

POISON
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING



Dow AgroSciences

Hotshot™

Herbicide

ACTIVE CONSTITUENTS: 10 g/L AMINOPYRALID present as triisopropanolamine salt
140 g/L FLUROXYPYR present as methylheptyl ester
SOLVENT: 418 g/L LIQUID HYDROCARBON

GROUP I HERBICIDE

For the control of climbing buckwheat and other broadleaf weeds in winter cereals, lantana and certain other pasture weeds.

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Dow AgroSciences

DIRECTIONS FOR USE

RESTRAINTS

DO NOT apply to crops or weeds which are not actively growing or to plants which may be stressed (not actively growing) due to prolonged periods of extreme cold, moisture stress (water-logged or drought affected) or previous herbicide treatment, as crop damage or reduced levels of control may result.

DO NOT spray if rain is likely to occur within one hour.

AVOID double overlaps to reduce risk of injury to rotational crops the following season.

DO NOT apply by aerial application.

Table 1: Northern New South Wales and Queensland

CROP	CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS	
Barley, Oats, Triticale, Wheat	Apply from 3 leaf to first node (Z13 to Z31)	Climbing buckwheat (<i>Fallopia convolvulus</i>) (black bindweed)	Seedling up to 2-4 leaf	500 mL		
		Prickly lettuce (<i>Lactuca serriola</i>) Vetch (<i>Vicia sativa</i>) Volunteer chickpea (<i>Cicer arietinum</i>) Volunteer faba bean (<i>Vicia faba</i>) Volunteer field pea (<i>Pisum sativum</i>)	Seedling up to 6-8 leaf	750 mL		
			Seedling up to 4 leaf	500 – 750 mL + 5 g metsulfuron (600 g/kg)		
			Common sowthistle (<i>Sonchus oleraceus</i>) Deadnettle (<i>Lamium amplexicaule</i>) Wireweed (<i>Polygonum aviculare</i>)			
	Apply from 4 leaf to first node (Z14 to Z31)	Flax-leaf fleabane (<i>Conyza bonariensis</i>)	750 mL + 5g metsulfuron (600 g/kg)	500 – 750 mL + 420 or 580 mL LVE 600 MCPA		DO NOT USE in oats. Add BS1000 or an alternative (see compatibility section) at the rate of 100 mL/100 L water. Note: this mixture will also control non ALS resistant weeds such as mustards, turnip weed, volunteer canola and wild turnip.
		Common sowthistle (<i>Sonchus oleraceus</i>) Spiny emex (<i>Emex australis</i>) Variegated thistle (<i>Silybum marianum</i>)				
Wheat	Apply from 3 leaf to first node (Z13 to Z31)	Flax-leaf fleabane (<i>Conyza bonariensis</i>)	750 mL + 580 mL LVE 600 MCPA	500 – 750 mL + 85 mL Topik® 240 EC	Use the higher rate of LVE 600 MCPA Selective Herbicide only from 5 leaf cereal growth stage onwards. Mustards, turnip weed, volunteer canola and wild turnip will also be controlled.	
		Wild oats (<i>Avena sterilis</i> spp. <i>ludoviciana</i>) (<i>Avena fatua</i>) (non 'fop' resistant)	2 to 4 leaf			500 – 750 mL + 85 mL Topik® 240 EC



Table 2: Northern New South Wales and Queensland

SITUATION	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
Fallow	Climbing buckwheat (<i>Fallopia convolvulus</i>) Red pigweed (<i>Portulaca oleracea</i>)	Seedling up to 4 leaf	500 mL + Ripper™ (glyphosate)	When mixing with Ripper to control both grass and broadleaf weeds, refer to the Ripper label for use rates and adjuvants recommended for the grasses.

