FACT SHEET

NSW Cut Flower Industry

Best Practice Chemical Storage and Disposal

Purpose

Proper storage and disposal of chemicals on farm is crucial for ensuring safety, compliance with regulations, and protecting the environment. This factsheet provides practical guidelines and best practices for storing hazardous chemicals securely, transporting them safely, and disposing of them responsibly. By following these recommendations, you can minimise risks to farm workers, prevent environmental contamination, and ensure that your farm operations meet regulatory requirements.

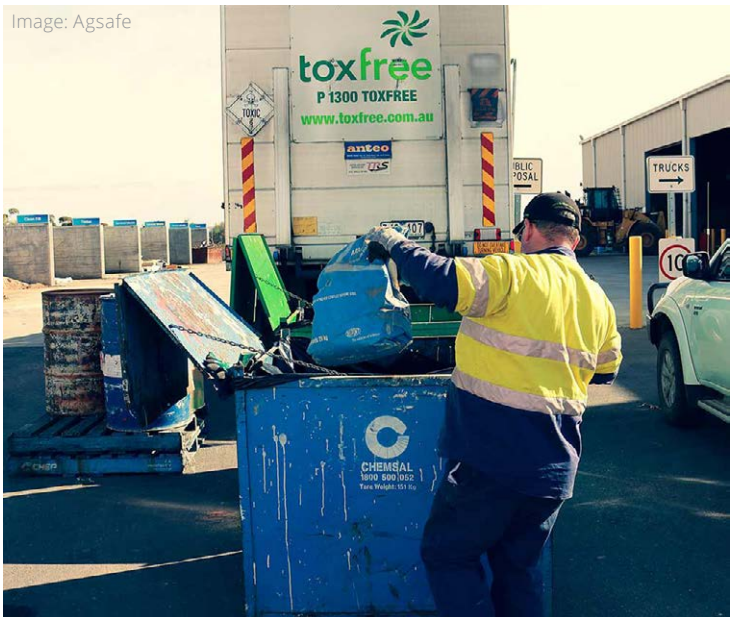


Image: Agsafe

Storage Requirements

Proper storage of hazardous chemicals on farm is critical to ensuring the safety of yourself, farm workers, the environment and may be required under regulation. In certain cases, the use and storage of these substances may require licensing, particularly depending on the type and quantity of chemicals stored.[1]

Under the NSW Pesticides Act 1999 anyone who uses pesticides in their job or business must be trained and hold a valid licence. The term pesticides include herbicides, insecticides, fungicides, bactericides, baits, lures and rodenticides (rat poison). Also, under the Workplace Health and Safety (WHS) Act 2011, anyone who uses hazardous chemicals must be trained.[2]

It is crucial to store pesticides in an isolated, secure area that is accessible only to authorised personnel and equipped to handle spills and emergencies.

On the next page is a 10-point check list to ensure your storage shed is up to regulation.

