PMCF – as a future option perhaps we could split the workshop AM Table Olives / PM EVOO)*
- Too much PowerPoint – need variation in delivery method – *(PMCF -fair comment)*
- Present some basics of chemistry – some of the chemistry was a bit too detailed
- Drop the Premium / UP section, and integrate the chemistry with the checklists – *(PMCF - possible but most participants find that section interesting)*
- Condense to vital information with less detail snapshot to encourage more interest – *(PMCF - worthy of consideration)*

All workshop participants received a follow-up email with copies of workshop presentations and invitations to join OliveCare®.

2020 OL18000 table olive best practice workshop series with South African table olive specialist Linda Costa:

Workshops were held in TAS, VIC, SA, NSW, ACT & WA in February / March 2020 as part of the OL18000 program – with OliveCare® contributing a presentation on table olive food safety.

There was a total of 113 workshop participants across the 6 workshops.

A total of 59% of participants are currently commercial table olive producers, with a further 35% of participants (olive oil producers) planning to become table olive producers.

24% of workshop participants rated all sessions as equally valuable. The standout presentation was Principles of Table Olive Fermentation, different methods of processing olive fruit which was delivered across 2 sessions rated best by up to 87% of participants; followed by the Cultivar Conundrum at 51% and Spoilage Issues & Corrective Actions at 41%, and Table olives as a Functional Food at 34%.

Three presentations were nominated as the least interesting by 12% of workshop participants:

- Economic Context – market overview, cost structures. (AOA)
- Australian Food Safety Requirements. (OliveCare®)
- Table Olives as a functional food. (Linda Costa)

The data reflects the primary motivation for table olives producers for attending the workshop – they want to learn / confirm the best methods for making their table olives.

Podbooth also recorded a video production of the SA workshop:

<https://olivebiz.com.au/2020-linda-costa-table-olives-sa-workshop-videos/>

2018 / 2019 AOA Risk Management and IPDM field days

A series of 10 field days held across Australia between August 2018 and February 2019, as part of OL17001 and the OL18000 program, attracting a total of over 300 participants.

The IPDM Field Day presentations include a segment on “Food Safety & Product Quality Risk Management (OL16011): OliveCare® Code of Best Practice” (Ref: [Appendix 5](#))

The program included a presentation on ‘OliveCare® and Food Safety & Product Quality Risk Management’.

The OL 17001 IPDM regional field days were organized by AOA in collaboration with Western Sydney University to explore appropriate IPDM extension services focused particularly on black scale, olive lace bug and anthracnose.

Field days were held:

- Marulan, NSW: 10 August 2018
- Lovedale, Hunter Valley, NSW: 12 August 2018
- Perseverance, QLD: 3 November 2018
- Pomonal, VIC: 16 November 2018
- Roseworthy, SA: 24 November 2018
- White Hill, TAS: 1 December 2018
- Bright, VIC: 1 February 2019
- Red Hill South, VIC: 3 February 2019
- New Norcia, WA: 15 February 2019
- Cowaramup, WA: 17 February 2019

Note 1: OL18000 AOA and OL17001 IPDM field day presentations (video and PowerPoint) are posted on the *OliveBiz* website at: <https://olivebiz.com.au/ipm-project/field-days/ipdm-videos-presentations/>

Note 2: Field day participant survey and evaluation was undertaken by the OL17001 team.

Appendix 6: OliveCare® Risk Management & HACCP Plan Templates: (Links):

Risk Management Plan Templates (Links):

Ref: <https://australianolives.com.au/risk-assurance/>

- 7A: *OliveCare®* Risk Assurance Template – Safety and Quality Small Grower Version – EVOO (AOA July 2020): https://australianolives.com.au/wp-content/uploads/2018/06/CoP-Assurance-Template_EVOO.pdf
- 7B: *OliveCare®* Risk Assurance Template – Safety and Quality Small Grower Version – Table Olives (AOA July 2020): https://australianolives.com.au/wp-content/uploads/2018/06/CoP-Assurance-Template_Table-Olives.pdf

HACCP Food Quality Safety Plan Templates (Links):

Ref: <https://australianolives.com.au/olivecare-members-area/haccp/>

- 7C: *OliveCare®* HACCP Template for Australian EVOO & Flavoured Olive Oil (updated August 2020): https://australianolives.com.au/wp-content/uploads/2021/05/COP-HACCP-Style-FOOD-SAFETY_FOOD-QUALITY-PLAN-EVOO-Edition-3.0-August-2020_OPT.pdf
- 7D: *OliveCare®* HACCP Template for Australian Table Olive Products (updated January 2021): https://australianolives.com.au/wp-content/uploads/2021/05/COP-HACCP-Style-FOOD-SAFETY_FOOD-QUALITY-PLAN-TABLE-OLIVES-Edition-3.2-January-2021_OPT.pdf

Appendix 7: OliveCare® Participant Compliance Declarations (Links)

The following declarations from part of the OliveCare® participant compliance program:

- **3A:** OliveCare® participant declaration of product labelling. <https://australianolives.com.au/wp-content/uploads/2020/08/Signatory-declaration-of-product-labelling.pdf>
- **3B:** OliveCare® participant declaration of food quality / food safety systems and risk management plans. <https://australianolives.com.au/wp-content/uploads/2020/02/Signatory-declaration-of-food-safety-systems-and-risk-management.pdf>
- **3C:** OliveCare® participant declaration of EVOO storage conditions: <https://australianolives.com.au/wp-content/uploads/2019/08/OliveCare-Oil-Storage-Declaration.pdf>
- **3D:** OliveCare® participant declaration of table olive storage conditions, with evidence of control of heat, light and oxygen. <https://australianolives.com.au/wp-content/uploads/2019/11/OliveCare-Table-Olive-Storage-Declaration.pdf>
- **3E:** OliveCare® participant declaration of agri-chemical use: <https://australianolives.com.au/wp-content/uploads/2019/08/OliveCare-Chemical-Use-Declaration.pdf>
- **3F:** OliveCare® participant declaration of on-farm biosecurity preparedness: <https://australianolives.com.au/wp-content/uploads/2020/01/Signatory-declaration-of-onfarm-biosecurity-preparedness.pdf>
- **3G** OliveCare® Production Best Practice Checklists: <https://australianolives.com.au/olivecare-best-practice-checklists/>

Appendix 8: OliveCare® Production Best Practice Checklists:

Ref: <https://australianolives.com.au/olivecare-best-practice-checklists/>

Updated 19/8/2021

The following 182 OliveCare® “best practice” checklists of management strategies aim to increase the yield of premium EVOO and table olives, these checklists are further expanded below:

