

**WARNING - ECOTOXIC**

  
**ravensdown**

**HERBICIDE**

**GROUP 9**

# Glyphosate 360 DELTA

A water soluble herbicide for  
non-selective control of many  
annual and perennial weeds

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**ACTIVE INGREDIENT:**

Contains 360g/litre glyphosate as the  
isopropylamine salt in the form of a  
soluble concentrate.

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**Registrant: Ravensdown Ltd**

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Hornby, Christchurch 8042  
New Zealand  
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[ravensdown.co.nz](http://ravensdown.co.nz)

BATCH:

D.O.M:

**NET CONTENTS**  
**20 Litres**



# GLYPHOSATE 360 DELTA | READ LABEL CAREFULLY BEFORE USING

**This product must not be used for any purpose, or in any manner, contrary to the label unless authorised under appropriate legislation.**

## HAZARD STATEMENTS

### ECOTOXICITY Toxic to aquatic life with long lasting effects.

Avoid contamination of any water supply with chemical or empty container. Do not allow spray drift over aquatic environments. Use this product carefully. Avoid contact with foliage or green stems of fruit crops, desirable plants and trees. Spray drift may cause serious damage to desirable plants. Aerial application is recommended in non-crop areas only. Do not apply directly into or onto water.



## HANDLING PRECAUTIONS

### STORAGE

Keep out of reach of children. Store in accordance with NZS 8409 Management of Agrichemicals. Store in original container tightly closed in a locked, dry, cool area away from foodstuffs, fertilisers and seeds. Stores containing 1000L of GLYPHOSATE 360 DELTA are subject to signage and secondary containment. More than 1000L require emergency response plans.

### PERSONAL PROTECTION

Avoid contact with skin, eyes and inhalation of spray mist. When handling wear protective clothing such as waterproof gloves, overalls and boots. Wash splashes of concentrate from skin and eyes immediately. Remove protective clothing and wash hands and face thoroughly before meals and after work. Do not eat, drink or smoke while using.

### RECORD KEEPING

Records of use as described in NZS 8409 Management of Agrichemicals must be kept.

### EQUIPMENT

Apply using well maintained and accurately calibrated equipment. Flush equipment thoroughly with clean water after use. Decontaminate equipment before use on another crop. DO NOT mix or store this product in galvanized or unlined steel (except stainless steel) containers or spray tanks. The concentrate or solutions of may react with such containers to produce a highly flammable gas which may flash or explode if ignited.

### DISPOSAL

Triple rinse container and add rinsate to spray tank. Triple rinsed containers containing the Agrecovery logo on the label and that are free of all residues and have an intact legible label may be taken to an Agrecovery collection site for disposal. Otherwise crush or puncture and bury in an approved landfill. Do not burn container. Do not use container for any other purpose. Dispose of product only by using according to label directions or dispose of safely at a managed landfill.

## FIRST AID

If swallowed, DO NOT induce vomiting. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, wash out immediately with water. Get medical attention if skin or eye irritation persists. If inhaled, move the patient to fresh air immediately. Begin artificial respiration if breathing has stopped. For advice, contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor if you feel unwell.

## SPILLAGE

In case of spillage, wear appropriate protective clothing and prevent material from entering waterways. Exclude non-essential people from the area. Contain liquid spills and absorb with inert material such as soil or sand and place in waste containers. Wash area with water and absorb with further inert material. Dispose of waste safely in an approved landfill.

## EMERGENCY RESPONSE

In transport emergency call 111, Police or Fire Brigade.

For 24hr specialist advice in an emergency only call **0800 CHEMCALL (0800 243 622)**.

### SAFETY DATA SHEET

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**SHelf LIFE** When stored appropriately this product should show no significant degradation for two years from the date of manufacture.

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Agrecovery is available on plastic containers up to 60L and for plastic or steel large drums from 61L - 1000L.

Registered pursuant to the ACVM Act 1997, P10352.

See [www.foodsafety.govt.nz](http://www.foodsafety.govt.nz) for registration conditions.

Approved pursuant to the HSNO Act 1996, Code: HSR101102.

See [www.epa.govt.nz](http://www.epa.govt.nz) for approval controls.