Table 3: Southern New South Wales, Victoria, South Australia and Western Australia

CROP	CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
Barley, Oats, Triticale, Wheat	Apply from 3 leaf to first node (Z13 to Z31)	Volunteer faba bean Volunteer field pea Volunteer lupin Volunteer vetch	Seedling up to 4 leaf	500 mL	DO NOT plant susceptible crops for up to 20 months after application, as specified in GENERAL INSTRUCTIONS - MINIMUM RECROPPING PERIODS.

Table 4: Woody Weed Situations – High Volume Treatment/Spot Spray

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /100 L Water	CRITICAL COMMENTS
Fireweed (<i>Senecio madagascariensis</i>)	Flowering plants up to 30 cm tall	All States	500 mL	Apply to actively growing plants from October to April. Spray to ensure thorough coverage of all foliage, including stems, to the point of runoff.
Thistles, including Spear thistle (<i>Cirsium vulgare</i>)	Rosette stage prior to stem elongation			
Lantana (<i>Lantana camara</i>)	Seedlings and regrowth from 0.5 to 1.2 m high			
	Mature plants and regrowth from 1.2 to 2 m high		700 mL	
Cockspur thorn (<i>Maclura cochinchinensis</i>)	Up to 3 m high			
Creeping lantana (<i>Lantana montevidensis</i>)	At flowering			
Crofton weed (<i>Ageratina adenophora</i>) Mistflower (<i>Ageratina riparia</i>)	Seedlings and young plants up to flowering			



Table 4: Woody Weed Situations – High Volume Treatment/Spot Spray (continued)

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY				
WEEDS CONTROLLED	WEED GROWTH STAGE	STATE	RATE /100 L Water	CRITICAL COMMENTS
Docks (<i>Rumex</i> spp.)	Seedlings and rosettes up to 30 cm high	All States	700 mL	
Small flowered mallow (Marshmallow) (<i>Malva parviflora</i>)	Seedlings and young plants up to flowering			
St. John's wort (<i>Hypericum perforatum</i>)	From flowering to early seed set			Late spring to early summer.
Wattles, including <i>Acacia aulacocarpa</i> <i>A. decora</i> <i>A. harpophylla</i> <i>A. leiocalyx</i> <i>A. salicina</i>	Seedling plants or regrowth 0.5 to 1.2 m high			Apply to actively growing plants when soil moisture is plentiful. Some regrowth may occur particularly when treating old woody plants with sparse canopies and under dry conditions.

Table 5: Woody Weed Situations – Boom Application

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
Fireweed (<i>Senecio madgascariensis</i>)	Seedling plants up to flowering	1.5 L	Legumes present at application will be controlled.

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

WITHHOLDING PERIOD

Cereals (Barley, Oats Triticale and Wheat):

Harvest: **NOT REQUIRED WHEN USED AS DIRECTED.**

Cutting or Grazing for Stockfood: **DO NOT GRAZE OR CUT CROPS FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.**

Pasture: Cutting or Grazing Pastures for Stockfood: **NOT REQUIRED WHEN USED AS DIRECTED.**

Fodder Intended for Export: Some countries have limits on the level of residue acceptable in animal feeds.

Please consult your exporter before using this product on crops destined to be used for export fodder.

LIVESTOCK DESTINED FOR EXPORT MARKETS

The grazing withholding period only applies to stock slaughtered for the domestic market. Some export markets apply different standards. To meet these standards, ensure that in addition to complying with the grazing withholding period, that the Export Slaughter Interval, Export Grazing Interval or Export Animal Feed Interval is observed before stock are sold or slaughtered.

EXPORT SLAUGHTER INTERVAL (ESI) – 3 days:

After observing the grazing withholding period, livestock that has been grazed on or fed treated pasture should be placed on clean feed for 3 days prior to slaughter.



EXPORT GRAZING INTERVAL (EGI) – 42 days:

Livestock that has been grazing on treated pasture should not be sold for export slaughter for 42 days (6 weeks) after application of the chemical product, unless the export slaughter interval has been observed.