- **Grove Establishment Best Practice Checklist**, 8 items including nursery plant health status; olive cultivar selection and grove design – for those establishing a new grove or replanting an existing grove.
- **Biosecurity Best Practice Checklist**, 20 items including nursery plant health status; managing biosecurity risk on-farm, good grove hygiene and monitoring - it pays to be prepared.
- **Enterprise Sustainability Best Practice Checklist**, 13 items, including managing enterprise risk and benchmarking grove productivity to improve enterprise profitability.
- **Regulatory Compliance Best Practice Checklist**, 19 items including being a good employer, COVID-19 compliance, responsible chemical use, food safety and food quality, and Australian consumer law - be a responsible business.
- **Environmental & Community Responsibility Best Practice Checklist**, 13 items including minimising farm waste, maintaining biodiversity, and contributing to regional communities - build a sustainable future.
- **Grove Management Best Practice Checklist**, 30 items including soil health and tree nutrition, soil moisture, managing soil salinity, chemical use strategies, canopy management, and harvest management - how to be a leading olive producer.
- **Integrated Pest and Disease Management (IPDM) Best Practice Checklist**, 23 items including IPDM, cultural management, biological control, physical and mechanical control, use of selective pesticides, and stages of IPDM – achieve effective and responsible use of agri-chemicals.
- **Processing Best Practice Checklist**, 26 items including EVOO and table olive production - understanding essential elements of olive processing.
- **Product Quality, Storage & Blending Best Practice Checklist**, 14 items including EVOO and table olives.
- **Product Packaging, Labelling & Distribution Best Practice Checklist**, 16 items including labelling requirements, transportation, product specifications, retailing and product recall – develop standard operating procedures (SOPs) for finished product packaging and distribution.

The following 182 OliveCare® best practice checklist items may appear daunting however we will guide industry participants through each of these conversations and encourage and facilitate their implementation.

How about undertaking a preliminary self-assessment of your current practices to see how you fare? Then repeat after 12 months to measure your best practice implementation progress.

Note items coded **violet** are tagged for OliveCare® compliance. All other items are highly recommended as each will contribute to improving the enterprise ‘bottom line’.

Grove Establishment Best Practice Checklist: 8 Items

Grove establishment:

Important considerations for deciding where to establish an olive grove:

- ☐ Determine if the local climatic conditions (and projections) are suitable for olives – range of winter temperatures, danger of spring frosts damaging buds and wood, long warm and dry summers, danger of autumn frosts damaging fruit
- ☐ Research site history, chemical use, avoid previous crops with risk of Verticillium Wilt – cotton, cucurbits, eggplant, peppers, potato and tomato
- ☐ Analyse soil profile for limiting factors for water penetration (hydrophobic soils) and drainage (perched water tables)
- ☐ Test soil chemistry – pH, sodium, chloride and boron that may limit productivity

- ☐ Determine water availability and quality required for the proposed irrigation methods – inadequate water supply is the most common limiting factor for grove productivity
- ☐ Assess critical infrastructure needs – water, electricity, transport, labour

Grove design and olive cultivar selection:

These factors will determine potential grove productivity, and will be expensive to change:

- ☐ Consider tree planting density (low density, high density, super high density) and canopy architecture, proposed harvest method, frost control, soil moisture management (berms and drainage channels), wind breaks and staking of young trees.
- ☐ Consider olive cultivar selection including verification of DNA status, regional environment, agronomic (pollination, tree vigour, precocity, alternate bearing), pest and disease resistance, frost tolerance, market attributes (Oil: oil content, extraction efficiency, flavour profile, oxidative stability; Table Olives: flesh:stone ratio, fruit size, flesh quality (resistance to bruising, sensory profile for the intended processing method).

Biosecurity Best Practice Checklist: 20 Items

Nursery plant health status:

Essential questions to ask your nursery supplier:

- ☐ Are the nursery trees 'true to type'? – The olive cultivar authenticity of mother trees should be established by DNA analysis.
- ☐ Are the nursery trees 'proven olive cultivars'? It is important how selected olive cultivars will perform in your region.
- ☐ Are the nursery trees propagated from fruiting wood? Trees propagated from juvenile wood will take longer to produce fruit.
- ☐ Are the nursery trees supplied with thick trunks and with dynamic 'root trained' systems? This will increase tree survival and earlier fruit production. Seedlings with poorly formed root systems such as with root spiralling will underperform and be more susceptible to damage from wind and harvesters.
- ☐ Are the nursery trees supplied 'soil free' and with heat sterilised potting mix? It is important for tree health to eliminate soil borne pathogens.
- ☐ Are the nursery trees propagated under appropriate climatic conditions and supplied 'sun hardened'? Growing nursery trees outside for at least 6 months before delivery in a similar environment to that of the purchaser will minimise transplanting shock, and improve tree performance.
- ☐ Are the nursery trees provided graded and 'colour coded'? This will avoid any mix up of olive cultivars in the grove while planting.
- ☐ Are the trees trained to a 'single leader'? Removal of lower laterals to establish a strong central leader is the first step in training the tree canopy.
- ☐ Are the nursery trees supplied with optimal nutrition balance? Using leaf analysis to ensure optimal nutritional status will reduce risk of damage from cold air and attack by soil pathogens.
- ☐ Are the nursery trees supplied without staking? Seedlings should be self-supporting, however staking after planting out is essential.
- ☐ Does the nursery have plant health / hygiene / quarantine accreditation?

On-farm biosecurity preparedness:

Managing biosecurity risks to safeguard Australia's horticultural production from pest and disease incursions, and associated eradication / management costs:

- ☐ Prepare an on-farm biosecurity plan to identify and manage risks
- ☐ Plant / replant disease resistant olive cultivars and avoid planting in infected soils.
- ☐ Know your high priority biosecurity pests – induct your employees
- ☐ Monitor your grove regularly – report anything unusual to the exotic pest hotline (application of remote sensing)

- ☐ Implement good grove hygiene – keep it clean, removal or composting of pruning wood, disinfection of pruning tools
- ☐ Enforce visitor movement requirements – people and vehicles
- ☐ Use grove biosecurity signage
- ☐ Provide access to vehicle and fruit bin wash down facilities – arrive clean / leave clean
- ☐ Observe any quarantine restrictions on movement of olive fruit from designated zones

Enterprise Sustainability Best Practice Checklist: 12 Items

Productive & profitable farms:

Implement world best practice business management:

- ☐ Participate in the *OliveCare*® Best Practice Program
- ☐ Build skills, capacity, knowledge, leadership and professionalism in the industry
 - Train staff to lift productivity, comply with OH&S practices , meet food safety and food quality requirements
- ☐ Benchmark grove performance – set KPIs for grove productivity and profitability
 - Grove productivity KPIs: kg / tree, tonnes / ha ;
 - Cost of production - cost \$/tonne;
 - Gross margin - \$/ha
- ☐ Benchmark processing performance – set KPIs for processing productivity
 - Processing efficiency KPIs: Lit oil / tonne;
 - Cost of production - cost \$/lit or \$/kg
- ☐ Benchmark product quality – enter olive products in the AIOA and other competitions
 - Shoot for Gold
- ☐ Invest in your business to manage risk including capacity to protect, harvest and process your crop
- ☐ Ensure written commercial service and supply contractual arrangements are in place
- ☐ Keep your business cybersecurity safe
- ☐ Deploy innovative technologies to increase competitive advantage and profitability for olive growers, including plant breeding, tree physiology and best practice management
- ☐ Explore value-adding opportunities – olive crop and by-products
- ☐ Prepare business development and succession plans, and explore alternative business models for small producers

