



## RESPONSIBLE CHEMICAL USE



Learning how to manage and handle chemicals safely and responsibly not only ensures your personal protection, but also provides environmental protection for our precious natural resources, like water, soils, native plants and animals, marine and coastal environments.



*Glyphosate is one of the most widely used herbicides*

This fact sheet is part of a series designed to help you:

- increase your awareness of correct and responsible use of all chemical types
- gain the knowledge required to effectively control weeds, pest insects and diseases without damaging, contaminating or polluting our environment
- adopt best practice to minimise chemical use and maximise personal safety, and
- play a part in improving water quality and environmental health.

### What is Glyphosate

Glyphosate is one of the most widely used herbicides.

It is a non-selective chemical that is effective on a wide range of weeds. However, Glyphosate will kill your garden plants if it comes into contact with them.

This chemical is most effective against young, actively growing plants, but needs to be used in the correct way to achieve the best results. Field evidence suggests that most people apply far more chemical than is needed to kill the weeds being targeted – up to five times as much as is necessary.

This is putting our environment, in particular our precious water resources, at risk.

### How it Works

Glyphosate is absorbed through plant leaves. It is then carried by the sap stream into the plant roots, where it prevents them from absorbing nutrients from the soil – thereby killing the plant.

Annual weeds, including grasses and most broad-leafed plants, are easily controlled using Glyphosate. This is because they have soft tissue and when growing actively they quickly absorb enough chemical to destroy the plant.

However, weeds with bulbs and perennial weeds with woody stems are much harder to control. They will only die if sufficient chemical reaches each plant's root system.

In all cases, but particularly with bulbs and woody weeds, timing of the spray application is critical.

### More is Not Better

Glyphosate, like all registered herbicides, works best when applied at the correct rates. Applying more than is needed is not only unnecessary, it also places you and the environment at risk.

Use the minimum amount of spray mix needed, according to the directions on the label, to achieve uniform coverage of the target foliage without runoff.

*For more information on how to calculate the correct application rates, please refer to another fact sheet in this series: Accuracy and Effectiveness.*

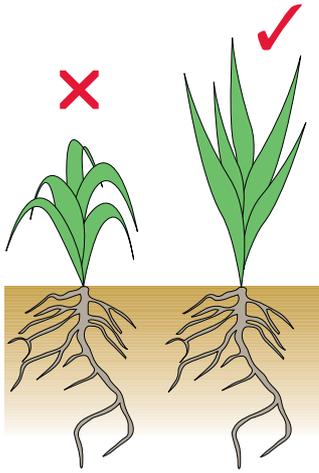
### Glyphosate is sold under a variety of brand names, including:

- Weedmaster Duo®
- No Grow®
- Zero®
- Round-up®
- Mitre 10 Glyphosate®

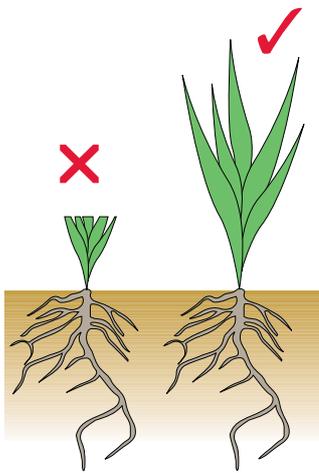
#### Other fact sheets in this series

- Accuracy and Effectiveness
- Alternatives to Chemicals
- Bait Station Safety
- Best Time to Spray
- Calibrating Spray Equipment
- Personal Safety
- Understanding Product Labels #1
- Understanding Product Labels #2
- Weeds Near Water





Do not spray when plants are under stress



Spray only when there is enough foliage to ensure adequate chemical intake

### Getting the Best Results

To get the best results from spraying with Glyphosate make sure that:

- plants are actively growing
- there is plenty of fresh, green growth to absorb enough of the spray mix to kill the plant – spray only when there is enough foliage to ensure adequate chemical intake
- leaves are:
  - > free of dust or dirt
  - > not covered with heavy dew or frost
- plants are not under stress due to:
  - > dry conditions
  - > waterlogging
  - > high temperatures (do not spray if the temperature is over 25°C)
  - > low temperatures (do not spray until the day temperature reaches 12°C)
- water used for mixing is clean and free of dirt – rainwater is best
- spray equipment has the right nozzle and operates at the right pressure to ensure good coverage, and
- no rain is expected for at least six hours.

Always put 80 per cent of the required water into your clean sprayer before adding the chemical, then slowly add the other 20 per cent of the water. This avoids frothing of the spray mix.

Do not spray when there is a breeze that may cause spray droplets to drift onto desirable plants, including trees, or onto hard surface areas (paving, pathways and driveways) where it may be washed into the gutters and from there into local drains, creeks and rivers.

If the breeze is strong enough to shake the foliage of trees or bushes, it is probably too windy to spray safely.

### Give it Time to Work

Allow enough time after spraying with Glyphosate for the chemical to be absorbed and do its work.

- Do not pull, dig or mow weeds for a week after spraying.
- Do not respray because you fail to see an obvious effect within just a few days.
- With perennial weeds the visible effects of spraying (gradual wilting and yellowing) may not be evident for three weeks or more.

### Dealing with Problem Weeds

The following guidelines for particular problem weeds will help ensure that Glyphosate works well for you without over using or respraying unnecessarily.

#### Oxalis

- For Oxalis (soursobs) the best results will be achieved by spraying when the plants are about one third in flower.
- At this growth stage the chemical will be effectively carried down to the bulbs of the plants.

#### Perennial Plants

- To kill perennial plants such as couch grass, Glyphosate needs to be applied to fresh, actively growing green vegetation with sufficient leaf area to absorb enough chemical to kill the whole plant.
- Slashing or mowing and allowing ample regrowth (good lush green growth 10 to 15cm long in the case of kikuyu or couch grass) before spraying can improve the chances of maximum control.

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**When using chemicals more is not better!**

**If you are uncertain about any aspect of chemical use, please seek professional advice from the place of purchase or the manufacturer before proceeding.**

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