EXPORT ANIMAL FEED INTERVAL (EAFI) – 42 days:

DO NOT cut treated pasture for 42 days (6 weeks) after application of the chemical product for stock feed or animals intended to be slaughtered for export.

When Hotshot Herbicide is used as directed and the above withholding periods and/or export intervals are observed, treated grain and livestock commodities are considered acceptable for export. However, export requirements are subject to change. Consult your exporter for updated information about specific market requirements.

IMPORTANT: Read the *MANAGEMENT OF RESIDUES IN COMPOST, MULCHES AND ANIMAL WASTE* in the PROTECTION OF CROPS, NATIVES AND OTHER NON-TARGET PLANTS section of this label.

GENERAL INSTRUCTIONS

MINIMUM RECROPPING PERIODS

Aminopyralid remains active in the soil for extended periods depending on rate of application, soil type (clay content), rainfall, temperature, humidity, soil moisture and soil organic matter. The following tables show plant-back periods to particular crops following application of Hotshot in different areas in Australia.

Northern New South Wales & Queensland

Plant-back periods for rotational crops following application of Hotshot for rates up to 750 mL/ha on black cracking clay soils. These plant-back periods are based on normal rainfall pattern. During drought conditions (or when rainfall is less than 100 mm for a period of 4 months or greater) the plant-back period may be significantly longer.

Winter Crop	Plant-back Period (months)	Summer Crop	Plant-back Period (months)
Wheat	4	Sorghum	3
Barley	4	Mungbean	5
Canola	4	Sunflower	5
Chickpea	6	Soybean	5
Faba bean	6	Cotton	9
Lucerne	6		

Southern New South Wales, Victoria, South Australia & Western Australia

Plant-back periods for rotational crops following application of Hotshot for rates up to 500 mL/ha.

Crops	Plant-back Period (months)
Barley, Canola, Wheat	9
Chickpea, Faba bean, Field pea, Lucerne, Lupin, Medic, Subclover	20

Note: Before using Hotshot in tank mixes with other herbicides, check the plant-back information on all product labels. The most residual product, i.e. the product with the longest plant-back period, will determine the time between spraying and planting the next crop.

MIXING

Hotshot can be mixed with water only.

Mix only sufficient chemical for each day use and avoid storing mix.

Half fill the spray tank with water and add the required quantity of Hotshot and complete filling. Agitate continuously to ensure thorough mixing before and during application.

Tank mixtures: Wettable powder or dry flowable formulations (e.g. water dispersible granules) should be added to the spray tank first, followed by suspension concentrates (flowables), water soluble salts and then emulsifiable concentrate formulations (e.g. Starane™ Advanced Herbicide). Add spraying oils and surfactants (wettors) last, if required.



COMPATIBILITY

Hotshot is compatible with the following:
(Read and follow all label directions, RESTRAINTS, PLANT-BACK periods, WITHHOLDING PERIODS and SAFETY DIRECTIONS on the partner label as well as those on the Hotshot label).

Broadleaf Herbicides

LVE 600 MCPA Selective Herbicide (MCPA LVE), metsulfuron-methyl, Starane™ Advanced, (chlorsulfuron), Conclude™, Eclipse®¹, Ripper™ 480 (glyphosate).

Grass Herbicides

Topik® 240 EC, Axial® 100 EC, Wildcat® 110 EC (wild oats only).

Adjuvants

BS1000 Biodegradable surfactant (when mixed with metsulfuron-methyl) or its alternatives Chemwet 1000, and Spreadwet 1000 Wetting Agent.

Uptake™ Spraying Oil (when mixed with Topik® 240 EC and Axial).

Adigor® Spray Adjuvant (when mixed with Axial).

Not all surfactants or crop oils are of equal quality, Dow AgroSciences does not support the use of alternative products other than those listed in the compatibility section.

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APPLICATION METHODS

Broadcast application in cropping situations.

A. Ground Application (Boom)

Apply Hotshot with an accurately calibrated boom sprayer, in at least 80L/ha water.

