

WARNING – ECOTOXIC

HERBICIDE – GROUP 9

GLYPHOSATE 540K

A non-residual, non-selective herbicide for weed control prior to planting crops and pasture, prior to harvesting some crops and for general weed control in horticulture, agriculture, and forestry

ACTIVE INGREDIENT:

Contains 540g/L glyphosate present as the potassium salt in the form of a soluble concentrate.

Registrant;

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Ravensdown.co.nz

BATCH:

DOM:

NET CONTENTS

1-1,000L

GLYPHOSATE 540K

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. Beware – apply this product carefully. Prevent spray drift as it may cause serious damage to non-target plants. Aerial application is recommended in non-crop areas only. Do not apply directly into or onto water. Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

QUALIFIED HANDLER:

Where Glyphosate 540K is applied onto or into water and the water has the potential to leave the place containing the application area, clauses 62, 63 and 64 of the Hazardous Property Controls Notice apply as if the substance has a hazard classification of hazardous to the aquatic environment acute Category 1.

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 or more of GLYPHOSATE 540K are subject to signage and secondary containment. More than 1000L require emergency response plans.

PERSONAL PROTECTION

Avoid contact with skin, eyes and avoid breathing 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

For medical advice, contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor.

If swallowed, DO NOT induce vomiting. Rinse mouth. Get medical advice if you feel unwell. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists get medical advice or attention.

If inhaled, move the patient to fresh air immediately and keep at rest until recovered. Begin artificial respiration if breathing has stopped.

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

If additional safety information is required, refer to the Safety Data Sheet. For a copy, contact the customer centre on 0800 100 123.

SHELF LIFE

When stored appropriately this product should show no significant degradation for two years from the date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

Registered pursuant to the ACVM Act 1997, No. P10351.

See www.foodsafety.govt.nz for registration conditions.

Approved pursuant to the HSNO Act 1996, Code: HSR100587.

See www.epa.govt.nz for approval controls.

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

PHONE 0800 100 123



GENERAL INFORMATION

- GLYPHOSATE 540K 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 540K 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.

MAXIMUM APPLICATION RATE:

A maximum application rate of 6.64kgai/ha (12.3L of product/ha) has been set for this product.

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:

For human consumption - only to be used prior to sowing.

For animal feed - 7 days.

Animal Safety

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 Accelerate is added the rainfall period is reduced to 20 minutes. Do not apply to wet plants as the efficacy may be reduced.

APPLICATION

Boom Equipment

GLYPHOSATE 540K 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 Equipment

GLYPHOSATE 540K can be applied by aircraft. Aerial application should be made to forestry and non-crop areas only. 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

Provide complete coverage and spray to wet but not to runoff.

Refer to table.

Wiper Equipment

Mix only enough for immediate use, mixing a 25% solution (1 part GLYPHOSATE 540K with 3 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 540K, agitate and continue to fill the tank. If Accelerate 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 540K. Be sure to observe all precautions, especially plant back periods when using other herbicides. Use tank mixes promptly. GLYPHOSATE 540K 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 540K 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 100 litres 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 540K 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 540K in tank mixture or rotation with herbicides of a different mode of action against the weed. Consult www.resistance.nzpps.org/ for alternative modes of action and details of resistance management strategies (if any) for the crops listed on the label.

SITUATIONS FOR USE

Situations

Critical comments

Agricultural areas

May be used for the control of annual and perennial weed species as indicated in the Weed Control Table prior to sowing any edible or non-edible crop or pasture. Where white clover control is required, tank mix with a suitable white clover herbicide and observe recommended waiting periods prior to planting legumes. Cultivation may start from 3 days after spraying perennial weeds and 1 day for annual weeds.

Asparagus

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.

Aquatic areas - 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.

Broadacre crops - wheat, barley, oats

Can be used to control weeds prior to cultivation. Not for use on crops intended for human consumption. For crops intended for animal feed; 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 spray under-sown crops. Do not spray crops that will be harvested for seed. Use rates up to 2.7 litres/ha depending on the specific weeds to be treated. Avoid treating plants under stress.

Forestry

For control of all listed weeds as listed in the Weed Control 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.

Industrial and non-agricultural areas

Treat weeds as per Weed Control Table.

Market gardens - 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 540K, in accordance with label recommendations.

Orchards and vineyards - 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 540K can be tank mixed with an appropriate herbicide for residual control.

Pasture renewal

For the control of existing species (grass species, legumes and forage herb species) prior to re-seeding pasture or establishing crops.

Pasture seedhead suppression (unimproved pasture)

For the suppression of seed heads on unimproved pasture (Pasture Topping) apply 180ml/ha in spring at early seed head emergence. Do not use Accelerate. 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. It is advisable not to treat more than 10-15% of the farm in any one year.

