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

Sickle™ 540

HERBICIDE

Active Constituent: 540 g/L GLYPHOSATE present as the isopropylamine salt

GROUP	M	HERBICIDE

A non-selective water soluble herbicide for the control of a wide range of annual and perennial weeds in a variety of situations as per the Directions for Use Table

GENERAL INSTRUCTIONS

Mode of Action

Sickle 540 Herbicide is a water soluble liquid herbicide. The product is non-selective and will control a wide range of emerged annual and perennial weeds. It provides no residual activity and is inactivated once it comes into contact with the soil. The product is absorbed by plant leaves and green stems and is then translocated through the plant to the root system. The product inhibits a plant enzyme causing a breakdown in the metabolic pathway leading to death of the plant.

Visual effects of product efficacy are gradual wilting, yellowing leading to complete plant browning. For annual weeds effects are usually apparent in 3-7 days and for perennial weeds up to 14-21 days. The time taken for these effects to appear will vary depending on the speed of translocation which will be dependent on climatic conditions such as temperature, moisture conditions etc. Best results are obtained if plants are sprayed when they are actively growing and not under any stress from such factors as disease, waterlogging, insect damage, drought stress, etc. To ensure that the product is adequately absorbed by weeds it is recommended that spraying be delayed if rainfall is expected. Rain up to 6 hours after application may reduce the efficacy of the product and heavy rain within 2 hours may necessitate re-treatment. Plants which are covered in dust or which are wet with dew should not be treated.

Crop Establishment – Where the product is used to control weeds prior to the establishment of a new crop or pasture it is important that the crop or pasture not be sown until a suitable seed bed is present. Where a light cover of weeds has been sprayed, it may be possible to sow in one day. Where a large amount of dead weed matter or trash is present the seed bed needs to be adequately prepared before crop or pasture sowing.

Mixing and Application

Sickle 540 Herbicide may be applied by boom spray, aircraft, knapsack, handgun or wiper equipment.

Boom Application – Spray volumes of 25 – 100 L water/ha are recommended with a fan nozzle at pressures of 240 - 280 kPa. Boom height must be set to ensure double overlap of spray patterns at the top of the weed canopy.

Wiper Equipment – (e.g. ropewick, canvas, carpet or felt applicators) may be used to apply the product in the situations as per the Directions for Use Table. Weeds should be at least 15 cm above the crop and the wiper equipment should be operated at least 10 cm above the crop. Best results are obtained with lower speeds of application (do not exceed 8 kilometres per hour) and where two applications are made in opposite directions, i.e. double pass. Where herbicide does not contact foliage (due to different levels of foliage) results may not be satisfactory and re-treatment may be required.
Do not store a mixed solution for more than 2 days.
Rate: 660 mL of product to 2 litres of water.

Aerial Application – Apply a minimum spray volume of 20 L/ha for Micronair and boom equipment. Droplet size should be 250 - 350 micron and the swath width 15 - 17 metres. Aerial application is only recommended in pasture or fallow situations before establishment of a new crop or pasture or in pre-harvest sorghum.
On sloping ground, the spraying height may vary, so it is recommended that the spray volume be increased to 30 - 80 L/ha with a droplet size of at least 300 micron.
Since the product is non-selective it is important to avoid spraying in conditions likely to cause drift, e.g. wind over 8 km/h, temperature inversion, still air and hot dry days.
DO NOT apply by aircraft in intensive horticultural areas.
Use recommended rates specified in this label up to a maximum limit of 2.8 L/ha.

Application in hot conditions – When the temperature reaches 25°C increase the water volume to at least 30 L/ha and droplet size to at least 300 micron VMD to compensate for additional evaporation of sprayed droplets. DO NOT apply by aircraft in temperatures above 30°C.

Surfactant – The addition of a surfactant may improve weed control where water rates are high or product rates are low. Suggested surfactant rates are 200 mL/100 L of 1000 g/L high quality non-ionic surfactant or 250 - 500 mL/100 L of 700 g/L high quality non-ionic surfactant. Do not add spraying oils, agricultural chemicals or any other material except as directed on the label.