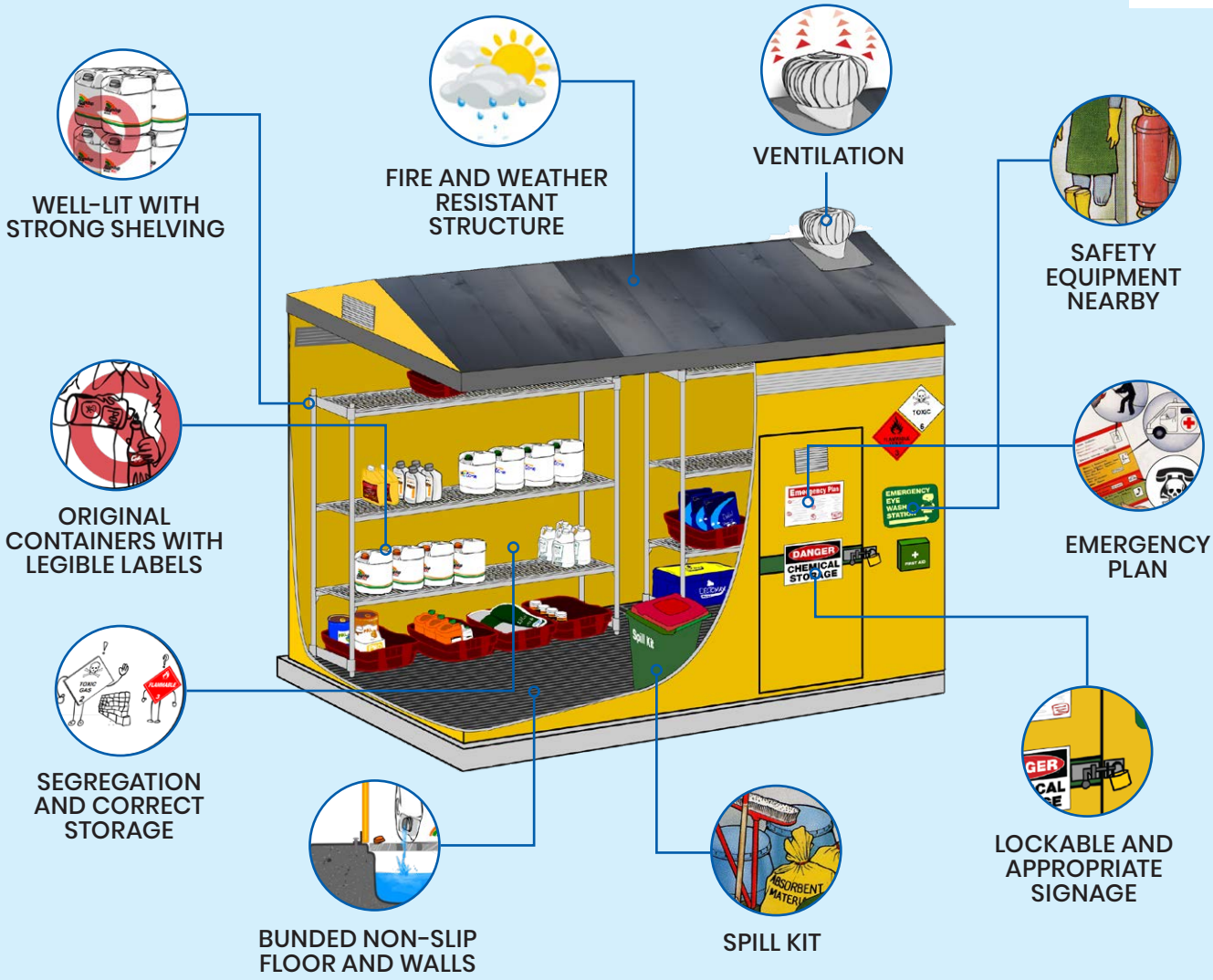
Key Messages

- **PRIORITISE SAFETY**
  Store chemicals securely in original containers with legible labels, away from unauthorised access. Never decant into food or beverage containers
- **PROPER STORAGE**
  Use fire-resistant, weather-protected structures with spill management and emergency tools on hand
- **SEPARATION AND ORGANISATION**
  Segregate flammables from other chemicals and store solids above liquids
- **EMERGENCY READY**
  Have an emergency plan and Safety Data Sheets (SDS) accessible near the storage area
- **RESPONSIBLE DISPOSAL**
  Use drumMUSTER and ChemClear for proper disposal of containers and chemicals
- **SAFE TRANSPORT**
  Secure and correctly label chemicals during transport, keeping them separate from passengers and food


Image: Markus Winkler

[1] https://www.dpi.nsw.gov.au/__data/assets/pdf_file/0004/186394/storing-pesticides.pdf
[2] https://www.chemcert.com.au/resources/state-legislation/

ChemCERT Chemical Storage Shed Ten Point Guide



Images from ChemCERT

Original poster *ChemCert Storage Guide for Hazardous Chemicals* available at https://www.chemcert.com.au/resources/

Well-lit with Strong Shelving
Ensure the storage area is well-lit and equipped with strong metal shelving to prevent stacking drums on top of each other.

Original Containers with Legible Labels
Always store chemicals in their original containers with intact and legible labels. Never decant chemicals into food or beverage containers.

Fire and Weather-Resistant Structure
Use structures that protect chemicals from extreme heat and UV exposure.

Ventilation
Ensure the storage area is well-ventilated with cross airflow and roof exhaust vents. Seek advice when using shipping containers.

Safety Equipment Nearby
Keep a fire extinguisher, first aid kit, and personal protective equipment (PPE) close by but stored in a separate area/external locker to prevent contamination. Maintain a safety shower and eyewash station capable of a 15-minute eyewash in case of pesticide splashes.

Bunded Non-slip Floor and Walls
Use concrete or impervious materials for floors and walls, with bunding to contain at least 25% of the total volume of stored products or 100% of the largest container's capacity.