PHONE **0800 100 123**

## GENERAL DIRECTIONS

- GLYPHOSATE 360 DELTA is a broad spectrum, non-selective, non-residual, foliar absorbed and translocated herbicide for control of emerged weeds only. It is deactivated immediately upon contact with the soil and will not provide residual weed control.
- Plants should have sufficient leaf area for uptake, be actively growing, free of stress with clean foliage at time of spraying. Do not treat plants that are silt laden or affected by drought, frost, water logging, grazing, or previous herbicide application.
- The effects of GLYPHOSATE 360 DELTA may not be apparent for 3-7 days depending on weather conditions, weed species and the herbicide rate used. Some perennial weeds may not show effects for 14-21 days.
- Cultivation may start from 1 day after spraying on annual weeds and 3 days after spraying perennial weeds. Cultivation should occur within 21 days of spraying.
- Reduced results may occur if dirty water (e.g. from ponds), hard water containing calcium salts or water containing metal ions (e.g. iron) is used. If hard water cannot be avoided, the addition of a recommended surfactant is advised.
- Accelerate penetrant may be used with GLYPHOSATE 360 DELTA to increase the rate of uptake into certain weeds.
- Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

**It is an offence for users of this product to cause residues exceeding the relevant MRL in the Food Notice: Maximum Residue Levels for Agricultural Compounds.**

## WITHHOLDING PERIOD

Wheat, barley and oat grain: 7 days

## Animal Safety

A withholding period for stock grazing is not required except for where ragwort and other poisonous weeds are present. Stock should be withheld from the treated area until these plants brown out. In all other situations, it is recommended that cultivating or grazing treated areas is delayed for 1 day for annual weeds and 3 days for perennial weeds to ensure full uptake and translocation. For brushweed control, wait for stem dehydration before burning or slashing.

## RAINFALL

Rain occurring up to 2 hours after application may reduce effectiveness. When a penetrant is added the rainfall period is reduced to 20 minutes. Do not apply to wet plants as the efficacy may be reduced.

## APPLICATION

**Boom:** GLYPHOSATE 360 DELTA can be applied in spray volumes up to 200L per hectare using fan nozzles at pressures in the range of 200-280kPa. Boom height should be set so a double overlap of nozzle pattern is achieved at the top of the target plants.

**Aerial:** Application should be made to forestry and non-crop areas only. GLYPHOSATE 360 DELTA can be applied by aircraft in spray volumes of up to 100L per hectare. Increase the spray volume in hilly terrain to ensure maximum target contact.

**Handgun and Knapsack:** Ensure a fine spray pattern to give complete coverage. For handguns use pressures of 1000-2000kPa and No.4 to No.6 spray tips.

**Mistblower:** Refer to table.

**Wiper Equipment:** Mix only enough for immediate use, mixing a 33% solution (1 part GLYPHOSATE 360 DELTA with 2 parts water). Plants must be clean and dry and the wiper fully saturated. Apply up and down slopes for effective applications. High weed density: reduce speed and apply twice in opposing directions.

## MIXING AND COMPATIBILITY

Half fill the spray tank with clean water and add the required amount of GLYPHOSATE 360 DELTA, agitate and continue to fill the tank. If a penetrant is required, add this last to minimize foaming. Agitate well before spraying. When tank mixing with other herbicides, ensure these are fully dispersed before adding GLYPHOSATE 360 DELTA. Be sure to observe all precautions, especially plant back periods when using other herbicides. Use tank mixes promptly. GLYPHOSATE 360 DELTA is compatible with most commonly used herbicides.

## SPRAYER DECONTAMINATION

Always wash tank and flush equipment thoroughly with clean water after use. To avoid subsequent injury to sensitive crops, immediately after spraying thoroughly remove all traces of GLYPHOSATE 360 DELTA from mixing and spraying equipment as follows:

1. Drain tank, then flush tank, booms and hoses with clean water.
2. Half fill the tank with clean water and add 125g of an alkali detergent per 100L of water. Circulate through the system for at least 15 minutes with agitation then drain.
3. Drain the whole system.
4. Nozzles and filters should be removed and cleaned separately.
5. Finally, rinse tank thoroughly with clean water, flush through hoses and boom and allow to drain.

