

CAUTION

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING



Glyphosate 450

HERBICIDE

ACTIVE CONSTITUENTS: 450 g/L GLYPHOSATE present as the isopropylamine salt

GROUP

M

HERBICIDE

Water soluble herbicide for non-selective control of many annual and perennial weeds in conservation tillage situations

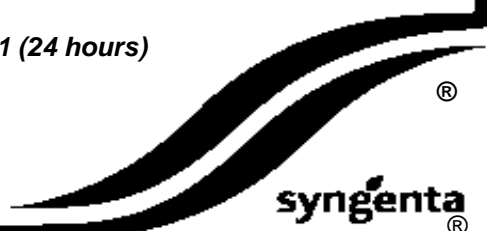
IMPORTANT: Read the attached booklet before use

20, 100, 110, 120, 1000 LITRES

Syngenta Crop Protection Pty Limited
Level 1, 2-4 Lyonpark Road, North Ryde NSW 2113

In a transport emergency dial 000, Police or Fire Brigade
For specialist advice in an emergency only, call 1800 033 111 (24 hours)

APVMA Approval No: 62045/20-1000/0707
Item number
UN-Free



STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well ventilated area out of direct sunlight.

Where Drummuster logo is visible below

Triple or preferably pressure rinse empty containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

Where no Drummuster logo is visible below

Empty contents fully into application equipment. Close all valves and return to point of storage for refill or storage.

SAFETY DIRECTIONS

Product will irritate the eyes and skin. Avoid contact with eyes and skin. When preparing product for use wear:

- elbow-length PVC gloves
- face shield or goggles

After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash contaminated clothing, gloves and face shield or goggles.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone 131 126.

MATERIAL SAFETY DATA SHEET

If additional hazard information is required refer to the Material Safety Data Sheet. For a copy visit our website at www.syngenta.com.au

MANUFACTURER'S WARRANTY AND EXCLUSION OF LIABILITY

Syngenta has no control over storage, handling and manner of use of this product. Where this material is not stored, handled or used correctly and in accordance with directions, no express or implied representations or warranties concerning this product (other than non-excludable statutory warranties) will apply. Syngenta accepts no liability for any loss or damage arising from incorrect storage, handling or use.

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Batch No	
Date of Manufacture	

BARCODE

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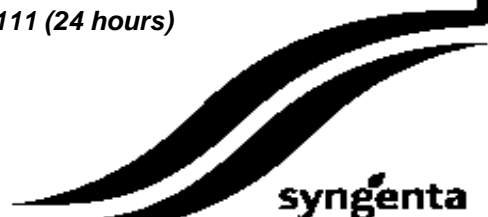
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DIRECTIONS FOR USE

Restraint

To ensure herbicide absorption, DO NOT disturb weeds by cultivation, sowing or grazing for 1 day after treatment of annual weeds and 7 days for perennial weeds, except where noted.

Situation	State	Weeds	Rate /ha	Critical Comments
Southern Australia Prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement	NSW, Vic, SA, WA only	Barley Grass, Brome Grass, Volunteer Cereals, Wild Oats	400 to 800 mL pre tillering 800 mL to 1.0 L post tillering	Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6-8cm before spraying and use the higher rate. Rate Selection: Increase to higher rates late in the season or when treating under cold/overcast conditions. Full disturbance with a cultivation or sowing with a tyned implement may start one day after treatment (7 days if Dock, Phalaris, Skeleton weed, Soursob, or Sorrel are present) and should occur within 21 days after treatment. When treating light infestations or seedling annual grasses (pre-tillering) and annual broadleaf weeds (less than 8cm diameter or height), cultivation or sowing may start 6 hours after treatment and should occur within 21 days. Crop establishment: Sowing should not proceed until conditions allow the formation of a satisfactory seedbed. See Crop Establishment section for directions. Annual Ryegrass, Silvergrass and perennial grasses: Addition of WetterTX 200 mL/100 L spray solution, may improve control. When treating dense infestations of, Silvergrass nozzles designed to give MEDIUM to COARSE spray quality (ASAE S572) and a spray volume of 70 L/ha or more is recommended to improve spray coverage. Good coverage of Silvergrass is critical for control. Tank mixtures: For improved control of clover add dicamba (500 g/L). Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions. Perennial weeds: For Perennial Phalaris, Soursob, Skeleton Weed and Sorrel, INNOVA GLYPHOSATE 450 will provide knockdown, seasonal suppression and reduction in treated plant numbers.
		Annual Phalaris (Canary Grass), Annual Ryegrass, Silvergrass, Winter Grass	800 mL to 1.0 L pre tillering 1.0 to 1.2 L post tillering	
		Calomba Daisy, Capeweed, Doublegee/Spiny Emex	400 to 800 mL less than 8 cm diameter or height 800 mL to 1.2 L greater than 8 cm diameter or height	
		Amsinckia, Fumitory, Paterson's Curse, Saffron Thistle, Scotch Thistle, Spear Thistle, Variegated Thistle, Volunteer Lupins, Wild Turnip	800 mL to 1.0 L less than 12 cm diameter 1.0 to 1.2 L greater than 12cm diameter	
		Dock (seedling)	800 mL to 1.2 L	
	Perennial Phalaris, Skeleton Weed fully emerged rosettes (NSW only), Sorrel, Soursob, Subterranean Clover	1.2 L		
	TAS only	All the above weeds	1.2 to 2.4 L	Use 1.2 L/ha on annual weeds. Increase to 2.4 L/ha where perennial weeds are being treated. To control White Clover and improve control of Sorrel and Dock, add 1 L/ha dicamba (500g/L). Observe the dicamba label directions and plant back periods.