Use a medium quality spray as defined by ASABE (S572).

Set the boom at a height to ensure a double overlap of the nozzle pattern.

Woody weed situations

A. High Volume Spot Spraying Application

Apply the recommended mix to obtain full coverage of leaves and stems using a coarse to very coarse quality spray as defined by ASABE (S572) eg a number 6 – 8 spray tip at 700 to 1500 kPa. To obtain good coverage, a spray volume of 3000 L water/ha is required per treated hectare. Spray to ensure thorough coverage of all foliage, including stems to the point of runoff.

CLEANING SPRAY EQUIPMENT

Rinse water should be discharged onto a designated disposal area or, if this is unavailable, onto wasteland away from desirable plants and water courses.

Rinsing: After using Hotshot Herbicide, empty the tank completely and drain the whole system. Thoroughly wash inside the spray unit using a pressure hose. Drain, and clean any filters in the tank, pump, lines, hoses and nozzles. After cleaning the tank as above, quarter fill with clean water and circulate through the pump, lines, hoses and nozzles. Drain and repeat the rinsing procedure twice.

Decontamination (before spraying cotton and other sensitive crops; see PROTECTION OF CROPS, NATIVES AND OTHER NON-TARGET PLANTS):

Wash the tank and rinse the system as above. Then quarter fill the tank and add a standard alkali based laundry detergent at 500 g (or mL)/100 L water and circulate throughout the system for at least 15 minutes. If using a concentrated laundry detergent use 250 g (or mL)/100 L water. Do not use chlorine based cleaners. Drain the whole system. Remove filters and nozzles and clean them separately. Finally flush the system with clean water and allow draining.

RESISTANT WEEDS WARNING

GROUP I HERBICIDE

Hotshot Herbicide contains members of the pyridine group of herbicides. The product has the disruptors of plant cell growth mode of action. For weed resistance management, the product is a Group I Herbicide.

Some naturally-occurring weed biotypes resistant to the product and other Group I 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 this product or other Group I herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Dow AgroSciences Australia Limited accepts no liability for any losses that may result from the failure of this product to control resistant weeds. Strategies to minimise the risk of herbicide resistance are available. Contact your farm chemical supplier, consultant, local Department of Agriculture, or local Dow AgroSciences representative.



PROTECTION OF CROPS, NATIVES AND OTHER NON-TARGET PLANTS

DO NOT use on land to be cultivated for growing susceptible crops for up to 20 months of applying Hotshot, except where indicated in the MINIMUM RECROPPING PERIODS section of the GENERAL INSTRUCTIONS. Legumes, vines, vegetables, cotton, tomatoes, ornamentals and many other plants are highly susceptible to this herbicide during both growing and dormant periods. Cereal crops, canola and grasses can be sown safely after using HOTSHOT.

This product will kill legumes (clovers, medics) present in the crop at the time of spraying. In the season, following application of this product the regeneration or establishment of sensitive legumes (clover, medics, peas, and lupins) may be adversely affected by soil residues.

DO NOT allow spray drift onto sensitive native vegetation or susceptible crops, such as cotton, tomatoes, vines, fruit, potatoes, vegetables, ornamentals, tobacco, lupins and other legumes, safflower, sugar beet, hops, flowers or shade trees.

DO NOT use under meteorological conditions or with spraying equipment likely to produce drift. Minimise spray drift by using low pressures and nozzles, which **DO NOT** give a fine droplet size.

DO NOT apply close to or on areas containing roots of desirable vegetation, where treated soil may be washed to areas growing, or to be planted to desirable plants, or on sites where surface water from heavy rain can be expected to run off to areas containing or to be planted to susceptible crops or plants.

DO NOT move soil, which may have been sprayed, to areas where desirable plants are to be grown.

MANAGEMENT OF RESIDUES IN COMPOST, MULCHES AND ANIMAL WASTE

DO NOT cut pasture for hay or silage production within 6 months of application, where it is intended for use off-farm.