Spill Kit
Store a spill kit inside the storage area, suitable for the chemicals housed.

Lockable with Appropriate Signage
Ensure the storage area is lockable with a child-proof latch and has appropriate signage.

Segregation and Correct Storage
Store flammables at least 3 metres away from non-flammables and pesticides away from animal food, feedstuffs, seeds, and fertilisers. Keep chemicals out of direct sunlight and away from easily combustible materials like oils, hay, and dry grass. Store solids above liquids.

Emergency Plan
Maintain an emergency plan with contact numbers and Safety Data Sheets (SDS) nearby. Display the Poisons Information Centre number and a diagram of the assembly area near the entrance.

Transport Requirements

The principle hazards associated with the transport of AgVet chemicals are the poisoning of drivers and, in the event of accident, poisoning the general public and pollution of the environment. The ***Australian Dangerous Goods Code for the Transport of Dangerous Goods Edition 7.4*** controls the quantity of dangerous good that can be carried, placarding requirements, packing methods, segregation of mixed loads and accompanying documentation.[3]

If transporting chemicals, they must:[4]

- Securely stow chemicals in a separate compartment from passengers, food, stockfeed and fertiliser (the boot of a car and the cargo area of a station wagon are not separate compartments)
- Ensure containers are properly packaged to avoid breakage
- Display dangerous goods hazard symbols or class labels and Hazchem signs as required (quantities over 500kg/litres)
- Ensure weight is evenly distributed and liquids are carried top side up.