**RESISTANCE MANAGEMENT:**

GLYPHOSATE 360 DELTA contains glyphosate, a **GROUP 9 HERBICIDE** from the glycine chemical group with the inhibition of EPSP synthase mode of action. Naturally occurring weed biotypes resistant to glyphosate are known to exist. These become more prevalent after many years of continuous use of the product. Species with known resistant biotypes include Italian and perennial ryegrass. To prevent or delay development of resistant biotypes, use GLYPHOSATE 360 DELTA in tank mixture or rotation with herbicides of a different mode of action against the weed. Consult [www.resistance.nzpps.org/](http://www.resistance.nzpps.org/) for alternative modes of action and details of resistance management strategies (if any) for the crops listed on the label.

<b>SITUATIONS FOR USE</b>	
<b>Situations</b>	<b>Critical comments</b>
<b>Agricultural areas</b>	May be used for the control of annual and perennial weed species as indicated in the Weed Control Table.
<b>Asparagus</b>	Pre-crop emergence and post harvest applications. In established ferns, apply as directed or shielded spray or with a weed wiper. Do not allow spray, spray drift or the wiper surface to contact any part of the asparagus plant.
<b>Aquatic areas</b> - drains and waterways	Do not spray until 75% of the weed is above water level. Avoid treating silt laden plants. Do not allow submergence for 6 hours post spraying.
<b>Broadacre crops</b> - wheat, barley, oats	Can be used to control weeds prior to cultivation or prior to harvest. Spray 7-12 days prior to harvest when the grain moisture is less than 30%. Do not harvest within 7 days of spraying. Do NOT apply more than 4 L / ha. Do not spray under-sown crops. Do not spray crops that will be harvested for seed. Avoid treating plants under stress.
<b>Forestry</b>	For control of all listed weeds as listed in the Weeds Controlled Table, prior to burning or planting of forest or nursery or around established trees. Do not allow spray to come into contact with foliage or green bark of desirable trees.
<b>Industrial and non-agricultural areas</b>	Treat weeds as per Weed Control Table.
<b>Market gardens</b> - as a knock down prior to seeding, transplanting and after harvest clean up	Apply before or after seeding but prior to crop emergence. Spraying can also be carried out prior to transplanting or as a post harvest clean up. For longer term control of seedling weeds, an appropriate residual herbicide can be used as a tank mix with GLYPHOSATE 360 DELTA, in accordance with label recommendations.
<b>Minimum tillage</b> - for total weed control prior to seeding in a reduced tillage system	Weeds should be actively growing and not under stress. For improved control of white clover and certain other broadleaf weeds, GLYPHOSATE 360 DELTA may be tank mixed with Granit, Backup, Dicom 480 or Multiple. Consult companion herbicide label for further instructions on use, plant back periods and other restrictions.
<b>Orchards and vineyards</b> - citrus, apple, pear, stonefruit, kiwifruit and grapes	Apply as a directed or shielded spray. Do not apply near unprotected trees less than 3 years old. Do not let spray contact green foliage or new growth. Do not allow spray or spray drift to come into contact with the bark of stonefruit trees, or, green bark, suckers, buds, foliage or fruit of any other tree. Spray before crops bud, sucker or bloom. GLYPHOSATE 360 DELTA can be tank mixed with an appropriate herbicide for residual control.
<b>Pasture (grass/clover)</b>	For the control of existing species prior to pasture renewal. For improved control of white clover and certain other broadleaf weeds, GLYPHOSATE 360 DELTA may be tank mixed with Granit or Backup. Consult companion herbicide label for further instructions on use, plant back periods and other restrictions. For the suppression of seed heads on unimproved pasture (Pasture Topping) apply 270ml/ha in spring at early seed head emergence. Do not use a penetrant. Do not use if soil moisture levels following application are too low for pasture growth. Do not use on ryegrass or on another improved pasture as suppression may occur. Brownout will occur but this will be temporary until the pasture grows back. Grazing may commence 3 days after treatment but for best results delay grazing for at least 21 days after treatment. As treatment will restrict grazing, limit the area to be treated.
<b>Recreational areas</b> - lawns, parks, turf, reserves and ornamentals	Apply before the sowing and planting of these areas or use as a spot application. In mown areas allow sufficient re-growth before spraying. Can also be used around the base of established trees and shrubs as a directed or shielded spray. Avoid contact with any part of the shrub or tree.