Trade and industry growth:

The olive industry is contributing to the growth in Australia's domestic and export markets:

- ☐ Understand markets and explore market opportunities for olive products including digital marketing
- ☐ Grow demand for and consumption of Australian olive products in domestic and export markets

Regulatory Compliance Best Practice Checklist: 19 Items

Be a good employer:

Fair farms - provide ethical, safe and fair work conditions that attract and retain motivated workers

- ☐ Fairwork Australia – understand workplace rights and responsibilities
- ☐ OH&S Compliance – prepare and regularly review your enterprise safety plan
- ☐ Have a healthy workplace including:
 - Implementing a workplace health and wellbeing program by providing leadership, consultation and communication with staff, supporting healthy habits in the workplace, including good mental health

- Prioritise personal health and well-being for increased effectiveness – implement healthy eating, regular exercise, work/life balance

Infectious diseases management:

Implement infectious diseases transmission controls to protect staff and ensure continuing business operation

- ☐ Undertake a COVID-19 Risk Assessment and prepare a COVID Safe Plan if required
- ☐ Follow all health directives to implement COVID Safe workplace practices, including:
 - Staff training on safe workplace practices
 - Monitoring – health declarations and temperature screening of workers and customers
 - Hygiene arrangements – airflow, access to PPE and sanitiser stations, remove communal use items
 - Cleaning program – frequency especially of high touch areas
 - Physical distancing – limit entry of workers and visitors, review delivery arrangements, option to work from home, reduce movement between multiple workplaces, staggered shifts, modify configuration of work stations and visitor areas to increase distancing, use of floor markings and maximum occupancy notices
 - Record keeping – staff and customer attendance, declarations, OHS incidents

Agricultural chemical management:

Practice responsible agri-chemical use to minimise chemical use while also protecting the industry from pests and diseases:

- ☐ Be aware of relevant national and state government legislative requirements for the use of agri-chemicals
- ☐ Mitigate agrichemical risks and safety hazards:
 - Ensure persons applying chemicals use protective clothing and are trained and licensed as required by national and state legislation (Agri-chemical use training is mandatory in NSW – EPA jurisdiction)
 - Ensure agri-chemicals are safely and securely stored on farm
 - Ensure correct disposal of used chemical containers, and unwanted chemicals
- ☐ Read the label - always use chemicals in accordance with label and permit approvals – target pests, spray dilution, application rates and withholding periods (to meet MRL requirements)
- ☐ Maintain a chemical use inventory / spray diary record (paper or electronic)
- ☐ Maintain an up-to-date file of APVMA Permits / Product Labels / Material Safety Data Sheets (MSDS) for all agri-chemicals used in your grove(s).
- ☐ Minimise off-target impact - avoid spraying in unsuitable weather conditions, observe buffer zones around sensitive crops, water courses and nature reserves
- ☐ Ensure spray application equipment is regularly calibrated for optimal droplet size and delivery rate, observe spray buffer zones and wind speed restrictions

Food safety and food quality:

Enhance Australia's reputation for production of reliable, nutritious and safe food:

- ☐ Implement Good Hygiene Practice (GHP) and develop a food safety culture in the workplace
- ☐ Prepare a Food Quality Plan based on HACCP principles to manage enterprise risks including product quality, biological, chemical, physical and environmental hazards:
 - Recommend using the *OliveCare*® template for a HACCP style food quality plan for EVOO production
 - Recommend using the *OliveCare*® template for a HACCP style food quality plan for table olive production

- ☐ Ensure soil is free from contamination – soil testing for heavy metals, persistent pesticides and contaminants
- ☐ Ensure olive products comply with pesticide MRLs
- ☐ Compliance with APVMA, FSANZ, State and Local Government requirements for producing safe food.

Australian Consumer & Competition Law:

Fair trading and maintaining consumer focus:

- ☐ Compliance with Australian Consumer Law (ACL) including product labelling requirements, and substantiation of credence claims including product quality, provenance and certification.
- ☐ Compliance with Australian Competition Law including fair trading.

Environmental and Community Responsibility Best Practice Check List: 13 Items

Ref: [Australian-grown Horticulture Sustainability Framework](#)

Farm waste:

Aim to minimise farm waste:

- ☐ Ensure appropriate use / recovery / disposal of processing waste
- ☐ Convert organic waste to value added products eg compost
- ☐ Aim for zero organic waste to landfill

Preserving 'natural capital':

Support and improve 'natural capital' (soil, water, flora and fauna), and minimise off-site impacts on environmental assets associated with soil, nutrient, pesticide and discharge water movement off site

- ☐ Olive enterprise should co-exist with the natural habitat and in accordance with local Native Vegetation Council and Local Council rules and regulations.
- ☐ Maintain biodiversity values on the property in a regional context by taking into account native vegetation, wildlife and ecosystems in business planning (EcoHort)
- ☐ Minimise impacts on environmental values from soil, sediment and associated pollutants entering waterways
- ☐ Manage water run-off and discharge to minimise impacts on downstream environments
- ☐ Noting the importance of other Australian horticulture crops having effective pollination

Community:

The olive industry is valued for its contribution to regional Australia and communities:

- ☐ The olive industry makes a valuable contribution to the economic and social fabric in regional and peri-urban communities
- ☐ Olive groves are a valued part of the landscape in regional and peri-urban communities

Carbon value and greenhouse gas emissions:

The Australian olive industry aims to provide a net positive capture of greenhouse gas emissions

- ☐ Climate adaptation (incremental or transformational) - plan for climate change / environmental threats to the crops you currently grow:
 - Increasing frequency of high temperature events impacting on product quality and cultivar suitability
 - Change in rainfall distribution and variability impacting on water availability, quality and cost
 - Change in frost, flood, drought & fire frequency and severity
 - Change in pest and disease outbreaks and biosecurity risk

- Disruption to supply chains and services
- ☐ Utilise olive groves for carbon capture where appropriate
- ☐ Benchmark enterprise energy use efficiency:
 - Energy use efficiency (litres of fuel and kwh electricity/ kg product)
 - Carbon footprint for your olive products (eg kg CO₂ / kg olive oil)

Grove Management Best Practice Checklist: 30 Items

Water use:

Be a responsible and efficient user of water:

- ☐ Understand olive tree water requirements (understand tree physiology)
- ☐ Undertake continuous monitoring of soil moisture and evaporation (application of remote sensing)
- ☐ Improve soil moisture infiltration, holding capacity and drainage properties
- ☐ Maintain soil cover (plants / mulch) to manage soil temperature, conserve soil moisture and minimise water stress on the olive tree
- ☐ Understand irrigation systems and design (micro-irrigation, sprinklers, furrow)
- ☐ Understand water trading and how to secure a water license
- ☐ Set annual water use targets
- ☐ Understand and measure water use efficiency (Lit water / kg product)