Mixing – When the product is to be mixed with water it is important that clean water be used. Dirty water or hard water containing calcium salts may reduce the product's effectiveness. The following procedure for mixing should be followed:

1. Ensure spray tank is clean and that previous chemicals used are washed from the tank.
2. Half fill the tank with clean water, add the required amount of Sickle 540 Herbicide.
3. Add the rest of the water.
4. Add surfactant last and agitate thoroughly.

Compatibility

The product may be mixed with a variety of products to enhance weed control, to broaden the spectrum of weeds controlled, and to add residual control. Refer to the "Directions for Use" Section for detailed information on the tank mix situations. For further information on product compatability in addition to the information provided below, contact Bayer CropScience Pty Ltd.

Additives: Crystalline ammonium sulphate assists in minimising antagonism when mixed with flowable triazine herbicides. The only form of ammonium sulphate to be used is the crystalline form (not prilled or granule forms). Test the quality by dissolving 2 tablespoons of crystalline ammonium sulphate in 2 litres of water. Swirl gently for 2 minutes. Should undissolved particles still remain at the end of that time, pre-dissolve them prior to adding product to spray tank. Ensure solution is poured through a screen.

Herbicides: Atrazine – flowable or granular (see additives above – do not apply this tank mix for control of barnyard grass or liverseed grass), dicamba, 2,4-D ester, tribenuron-methyl, triclopyr, chlorsulfuron, metsulfuron-methyl, pendimethalin, triasulfuron, MCPA LVE, Goal® CT.
Goal CT – The addition of Goal CT at 75 mL/ha to recommended rates of this product prior to planting wheat or barley will improve knockdown and increase the speed at which treated weeds develop visible symptoms of phytotoxicity. Add Flowright Compatibility agent to improve the compatibility in cold water (less than 15°C). See Directions below.

Insecticides: Chlorpyrifos, dimethoate, fenitrothion.

Flowright compatibility agent

Rate: 200 mL/100 L spray solution. When mixing with Goal CT, add to improve the compatibility in cold water (less than 15°C). Flowright must be pre-mixed with Goal CT before adding to the spray tank. Refer to Flowright label for full directions.

For tank mixing the following procedure should be undertaken:

1. Half fill tank and start agitator.
2. Add crystalline ammonium sulphate if required through mesh screen.
3. Add companion product.
4. Add Sickle 540 Herbicide and rest of the water.
5. Add surfactant and maintain agitation while spraying.

Equipment Maintenance and Usage

Sickle 540 Herbicide should ONLY be stored, mixed or applied in plastic or plastic lined, stainless steel, aluminum, copper, brass or fiberglass containers. The product and spray solution react with galvanized steel and unlined steel tanks and containers to form hydrogen gas which may form a highly combustible gas mixture. This gas could cause an explosion if ignited by an open flame. All application equipment including tanks, nozzles, hoses, aircraft and aircraft landing gear, should be thoroughly washed after use to prevent corrosion.

Resistant weeds warning

Sickle 540 Herbicide is a member of the glycines group of herbicides. Sickle 540 Herbicide has the inhibitors of EPSP synthase mode of action. For weed resistance management Sickle 540 Herbicide is a Group M herbicide. Some naturally occurring weed biotypes resistant to Sickle 540 Herbicide 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 Sickle 540 Herbicide or other Group M herbicides. Since occurrence of resistant weeds is difficult to detect prior to use, Bayer CropScience Pty Ltd accepts no liability for any losses that may result from the failure of Sickle 540 Herbicide to control resistant weeds.

PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS

This product is non selective and may severely injure or kill desirable plants should the product contact the foliage, green stems or fruit of such plants.
DO NOT spray under meteorological conditions or under spraying conditions which could be expected to cause spray to drift onto nearby susceptible plants, adjacent crops, crop land or pastures.
DO NOT use prior to transplanting tomato seedlings.