Situation	State	Weeds	Rate /ha	Critical Comments
<p>Southern Australia Prior to establishing a crop or pasture with an implement that gives minimal or no soil disturbance</p>	NSW, Vic, SA, WA only	Barley Grass, Volunteer Cereals, Wild Oats	800 mL to 1.2 L	<p>Treat only actively growing weeds not under stress low moisture, frost, cold, disease or waterlogging. If heavy grazing of mature plants has occurred, allow regrowth to 6 to 8 cm before spraying and use the higher rate. Rate selection: Use the lower rate on young weeds; increase the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. Increase to higher rates in spring or when treating under cold/overcast conditions. Aerial application: Use the higher rates. See Aerial Equipment. Annual Ryegrass, Silvergrass and perennial grasses: Add WetterTX, 200 mL/100 L spray solution. When treating dense infestations of Silvergrass, nozzles designed to give MEDIUM to COARSE spray quality (ASAE S572) and a spray volume of 70 L/ha or more is recommended to improve plant spray coverage. Good coverage of Silvergrass is critical for control. Tank mixtures: For improved control of Dock, Sorrel and Subterranean Clover, add dicamba (500 g/L). Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions. Addition of Spraymate* Liase at 2 L/100L, may improve control when treating under adverse environmental conditions. Pasture or crop establishment: DO NOT sow into excessive trash. Trash may be removed by grazing after treatment. Grazing may commence one day after treatment of annual weeds (small) and 7 days for perennial weeds. Delay grazing for three days where annual weeds are large. Sowing may proceed when excessive trash is removed, but not sooner than one day after treatment of annual weeds and 7 days for perennial weeds. See also Crop Establishment. Aerial (or surface) seeding: Delay seeding until trash is completely removed by grazing and/or plant decay. When establishing pasture, ensure application of fertilizer and insecticides and follow up management is undertaken as required.</p>
		Brome Grass, Canary Grass, Capeweed, Variegated Thistle, Winter Grass	1.0 to 1.6 L	
		Annual Ryegrass, Paterson's Curse, Saffron Thistle, Scotch Thistle, Silvergrass, Spear Thistle, Wild Mustard, Wild Radish, Wild Turnip	1.2 to 1.6 L	
		Erodium, Perennial Phalaris, Plantain, Sorrel, Subterranean Clover, Yorkshire Fog	1.5 to 2.0 L	
	Dock, Flatweed	2.0 L		
	Tas only	All the above weeds	1.2 to 2.4 L	<p>Tasmania: Use 1.2 L/ha on Annual Weeds. Increase to 2.4 L/ha where perennial weeds are being treated. To control White clover and improve control of Sorrel and Dock, add 1 L/ha dicamba (500g/L). Observe dicamba (500g/L) label directions and plant back periods.</p>