**DIRECTIONS FOR USE;**

Glyphosate 360 DELTA must not be applied at rates exceeding 20L/ha (equivalent to 7.2Kg glyphosate/ha).

Prevent spray drift as it may cause severe damage to non-target plants.

Weed	RATE				Comment
	Boom/aerial Litres/ha	Handgun litres/100L	Knapsack ml/15L	Mistblower ml/10L	
<b>Annual weeds</b>	1.0-2.0	0.2	30	60	Use the high rate on larger weeds. May be tank mixed with residual herbicides such as one containing simazine.
<b>Australian sedge</b>	6-9	1.0	150	300	Apply from Nov-March. Burn or slash from 30 days after treatment
<b>Barley grass</b>	1.0	0.2	30	60	Apply when plants are at early seed head stage (September-December). A herbicide containing simazine may be added for residual control.
<b>Browntop</b>	3	0.5	75	150	Apply when plants are actively growing and 5-10cm high. For taller plants, graze or burn and allow regrowth of 5-10cm height before spraying.
<b>Californian thistle</b>	4	1.0	150	300	Spray after the development of flower buds but before autumn browning. Mowing 10 days after treatment may improve control. Re-treatment the following summer may also be necessary to prevent re-infestation.
<b>Cleavers</b>	1.5	0.5	75	150	Spray actively growing plants after the majority reach early seed head.
<b>Couch</b>	3-6	1.0	150	300	For best results apply 4-6 litres/ha in autumn to actively growing plants at least 10cm high where no cultivation has occurred for at least 6 months. For suppression apply 3.0 litres/ha in spring and repeat in the autumn.
<b>Docks</b>	4-9	1.0	150	—	Spray actively growing plants in spring and summer before seed heads have formed. Use higher rate for mature plants. In pasture, spray prior to reseeding or cropping to restrict re-establishment of seedlings
<b>Floating sweet grass</b>	6	1.0	150	300	Apply at early seed head stage to actively growing, unstressed plants.
<b>Indian doab</b>	9	1.0	150	—	Apply at seed head stage before frosts occur
<b>Johnson grass</b>	6	1.0	150	300	Apply when actively growing
<b>Kikuyu/Mercer grass</b>	6	1.0	150	300	Apply at early seed head stage. On dense infestations, cut then spray the re-growth.
<b>Nodding thistle</b>	—	1.0	150	—	When applying with wiper ensure plants are actively growing (Oct-Apr) when at least 10cm of the plant can be wiped. A double pass is recommended and follow up with spot treatment if necessary
<b>Paspalum</b>	4-6	1.0	150	300	Use low rate when plants are in early seed head. Use the higher rate on mature vegetative plants, before the onset of frosts.

Weed	RATE				Comment
	Boom/aerial Litres/ha	Handgun litres/100L	Knapsack ml/15L	Mistblower ml/10L	
<b>Potato - volunteer</b>	3	0.5	75	150	Spray actively growing plants.
<b>Prairie grass</b>	1.5	0.2	30	–	Apply at early seed head.
<b>Ragwort</b>	6	1.0	150	–	Apply to actively growing plants with sufficient leaf area for uptake. Use wiper when plants are 10-15cm above the pasture using double pass in opposite directions. See note on Withholding Period.
<b>Ratstail</b>	5	1.0	150	–	Apply to actively growing plants (Mar-Apr). In dry conditions delay spraying until sufficient green foliage is present.
<b>Rautahi (cuttygrass)</b>	6	1.0	150	300	Apply to actively growing plants (Jan-Mar). Burning or slashing may take place after plants have browned out, usually 30 days after application.
<b>Rushes</b>	6	1.0	150	300	Wiper application should be carried out between Nov-May. Burning or slashing may take place after plants have browned out, usually 30 days after application
<b>Ryegrass (annual, Italian, short rotation hybrids)</b>	3 - 4 + 100mL/100 L Accelerate	1.0 + 100 mL/100 L Accelerate	150 + 100 mL/100 L Accelerate	300 + 10 mL/100 L Accelerate	Spray to actively growing plants when 5 to 10 cm tall. The higher rate may be necessary to reflect the spectrum of weeds present.
<b>Established, &gt; 8 months</b>	4 + 100 mL/100L Accelerate	1.0 + 100 mL/100 L Accelerate	150 + 100 mL/100 L Accelerate	300 + 10 mL/100 L Accelerate	
<b>Ryegrass (perennial)</b>	4 + 100 mL/100 L Accelerate	1.0 + 100 mL/100 L Accelerate	150 + 100 mL/100 L Accelerate	–	Apply anytime plants are actively growing and 3-10cm tall. Use low rate Jan-Jul when cultivation is to follow spraying. Use the high rate Aug-Sept. For pasture renewal select a suitable rate that reflects weed spectrum present.
<b>Tall fescue</b>	6	1.0	150	300	Apply to actively growing plants Jan-Mar
<b>Yarrow</b>	3-6	–	–	–	Apply to plants with 5-10cm leaf. For best results cultivate 10 days after treatment. Use low rate when a competitive crop is to be drilled.