PROTECTION OF LIVESTOCK
There is no withholding period for this product but removal of stock may be necessary to achieve optimum efficacy. It is recommended that stock be removed from treated areas for 1 day after treatment of annual weeds and for 7 days after treatment of perennial weeds. Certain plants (e.g. soursob, variegated thistle) may be naturally toxic to livestock. Where known toxic plants are present, do no allow livestock to graze until complete browning of treated plants has occurred.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT
DO NOT contaminate dams, rivers or streams with the product or used container. When controlling weeds near water, refer to label directions to minimise the entry of spray into the water.

PRECAUTIONS
DO NOT store, mix or apply the product or spray solutions in unlined steel or galvanised containers as a highly flammable gas may form. Use stainless steel, brass, copper, aluminum, plastic or plastic lined, fiberglass containers or spray tanks.

STORAGE AND DISPOSAL
Store in the closed, original container in a dry, cool, well-ventilated area. Do not store for prolonged periods in direct sunlight.
(20 L container only)
Triple or preferably pressure rinse 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. Do not re-use empty container for any other purpose.
Container with dry-break connection (110 L)
If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured. Empty container by pumping through dry-break connection system. Do not attempt to breach the valve system or the filling point, or contaminate the container with water or other products. Ensure that the coupler, pump, meter and hoses are disconnected, triple rinsed and drained after each use. When empty, or contents no longer required, return the container to the point of purchase. This container remains the property of Bayer CropScience Pty Ltd.
Schutz container with camlock valve connection (1000 L)
If tamper evident seals are broken prior to initial use then the integrity of the contents cannot be assured. The container must be vented before discharging contents. To empty connect a camlock fitted hose to the bottom valve. Remove top cap when discharging for venting purposes. When the container is empty, close all caps and valves and return the container to the point of purchase.

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 and face shield or goggles. When using controlled droplet applicator wear protective waterproof clothing and impervious footwear. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

FIRST AID
If poisoning occurs contact a doctor or Poisons Information Centre (telephone 13 11 26).

MATERIAL SAFETY DATA SHEET
Additional information is listed in the Material Safety Data Sheet, which can be obtained from www.bayercropscience.com.au.

EXCLUSION OF LIABILITY
This product must be used strictly as directed, and in accordance with all instructions appearing on the label and in other reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

APVMA Approval No.: 62604/0308

FOR 24 HOUR SPECIALIST ADVICE
IN EMERGENCY ONLY
PHONE 1800 033 111

DIRECTIONS FOR USE

Restraints

DO NOT spray if rainfall is expected as rainfall within 6 hours of treatment may reduce the effectiveness of the product. Heavy rainfall within 2 hours of treatment may wash the product from the leaf surface and retreatment may be necessary.
DO NOT disturb treated weeds by grazing, cultivation, sowing, etc. after treatment for 1 day for annual weeds, and 7 days for perennial weeds to ensure complete uptake of the herbicide.
DO NOT treat weeds under any stress from frost, cold, disease, waterlogging, lack of moisture or insect damage. Plants must be actively growing to ensure optimum uptake of the product.