Situation	State	Weeds	Rate /ha	Critical Comments
Southern Australia To commence a fallow	NSW, VIC, SA, WA only	Barley Grass, Volunteer Cereals, Wild Oats	800 mL to 1.2 L	<p>Treat only actively growing weeds not under stress low moisture, frost, cold, disease or waterlogging. If heavy grazing of mature plants has occurred, allow regrowth to 6 to 8 cm before spraying.</p> <p>Rate Selection: Use lower rates on young weeds or where cultivation is to follow within 21 days. Increasing to the high rates where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding.</p> <p>Annual ryegrass, silvergrass and perennial grasses: Addition of WetterTX at 200 mL/100L spray solution may improve control. When treating dense infestations of Silvergrass, nozzles designed to give MEDIUM to COARSE spray quality (ASAE S572) and a spray volume of 70 L/ha or more is recommended to improve plant spray coverage. Good coverage of Silvergrass is critical for control.</p> <p>Bathurst Burr: For mature weeds use the higher rate.</p> <p>Hoary Cress: Treat from late rosette to early flowering.</p> <p>Soursob: Treat at tuber exhaustion.</p> <p>Couch: Use the higher rate on dense infestations. Apply sequential treatments during summer and autumn, with autumn being most effective. Repeat applications will be required for full control. For improved control use in conjunction with cultivation. The use of Spraymate LI 700 500 mL/100L may improve control.</p> <p>Tank mixtures: Read and follow all label directions, restraints, plant-back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. See Tank Mixtures for directions.</p>
		Annual Ryegrass, Brome Grass, Capeweed, Paterson's Curse, Saffron Thistle, Scotch Thistle, Silvergrass, Spear Thistle, Wild Mustard, Wild Radish, Wild Turnip	1.2 to 1.6 L	
		Hoary Cress, Soursob	1.2 L	
		Couch	1.2 to 2.4 L	
	Bathurst Burr	1.5 to 2.4 L		
	Tas only	All the above weeds	1.2 to 2.4 L	Use 1.2 L/ha on annual weeds. Increase to 2.4 L/ha where perennial weeds are being treated. To control White Clover and improve control of Sorrel and Dock, add 1 L/ha dicamba (500g/L). Observe the dicamba label directions and plant back periods.
Pasture topping For annual grass Capeweed and Calomba daisy seed-set reduction	NSW, Vic, Tas, SA, WA only	Barley Grass, Brome Grass, Capeweed, Silvergrass	240 to 360 mL	<p>Remove stock prior to treatment to allow even regrowth. Apply to Capeweed and Annual Ryegrass at flowering. For other grasses, apply from head to milky dough stage.</p> <p>Use the higher rate for dense infestations or where Annual ryegrass is present. Apply before signs of plants "haying off". Reduction in pasture legume population may occur as a result of treatment. DO NOT apply to clover or medic crops intended for seed or hay.</p>
		Annual Ryegrass Calomba Daisy	360 mL	
Seed head suppression of Perennial Grasses		Bent Grass	300 to 500 mL	<p>Timing: Treat from late October to late November. Apply before seed heads have emerged. Use the higher rate where growth is excessive and renovation is intended the following Autumn.</p> <p>Follow up management: Graze hard after spraying.</p>

Situation	State	Weeds	Rate /ha	Critical Comments
<p>Bent grass infested pasture For control/suppression prior to establishing crops or improved pasture species</p>	Vic, Tas only	Most Annual Weeds, Bent grass	2.0 L	<p>Timing: Apply to actively growing plants in late spring when they have some seed-head development, but before summer moisture stress. Remove stock to ensure there is full leaf growth.</p> <p>Follow up management: Full disturbance with a tined implement should follow 10 to 21 days after spraying. Then follow with a summer crop, and/or re-seeded pasture or crop the following autumn.</p>
<p>Pasture manipulation For suppression or control of pastures species prior to drilling improved pasture, forage species, Soybeans or Leucaena Band Spraying May also be applied as a band or strip spray</p>	NSW, Vic, WA only	Carpet Grass Kikuyu Paspalum	1.1 to 4.8 L	<p>Rate Selection: For suppression, apply the low rate. Where complete control is required apply up to the high rate.</p> <p>Band Spraying: Band spraying may be done immediately after the sowing operation. Mount the nozzles behind the coulter/tyne/press wheel assembly of the band seeder. Adjust to spray 0.5 to 1.0 m strips. Ensure minimal disturbance of the pasture. Excessive dust created in the seedling operation may reduce herbicide activity. Pasture seed must be drilled at the appropriate depth and covered by soil.</p> <p>Lucaena (Qld only): Apply 2 L/ha through a single taper fan nozzle LFI-80 mounted at the rear of the single row planter providing a 1 m swath. Planting rows to be 4 m apart.</p>
	Qld only	Carpet Grass Paspalum Kikuyu	500 mL to 4.8 L	
		Barbed Wire Grass, Black Speargrass, Love Grasses, Red Natal Grass, Wire Grasses	2.4 L	
<p>Poa tussock infested pasture For reduction of ground cover allowing pasture renovation</p>	Qld, NSW, Vic, Tas only	Most annual weeds and suppression of Poa tussock	2.4 to 3.2 L	<p>Timing: Graze heavily, then remove at least 14 days before spraying to allow fresh regrowth. Apply to actively growing plants after the autumn break but before heavy frosts (March to May).</p> <p>Application: Increasing to the higher rate may give more effective reductions. If aerial spraying, see Aerial Equipment.</p> <p>Follow up management: Sowing may start from 14 days after spraying. It is essential that correct follow-up pasture establishment and management occurs after each treatment. Spot treatment will limit re-infestation.</p>

