



orion

AGRISCIENCE



HARMFUL | ECOTOXIC

KEEP OUT OF REACH OF CHILDREN

Glyphosate

360

HERBICIDE

A non selective glyphosate herbicide for the control of many annual and perennial weeds in a wide range of situations.

Active Ingredient:

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



20 Litres





PLEASE READ THE LABEL COMPLETELY BEFORE USE

HAZARD CLASSIFICATION: 6.3A, 6.4A, 9.1B

WARNING: ECOTOXIC

Harmful. May cause skin and eye irritation. Toxic to aquatic organisms.

PRECAUTIONS

STORAGE: Keep out of reach of children. Store in the original, tightly closed container, in a secure place away from feed or foodstuffs. Avoid temperatures below -5°C and above 35°C. Storage of certain quantities of this product trigger specific storage requirements (Refer to Safety Note). 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 product that is older than this.

PERSONAL PROTECTION: Avoid contact with eyes and skin. Avoid inhalation of spray mist. When mixing or applying, wear overalls, boots, gloves and eye protection. Clean protective equipment daily after work. Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work.

USE: Apply with well maintained and calibrated spray equipment. This product should only be mixed, contained in or sprayed by, equipment made from stainless steel, fibreglass, plastic, aluminium, brass or copper. A highly flammable gas may be formed from the contact of this product with galvanised or unlined steel. All spray equipment, including pumps, spray tanks, lines, nozzles, and landing gear (aircraft) should be thoroughly washed with water after each day of spraying.

DISPOSAL: Dispose of this product only by using in accordance with this label, or at a suitable landfill. Triple rinse container and add rinsate to the spray tank. Dispose of container to a suitable landfill or agricultural recycling scheme. Do not burn. Do not use container for any other purpose.

ENVIRONMENTAL: Use this product carefully. Do not contaminate aquatic environments with product, spray drift or empty container. Spray drift or equipment contamination may cause serious damage to desirable plants. Do not allow spray drift outside the target area to occur. If accidental spraying occurs, immediately wash spray off foliage with plenty of water to minimise damage.

First Aid

If swallowed do not induce vomiting. If splashed in eyes, wash out immediately with water. If skin or hair contact occurs, remove contaminated clothing and wash with running water. For advice, call the National Poisons Centre **0800 POISON (0800 764 766)** (24 hrs) or a doctor immediately.

Emergency Response

In a transport emergency call **111, Police or Fire Brigade**. For specialist advice in an emergency only, call **0800 CHEMCALL (0800 243 622)** (24 hrs).

Spillage

Exclude non-essential people from the area. Wear protective clothing and prevent material from entering waterways. Absorb spill with inert material such as soil, sand, etc, and place in waste container. Wash area with water, and absorb with further inert material. Dispose of safely to a suitable landfill.

Safety Data Sheet

Additional information is provided in the safety data sheet. Freephone **0800 ORIONAS (0800 674 6627)** or visit **www.orionagriscience.co.nz**.

Batch No:

Date of manufacture:

GLYPHOSATE 360

WARRANTY

This formulation is warranted to contain the specified active ingredient within accepted analytical tolerance when packed. The user bears the risk for damage resulting from factors beyond the manufacturer's control. The manufacturer declines all liability for damage resulting from improper storage or use of the product.

Registered pursuant to the ACVM Act 1997, No. P7075

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

Approved pursuant to the HSN0 Act 1996, No. HSR000769

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

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AGRISCIENCE



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GENERAL INFORMATION

Orion Glyphosate 360 is a non-selective herbicide for use in agriculture and horticulture:

- Before planting crops and trees
- In pasture renovation and reduced tillage systems
- For pre-harvest weed control
- In vineyards, orchards and market gardens
- On turf and recreational areas
- In drains and waterways

Orion Glyphosate 360 is absorbed by green plant tissue, and is translocated throughout the plant, including the root system, to kill the entire plant. Plants should be actively growing, not under drought stress, and have clean foliage at the time of spraying. The product degrades in the soil and has no residual weed control activity.

Do not apply when rain is likely to occur within 6 hours of application.

Visible effects may not be apparent for 14 days depending on weather conditions, weed species and rate of application. Some perennial weeds may not show effects for 2 - 3 weeks.

DIRECTIONS FOR USE

RATES OF APPLICATION AND TIMING

Refer to table.