PRE-SOWING OR FALLOW

CROP/SITUATION	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Southern Australia Before sowing a crop or pasture For weed control prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement	Barley grass, brome grass, volunteer cereals, wild oats	NSW, ACT, Vic, SA, WA only	330 - 660 mL/ha pre-tillering 660 – 850 mL/ha post tillering	Use the higher rate when applying in cold/overcast conditions or when applying late in the season. Use the lower rate on young weeds and the higher rate on mature weeds, i.e. fully tillered grasses, or broadleaf weeds at budding or stem elongation. If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6 – 8 cm before treatment and use the higher rate. To allow for herbicide uptake do not begin sowing for 1 day after application for annual weeds and 7 – 10 days for perennial weeds. If cultivation or sowing does not occur within 21 days retreatment may be necessary. Annual ryegrass, silver grass and perennial grasses – it is recommended to use a water volume of 70 L/ha or more with low volume nozzles to improve control. Addition of a high quality non-ionic surfactant according to that product's label directions may improve control. **Crop establishment**: Sowing should not proceed until conditions allow for the formation of a satisfactory seedbed. See 'Crop Establishment' section of the General Instructions for further directions. **Tank mixtures**: For improved control of clover add dicamba. Read and follow all label directions for the tank mix product. **Perennial weeds**: for perennial phalaris, soursob, skeleton weed and sorrel this product will provide knockdown, season-long suppression and reduction in treated plant numbers.
	Annual phalaris, annual ryegrass, silver grass, winter grass		660 - 850 mL/ha pre-tillering 850 - 950 mL/ha post tillering	
	Capeweed, doublegee (spiny emex)		330 - 660 mL/ha less than 8 cm diameter 660 – 850 mL/ha greater than 8 cm diameter	
	Amsinkia, fumitory, Paterson's curse (Salvation Jane), saffron thistle, scotch thistle, spear thistle, variegated thistle, volunteer lupins, wild turnip		660 – 850 mL/ha less than 12 cm diameter 850 – 950 mL/ha greater than 12 cm diameter	
	Dock (seedling)		660 - 950 mL/ha	
	Perennial phalaris, sorrel, sub-clover, soursob, skeleton weed – fully emerged rosettes (NSW only)		950 mL/ha	

PRE-SOWING OR FALLOW

CROP/SITUATION	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Southern Australia Before sowing a crop or pasture For weed control prior to sowing a crop or pasture with full soil disturbance by cultivation or sowing with a tyned implement	All weeds listed above	Tas only	950 mL – 1.9 L/ha	TASMANIA ONLY: use 950 mL/ha on annual weeds and 1.9 L/ha on perennial weeds. The product may also be tank mixed with dicamba (200 g/L) to improve control of sorrel, dock and white clover. Observe dicamba label directions and plant-back periods. Addition of a quality non-ionic surfactant according to the label directions of that product may improve control.
Southern Australia Before sowing a crop or pasture For weed control prior to sowing a crop or pasture with minimal or no soil disturbance	Barley grass, volunteer cereals, wild oats	NSW, ACT, Vic, SA, WA only	660 – 950 mL/ha	Use the higher rate when applying in cold/overcast conditions, or when applying late in the season. Use the lower rate on young weeds and the higher rate on mature weeds, i.e. fully tillered grasses, or broadleaf weeds at budding or stem elongation. If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6 – 8 cm before treatment and use the higher rate. Annual ryegrass, silver grass and perennial grasses – it is recommended to use a water volume of 70 L/ha or more with low volume nozzles to improve control. Addition of a high quality non-ionic surfactant according to the label directions of that product may improve control. Do not sow if heavy trash is present. Seeding may proceed 1 day after spraying annual weeds and 7 days after spraying perennial weeds. Aerial application: May be applied by air provided a good seedbed has been established. Always use the higher rates. **Tank mixtures**: For improved control of dock, sorrel and sub-clover add dicamba. Read and follow all label directions for the tank mix product. Addition of ammonium sulphate 2 kg/100 L 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 the treatment of annual weeds (small) and 7 days for perennial weeds. Delay grazing for 3 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' section of the General Instructions for further directions. **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 that follow-up management is undertaken as required.
	Brome grass, capeweed, variegated thistle, winter grass		850 mL – 1.35 L/ha	
	Annual ryegrass, Paterson's curse (Salvation Jane), saffron thistle, scotch thistle, silver grass, spear thistle, wild mustard, wild turnip		950 mL – 1.25 L/ha	
	Erodium, plantain, perennial phalaris, sorrel, sub-clover		1.15 – 1.7 L/ha	
	Dock, flat weed		1.7 L/ha	