DO NOT cut cereals intended for hay or silage production within 6 weeks of application, where it is intended for use off-farm.

DO NOT use treated plant material to make mushroom substrate. **DO NOT** send straw from treated crops off-farm for these purposes or for animal bedding.

DO NOT send animal manure, dairy shed and feed pad effluent that has been collected from animals grazing or fed crops treated within the previous 6 months (pasture) or 6 weeks (cereals) off-farm. Spreading/irrigating this manure/effluent may cause damage to clover and other susceptible plants.

DO NOT send compost made from animal waste that has been collected from animals grazing or fed crops treated within the previous 6 months (pasture) or 6 weeks (cereals) off-farm. Such compost may cause damage to clover and other susceptible plants.

DO NOT apply animal waste (e.g. manure, slurry) collected from animals grazing or fed crops treated within the previous 6 months (pasture) or 6 weeks (cereals) to susceptible plants or land to be used to grow susceptible plants.

DO NOT grow susceptible plants within the relevant plantback period in fields treated with manure/effluent from farms where animals have grazed or been fed treated plants until a field bioassay shows there are no residues in the soil at levels injurious to the susceptible plants (see the crop rotation section).

To promote herbicide decomposition, manure should be evenly incorporated in the surface soil. Breakdown of residues in decomposing plants or manure is more rapid under warm, moist soil conditions and may be enhanced by supplemental irrigation.

SOIL BIOASSAY

A simple bioassay can be conducted by collecting at least 10 spade spits of soil to a depth of 200 mm from around the paddock and thoroughly mixing the soil together. Place some of this soil in a shallow container to a depth of 3-5 cm and sow 100 seeds of the susceptible plant to be grown (subterranean or white clover is a good indicator plant where it is not practical to use the susceptible plant) into the soil. Keep in a warm and well lit location and ensure the soil does not dry out. After crop emergence, check the number of plants that have germinated and seedling vigour. Symptoms of Hotshot residues include non-germination or low plant emergence, leaf cupping, leaf whitening, stem elongation and twisting. If these symptoms occur – do not grow the susceptible plant. Repeat the bioassay again after a further time interval.

Further information on residues in composts, mulches and animal wastes can be found at www.dowagrosciences.com.au

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers or waterways with the chemical or used containers.



STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight.

DO NOT store near food, feedstuffs, fertilisers or seed.

This container can be recycled if it is clean, dry, free of visible residues and has the **drumMUSTER** logo visible. Triple or pressure rinse container for disposal. Dispose of rinsate by adding to the spray tank. Do not dispose of undiluted chemicals on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any **drumMUSTER** collection or similar container management site. The cap should not be replaced but may be taken separately. If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. **DO NOT** burn empty containers or product.

SMALL SPILL MANAGEMENT

Wear protective equipment (see SAFETY DIRECTIONS). Apply absorbent material such as earth, sand, clay granules or cat litter to the spill. Sweep up material for disposal when absorption is completed and contain in a refuse vessel for disposal (see STORAGE AND DISPOSAL section). If necessary wash the spill area with an alkali detergent and water and absorb as above the wash liquid for disposal as described above.

SAFETY DIRECTIONS

- Will damage the eyes.
- Will irritate the skin.
- Avoid contact with eyes and skin.
- If product in eyes, wash it out immediately with water.
- If product on skin immediately wash area with soap and water.
- Wash hands after use
- When opening the container, preparing spray and using prepared spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC gloves and goggles.
- After each day's use, wash gloves, goggles and contaminated clothing.

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone: *Australia* 13 11 26.

If in eyes, hold eyes open, flood with water for at least 15 minutes and see a doctor.

MATERIAL SAFETY DATA SHEET

Additional information is listed in the Material Safety Data Sheet for **HOTSHOT™ HERBICIDE** which is available from Dow AgroSciences on request.

Call Customer Service Toll Free on 1-800 700 096 or visit www.dowagrosciences.com.au

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