Situation	State	Weeds	Rate /ha	Critical Comments
Northern Australia In fallows or prior to sowing a crop	Qld, NSW only	Annual Phalaris (Canary Grass), Barley Grass, Volunteer Cereals, Wild Oats	400 to 800mL	<p>Treat only actively growing weeds not under stress from low moisture, frost, cold, disease or waterlogging. If heavy grazing has occurred allow regrowth to 6 to 8 cm before spraying. Note that under Summer (hot) conditions, dense infestations of Barnyard grass and Liverseed grass may require follow-up treatment for complete control. In Winter (cold) conditions, symptoms on Deadnettle may be slow to develop.</p> <p>Rate selection: Use the lower rate on young weeds; increase to the higher rate where grasses reach full tillering or where broadleaf weeds reach stem elongation/budding. At more advanced stages of growth certain broadleaf weeds require a higher rate range or the addition of 2,4-D IPA (300g/L), 2,4-D IOE (600 g/L).</p> <p>Crop establishment: Sowing should not proceed until conditions allow the formation of a satisfactory seeded. See Crop Establishment for directions.</p> <p>Tank mixtures: Read and follow all label directions, restraints, plant-back periods, withholding periods, regional use restrictions and safety directions for the tank mix products. DO NOT tank mix with atrazine when spraying Barnyard Grass or Liverseed Grass.</p> <p>Aerial application: For instructions on Aerial Application, under hot conditions, see aerial application. DO NOT apply by aircraft when temperature is above 30°C.</p>
		Barnyard Grass, Bathurst Burr, Button Grass, Columbus Grass (seedling), Liverseed Grass, Native Millet, Stinkgrass (Lovegrass), Volunteer Sorghum	800 mL to 1.6L	
		Australian Bluebell (Qld only) Cudweed, Fumitory, Mexican Poppy, New Zealand Spinach, Saffron Thistle, Spear Thistle, Spurge, Stinking Goosefoot	800 mL to 1.2L	
		Black (Giant) Pigweed, Boggabri Weed, Caltrop (Yellowvine), Indian Hedge Mustard, Mintweed, Summer Grass	400 to 800 mL up to 5 true leaves or 3 cm diameter/height, 800 mL to 1.2 L greater than 5 true leaves or 3 cm diameter/height	
		African Turnip Weed, Deadnettle, Sweet Summer Grass, Variegated Thistle, Volunteer Sunflower	600 to 800mL up to 5 true leaves or 3cm diameter/height, 800mL to 1.6 L greater than 3 cm diameter/height	
		Annual Ground Cherry (Gooseberry), Bladder Ketmia, Camel Melon, False Castor Oil Plant/Thornapple, Noogoora Burr, Turnip Weed, Wild Lettuce, Wild Turnip, Wireweed	800 mL to 1.2 L prior to stem elongation/ budding, after that use 400 mL to 1.2 L plus 1.8 to 2.7 L/ha 2,4-D IPA (300 g/L) or 1.2 to 1.6 L	
		Pigweed	800 mL to 1.6 L up to 20 cm diameter	
		Prickly Paddy Melon	770 mL to 1.6 L plus 80 mL of trichlopyr (600 g/L)	
				DO NOT add crop oil.