Soil health and tree nutrition:

Maintain the productive capacity of the soil without detriment to the environment

- ☐ Manage application of fertilisers to optimise plant uptake and minimise losses to run-off, leaching or gas emissions
- ☐ Undertake regular soil testing and leaf analysis
- ☐ Understand fertiliser application methods – foliar, fertigation, broadcasting
- ☐ Improve soil biology / build soil carbon
- ☐ Build soil nitrogen - nitrogen fixation
- ☐ Use soil amendments (gypsum, sulphur and lime) to correct sodic (alkali) and acidic soils

Canopy management:

Maintain a productive tree canopy:

- ☐ Undertake pruning to obtain optimal canopy surface to volume ratio, in accordance with your method of harvest
- ☐ Undertake maintenance pruning to manage biennial bearing and achieve optimal light penetration and air flow (which also assists with effective spray coverage)
- ☐ Undertake renovation pruning on older trees to lower tree height, reduce wood and open up the canopy to sunlight to generate new fruiting wood
- ☐ Monitor grove temperatures and implement frost and severe heat event mitigation strategies

Harvest:

Manage harvest to optimise fruit quality and grove productivity:

- ☐ Consider what you want to achieve? eg olive oil or table or both? Robust or mild oil? Single variety oil? Agrumato oil? Black or green manzanillo etc.
- ☐ Consider stage of fruit ripeness, oil content, desired taste profile and ease of processing
- ☐ Understand how to estimate harvest dates and likely yields
- ☐ Contract harvesters, transport / bins and processing facilities if required - maintain good communications with and update contractors on any developing issues

- ☐ Mark with tape any trees not to be harvested (eg diseased trees, pollinators, trees with over ripe fruit)
- ☐ Observe required chemical use withholding periods, grove biosecurity and workplace health and safety requirements
- ☐ Take care when using fruit abscission agents – always read the label
- ☐ Use harvest methods that minimise damage to fruit and trees - if fruit is damaged during harvest it needs to be processed quickly before fruit can oxidise and / or ferment
- ☐ Keep olives clean – do not collect fallen fruit or fruit that has been in contact with the soil, and avoid contamination of harvested olives with soil, bird droppings, hydraulic oil etc
- ☐ Manage ‘field heat’ - take care with storage of olive fruit in ventilated bins from harvest to milling (don’t overfill bins and store in shade or cool room)
- ☐ Deliver the fruit clean and dry to the processor within 24 hours of harvest - prolonged storage of fruit will result in oxidation and fermentation leading to defects in the oil and loss of EVOO status
- ☐ Coordinate harvest to minimise the time olives sit around waiting to be processed.

Integrated Pest and Disease Management (IPDM) Best Practice Checklist: 23 Items

Goal: To implement IPDM best practice to achieve effective and responsible agri-chemical use:

Ref: <https://olivebiz.com.au/ipm-project/field-days/ipdm-videos-presentations/>

IPDM 101:

- ☐ Know your pests, diseases and weeds (ref: *Field Guide to Olive Pests, Diseases and Disorders in Australia*)
- ☐ Implement regular grove pest and disease monitoring

Strategy 1: Cultural management

- ☐ Maintain good soil and tree health (happy trees)
- ☐ Improve soil biology / build soil carbon through application of compost which can include grove and processing waste
- ☐ Practise good grove hygiene, maintain quarantine and biosecurity best practice
- ☐ Manage the grove environment to reduce pest and disease pressure – canopy management, use of selected cover crops, control alternative hosts, control weed seed and perennial propagule production
- ☐ Change management practices to minimise spread of pests and diseases – harvest timing, selection of resistant olive cultivars, hygienic pruning practices

Strategy 2: Biological control

- ☐ Encourage presence of beneficial organisms in the grove by providing suitable habitat – use of cover crops, don’t use broad spectrum pesticides
- ☐ Mass release of beneficial organisms - *entomopathogenic* fungus / competitors / antagonists

Strategy 3: Physical & mechanical control:

- ☐ Use of physical traps / barriers - eg for apple weevil
- ☐ Use non-chemical weed control options - eg mulches, cover crops, grazing, cultivation, flame and steam weeding.

Strategy 4 – Use of selective (targeted) pesticides:

- ☐ Spot spraying - strategically timed and limited area application to target pests and diseases
- ☐ Implement chemical resistance strategies by rotating chemical groups as recommended
- ☐ Consider use of narrow spectrum (selective) pesticides

- ☐ Consider use of pesticides which disrupt pest development or behaviour – eg pheromones, insect growth regulators, oil sprays
- ☐ Consider use of natural or organic control methods (not always the least disruptive choice)
- ☐ Use 'double knockdown' strategies for hard to control weeds

Stages of IPDM:

IPDM can be implemented in stages:

1. Implement improved cultural and grove hygiene management practices

- ☐ Monitor pests/diseases to work out the best time to apply pesticides
- ☐ Use of on-farm weather stations to monitor and identify high risk weather conditions (disease prediction models)

2. Monitoring of beneficial species, predicting pest and disease populations

- ☐ Selection of “softer” pesticides where possible
- ☐ Spot and target applications of pesticides

3. Environmental modifications to encourage beneficial organisms, and discourage pests

- ☐ Releases of mass-reared beneficial organisms - *entomopathogenic* fungus / competitors / antagonists, (take into consideration what the beneficial organisms will feed on once the pests are eliminated).

4. Better design of production systems to minimise pest problems

- ☐ Selection of appropriate olive cultivars, planting density and canopy architecture

Processing Best Practice Checklist: 26 Items

EVOO production & processor certification:

Understand the essential elements of EVOO production:

- ☐ Undertake AOA best practice olive oil processing training eg Pablo Canamasas workshops
- ☐ 'Processing 101' - important questions to ask your contract (toll) olive oil processor
- ☐ Understand olive oil processing defects and how to prevent these occurring and provide a declaration of olive oil processing practices.
- ☐ Compliance with FSANZ and Local Government requirements for processing facilities.
- ☐ De-leafing and washing olive fruit (only if necessary) – minimise material other than olives (MOO) - remove leaf matter, soil or other contaminants
- ☐ Olive crushing – what type of crusher and grid size?
- ☐ Manage malaxation temperature, time & moisture control, use of talc and enzymes
- ☐ Oil Separation – understand characteristics of 2 & 3 phase separators and water usage, and when to adjust settings
- ☐ Monitor oil yield
- ☐ Implement a batch, daily and end of season machinery cleaning schedule

Flavoured olive oil production:

Use only approved methods for producing flavoured olive oils:

- ☐ Understand the food safety requirements when making flavoured olive oils - prevent the formation of emulsions
- ☐ Use only food grade flavourings in the production of flavoured olive oil
- ☐ Fresh and dried flavourings may only be used for co-processed flavoured olive oil