Spraying of silage before cutting

Where paddocks are to be used for cropping after silage, Glyphosate 540K may be applied before the silage is cut. Use 2.0-2.7 L/ha plus Accelerate 100 mL/100 litres of water in 100-200 litres of water per hectare. Use the high rate on perennial ryegrass or if the silage is rank or lodged. Refer to higher label rates on other specific weeds. After spraying wait at least 4 days before cutting. Grass quality is maintained for 7-10 days after the initial planned cutting date, even into the early stages of brownout.

Spraying of Silage or Hay paddocks after cutting

Before spraying ensure that there is at least 5-10 cm of actively growing green leaf on all tillers. Typically this takes three weeks or more after cutting. Refer to application rates in the table. Always use Accelerate.

Pasture (grass, clover) direct (spot) application

GLYPHOSATE 540K is non-selective and may damage or kill any plant in the sprayed area. Apply as a directed low pressure spray. Retreatment and/or pasture improvement may be necessary to restrict seedling re-establishment.

Pasture (grass clover) selective wiper application

For the control of erect weeds in pastures (grass, clover)

Recreational areas - 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.

WEED CONTROL TABLE					
WEEDS	Rate				CRITICAL COMMENTS
	Boom/ aerial L/ha	Handgun ml/100L	Knapsack ml/10L	Mistblower ml/10L	
Annual weeds	0.66-1.3	130	13	40	Use the high rate on larger weeds. May be tank mixed with residual herbicides such as Simaflo.
Australian sedge	4.0 Aerial 6.0	660	66	200	Apply from Nov. to Mar. Where rank growth is present the area should be burnt 12-18 months prior to aerial application to ensure adequate spray coverage
Barley grass	0.66	130	13	40	Apply when plants are at early seed head stage (September- December). Simaflo may be added for residual control.
Browntop	4.0	660	66	200	Apply to 5-10cm high actively growing plants. Some regrowth may occur. Long term control requires a pasture renewal programme utilizing annual crops and repeat applications of Glyphosate 540K before re-establishing perennial pasture.
Californian thistle	2.7	660	66	200	Apply after flower bud development but before autumn browning. To ensure maximum shoot emergence do not cultivate for 6 months prior to treatment. Wiper - a double pass at low speed is recommended in heavy infestations. Mowing thistles 10 days after treatment may assist control. Retreatment may be necessary in the following season.
Cleavers	1.0	330	33	100	Spray actively growing plants after the majority reach early seed head.
Couch	2.0 - 4.0	660	66	200	For suppression use 2 litres/ha, for control use 2.7 - 4 litres/ha when growing conditions are satisfactory. Autumn treatment is preferable. Use the high rate in late spring. Apply to plants with at least 4-5 leaves (at least 10-15 cm leaf length) and active shoot and root growth. Do not cultivate for 6 months prior to application to ensure maximum shoot emergence. Some regrowth may occur. Long term control requires a pasture renewal programme utilizing annual crops and repeat applications of Glyphosate 540K before re-establishing perennial pasture. See the Use Recommendations section for control of couch in a preharvest situation

WEED CONTROL TABLE					
WEEDS	Rate				CRITICAL COMMENTS
	Boom/ aerial L/ha	Handgun ml/100L	Knapsack ml/10L	Mistblower ml/10L	
Chewings Fescue Red Fescue	6.0 + Accelerate 100ml/100L	660ml + Accelerate 100ml/100L	-	-	Apply to healthy actively growing plants with 10-15cm leaf length. Spring treatment gives best results. Some regrowth may occur. Long term weed control requires a pasture renewal programme utilising annual crops and repeat applications before re-establishing perennial pasture.
Dock	2.7 – 6.0	660	66	–	Spray actively growing plants in full leaf in spring and summer before seed heads have formed. Use lower rate for seedlings and young plants and higher rate for mature plants.
Floating sweet grass Reed Sweet Grass	4.0	660	66	200	Apply to actively growing, unstressed plants when most have reached early seed head stage.
Indian doab	6.0	660	66	–	Apply when most plants have reached early seed head stage before frosts occur.
Johnson grass	4.0	660	66	200	Apply when actively growing.
Kikuyu	4.0	660	66	200	Apply to actively growing plants. Under dense growth conditions mulch and allow at least 10-15 cm of regrowth before treatment. Long term control requires a pasture renewal programme utilizing annual crops and repeat applications of Glyphosate 540K before re-establishing perennial pastures
Mercer grass					
Aquatic	6.0	1	100	300	
Non-aquatic	4.0	660	66	200	
Nodding thistle	4.0	660	66	–	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.
Paspalum	2.7 - 4.0	660	66	200	Use the low rate from Jan. to Apr. (early seedhead) prior to frosts. Use 4.0 litres/ha on vegetative plants
Potato - volunteer	2.0	330	33	100	Spray actively growing plants.
Prairie grass	1.0	-	-	–	Apply at early seed head.
Ragwort	4.0	660	66	–	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. Caution: Ragwort plants may become more palatable following spraying and stock should be removed until the treated plants brown out
Ratstail	3.3	–	–	–	Apply to actively growing plants (Mar-Apr). In dry conditions delay spraying until sufficient green foliage is present.