Situation	State	Weeds	Rate /ha	Critical Comments
Northern Australia In fallows or prior to sowing a crop	Qld, NSW only	Sowthistle/ Milkthistle	600 to 800 mL rosettes up to 3 cm diameter, 800 mL to 1.6 L greater than 3 cm diameter	Previously grazed plants may be difficult to control without allowing full recovery.
		Couch	1.2 to 2.4 L	Use the higher rate for dense infestations. Apply sequential treatments during summer and autumn, with autumn being most effective. Repeat applications will be required for full control. For improved control use in conjunction with cultivation. The use of LI 700 500mL/100L may improve control.
		Johnson Grass	1.6 to 2.4 L	Use the higher rate on plants approaching seed head stage. Apply to plants with a minimum of 30 cm new growth. Sequential treatments will be required for long term control.
		Nutgrass	2.4 plus 2.4 L	Make first application to actively growing plants when at least 20% have reached the head stage (normally about Feb). After allowing maximum re-emergence to occur (normally in 6 to 8 weeks), it is essential to make a second application. Note: Follow-up treatments should be made as part of a Nutgrass control program.
Sorghum control Pre-harvest		Sorghum, Grain Sorghum DO NOT apply to varieties intended for seed production or varieties prone to lodging	1.2 or 1.6 L	DO NOT apply if crop is under stress from low moisture, frost, cold or waterlogging. Rate selection: Use the lower rate for control of crop and late tillers and suppression of ratoon regrowth. Use the higher rate for improved suppression of ratoon regrowth. Timing: Apply when grain moisture is less than 25%. Application can be made when moderate browning has occurred. Caution: Treatment may increase potential for CROP LODGING, particularly if prior moisture stress has occurred. Harvest should commence at least 7 days after application provided sufficient dry down has occurred to avoid possible lodging. Speed of dry down is dependent on physiological maturity, soil moisture and climatic conditions. Caution: Sorghum may be naturally toxic to stock.
Sorghum Control Post-harvest		Sorghum Stubble, Grain Sorghum	800 mL to 1.2 L for fresh regrowth from slashed stubble, 1.2 to 1.6 L for standing stubble if sufficiently green and for fresh Spring regrowth	Apply under good growing conditions only. DO NOT apply if plants are under stress from low moisture, frost, cold or waterlogging. Slashed stubble and spring regrowth: Apply when fresh regrowth is at least 20 cm high. Standing stubble: Apply only if sufficient green leaf is present. If grazing has occurred allow regrowth to 20 cm before treatment. Rate selection: Use the lower rate for knockdown and regrowth suppression where cultivation is to follow. Increase to the higher rate for improved regrowth control. Note: Variable results occur where the crop has been subject to stress or growing conditions are marginal. Caution: Sorghum may be naturally toxic to stock.

Situation	State	Weeds	Rate /ha	Critical Comments
Sugarcane Ratoon spray out	Qld, NSW only	Sugarcane ratoon regrowth	4.8 to 7.2 L	Apply under good growing conditions only to actively growing ratoons 60 to 120 cm tall. DO NOT apply if plants are under stress from low moisture or waterlogging. Use the lower rate for suppression or where cultivation is to follow. Use higher rate for control.
Rice Direct drilling	NSW only	Annual Ryegrass, Annual Phalaris, Canary Grass, Barley Grass, Burr Medic, Subterranean Clover, Winter Grass	800 mL to 1.0 L	INNOVA GLYPHOSATE 450 is less effective on drought-stressed plants. In drought conditions a pre-watering prior to spraying is recommended. In grazed situations, if heavy grazing has occurred allow regrowth to 6 to 8 cm before spraying. Annual ryegrass: Add WetterTX at 200 mL/100L of spray solutions and where dominant use the higher rate. Sowing: Direct drilling may take place 1 to 14 days after spraying. INNOVA GLYPHOSATE 450 does not provide residual weed control. Permanent water and approved selective herbicides should be used to provide continuing control of weeds.
Cotton Pre-harvest DO NOT use on crops intended for seed production	NSW, Qld only	Bathurst Burr, Noogoora Burr, Winter Annual Weeds including Sowthistle/ Milkthistle	1.0 to 2.0 L	Use the lower rate on light infestations of small weeds, where the crop canopy allows adequate spray coverage of the weeds. Increase to the higher rate when the crop canopy may limit spray coverage, when treating dense infestations, or when treating larger weeds. Apply alone or in tank mixtures with thidiazuron (500 g/L) or dimethipin (600 g/L). Apply when at least 60% of bolls are open and immature bolls cannot be easily cut with a sharp knife. Where a leafy canopy limits spray coverage, reduced weed control can be expected. For best results under these conditions, delay application until canopy re-opens following initial conditioning treatment. Where control of Nutgrass or Noogoora Burr is required treatments should be applied prior to the onset of frosts. When tank mixed defoliant, a slightly higher proportion of cotton leaf may be retained, particularly where the higher rate is used. Read and follow all label direction for the tank mix products.
		Nutgrass (seasonal suppression only)	2.0 L	
Cotton Shielded sprayers	NSW, Qld only	Refer to Weeds Controlled section Northern Australia: In fallows or prior to sowing a crop		Apply INNOVA GLYPHOSATE 450 to weeds growing between crop rows using a shielded sprayer. DO NOT apply in crops less than 20 cm high. DO NOT allow spray or spray drift to contact any part of the cotton plant as severe injury or destruction may result.

