Top 10 spraying tips

To get the job done safely and effectively
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Here are our top 10 tips to ensure your chemical spraying is as effective and safe as possible.

1. **Plan**
   Chemicals play a vital role in Australian agriculture but it is important to determine if there is a need to spray. More farmers are adopting practices such as Integrated Pest Management (IPM) which lets controls such as good property hygiene and beneficial insects do the work for them, leading to dramatic savings in chemical use.

   If a decision to spray is reached then setting time aside to adequately plan any spray program is vital to ensure chemicals are used safely and responsibly. A small amount of effort in planning at the start is far more efficient than dealing with issues later on.

2. **Read the label**
   Read the product label thoroughly and understand all the requirements and advice to ensure the job is done as effectively and safely as possible. Many products require weeds to be actively growing and not under heat stress for the chemical to work and all labels contain vital information on what measures must be put in place to ensure adverse outcomes do not occur.

3. **Check use restrictions**
   In general all products should only be used in accordance with label directions but there are limited circumstances where some products may be used off-label in Victoria without a permit.

   This does not apply if the product is:
   - a ‘restricted use’ chemical product (all Schedule 7 Poisons (Dangerous Poisons); products containing atrazine, metham sodium or ester formulations of 2,4-D, 2,4-DB, MCPA or triclopyr)
   - to be used at an application rate higher than specified on the label
   - to be used more frequently than as specified on the label;
   - to be used in a way specifically prohibited on the label (i.e. a ’DO NOT’ statement)

   Agricultural Chemical Control Areas (ACCAs) are set up across Victoria to protect sensitive crops. For example, the Extended Mallee ACCA does not allow the application of any 2,4-D ester (e.g. Nufarm Estercide® Xtra 680) or MCPA ester (e.g. Tigrex®) by any means from 1 August to 30 April each year. It also prohibits the use of any triclopyr ester (e.g. Garlon®) by mister or aerial application.

4. **Manage resistance build up**
   Resistance of diseases, pests and weeds to agricultural chemicals is a naturally occurring phenomenon that can be made worse by poor chemical use practices, so is essential for farmers to manage.

   Some groups of products and target weeds, pests and diseases are particularly susceptible to resistance build up and the only way to prevent it is to adequately manage rotations of different chemicals from different activity groups (for fungicides) or Modes of Action (for herbicides and insecticides). More information can be found on the CropLife Australia website.

5. **Know your equipment**
   Ensure your equipment is set up correctly and accurately calibrated to ensure the required amount of chemical reaches the target otherwise you are wasting time and money.

6. **Buffer zones**
   A buffer zone is an area where no chemical is applied which is between the target area and a sensitive area such as a different type of crop, a house or a waterway. A change related to the APVMA Operating Principles in Relation to Spray Drift Risk is the introduction of ‘mandatory no-spray zones’ which will begin to appear on labels and restrict how close you can spray to a sensitive area when the wind is blowing towards it.

   Spraying in extremely windy conditions such as this is totally unacceptable and not only puts surrounding areas at risk but is a waste of time and money because it’s unlikely that enough chemical will reach the target to be completely effective.
9. Monitor weather conditions

In response to the APVMA Operating Principles in Relation to Spray Drift Risk, products will begin to contain a lot more information about the weather conditions which must be observed.

More information about weather is available than ever before. A useful website is the Bureau of Meteorology’s Water and the Land, but several chemical manufacturers and resellers also have websites providing up-to-date information and forecasts to help farmers plan spray jobs. Only use these tools for planning, as the weather that really matters is the actual weather on the day and at the time where you plan to spray.

Unless there are specific label directions, the following are guidelines for better spraying conditions:

- a Delta T (ΔT, which relates temperature and relative humidity) of between two and eight temperatures below 28ºC
- no inversion layer present
- a steady wind of 3-15 kilometres an hour, blowing away from sensitive areas.

A classic sign of an inversion layer is fog settling like this, or smoke rising vertically and then suddenly flowing horizontally.

10. Keep records

Recording chemical use details is a legal requirement and vital for traceability in production systems and ongoing management of chemical use in terms of monitoring efficacy and rotations of chemical groups to prevent resistance build up.

There is no specified format for record keeping, only required details. The best way to ensure records are kept is to develop your own system which suits your business practices.

For more information on record keeping, including the required details, please go to the DPI Chemical Standards website and click on the record keeping link.
Where can I find out more?

- Consultants and manufacturers or resellers of chemical products, application equipment and nozzles are all well placed in your local area, and online, to provide specific information and advice.

- Visit the DPI Chemical Standards website www.dpi.vic.gov.au/chemicalstandards or contact your local Chemical Standards Officer via the DPI Customer Service Centre on 136 186, to learn about legal requirements such as use restrictions, licensing, record keeping and label interpretation.

- Visit the Australian Pesticides and Veterinary Medicines Authority (APVMA) website www.apvma.gov.au for the PUBCRIS database to search for chemical products and other information including the APVMA Operating Principles in Relation to Spray Drift Risk.

- The latest weather forecast information can be found at the Bureau of Meteorology Water and the Land website www.bom.gov.au/watl.

- Industry associations and research organisations regularly provide information related to chemical use therefore contact them directly for advice.

- CropLife Australia provides valuable information, particularly in resistance management, which can be found in a section of the same name at www.croplifeaustralia.org.au.