

Safe disposal of empty pesticide containers

Read the label

The NSW Pesticides Act, 1999 requires all pesticide users to follow the label recommendations for disposal methods. The label is a legal document, so it is important that you read it and understand the disposal requirements before getting rid of containers, to avoid prosecution. This section outlines several techniques to help you dispose of pesticide containers safely and legally.

Remember:

If you use agricultural chemicals you are responsible for ensuring that empty containers are disposed of safely.

Rinse empty containers

Rinsing empty containers is a good farm practice to adopt. Pesticide labels specify that before disposal, empty containers must be properly rinsed. Before discarding, recycling, storage or reuse, all containers must be triple rinsed or pressure rinsed and the rinsate added to the spray tank. By thoroughly rinsing empty containers at the time of use and adding the rinsate to the spray tank, you get full value from your pesticide.

Unrinsed containers can hold as much as 3% of product concentrate. Over time, you can incur considerable financial loss by leaving unrinsed product in containers. For example, when 1.5% of product remains unused in a 20 litre container that cost \$400, then \$9 is being thrown away each time.

In most Australian states, containers that have not been properly rinsed can be classified as hazardous waste. Discarded, unrinsed and improperly rinsed empty containers are a health risk to the people who handle them, and they can contaminate the environment. They are a potential danger to public health, domesticated animals, plants, surface and groundwater, soil and wildlife.

Rinsing methods

There are several ways of rinsing containers. Whichever method you use, make sure you wear the right protective clothing during the rinsing process. This is important because the chemical remaining in the container is a concentrate – the most toxic form of the chemical. Always ensure that rinsed containers are drained, punctured and allowed to dry.

1. Triple rinsing:

Triple rinsing is a three-stage manual rinsing process. It is only suitable for small containers up to 20 L because larger containers are too heavy to lift and shake. The empty container is $\frac{1}{4}$ filled with clean water, the cap replaced and the container shaken, rotated, rolled and inverted vigorously for at least 30 seconds. The rinsate is then added to the spray tank, allowing the container to drain for

Remember:

Proper rinsing and cleaning of empty pesticide containers is good farm practice and the first step in their safe disposal.



at least 30 seconds. The rinsing procedure is then performed two more times before the container is allowed to completely dry.

2. Pressure rinsing methods:

a) Piercing nozzle:

This manual method uses a specially-designed nozzle that attaches to a hose to pierce and force the remaining product from plastic and non-pressurised metal containers. It is generally faster and easier than manual triple rinsing. These nozzles are available from spray equipment suppliers.

b) Probes and ‘sucker flusher’ transfer systems:

Several probe designs are available. They are basically used to extract the chemical concentrate while enabling water to be introduced into the container during the extraction process to assist in the removal of viscous (thick) products, such as flowable formulations, and to rinse the containers once empty. Rinsing must be done with clean water.

c) Integrated transfer and rinsing systems:

These devices are normally built into an induction hopper attached to the sprayer or they can be purchased as separate induction and filling units. Some of these systems are also suited to rinsing large containers (e.g. envirodrums).

In both cases, nozzles or probes are used to spray water into the container, the rinsate is then caught in the hopper and transferred into the spray tank. Hopper units are available from several spray equipment manufacturers. Separate boom spray filler and container washer units are also available, as well as a closed (‘hands-off’) chemical transfer and metering system with an optional rinsing probe.

d) Rinsing attachments:

Attachments that can be used to rinse plastic and paper bags are available with some of the induction hopper units.

How to dispose of empty containers

When buying pesticides, find out if the containers can be re-used, returned, refilled or recycled.

Keep empty, cleaned containers locked away until they can be disposed of at an approved tip, returned or recycled.

Empty containers must have any residual product effectively removed by thorough rinsing – according to one of the methods outlined previously.

Puncture plastic and metal containers, unless they are marked as returnable or recyclable, so they cannot be used again and to ensure they can be completely drained.

To assist the draining process, containers should be punctured from the inside. For example, drive a crowbar or spike through the container opening and puncture its base – then let the container dry completely and store in a dry place before disposal.

Do not bury crushed or emptied containers on-farm to avoid the possibility of pesticides leaching into the soil, waterways or groundwater.

Remember:

Always refer to the pesticide label for the recommended method of disposal – this includes metal and plastic containers, and cardboard or plastic packaging material.

drumMUSTER

drumMUSTER is a national collection and recycling scheme that provides a solution to the problem of disposing of used non-returnable chemical containers.

Since 1 February 1999 farmers have paid a 4c/L or 4c/kg levy on non-returnable chemical containers bigger than 1 L or 1 kg, which funds drumMUSTER. Local councils, either individually or in groups, enter into an agreement with drumMUSTER and use these funds to hold a drumMUSTER collection operation. Farmers are then able to deliver cleaned (i.e. triple or pressure rinsed) used containers to designated collection points, run by the participating councils, where they are inspected and either accepted or rejected.

Only containers with the drumMUSTER sticker, for which the levy has been paid, are accepted.

Burning restrictions

Do not burn empty (even properly rinsed) plastic containers or plastic packaging material on-farm as toxic fumes can be given off.

Pesticide labels clearly state that burning of empty containers is illegal. Such action could result in your prosecution by the regulatory powers of the DEC, which administers legislation under various Acts.

Paper, cardboard, plastic or other packaging material that has come in contact with a pesticide should be stored safely until disposal. Paper or cardboard packaging should be well shaken, punctured or shredded and plastic bags should be rinsed once to remove any pesticide residue prior to either storage or disposal.

Disposal can be done at either an approved council landfill or via a licensed waste contractor.

No pesticide packaging material may be burned.

Other hints:

- Always wear the right protective clothing outlined on the label when rinsing containers and adding the rinsate to the spray tank.
- Never rinse containers by dipping them into natural water sources like dams, creeks, rivers or lagoons.
- Never re-use or re-fill pesticide containers with another pesticide or liquid. Even after thorough cleaning, minute amounts can remain, so cross-contamination or poisoning can occur.
- Do not leave glass or plastic containers at community recycling collection centres unless there is special provision for them.

Further information

CropLife Australia (formerly Avcare), the national association for crop protection and animal health, has initiated 'Operation Clean Rinse' to help farmers effectively rinse and prepare chemical containers for safe disposal. Phone 02 6230 6399

For more information on this series, contact Sandra Hardy, NSW Department of Primary Industries, Locked Bag 26, Gosford, NSW, 2250. Phone 02 4348 1900 or fax 02 4348 1910. This information was correct at time of printing. Updated April 2006.

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