APPLICATION METHODS

Boom equipment: Application can be made in spray volumes up to 200 litres/ha using fan nozzles at pressures in the range of 200 – 280 kPa. Boom height should be set so that a double overlap of nozzle pattern is achieved at the top of the target plants.

Aerial equipment: Applicable to forest and non-crop areas only. Can be applied by aircraft in spray volumes of up to 100 litres/ha. Increase spray volumes in hilly terrain to ensure maximum target contact. Do not use in intensive horticultural cropping areas.

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

Wiper Equipment: Pre-mix 1 part Orion Glyphosate 360 in 2 parts clean water to make a 33% solution. Mix only enough for immediate use. Plants must be clean and dry and the wiper fully saturated. Apply up and down slopes for effective applications.

Mist Blower: Refer to table.

MIXING

Fill the clean spray tank with half the required amount of clean water. Add Orion Glyphosate 360 as required and mix well before adding the remaining water. If surfactant is required, add this last to minimise foaming. Agitate well before spraying. When tank-mixing with other chemicals, add Orion Glyphosate 360 after suspension concentrates, such as Simatop™ 500FW (simazine), and other water-soluble concentrates. Soil particles and hard water containing calcium salts deactivate Orion Glyphosate 360. If hard water cannot be avoided, the addition of a surfactant such as a pH Buffer is recommended.

COMPATIBILITY

Orion Glyphosate 360 is compatible with commonly used herbicides.

WITHHOLDING PERIODS

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.

Poisonous plants, such as ragwort, may become more palatable to stock after spraying, and livestock should be kept away until plants have died down. Otherwise, withholding is not required for stock grazing. However, it is recommended that grazing is delayed for one day for annual weeds, and three days for perennial weeds. This will allow Orion Glyphosate 360 to penetrate the weeds for maximum effectiveness.

WEED CONTROL NOTES

Agricultural Areas: May be used for the control of annual and perennial weeds as indicated in the Weeds Controlled Table prior to sowing any crop.

Asparagus: Pre-crop emergence and post-harvest applications. Apply prior to planting or crop emergence. Do not treat emerging spears. Application can also be made after removal of all spears but before crop regrowth occurs. In established ferns, apply as a directed or shielded spray or with wiper equipment. Do not allow spray, spray drift or the wiper surface to contact any part of the asparagus plant.

Broad-acre Crops: Wheat, barley, oats and threshing peas. 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 after spraying. Do not spray undersown crops. Do not spray crops that will be harvested for seed. For threshing peas: Apply 7-14 days prior to harvest when the pods have dried. Avoid treating plants under drought stress.

Brushweeds: Refer to table. The use of a surfactant such as Silmaxx™ is recommended.

Drains and Waterways: For best results ensure that 75% of the weed to be sprayed is above water level. Avoid treating silt-laden weeds. Following spraying do not submerge the weed, as this will cause the herbicide to be washed off.

Forestry: For the control of grasses and weeds as listed in the Weeds Controlled Table. Can be applied for weed control prior to burning or planting of forest or nursery or around already established trees. Do not allow spray drift or spray contact with foliage or green bark of desirable trees.

Industrial and Non-Agricultural Areas: Treat specific problem weeds as indicated in the Weeds Controlled Table. Do not allow spray drift.

Market Gardens: Apply before or after seeding but prior to crop emergence. Spraying can also be made prior to transplanting or as a post-harvest clean up. For longer-term control of seedling weeds it may be tank mixed with an approved residual herbicide such as Simatop™ 500FW (simazine) in accordance with label recommendations.

Minimum Tillage: For total weed control prior to seeding in a reduced tillage system. Weeds should be actively growing and not under stress from frost, drought or waterlogging. For the improved control

of white clover, tank mix with Bandit® (dicamba) at 625 mls/ha, or TillMate™. Do not plant legume crops within 28 days of applying dicamba. If using with TillMate - Do not sow crops within 14 days of application, or sow brassicas if the soil pH exceeds 6.5, or use within 2 months after applying lime. Consult partner product label for further directions. Cultivation may start from 3 days after spraying annual weeds, and 7 days after spraying perennial weeds. Cultivation should occur within 21 days after spraying. Do not sow until a satisfactory seedbed is formed.