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS
AUTHORISED UNDER APPROPRIATE LEGISLATION**

WITHHOLDING PERIOD

Pre-harvest sorghum: DO NOT HARVEST FOR 7 DAYS

Other uses: NOT REQUIRED WHEN USED AS DIRECTED

GENERAL INSTRUCTIONS

INNOVA GLYPHOSATE 450 is a non-volatile, non selective, water soluble liquid herbicide with non-selective herbicidal activity. It is absorbed by plant foliage and green stems and moves through the plant from the point of contact to and into the root system. Effects may not be apparent for 3 to 7 days (annual weeds) or 2 to 3 weeks (perennial weeds) or longer under cool, cloudy conditions.

INNOVA GLYPHOSATE 450 will control emerged weeds only, and provides no residual weed control. Apply treatments to weeds which have at least one true leaf (broadleaf weeds) or two leaves (grasses) to provide an adequate surface area for herbicide uptake.

INNOVA GLYPHOSATE 450 may be used prior to sowing any crop (edible or non edible) but not prior to transplanting tomato seedlings.

A withholding period for grazing stock is not required. However, it is recommended that grazing of treated plants be delayed for one day after treatment of annual weeds, or 7 days if perennial weeds are present, to ensure absorption of INNOVA GLYPHOSATE 450. Certain plants (eg Soursob, Variegated Thistle) may be naturally toxic to stock. Where known toxic plants are present, DO NOT allow stock to graze until complete browning of treated plants has occurred.

Weeds should be actively growing at the time of treatment. DO NOT treat weeds under poor growing or dormant conditions (such as occur in drought, water logging, disease, insect damage or following frosts) as reduced weed control may result. Reduced results may also occur when treating weeds heavily covered with dust or silt. Prior herbicide application may also induce stress in weeds.

Rainfall occurring up to 6 hours after application may reduce effectiveness. Rainfastness or general efficacy may be reduced if weeds are not actively growing, are under stress or conditions of low light intensity/darkness. Heavy rainfall within 2 hours after application may wash the chemical off the foliage and a repeat treatment may be required. Delay treatment of plants wet with dew or rain, if water droplets run off when plants are disturbed. Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, since severe injury or destruction may result.

Crop Establishment

INNOVA GLYPHOSATE 450 is recommended for control of emerged weeds prior to crop establishment. Suitable cultivation and/or sowing operations are required to provide seed bed conditions satisfactory for crop germination and development.

Spraying early to control young weeds will favour preparation of suitable seed beds. On friable soils and where there is only light cover of young weeds, sowing may proceed satisfactorily from one day after spraying. In situations of heavy weed growth sowing should be delayed until weed decay and soil conditions allow formation of a satisfactory seed bed.

Incorporation of green or decaying vegetation and roots into the seedbed by cultivation or sowing may cause retarded crop emergence, particularly in cold and/or wet conditions. Vegetation may be reduced by grazing and weed decay may be assisted by cultivation to leave trash on the surface. In marginal seedbed conditions take care to achieve correct seeding depth, and avoid use of pre-emergence herbicides where label directions advise of risk of retarded crop emergence.

Mixing

INNOVA GLYPHOSATE 450 mixes readily with water. Note: reduced results may occur if water containing soil is used, eg water from ponds and unlined ditches, or if hard water containing calcium salts is used.

DO NOT mix, store or apply this product or spray solutions of this product in galvanised steel or unlined steel containers or spray tanks, since a highly flammable gas mixture may be formed. Use stainless steel, aluminium, brass, copper, fibreglass, plastic or plastic lined containers or spray tanks. Ensure the sprayer is free of any residue of previous spray materials. Use spray solutions promptly and certainly within 5 days since a gradual loss of activity will occur. Fill the spray tank with one half the required amount of clean water and add the proper amount of INNOVA GLYPHOSATE 450. Mix well before adding the remaining portion of water. Add surfactant near the end of the filling process to minimize foaming. Placing the filling hose below the surface of the spray solution will prevent excessive foaming. Removing hose from tank immediately after the filling will prevent back siphoning into water source. Do not use mechanical agitators as these may cause excessive foaming. Spray tanks, pumps, lines and nozzles should be thoroughly rinsed with clean water following application to prevent corrosion.