- ☐ Use food grade flavour essences only when making infused flavoured olive oil
- ☐ Understand that flavoured olive oils must not be labelled as EVOO

Table olive production

Understand the essential elements of table olive production:

- ☐ Undertake AOA best practice table olive processing training – eg Linda Costa workshops
- ☐ Compliance with FSANZ and Local Government requirements for processing facilities
- ☐ Compliance with the Voluntary Standard for Table Olives in Australia (RIRDC 2012)
- ☐ Purchasing olive fruit for processing – questions to ask your supplier
- ☐ Only process sound fruit, and recognise table olive defects and their causes
- ☐ Understand table olive primary and secondary processing methods and inherent risks to food safety and quality
- ☐ Document table olive primary and secondary processing methods
- ☐ Implement Good Manufacturing Practice (GMP), including
- ☐ Use only food grade equipment and materials
- ☐ Thoroughly clean all processing equipment including vats & barrels to avoid transfer of off flavours (Zapatera defect)
- ☐ Implement Good Hygiene Practice (GHP) and understand food safety considerations

Product Quality, Storage Best Practice Checklist: 14 Items

EVOO storage & blending:

Develop Standard Operating procedures (SOPs) for storage of EVOO (bulk and packaged):

- ☐ Important questions to ask your contract tank farm
- ☐ Ensure compliance with EVOO Quality Standard (AS5264-2011),
- ☐ Undertake annual chemical and sensory testing of olive oil products, and understand how to read a test report
- ☐ Understand olive oil storage defects and how to prevent these occurring, and provide a declaration of olive oil storage conditions
- ☐ Undertake olive oil oxidative stability and freshness testing to determine objective BBDs
- ☐ Control of exposure of oil to heat, light, oxygen and moisture – optimal settling and storage temperatures to minimise oxidation (too hot) or oil separation (too cold)
- ☐ Understand characteristics of oil storage vessels including the importance of conical bases, and use of floating lids to minimise head space (exposure to air)
- ☐ Understand how to use an inert gas blanket - Ar or N₂
- ☐ Understand the principles and practice of oil settling, purging, racking off and when to use filtration
- ☐ Understand the storage limitations of ‘olio nuovo’, (Italian for “new oil”) style olive oil
- ☐ Undertake due diligence before purchasing bulk olive oil
- ☐ Understand the principles of blending olive oil:
 - Excellent oils are created by blending good oils.
 - Blending can only remedy relatively small inadequacies
 - A good oil can be lost if blended with a poor oil
 - Oils with very dissimilar flavour profiles rarely blend well

Table olive storage:

Develop Standard Operating procedures (SOPs) for storage of Table Olives (bulk and packaged):

- ☐ Store products away from heat, light and air, and monitor storage conditions

- ☐ Undertake annual chemical and sensory testing of table olive products, and understand how to read a test report

Product Packaging, Labelling & Finished Product Distribution Best Practice Checklist: 16 Items

Minimise waste:

Setting environmental sustainable goals for the use of packaging materials:

- ☐ Commitment to minimal, recyclable, reusable or compostable packaging.
- ☐ Aim for 100% of packaging being recyclable, compostable or reusable by 2025
- ☐ Minimise net waste (balancing packaging waste vs food waste)

Product packaging, labelling, and distribution:

Develop Standard Operating Procedures (SOPs) for packaging, labelling and distribution of olive products:

- ☐ Important questions to ask your contract packaging company
- ☐ Store packaging securely to prevent contamination
- ☐ Comply with FSANZ, ACL, and Industry product labelling requirements by always applying:
 - CoOL logos to product front labels (use on on-line sales platforms optional but recommended)
 - BBDs (back label) based on objective testing / measurement
 - Net Contents (front label) – ml / L for liquids, g/kg for solids
 - Ingredients list (back label) – in order of most % to least %
 - Nutrition Information Panel (back label) – as per FSANZ guide
 - Storage information (back label) – also include instructions for opened product (if different eg refrigeration)
 - Company contact details (back label) – for consumer enquiries and product recall
- ☐ Be consumer focussed and support *OliveCare*® by always using AOA certification trade mark logos on product labels and websites
- ☐ Exercise due diligence when adding the following information to product labels:
 - 'Credence' or 'Premium' claims – eg Select, Ultra-Premium - only if there is some justification
 - Provenance claims – only if all olives used are sourced from the declared / state / region / district
 - Product description - eg style, sensory attributes – based on expert sensory assessment
 - Olive cultivar(s) – only if varieties are certified
 - Organic certification - must be from a government approved certifier
 - Competition awards – only to be applied to winning product batches
- ☐ Consider adding the following consumer advice to product labels
 - QR Code - linking consumers to additional product information and producer videos
 - Product tracking / anti-fraud technology
 - Year of harvest – useful guidance on freshness for consumers
 - Drained Weight – for table olives provides consumers with useful serve size information
- ☐ Transport of packed product – temperature control and monitoring
- ☐ For fulfilment of on-line sales use suitable protective packaging and monitor efficient courier delivery
- ☐ Implement product traceability and product recall systems
- ☐ Consider implementing product integrity / anti-fraud systems in high risk markets

Retail support checklist:

Supporting retailers with product storage and use information:

- ☐ Provide product specification sheets
- ☐ Provide product storage advice
- ☐ Provide Point of Sale (POS) consumer education materials to retail outlets

ENDS

Appendix 9: AOA Product Labelling Guides: (Links)

Ref: <https://australianolives.com.au/labelling-information/>

- AOA Labelling Guide for EVOO – August 2020: <https://australianolives.com.au/wp-content/uploads/2020/08/LABELLING-GUIDE-EVOO-Updated-August-2020.pdf>
- AOA Labelling Guide for Flavoured Olive Oil – August 2020: <https://australianolives.com.au/wp-content/uploads/2020/08/LABELLING-GUIDE-FOO-Updated-August-2020.pdf>
- AOA Labelling Guide for Table Olives – Updated September 2020: <https://australianolives.com.au/wp-content/uploads/2020/09/LABELLING-GUIDE-TABLE-OLIVES-Landscape-Updated-September-2020.pdf>

Appendix 10: OliveCare® Published Articles:

OliveCare® Code of Best Practice articles published in industry publications:

Olive Grower & Processor Magazine: 26 articles

Ref: <https://olivebiz.com.au/magazines/olivegrower/>

- **September 2021 (scheduled) (4):** OliveCare® - Best Practice Series - Climate adaptation and environmental best practice / Frost risk reduction / ABC of Nutrition Information Panels / Grove Establishment
- **June 2021 (1):** OliveCare® - Q&A - filtration, packaging hygiene and food safety pp 31-32
- **March 2021 (3):** OliveCare® - Spotlight on Anthracnose pp34-35 / Q&A - flavouring olive products pp 42-43 / Evaluation of current Country of Origin Labelling regulations for food pp 46-47.
- **September 2020 (1):** OliveCare® - Q&A – cleaning olive oil storage containers pg 44
- **June 2020 (5):** OliveCare® - Wollundry Grove canopy renovation – progress report pp 14-17 / Best Practice EVOO handling & storage pg 22 / Q&A – malaxing, controlling polyphenol levels pg 31 / Best Practice Series – Food recalls and traceability pp 45-47 / Labelling – the truth, and nothing but the truth pg 48.
- **March 2020 (4):** OliveCare® - Will bushfire smoke taint my EVOO? pg 20 / Best Practice Series – Olive industry agri-chemical usage pp 41-43 / Malaxing – a ‘hot’ topic in processing pp 44-45 / Effects of settling, filtering and timing on EVOO chemistry pg 46.
- **December 2019 (1):** Awards and the OliveCare® factor pp 45-47.
- **September 2019 (2):** OliveCare® - Wollundry Grove renovation pruning – progress report pp 35-36 / Best Practice Transport & Shipping pp 44-45.
- **June 2019 (1):** OliveCare® - Best Practice Series - How to read an olive oil test report pp 43-46
- **March 2019 (3):** OliveCare® - Best Practice Series - Tree nutrition and resistance pp 20-22 / Label compliance with Australian Consumer Law pg 46 / Keeping your fresh EVOO fresh pg 47.
- **September 2018 (1):** OliveCare® - Is your top-up oil really EVOO? pg 46

R&D Insights: 4 articles

Ref: <https://olivebiz.com.au/rd-insights/>

- **March 2021:** AOA grove management videos now on line: <https://olivebiz.com.au/wp-content/uploads/2021/03/OGP-Mar-2021-issuu.pdf>
- **June 2020:** Approval work seeks new fungicide options and resistance management: <https://olivebiz.com.au/r-d-insights-june-2020/>
- **September 2019:** Olive industry sensory training workshops: <https://olivebiz.com.au/wp-content/uploads/2019/10/OGP-Sept-2019-RandD.pdf>
- **June 2019:** Explore sensory skills and quality parameters at Tastebook™ / OliveCare® workshops: <https://olivebiz.com.au/wp-content/uploads/2019/06/GI-OGP-June-2019.pdf>

Grove Innovation: 7 articles

Ref: <https://olivebiz.com.au/grove-innovation-news-index/>

- **June 2021:** [OliveCare® Best Practice webinar series](#)
- **March 2021:** [Preventing olive product fraud](#)
- **December 2020:** [New fungal disease found on olives in Australia](#)
- **February 2020:** [Don't miss out: Register now for final Sensory Training Workshops](#)
- **November 2019:** [Hunter Valley wraps up 2019 sensory workshop program](#)
- **May 2019:** [Put your senses to work at TasteBook™/OliveCare® workshops](#)
- **November 2018:** [OliveCare® Code of Best Practice program extended](#)

ENDS

Appendix 11: OliveCare® members' brand performance at Australian and international olive competitions

Ref: Olive Grower & Processor Magazine - December 2019 (1): Awards and the OliveCare® factor pp 45-47.

Awards and the OliveCare® factor

The value of the OliveCare® Best Practice Program is evident from the results of olive competitions which demonstrate outstanding success for OliveCare® members at state, national and international events:

"OliveCare® exhibitors won 83% of the EVOO awards and scooped 66% of the Gold Awards, reflecting the value of OliveCare® membership to the pursuit of excellence" – AOA OliveCare® administrator Peter MacFarlane

"Certification will distinguish your oil from the bulk of supermarket suppliers" - Rob Whyte, Gooramadda Olives

2019 Olive Competitions:

Australian International Olive Awards 2019

AIOA EVOO Competition

There were 156 EVOO exhibits, of which 118 (76%) were from OliveCare® members:

	Gold Awards	Silver Awards	Bronze Awards
OliveCare® Exhibitors (52)	21 (66%)	61 (80%)	30 (81%)
Other Exhibitors	11 (34%)	15 (20%)	87 (19%)
Total Exhibitors	32	76	37

In the 2019 AIOA competition the 52 OliveCare® member exhibitors won 50% of the total 226 EVOO awards and won 66% of the Gold Awards.

AIOA Flavoured Olive Oil Competition

There were 27 Flavoured Oil exhibits, of which 22 (81%) were from OliveCare® members:

	Gold Awards	Silver Awards	Bronze Awards
OliveCare® Exhibitors (9)	3 (60%)	7 (88%)	9 (82%)
Other Exhibitors (2)	2 (40%)	1 (12%)	2 (18%)
Total Exhibitors (11)	5	8	11

The nine OliveCare® exhibitors won 79% of the awards and scooped 60% of the Gold Awards. Most significantly, three OliveCare® members won Gold and Champion or Reserve Champion of class Awards for their flavoured olive oil products (both infused and agrumato production).

AIOA Table Olive Competition

There were 36 exhibits, of which 18 (50%) were from OliveCare® members:

	Gold Awards	Silver Awards	Bronze Awards
OliveCare®	3 (43%)	7 (64%)	5 (38%)

Exhibitors (8)			
Other Exhibitors (4)	4 (57%)	4 (36%)	8 (62%)
Total Exhibitors (12)	7	11	13

The eight *OliveCare*® exhibitors won 48% of the AIOA Table Olive awards and 43% of the Gold Awards. Most significantly, four *OliveCare*® members won Gold and/or Champion or Reserve Champion of Class, including Victorian producer Saluté Oliva, who won Gold, Champion of Class and Best Table Olive of Show for its 2019 season salt dried Kalamata.

Note: the AIOA Table Olive competition is open to international exhibitors, with 10 of the total 36 entries for 2019 coming from international producers who are not *OliveCare*® members.

2019 Australian Food Awards – (Royal Agricultural Society of Victoria)

OliveCare® members were awarded 79% of the EVOO competition awards, including eight of the 10 Gold awards, 12 of the 19 Silver awards and 14 of the 16 Bronze awards.

The results in the Flavoured Olive Oil awards were even more outstanding: *OliveCare*® members took 88% of the total medal count, including the only Gold, the only Silver and five of the six Bronze awards.

Most significantly, *OliveCare*® members Boundary Bend and Bylands Estate took out the Best EVOO in Competition and Best Flavoured Oil in Competition awards respectively.

2019 Royal Adelaide Olive Awards

OliveCare® members were awarded 78% of the EVOO awards, including eight of the 10 Gold awards, 21 of the 27 Silver awards, and 13 of the 17 Bronze awards.

The Flavoured Olive Oil awards were again even more outstanding: *OliveCare*® members took 89% of the total medal count, including two of the three Gold awards, all five Silver awards and the only Bronze award.

OliveCare® members also dominated in the Table Olive awards, taking 71% of the total medal count including one of the two Gold awards and all four Silver awards.