Orchards/Vines: Crops: Citrus, apple, pear, stonefruit, kiwifruit, grapes. Apply as a directed or shielded spray. For long term control of annual weeds Orion Glyphosate 360 may be tank mixed with an approved herbicide for residual control. Do not apply near unprotected trees less than 3 years old. Do not allow spray or spray drift to contact any part of the stonefruit tree, or green bark, suckers, buds, foliage or fruit of other trees. Spray before crops bud, sucker or bloom.

Pasture: May be applied as a spot application to control a wide range of weeds in pasture. It is non-selective and may damage or kill any plant in the spray area.

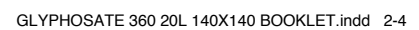
Recreational Areas: Lawns, turf, parks, reserves and ornamentals. Apply before the sowing and planting of these areas, or use as a spot application. In mown areas, allow sufficient regrowth before spraying. Can also be sprayed around the base of established trees or shrubs, as a directed or shielded spray. Avoid contact with any part of the shrub or tree.

RESISTANCE MANAGEMENT

GROUP	G	HERBICIDE
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Orion Glyphosate 360 contains glyphosate, a group G herbicide belonging to the glycine chemical family, and having the EPSP synthase mode of action. Some naturally occurring weeds may become resistant when excessive use of the same herbicide occurs. To prevent or delay the development of resistance, use in tank mixes and/or rotate use with herbicides with a different mode of action. Consult <http://resistance.nzpps.org/index.php> for alternative modes of action and details of resistance management strategies (if any) for the crops listed on the label.

SEE INSIDE FOR TABLE →





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Weed	Boom/ Aerial litres/ha	Handgun vol/100 litres	Knapsack ml/15 litres	Mistblower ml/10 litres	Critical Comments
Annual weeds	1 - 2	200ml	30	60	Use the higher rate for larger weeds. For residual control may be tank mixed with Simatop 500FW (simazine).
Australian sedge	6 - 9 (aerial)	1	150	300	Apply from Nov - Mar. Burn or slash from 30 days after treatment.
Barberry	-	1	150	300	Apply from flowering to late fruit stage (Jan - Apr). Regrowth should be 1.5m tall before spraying is carried out.
Barley grass	1	200ml	30	60	Apply when plants are at early seedhead stage. (Sept - Dec). Simatop 500FW (simazine) may be tank mixed for residual control.
Blackberry	9 - 20	1.5	150	300	Apply from flowering-fruiting stage (Dec - Apr), before frosts occur. For hard to kill blackberry, aerial application, or no follow-up action planned, use the higher rate. Allow 6 - 10 weeks before slashing or burning.
Boxthorn	-	1.25	150	-	Apply to actively growing plants (Nov - Apr). Ensure complete coverage of dense thickets. Do not use extra surfactant, or treat salt damaged bushes.
Bracken/ broom	9 + 250ml/100L Silmaxx (min 500mL/ha)	1 + 200ml/100L Silmaxx	150 + 30ml Silmaxx	300 + 20ml Silmaxx	Apply after bracken fronds have unfurled (mid-Jan - June), but before frosts occur. For ground application to broom anytime, but for aerial application when broom is in full leaf.
Browntop	6	1	150	300	Apply when plants are 5 - 10cm high. For taller plants, graze or burn and allow regrowth of 5 - 10 cm height before treatment.
Buddleia	9	1	150	-	Apply using handgun anytime. Aerial-treat buddleia up to 2 metres high (Feb - Apr) using spray volume of 200 - 300 litres/ha.
Californian thistle	4	1	150	300	Apply after flower bud development. Retreatment and/or cropping or pasture improvement may be necessary to restrict re-establishment from seed. Mowing thistles 10 days after spraying may assist control.
Cleavers	1.5	500ml	75	150	Spray actively growing plants after most reach early seedhead.
Couch	3 - 6	1	150	300	For suppression, apply 3 litres/ha in spring and repeat in autumn. For best results, apply 4 - 6 litres/ha in autumn to active growth of at least 10cm where no previous cultivation has occurred for at least 6 months.
Docks	4 - 9	1	150	-	Spray plants in spring or summer when actively growing and before seedheads have formed. Use the lower rate for seedlings and the higher rate for mature plants. In pasture situations boom spray prior to re-seeding or establishing crops to restrict seedling re-establishment. Under trees or vines may be tank-mixed with Simatop 500FW (simazine) for residual seedling control.
Floating sweet grass	6	1	150	300	Spray actively growing plants after most reach early seedhead. Spraying plants under drought stress may give reduced results.
Gorse	-	1 + 200ml/100L Silmaxx	-	-	Apply anytime ensuring complete coverage of plants not stressed by drought, grazing or previous herbicide treatment.
Indian doab	9	1	150	-	Apply at early seedhead stage before frosts occur.
Johnson grass	6	1	150	300	Apply when actively growing.
Kikuyu/Mercer grass	6	1	150	300	Apply at early seedhead stage. On dense infestations, cut and spray the regrowth.
Nodding thistle	-	1	150	-	When applying by 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 treatments if necessary.