Tank Mixtures/Compatibility

INNOVA GLYPHOSATE 450 may be tank mixed with the following herbicides, insecticides and additives. Read and follow all label directions, restraints, plant back periods, withholding periods, regional use restrictions and safety directions for the tank mix products.

Mixing instructions for all tank mixtures

1. Fill the spray tank 1/3 to 1/2 full with clean water and start agitation.
2. Add Spraymate Liase where required.
3. Add recommended herbicide/insecticide/additive to the spray tank and mix thoroughly.
4. Add INNOVA GLYPHOSATE 450 and the remaining water. Mix thoroughly.
5. Add surfactant, if required, near the end of the filling process to minimize foaming.
6. Always maintain adequate agitation during application and use the tank mix promptly.

Tank Mixtures – Herbicides

Innova Metsulfuron 600, tri-allate (500 g/L), tribenuron-methyl (750 g/L), imidazolinone, triclopyr (600 g/L), chlorsulfuron (750 g/kg), carfentrazone-ethyl (240 g/L), dicamba (500 g/L), Logran[®] 750WG, Logran B Power (ensure fully dispersed prior to addition of INNOVA GLYPHOSATE 450), Innova Clopyralid 300, 2,4-D ester (600 g/L), MCPA LVE, sulfosulfuron (750 g/kg), Flowable Gesaprim[®], Gesaprim 900 WG (DO NOT apply this tank mix for control of Barnyard Grass or Liverseed Grass), pendimethalin, Flowable Gesatop[®], Gesatop 900 WG, Innova Fluroxypyr 200, oxyfluorfen (240 g/L), trifluralin.

As formulations of other manufacturers' products are beyond the control of Syngenta, and water quality varies with location, all mixtures should be tested prior to mixing commercial quantities.

Spraymate Liase (Ammonium sulphate) may improve the performance of tank mixtures of INNOVA GLYPHOSATE 450 and atrazine or simazine. See directions below.

Oxyfluorfen: The addition of oxyfluorfen (240 g/L) at 75 mL/ha to recommended rates of INNOVA GLYPHOSATE 450 prior to planting Wheat or Barley or prior to planting cotton will improve knockdown and increase the speed at which treated weeds develop visible symptoms of phytotoxicity.

Tank Mixtures - Insecticides

INNOVA GLYPHOSATE 450 is compatible with the following insecticides: phosmet, omethoate, chlorpyrifos (500 g/L), Karate[®], fenitrothion ULV, bifenthrin (100 g/L) and emulsifiable concentrates of dimethoate and fenitrothion. Other insecticides have not been tested.

Tank Mixtures – Additives And Surfactants

Spraymate Liase (417 g/L Ammonium Sulphate liquid)

Rate: 2 L per 100 litres spray solution.

Spraymate Liase may be used as an adjuvant to alleviate the adverse effects of high levels of calcium, magnesium and bicarbonate ions in water. The addition of Spraymate Liase to INNOVA GLYPHOSATE 450, when used to control annual weeds, MAY improve the performance of INNOVA GLYPHOSATE 450 under adverse environmental conditions such as cool cloudy weather. Spraymate Liase may also improve the performance of tank mixtures of INNOVA GLYPHOSATE 450 and atrazine or simazine. Ammonium sulfate may be corrosive to metal parts of the sprayer. Thoroughly flush tanks, pumps and nozzles with water after use. Solubility and impurity profiles of other forms of ammonium sulphate can vary and may reduce the performance of INNOVA GLYPHOSATE 450 or tank mixtures.

Spraymate LI 700 Surfactant

Rate: 250 to 500 mL per 100 L

The addition of Spraymate LI 700 surfactant may improve weed control. At rates of 300 mL to 500 mL per 100 L, Spraymate LI 700 may modify the droplet spectrum produced by CP and flat fan nozzles. This may reduce the proportion of FINE droplets produced by these nozzles.

Spraymate Activator

Rate: 70 mL to 125 mL per 100 L

General Purpose non-ionic surfactants may increase the production of fine and very fine droplets, which are prone to drift when used through certain nozzle types.