2019 Sydney Royal Fine Food Show

Sydney EVOO Competition

There were 115 EVOO exhibits, of which 84 (73%) were from *OliveCare*® members:

	Gold Awards	Silver Awards	Bronze Awards
<i>OliveCare</i>® Exhibitors (29)	9 (82%)	36 (69%)	28 (76%)
Other Exhibitors	2 (18%)	16 (31%)	9 (24%)
Total Exhibitors	11	52	37

The 29 *OliveCare*® participants won 73% of the awards and scooped 82% of the Gold Awards.

Six *OliveCare*® members won Gold and/or Champion of Class with their collective nine EVOO products.

Sydney Flavoured & Culinary Oil Competition

There were 35 exhibits of which 28 (80%) were from *OliveCare*® members:

	Gold Awards	Silver Awards	Bronze Awards
<i>OliveCare</i>® Exhibitors (8)	3 (75%)	6 (60%)	15 (88%)
Other Exhibitors (5)	1 (25%)	4 (40%)	2 (12%)
Total Exhibitors (13)	4	10	17

The eight *OliveCare*® EVOO exhibitors won 77% of the awards and scooped 75% of the Gold awards.

Three *OliveCare*® members won Gold with their Flavoured Olive Oil products.

It is interesting to note that, of the five 'other exhibitors', four were canola oil producers and the EVOO producer has since joined *OliveCare*®.

2019 West Australian Olive Awards**EVOO Competition**

There were 71 exhibits, of which 15 (21%) were from *OliveCare*® members:

	Gold Awards	Silver Awards	Bronze Awards
<i>OliveCare</i>® Exhibitors (10)	6 (40%)	8 (28%)	1 (5%)
Other Exhibitors (35)	9 (60%)	21 (72%)	18 (95%)
Total Exhibitors (45)	15	29	19

The 10 *OliveCare*® exhibitors won 24% of the awards and scooped 40% of the Gold Awards.

Most significantly, four *OliveCare*® members won Gold and/or Best in Class with their collective six EVOO products, including Boundary Bend Olives, which won Gold and two Best of Class awards for its Cobram Estate Ultra Premium Reserve Hojiblanca.

Note: there is a lower level of participation in *OliveCare*® by WA olive producers and marketers.

2019 Hunter Olive Show – EVOO Competition:

A total of 23 exhibits of which 17 (74%) were from *OliveCare*® members. Pleasingly the 8 *OliveCare*® exhibitors won 74% of the awards and scooped 80% of the Gold Awards.

	Gold Awards	Silver Awards	Bronze Awards
<i>OliveCare</i>® Exhibitors (8)	4 (80%)	8 (73%)	5 (71%)
Other	1 (20%)	3 (27%)	2 (29%)

Exhibitors (5)			
Total Exhibitors (13)	5	11	7

2019 Los Angeles Extra Virgin Olive Oil Awards

Two *OliveCare*® members received a total of five awards for their EVOO entries in this international competition, comprising one Silver and four Bronze medals.

2019 Olive Japan competition

From a total of 13 Australian exhibits awarded at this international competition, six *OliveCare*® members achieved the outstanding collective total of 12 of awards. This included two Gold and 10 Silver medals.

2019 New York International Olive Oil Competition

OliveCare® members accounted for all winning entries from Australia in this international competition, achieving a collective total of 10 Gold and five Silver awards. Most significantly, two *OliveCare*® members also won Best in Class awards.

2020/21 Olive Competitions: Update

2020 NYIOOC World Olive Oil Competition Results:

Australian producers have once again done the industry proud at the New York International Olive Oil Competition 2020, awarded a total of five Gold and six Silver medals. Interestingly, all of this year's winning producers are from Victoria, and all are AOA *OliveCare*® Signatories.

2020 AIOA Results:



OliveCare® members again achieved outstanding results at the 2020 Australian International Olive Awards:

AIOA EVOO:

Awards	Total	<i>OliveCare</i> ®	Other exhibitors
Major Awards*	25	19 (76%)	6 (24%)
Gold Awards	56	42 (75%)	14 (25%)
Silver Awards	47	32 (68%)	15 (32%)
Bronze	27	18 (67%)	9 (33%)

Awards			
Total Awards	155	111 (72%)	26 (28%)
Exhibitors	69	43 (62%)	26 (38%)

**Includes best in show, best in hemisphere, best in Australia, best in state, champion and reserve champion in class.*

In the 2020 AIOA competition the 43 *OliveCare*® member exhibitors won 111 (72%) of the 155 EVOO awards, and won 75% of the Major and Gold Awards.

AIOA Flavoured Olive Oil:

Awards	Total	<i>OliveCare</i> ®	Other exhibitors
Major Awards*	6	5 (83%)	1 (17%)
Gold Awards	8	7 (88%)	1 (12%)
Silver Awards	12	6 (50%)	6 (50%)
Bronze Awards	2	2 (100%)	0 (0%)
Total Awards	28	20 (71%)	8 (29%)
Exhibitors	12	7 (58%)	5 (42%)

**Includes best in show, best in Australia, champion and reserve champion in class.*

AIOA Table Olives:

Awards	Total	<i>OliveCare</i> ®	Other exhibitors
Major Awards*	13	8 (62%)	5 (38%)
Gold Awards	6	4 (67%)	2 (33%)
Silver Awards	9	2 (22%)	7 (78%)
Bronze Awards	14	8 (57%)	6 (43%)
Total Awards	42	22 (52%)	20 (48%)
Exhibitors	12	9 (75%)	3 (25%)

**Includes best in show, best in hemisphere, best in Australia, champion and reserve champion in class.*

With *OliveCare*® members punching above their weight in the EVOO and flavoured olive oil competitions, and also winning the major awards in the table olive competition.

2020 Australian Golden Olive Awards Results

OliveCare® members comprised 16 of the 30 (53%) Australian Golden Olive Awards exhibitors, with *OliveCare*® members winning:

- 75% of the 56 EVOO Awards, including 10 (91%) of the 11 Gold Awards, 28 (76%) of the 37 Silver Awards, and 6 (75%) of the 8 Bronze Awards.
- 100% of the 12 Flavoured Olive Oil awards, including all 3 Gold awards, all 6 Silver Awards, and all 3 Bronze Awards.

2020 Royal Adelaide Olive Awards Results

OliveCare® members comprised 22 of the 30 (73%) Royal Adelaide Awards exhibitors, with *OliveCare*® members winning:

- 80% of the EVOO awards, including 9 (90%) of the 10 gold awards, 18 (78%) of the 23 silver awards, and 13 (76%) of the 17 bronze awards.
- 100% of the flavoured olive oil awards, including 3 (100%) of the 3 gold awards and 7 (100%) of the silver awards.
- 75% of the table olive awards, including the one and only gold award, 2 of the 4 silver awards and all 3 bronze awards.
- 85% of the 13 Best In Class / special awards.

2021 Olives Japan Competition Results:

Congratulation to the Australian award winning exhibitors at the 2021 *OliveJapan*® competition, noting that 6 of the 7 winners are current members of the *OliveCare*® best practice program, with groves situated across 5 states.