Weed	Boom/ Aerial litres/ha	Handgun vol/100 litres	Knapsack ml/15 litres	Mistblower ml/10 litres	Critical Comments
Old mans beard		1 – 2	300	-	Apply Nov - Mar prior to first leaf browning. Use higher rates on stems over 1cm in diameter. If complete coverage is not possible plants should be cut at ground level in winter and the regrowth sprayed with the higher rate when plants are at least 50cm long (March).
Pampas grass/toetoe	-	1	150	-	Spray Spring - Autumn. Reduced control may result if plants are in flower at the time of spraying. Ensure complete coverage.
Paspalum	4 - 6	1	150	300	Spray at low rate if plants are at early seedhead stage. Use 6 litres/ha on mature vegetative plants, before onset of frosts.
Potato (self set)	3	500ml	75	150	Spray actively growing plants after most reach early seedhead.
Prairie grass	1.5	200ml	30	-	Apply at early seedhead stage.
Ragwort	6	1	150	-	Spray when actively growing and ensure there is sufficient leaf area for herbicide uptake. When applying by wiper use on plants 10 - 15cm above the pasture. For best results, a double pass is recommended with a follow-up spot treatment if necessary. Caution: Ragwort becomes more palatable after treatment. Keep stock away from treated areas until plants brown-off.
Ratstail	5	1	150	-	Apply at a spray volume of 200 litres/ha in autumn. In dry conditions, delay spraying until sufficient green foliage is present.
Rautahi (cutty grass)	6	1	150	300	Spray to actively growing plants from Jan - Mar. Burning or slashing may begin 30 days after treatment following brown-off.
Ring fern	1 - 3	300ml	50	-	For effective control, apply 3 litres/ha. For pasture manipulation, apply 1 - 2 litres/ha from Dec - Apr. Use higher rates for dense infestations. Burn 4 - 6 weeks after treatment.
Rushes	6	1	150	300	Burning or slashing may begin 30 days after treatment following brown-off. Wiper application to be carried out in Nov - May.
Ryegrass (annual, Italian, short rotation hybrids)	3 – 4 + 100ml/100L Silmaxx Established < 8 months Established > 8 months	1 + 100ml/100L Silmaxx 1 + 100ml/100L Silmaxx	150 + 15 ml Silmaxx 150 + 15 ml Silmaxx	300 + 10 ml Silmaxx 300 + 10 ml Silmaxx	Spray to actively growing plants with at least 5 - 10cm of green leaf. A higher rate may be necessary that reflects the weed spectrum present.
Ryegrass (Perennial)	4 + 100ml/100L Silmaxx	1 + 100ml/100L Silmaxx	150 + 15 ml Silmaxx	-	Spray to actively growing plants with at least 5 - 10cm of green leaf. A higher rate may be necessary that reflects the weed spectrum present
Sweet brier	12 + 250ml/100L Silmaxx (min 500mL/ha)	1 + 200ml/100L Silmaxx	150 + 30ml Silmaxx	-	Spray when plant is in late flowering to early leaf yellowing stage. Ensure full coverage.
Tall fescue	6	1	150	300	Apply Jan-Mar to active growth.
Willow	9	1	-	-	Apply before leaf fall begins (Jan - Apr). Total spray coverage is essential for best results.
Yarrow	3 - 6	-	-	-	Apply to plant with 5 - 10cm of leaf. For best results cultivate 10 days after treatment. Use the low rate when a crop to be drilled is competitive to yarrow and higher rate when it is a poor competitor.