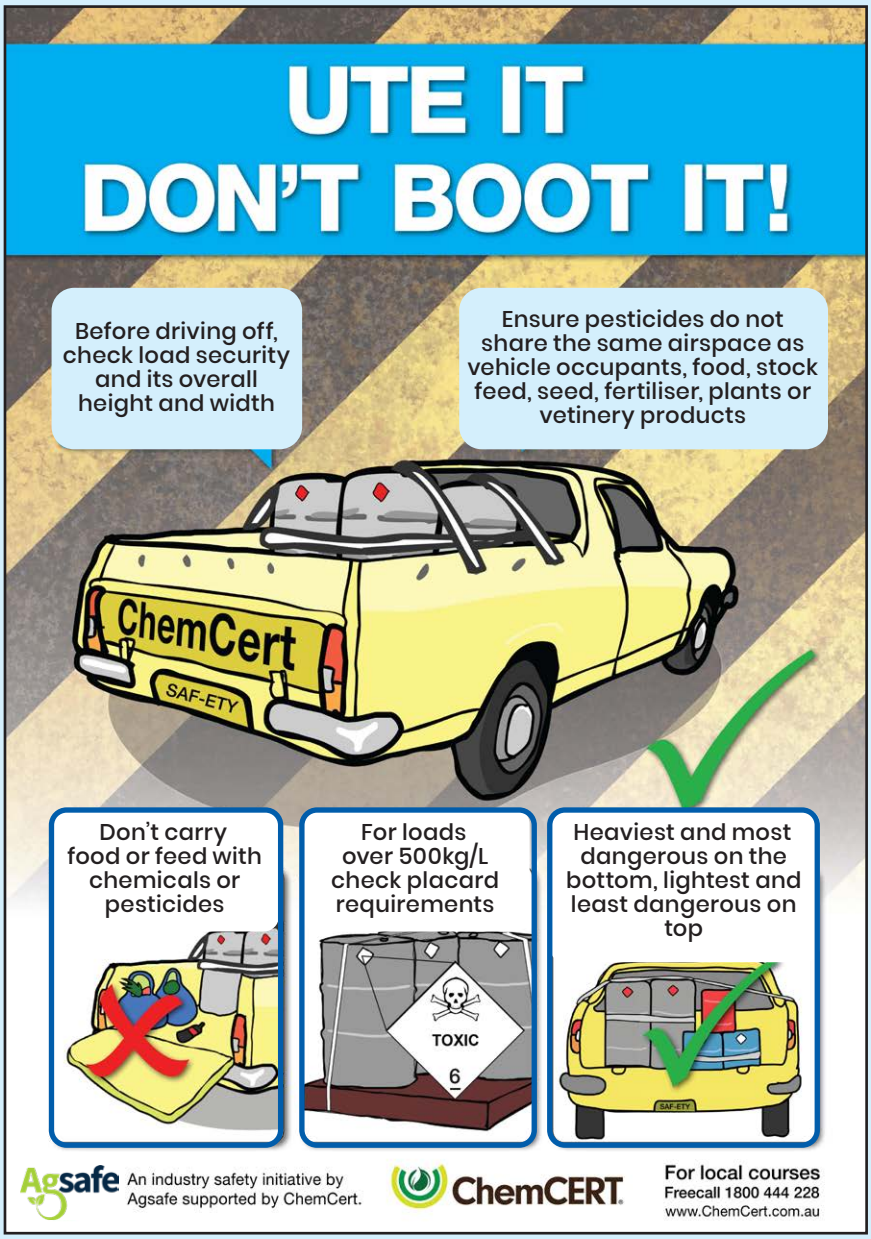


Figure 1 (right): ChemCERT "Ute It. Don't boot it!" poster. Original poster available at https://www.chemcert.com.au/resources/

Chemical Cleanup

On-farm Clean Up

Cleaning up after chemical application involves the decontamination of:

- The operator and their PPE
- Application equipment
- Empty chemical containers and preparation for their proper disposal
- Disposal of unwanted AgVet chemicals.

It is important that you clean your equipment when changing from one chemical to the other including flushing the lines. Always decontaminate at the end of the day and the spray season. Check the label for recommended cleaning agents and instructions for decontamination.

The approved procedure for decontamination of chemical containers involved pressure rinsing or triple rinsing which ensured the container is 99% free of chemical. To avoid wasting chemical, the rinsate (the water used to decontaminate the chemical container) can usually be poured into the spray tank during the chemical mixing stage before spraying. If you need to dispose of this, follow the specific disposal instructions on the product label.[5]

[3] AusChem Training Ltd. (2022). AusChem National AgVet Chemical Manual* (2nd ed.)
[4] https://agriculture.vic.gov.au/farm-management/chemicals/responsible-chemical-use/farm-chemical-transport-storage-mixing-and-disposal
[5] AusChem Training Ltd. (2022). AusChem National AgVet Chemical Manual* (2nd ed.)

drumMUSTER and ChemClear

drumMUSTER

drumMUSTER provides Australian agricultural and veterinary chemical users with a recycling pathway for eligible, empty AgVet chemical containers. Only containers with the drumMUSTER logo as show in Figure 2 (right) can be collected under the drumMUSTER program.[6]

To be eligible, container must be properly decontaminated and free of chemical residue, dry, and presented separately without lids.

There are over 700 drumMUSTER collection sites available across Australia where empty, clean, and eligible AgVet chemical containers can be collected, processed and recycled. Collection locations can be found here: https://www.agsafe.org.au/dm-collection-sites

Figure 2: drumMUSTER container logo

ChemClear

ChemClear is the only program in Australia dedicated to the collection and disposal of unwanted AgVet chemicals. The aim of this service is to minimise the potentially dangerous build-up of unwanted AgVet chemicals on farms, which may create risks to the environment, public health and trade. A web-based booking system is available for users, as well as a toll free number.

Figure 3: Collection of unwanted chemicals through ChemClear

There are 5 steps to getting your chemicals collected for disposal listed below.[7]

1. Make a list of all your unwanted or outdated agricultural chemicals, noting details like product name, container size, and the condition of each item. This will help ensure everything is ready for registration.
2. Register your chemicals online or by calling our toll-free number (1800 008 182). You'll receive a reference number, and ChemClear will classify them as Group 1 (free collection) or Group 2 (disposal fee applies).
3. Store your registered chemicals in a secure area, away from people, animals, and potential hazards. ChemClear will send you storage stickers to help label and identify your chemicals until collection day.
4. Once a collection is scheduled in your area, you'll be notified of the date, location, and time. Transport your registered chemicals to the designated collection point safely, using a ute or truck.
5. ChemClear's professional team will collect and safely dispose of your chemicals. 98% of chemicals are repurposed as an alternate fuel source for industries like cement manufacturing. The remaining 2% are treated using specialised technologies, such as Plasma Arc, or stabilised for secure landfilling. All disposal follows strict Environmental Protection Authority guidelines.

[6] https://wwwagsafe.org.au
[7] https://www.agsafe.org.au/cc-program-overview

Image: AdobeStock/hedgehog94

This Storm and Flood Industry Recovery project is jointly funded by the Australian and NSW governments under Disaster Recovery Funding Arrangements

Australian Government

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