



Using Remotely Piloted Aircraft Systems (RPAS) for pesticide application in Australia

What you need to know

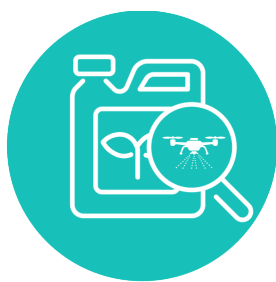
Remotely Piloted Aerial systems (RPAS) consist of an uncrewed aircraft that is operated by a pilot on the ground, a control station, and command and control links.

They are commonly known as drones or sometimes as Unmanned Aircraft Systems (UAS).

In this pamphlet



**Certification
and training**



**Following the
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**Knowing
your role**

Authors: DTS Regulatory Consultants and Hort Innovation

Hort Innovation manages MUP permits on behalf of its member industries. These are for specific use cases, rates and applications. We know that more growers are considering drones and want to understand how they can use them. We felt this information would be useful but it is recommended you consult with a professional before undertaking any use.



You must be Certified and Trained

Before anyone applies pesticides by an **RPAS**, both **aviation** and **pesticide** requirements must be met.

Aviation requirements for all drone use:

- The drone must be **registered** with CASA.¹
- Operate within the drone safety rules (standard operating conditions) at all times.²
- The remote pilot must maintain visual line of sight with the drone unless the operation is conducted under an appropriate CASA approval. Formal RPA observer requirements apply to extended visual line-of-sight (EVLLOS) operations.

Aviation requirements for land owned or leased by the drone owner:

- Drones up to 25 kg (including payload) – pilot must get an operator accreditation from CASA – it's free and lasts for 3 years.
- Drones > 25 kg with payload – pilot must obtain a **valid and appropriate** remote pilot licence (RePL), a remotely piloted aircraft operator's certificate (ReOC) from CASA¹ and complete all the required trainings. Check current requirements with CASA.

Aviation requirements for commercial drone service providers:

- The business owner must hold a ReOC
- The pilot must hold an **appropriate** RePL for the drone size and operations required.
- The drone must be registered with CASA.

Pesticide requirements:

- Contact your **state or territorial regulator** to confirm requirements for training, certification, permissions and pesticide use.
- Most states and territories require an additional pilot and/or operator licence to apply chemicals from a drone (for example, Victoria and Queensland have specific licensing schemes).^{3 4}
- Complete the training and certification required by your state or territory, if any.



Always follow the Pesticide Label

Always read and understand the label before using a pesticide.

A spray drone is treated as an aircraft, not as a ground application method.⁵

There are currently no standard drone application methods in Australia other than following label instructions for drone use (if they exist) or aerial use (if they don't). Very few labels contain drone-specific instructions.

If the label mentions RPAS:

- Follow those specific directions exactly.

If the label does not mention RPAS:

- Confirm if aerial application is allowed.
- If it is, follow exactly all aerial application and spray drift instructions on the label of the product you are using, including specific application rates, spray volume, mandatory no-spray buffer zones, wind speeds and maximum release heights.^{5 6}
- If the label has different requirements for fixed-wing and helicopter application, the APVMA has not published a rule which assigns drone to either category. So, a product-specific and jurisdiction-specific assessment of uses may be required. Apply the most conservative instructions if unsure.
- Pilots and product handlers must follow label PPE requirements when handling pesticide for mixing and loading.
- Pilots must follow all precautions relating to human flaggers or markers and also be aware of other non-targets in and near areas to be treated including livestock and bees.

If the label says "DO NOT apply by air" or "DO NOT apply by Remotely Piloted Aircraft Systems (RPAS)", or does not mention aerial application:

- You cannot use an RPAS.

Be aware of restrictions

- Aerial (including RPAS) pesticide applications to certain sites are restricted. They are only permitted where explicitly allowed on the product label, with additional state/territorial authorization required. Confirm with your local regulator first.



Use the Right Gear and Equipment

All persons handling or potentially exposed to the pesticide, via mixing and loading or during application **must** follow the label instructions for safety equipment and related matters.

All crew members, including the pilot, any visual observers, and **anyone** handling RPAS equipment or batteries should wear, at a minimum, the following to minimise exposure to pesticide residues:

- long-sleeved shirt and long pants.
- chemical-resistant gloves.
- socks and shoes.

If the label mentions RPAS:

- All persons handling the pesticide must follow the personal protective equipment (PPE) specified on the label for RPAS.
- If the pesticide label requires additional engineering controls or limit amounts for RPAS, these requirements must also be followed.

If the label does not mention RPAS:

- The persons handling the pesticide must follow the PPE requirements for **aerial application** (either helicopter or fixed wing depending on the crop/site being treated).
- If the label instructions cannot be followed, DO NOT use RPAS for applying the pesticide.
- Take special care to select the correct nozzle to deliver the required minimum spray droplet quality. The pilot must be aware what spray quality will be delivered in order to meet label requirements.



Know Your Role

- The pilot must be familiar with the qualifications of all crew members before the flight.
- **Drone size and capability are evolving rapidly.** Users in Australia need to understand how these advances may affect their ability to comply with pesticide label directions and other compliance requirements such as required by CASA.
- **Always check the current label and your licences before every job.**
- Remember that **all general use obligations** listed on the label still apply, for example, wind speed and temperature inversion restraints, protection of aquatic areas, bystanders, pollinators and livestock, re-entry periods, protective equipment and record keeping.⁷
- Crews typically include two people but may be larger.
- Roles of crew members may vary depending on operational needs.





Practical checklist for growers

- 1** Confirm the product label allows aerial application and that the drone operation can meet every aerial instruction (rate, water volume, droplet size, release height, buffer zones).
- 2** Confirm the pilot and operator hold current CASA authorisations (RePL/ ReOC) and the drone is registered.
- 3** Confirm the state/territory chemical application licence(s) held by you or your contractor.
- 4** Make sure everyone doing the work has all required training and is using proper PPE and equipment.
- 5** Check wind, inversion and buffer requirements at the time of spraying, and keep full spray records.
- 6** If using a contractor, ask to see their licences and confirm who holds responsibility for label compliance.
- 7** Watch for label updates – drone-specific instructions are expected to appear as the regulatory science matures.

Resources

1. CASA (Civil Aviation Safety Authority) <https://www.casa.gov.au/drones/drone-rules/drone-safety-rules#Relatedrulesandpublications>
2. CASA Drone safety rules <https://www.casa.gov.au/drones/drone-rules/drone-safety-rules>
3. <https://agriculture.vic.gov.au/about/media-centre/media-releases/2026-releases/know-the-rules-when-spraying-with-drones>
4. <https://www.dpi.qld.gov.au/news-media/campaigns/agtech/action/drones>
5. <https://www.apvma.gov.au/resources/using-chemicals/emerging-technologies>
6. <https://www.apvma.gov.au/resources/using-chemicals/spray-drift/spray-drift-definitions>
7. <https://www.apvma.gov.au/resources/using-chemicals/information-farmers>



For more information
about the safe use of pesticides visit:
**Australian Pesticides and
Veterinary Medicines Authority**

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Any request or enquiry to use this publication should be addressed to:

Communications Manager

Hort Innovation

Level 15, 141 Walker Street, North Sydney NSW 2060 Australia

Email: communications@horticulture.com.au

Phone: 02 8295 2300