**BRUSHWEEDS: Wait until stems have dehydrated before slashing or burning**

Weed	RATE				Comment
	Boom/aerial Litres/ha	Handgun litres/100L	Knapsack ml/15L	Mistblower ml/10L	
<b>Barberry</b>	–	1.0	150	300	Apply from flowering to late fruit set (Jan- Apr). Growth should reach 1.5m before spraying.
<b>Blackberry</b>	9-20	1.5	150	300	Best results when sprayed mid to late summer after flowering to full fruit (Dec-Apr) but before frosts occur. Allow 6-10 weeks before slashing/burning or oversowing. Use high rate for hard to kill blackberry, aerial applications and where no follow up treatment is planned.
<b>Boxthorn</b>	–	1.25	150	–	Apply to actively growing plants (Nov-Apr). Ensure complete coverage of dense thickets. Do not use additional surfactant or spray salt damaged plants
<b>Bracken</b>	9 + 250 mL/100L Accelerate (min 500ml/ ha)	1.0 + 200mL/100 L Accelerate	150 + 30 mL Accelerate	300 + 20 mL Accelerate	Apply after bracken fronds have unfurled (mid Jan/June) but before frost occurs
<b>Broom</b>					Apply to broom via ground application at anytime but for aerial application apply only when broom is in full leaf.
<b>Buddleia</b>	9	1.0	150	–	Apply using a handgun at anytime. For aerial application treat buddleia up to 2m high (Feb-Apr) using a spray volume of 200-300 L/ha
<b>Orse</b>	–	1.0 + 200mL/100 L Accelerate	–	–	Apply anytime ensuring complete coverage of plant. Do NOT treat plants stressed by (for example) drought, grazing or previous herbicide applications.
<b>Old mans beard</b>	–	1.0-2.0	300	–	Apply Nov-Mar before first leaves brown. Use higher rate on stems over 1cm in diameter. If complete coverage is not possible, plants should be cut at ground level and the re-growth sprayed with the higher rate when the plants are at least 50cm long.
<b>Pampas grass, toetoe</b>	–	1.0	150	–	Spray in spring to autumn. Reduced control may result if plants are in full flower at the time of spraying. Ensure complete coverage.
<b>Ring fern</b>	1-3	0.3	50	–	For effective control use 2 L/ha. For pasture manipulation, apply 0.7-1.4lt/ha from December to April. Use the higher rate for dense infestations. Burn 4-6 weeks after application.
<b>Sweet brier</b>	12 + 250 mL/100 L Accelerate (min 500 ml/ ha)	1.0 + 200 mL/100 L Accelerate	150 + 30 mL Accelerate	–	Spray when plant is in late flowering to early leaf yellowing stage. Ensure full coverage
<b>Willow</b>	9	1.0	–	–	Apply before leaf fall begins (Jan-Apr). Total coverage is essential for good control.

## **WARRANTY AND LIMITATION**

**IMPORTANT:** Read this notice before opening the container.

The registrant warrants that when packed the active ingredient of this product is as specified on this label within accepted analytical tolerances. The registrant gives only those other warranties that are required by law in relation to this product and limits its liability to the cost paid by the claimant for the product. The registrant declines all liability for damage resulting from the handling, storage or use of this product. The user bears the risk from the handling, storage or use of this product. The registrant is not liable for any use of this product which is contrary to the label directions given or any Act or Regulation.



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