WEED CONTROL TABLE					
WEEDS	Rate				CRITICAL COMMENTS
	Boom/ aerial L/ha	Handgun ml/100L	Knapsack ml/10L	Mistblower ml/10L	
Rautahi (cutty grass)	4.0	660	66	200	Apply to actively growing plants (Jan-Mar). Burning or slashing may take place after plants have browned out, usually 30 days after application. Wiper application (rushed only) should be carried out between Nov-May.
Rushes	4.0	660	66	200	
Ryegrass Short rotation (annual, Italian, hybrid) Established < 8 months	2.0-2.7 + Accelerate 100ml/100L	660ml + Accelerate 100ml/100L	66 + Accelerate 10ml/10L	200 + Accelerate 10ml/10L	Apply anytime plants are actively growing and have at least 5-10cm of green leaf. 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. Add an organosilicone penetrant such as Accelerate at all times.
Established > 8 months	2.7 + Accelerate 100ml/100L	660ml + Accelerate 100ml/100L	66 + Accelerate 10ml/10L	200 + Accelerate 10ml/10L	
Ryegrass (perennial)	2.7 + 100ml/100L Accelerate	660 + 100ml/100L Accelerate	66 + 10ml/10L Accelerate	–	
Tall fescue	4.0	660	66	200	
Yarrow	2.0 – 4.0	–	–	–	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.

BUSHWEEDS: Wait until stems have dehydrated before slashing or burning					
WEEDS	Rate				CRITICAL COMMENTS
	Boom/ aerial L/ha	Handgun ml/100L	Knapsack ml/10L	Mistblower ml/10L	
Barberry	–	660	66	200	Apply from flowering to late fruit set (Jan-Apr). Where bushes have been cut, regrowth should reach 1.5m tall before spraying.
Blackberry	6-12.3	660-1000	66	200	Apply to healthy plants from blossom to ripe fruit stage prior to Autumn frosts (Dec. to Apr.). Only bushes with a well developed canopy of leaves should be treated. Early treatment (Dec. to Jan.) may be preferred in drought prone areas. Leave sprayed blackberry for 40-60 days before burning or slashing and oversow the area. Where treatment has been carried out under marginal conditions some regrowth can be expected within 1-2 years. For aerial application of hard to kill blackberry or where no follow-up pasture management is anticipated, use the higher rate.
Boxthorn	–	830	-	–	Apply to actively growing plants (Nov-Apr). Ensure complete coverage of dense thickets. Do not use additional surfactant or spray salt damaged plants.
Bracken	6 + 250ml/100L Accelerate (min 500ml/ha)	660 + 200ml/100L Accelerate	66 + 20ml Accelerate	–	Apply after bracken fronds have unfurled (mid Jan-June) but before frost occurs. Dense virgin Bracken with high trash content and low leaf to root ration should be burnt in spring and the unfurled frond regrowth sprayed in the following March – June.
Broom	6 + 250ml/100L Accelerate (min 500ml/ha)	660 + 200ml/100L Accelerate	66 + 20ml Accelerate	200 + 20ml Accelerate	Apply to broom via ground application at anytime but for aerial application apply only when broom is in full leaf. Ensure full coverage.
Buddleia	6	660	66	–	Apply using a handgun at anytime during active growth. For aerial application treat buddleia up to 2m high (Feb-Apr) using a spray volume of 200-300L/ha.
Gorse	–	660 + 200ml/100L Accelerate	–	–	Apply anytime ensuring complete coverage of plant. DO NOT treat plants stressed by (for example) drought, grazing or previous herbicide applications.
Old mans beard	–	660-1300	130	–	Apply Nov. to Mar. prior to leaf senescence. Vines too high for complete coverage should be cut at ground level in winter or spring and the regrowth sprayed in Mar. when plants are at least 0.5 meters long. Follow-up treatment will be necessary to control seedlings. Use the low rate for small vines
Pampas grass, toetoe	–	660	66	–	Spray in spring to autumn. Reduced control may result if plants are in full flower at the time of spraying. Ensure complete coverage.

BUSHWEEDS: Wait until stems have dehydrated before slashing or burning					
WEEDS	Rate				CRITICAL COMMENTS
	Boom/ aerial L/ha	Handgun ml/100L	Knapsack ml/10L	Mistblower ml/10L	
Ring fern	0.66-2	200	23	–	For effective control use 2L/ha. For pasture manipulation, apply 0.7-1.4L/ha from Dec-April. Use the higher rate for dense infestations. Burn 4-6 weeks after application and oversow with pasture.
Sweet briar	8 + 250ml/100L Accelerate (min 500ml/ha)	660 + 200ml/100L Accelerate	66 + 20ml Accelerate	–	Spray when plant is in late flowering to early leaf yellowing stage. Ensure full coverage.
Willow	9-12 + 250mL Accelerate per 100L (Min 500mL/Ha)	660 + 200mL Accelerate per 100L	–	–	Apply before leaf fall begins (Jan-Apr). Total coverage is essential for good control. Use the high rate for pussy willow 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.