- Gold Award Winners: 3 *OliveCare*® members with a total of 9 products
- Silver Award Winners: 4 *OliveCare*® members with a total of 5 products

2021 NYIOOC World Olive Oil Competition Results:

Congratulations to the Australian EVOO brand winners at the 2021 NYIOOC World Olive Oil Competition, noting that four of the 5 Australian award winners are *OliveCare*® members with groves located in Victoria – three of the 5 situated on the Mornington Peninsula with its maritime climate:

- Gold Award Winners: 4 *OliveCare*® members with a total of 13 products
- Silver Award Winners: 1 *OliveCare*® members with a total of 1 product

ENDS

Appendix 12: OliveCare® participation in development of national training packages:

During the OL17006 project reporting period, OliveCare® has worked closely with Skills Impact on 2 skills development projects of significance to the Australian olive industry:

- “Artisanal Food and Beverage Project²⁴”, with the aim of including production of table olives units of competency in a new *Certificate IV in Artisan Fermented Products* training package.
- “Food & Beverage Processing Project²⁵”, with the aim of including production of olive oil units of competency in the revised *FBP30120 Certificate III in Food Processing* training package.

Skills Impact is a Skills Service Organisation (SSO), contracted by the Commonwealth. As part of this role, *Skills Impact* supports 12 Industry Reference Committees (IRCs) covering more than 120 sectors and maintains more than 3000 units of competency and 400 qualifications.

The Australian Industry and Skills Committee (AISC) appoint members of IRCs this made up of people with experience, skills and knowledge of their industry sector.

Industry Reference Committees (IRCs) guide and direct our work with industry to ensure training packages (i.e. units of competency, skill sets and qualifications) reflect their existing and emerging workforce development needs.

The relevant IRCs for the Australian Olive Industry are:

The Food, Beverage and Pharmaceutical Industry Reference Committee (IRC) – includes:

- Food Processing and Manufacturing

The Agriculture and Production Horticulture Industry Reference Committee (IRC), includes:

- Horticulture production
- Agricultural support services
- Agricultural irrigation
- Agricultural chemicals

What is a training package?



²⁴ Artisanal Food and Beverage Project: <https://www.skillsimpact.com.au/food-beverage-and-pharmaceutical/training-package-projects/artisanal-food-beverage-project/>

²⁵ Food & Beverage Processing Project: <https://www.skillsimpact.com.au/food-beverage-and-pharmaceutical/training-package-projects/food-beverage-processing-project/>

A: Artisan Olive Producer Skill Set

A New Qualification: *Certificate IV in Artisan Fermented Products*:

This new qualification reflects the role of those using artisanal methods to produce fermented food and/or beverage products, such as beer, spirits, miso, **table olives** and fermented meat products. In this role, makers analyse materials and products, exercising judgement to guide the fermentation process and the work of others.

To achieve this qualification, competency must be demonstrated in a total of 22 units of competency comprising:

- 10 core units plus
- 12 elective units

This qualification also offers specialisations in Brewing, Distilling, and Food and non-alcoholic beverages.

Artisan Olive Producer Skill Set:

This new skill set is designed to cover the knowledge and skills required to produce fermented olives for a retail market, it includes the following units of competency:

- FBPFST4XX2 (new core unit) Apply sensory analysis in fermented food and/or beverage production
- FBPFST5001 (core unit) Develop a HACCP-based food safety plan
- FBPTec4XX1 (new core unit) Manage raw materials
- FBPTec4003 (core unit) Control food contamination and spoilage
- FBPTec4002 (elective unit) Apply principles of food packaging
- FBPTec4XX10 (new elective unit) Control and monitor fermentation

Core Units of Competency:

When the above Skill Set is taken in combination with the following 6 designated Core Units of Competency:

- FBPFST4XX1 (new core unit) Interpret and respond to test results
- FBPFST4XX2 (new core unit) Apply sensory analysis in fermented food and/or beverage production
- FBPFST4009 (core unit) Label foods according to legislative requirements
- FBPTec4006 (core unit) Apply an understanding of legal requirements of food production
- FBPWHS4002 (core unit) Maintain work health and safety processes
- MSL973013 (core unit) Perform basic tests

Taken together with 10 other elective units of competency from the Food, Beverage and Pharmaceutical Industry sectors, this training package will meet assessment requirements of the new Certificate IV in Artisan Fermented Products.

Where to from here?

The final draft qualifications, units and skill sets were endorsed by the [Australian Industry and Skills Committee](#) (AISC) and State and Territory Ministers. They are published on the [training.gov.au](#) website, within the [FBP Food, Beverage and Pharmaceutical Training Package](#).

RTOs can find information to help them adopt to the new changes in the Companion Volumes, which provides additional information about the impacts of regulation and licensing implications and workplace health and safety on their training.

Subject to demand and available resources, it is anticipated that the new olive oil units of competency will be rolled out by RTOs such as TAFE and various private providers during 2021.

These new units of competency also provide a useful framework for the delivery of OliveCare® table olive training and certification programs.

B: Certificate 3 in Food Processing:

Consumer trends play a fundamental role in the food and beverage processing sector, inspiring innovations and shifting the way job roles are performed. Over the past ten years, increased interest in the origin, contents, and packaging of food, has driven industry to develop methods for improving traceability, automation, and contaminant control. It is important that these changes in job roles and practices are captured in the skills standards used by industry.

To achieve this qualification, competency must be demonstrated in a total of 17 units comprising:

- 5 core units plus
- 12 elective units

Core Units:

- FBPFSY3001X: Monitor the implementation of food safety and quality programs
- FBPFSY3XX2: Participate in traceability activities
- FBPOPR3XX5: Operate and monitor interrelated processes in a production or packaging system
- FBPOPR3X16: Apply Good Manufacturing Practice requirements in food processing
- FBPWHS3001X: Contribute to work health and safety processes

Edible Oils (refining or cold pressed edible oils) Electives:

Now includes the following olive oil processing units of competency:

- FBPOIL3XX9: Clean and mill olives
- FBPOIL3X10: Operate and monitor a malaxer
- FBPOIL3X11: Operate and monitor an olive oil separation process
- FBPOIL3X12: Operate and monitor storage of virgin olive oil
- Other elective units include:
- FBPOPR3X12: Operate and monitor a filtration process
- FBPOPR3X15: Operate a bulk liquid transfer process
- AHCPHT401: Assess olive oil for style and quality
- A suite of bottling and product labelling units
- A suite of QA and general units

Where to from here?

The final draft qualifications, skill sets and units of competency were approved for endorsement by the Australian Industry and Skills Committee (AISC) at their meeting on 22 June 2021. They are now being considered by the State and Territory Ministers.

Subject to demand and available resources, it is anticipated that the new olive oil units of competency will be rolled out by **RTOs** such as TAFE and various private providers during 2021.

The new units of competency also provide a useful framework for the delivery of *OliveCare*® EVOO production training and certification programs.

ENDS