WetterTX Surfactant

Rate: 200 mL/100L spray solution. Add when treating Annual Ryegrass, Silvergrass and Perennial grasses. WetterTX is NOT a general purpose surfactant and should be used only where recommended. DO NOT use spray oils, adjuvants or surfactants other than those recommended on this label.

Application

INNOVA GLYPHOSATE 450 is a non-selective translocated herbicide. Direct spray contact, or even slight drift, may cause severe injury or destruction of any growing crop or other desirable plants including trees. Clean all equipment after use by thoroughly washing with water.

Boom equipment

Application of INNOVA GLYPHOSATE 450 in spray volumes of 25 to 100 L/ha is recommended. Use nozzles that produce a medium or coarse spray quality at the target (ASAE S572). Environmental conditions, including delta T and wind speed, and the size and density of the target weeds, should be taken into consideration when selecting nozzles. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

Aerial equipment

Aerial equipment may be used to apply INNOVA GLYPHOSATE 450 only in pasture or fallow situations prior to establishment of field crops, fodder crops, or new pasture, and for preharvest application to sorghum crops. DO NOT use in intensive horticultural cropping areas. Use recommended rates of INNOVA GLYPHOSATE 450 specified in this label up to a maximum limit of 3.2 L/ha. For Micronair equipment, apply in a minimum spray volume of at least 20 L/ha. Use nozzles that produce a medium to coarse spray quality (ASAE S572) at the target are recommended. Swath width may need to be adjusted to take into account aircraft type, wind conditions, target height and density. DO NOT apply INNOVA GLYPHOSATE 450 by aircraft in temperatures above 30°C and increase spray output to at least 30 L/ha if temperatures rise above 25°C. Avoid application when relative humidity falls below 35%. In multiple product tank mixes a minimum water volume of 50L/ha is recommended and local advice should be sought. Correct mixing order is important. Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove herbicide residues.

Application on hilly terrain

Spraying height may vary. Increase water volume to 30 to 80 L/ha and use nozzles that produce a coarse spray quality at the target (ASAE S572).

Application under hot conditions

High temperatures and/or low relative humidity cause excessive evaporation of spray droplets, which may reduce results. When temperature reaches 25°C, increase water volume to at least 30 L/ha, and nozzles that produce a coarse spray quality at the target (ASAE S572). DO NOT apply INNOVA GLYPHOSATE 450 by aircraft when temperature is above 30°C.

GROUP	M	HERBICIDE
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Resistant Weeds Warning

INNOVA GLYPHOSATE 450 Herbicide is a member of the Glycines group of herbicides. INNOVA GLYPHOSATE 450 has the inhibition of EPSP synthase mode of action. For weed resistance management INNOVA GLYPHOSATE 450 is a Group M herbicide. Some naturally occurring weed biotypes resistant to INNOVA GLYPHOSATE 450 and other Group M herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by INNOVA GLYPHOSATE 450 or other Group M Herbicides. . Since the occurrence of resistant weeds is difficult to detect prior to use, Syngenta Crop Protection Pty Limited accepts no liability for any losses that may result from the failure of INNOVA GLYPHOSATE 450 to control resistant weeds.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

Avoid contact with foliage, green stems or fruit of crops, desirable plants and trees, since severe injury or destruction may result. DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate dams, rivers or streams with the product or used container. DO NOT apply to weeds growing in or over water. DO NOT spray across open bodies of water.

STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well ventilated area out of direct sunlight. The method of disposal depends on the container type. Read the Storage and Disposal instructions on the container label.

SAFETY DIRECTIONS

Product will irritate the eyes and skin. Avoid contact with eyes and skin. When preparing product for use wear:

- elbow-length PVC gloves
- face shield or goggles

After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash contaminated clothing, gloves and face shield or goggles.

FIRST AID


If poisoning occurs, contact a doctor or Poisons Information Centre. Phone 131 126.

MATERIAL SAFETY DATA SHEET

If additional hazard information is required refer to the Material Safety Data Sheet. For a copy visit our website at www.syngenta.com.au

MANUFACTURER'S WARRANTY AND EXCLUSION OF LIABILITY

Syngenta has no control over storage, handling and manner of use of this product. Where this material is not stored, handled or used correctly and in accordance with directions, no express or implied representations or warranties concerning this product (other than non-excludable statutory warranties) will apply. Syngenta accepts no liability for any loss or damage arising from incorrect storage, handling or use.

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