PRE-SOWING OR FALLOW

CROP/SITUATION	WEEDS	STATE	RATE	CRITICAL COMMENTS
Southern Australia Before sowing a crop or pasture For weed control prior to sowing a crop or pasture with minimal or no soil disturbance	All weeds listed above	Tas only	950 mL – 1.9 L/ha	TASMANIA ONLY: Use 950 mL/ha on annual weeds and 1.9 L/ha on perennial weeds. The product may also be tank mixed with dicamba to improve control of sorrel, dock and white clover. Observe dicamba label directions and plant-back periods. The addition of a high quality non-ionic surfactant according to the label directions of that product may improve control.
Southern Australia For weed control before a fallow	Barley grass, volunteer cereals, wild oats	NSW, ACT, Vic, SA, WA only	660 – 950 mL/ha	Use the lower rate on young weeds or where cultivation is to take place within 21 days. Use the higher rate where broadleaf weeds reach stem elongation/budding or where grasses are fully tillered. If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6 - 8 cm before treatment and use the higher rate. Soursob – Treat at tuber exhaustion. Hoary cress – Treat from late rosette to early flowering. Annual ryegrass, silver grass and perennial grasses – it is recommended to use water volumes of 70 L/ha or more with low volume nozzles to improve control. Addition of a high quality non-ionic surfactant according to the label directions of that product may improve control.
	Annual ryegrass, brome grass, capeweed, Paterson's curse (Salvation Jane) (rosette), saffron thistle, scotch thistle, silver grass, spear thistle, wild mustard, wild radish, wild turnip		950 mL – 1.25 L/ha	
	Hoary cress, soursob		950 mL/ha	

PRE-SOWING OR FALLOW

CROP/ SITUATION	WEEDS	STATE	RATE	CRITICAL COMMENTS
Northern Australia For weed control prior to sowing a summer or winter crop or in a fallow	Annual phalaris, barley grass, volunteer cereals, wild oats	Qld, NSW only	330 – 660 mL/ha	Use the lower rate on young weeds or where cultivation is to take place within 21 days. Use the higher rate where broadleaf weeds reach stem elongation/budding or where grasses are fully tillered. At more advanced stages certain broadleaf weeds may require the higher rate range or the addition of 2,4-D. In winter (cold) conditions, symptoms on deadnettle may be slow to develop. If weeds have been grazed heavily remove stock prior to spraying to ensure regrowth to 6 – 8 cm before treatment and use the higher rate. Liverseed grass and barnyard grass may be very sensitive to moisture stress. Dense stands may require re-treatment. For aerial application see General Instructions. Do not apply by air if temperature is over 30°C. *Large plants (>5 cm) of noogoora burr, variegated thistle and volunteer sunflower may require up to 1.25 L/ha to achieve control. Crop Establishment: Sowing should not proceed until conditions allow for formation of a satisfactory seedbed. See Crop Establishment section of the General Instructions for directions. Sowthistle: previously grazed plants may be difficult to control without allowing full recovery.
	Barnyard grass, liverseed grass, lovegrass/stink grass, sweet summer grass, volunteer sorghum		660 mL - 1.35 L/ha	
	Australian bluebell (Qld only), cudweed, fumitory, Mexican poppy, mintweed, New Zealand spinach, *noogoora burr, saffron thistle, spear thistle, spurge, *variegated thistle, *volunteer sunflower, yellowvine/ caltrop, wireweed		660 – 950 mL/ha	
	Boggabri weed, caltrop, Indian hedge mustard, mintweed, summer grass		290 - 660 mL/ha up to 3 cm in height or diameter or up to 5 true leaves OR 660 – 950 mL/ha greater than 3 cm in height or diameter or 5 true leaves	
	Annual ground cherry, bladder ketmia, sowthistle, turnip weed, wild lettuce, wild turnip		660 – 950 mL/ha prior to stem elongation/ budding OR 950 mL – 1.25 L/ha after stem elongation/ budding	

PASTURE RENOVATION AND TOPPING

CROP/SITUATION	WEEDS	STATE	RATE	CRITICAL COMMENTS
Pasture with poa tussock present as a weed For pasture renovation	Annual weeds (see Annual Weeds Table) and poa tussock	Qld, NSW, ACT, Vic, Tas only	2.0 – 2.65 L/ha	Before spraying *graze heavily *remove stock 14 days or more before treatment *apply after autumn break when plants are actively growing but before frosts begin (March - May). Increasing to the higher rate may give more effective reductions. Sowing of new pasture may begin 14 days after treatment. It is essential that correct follow-up pasture establishment and management occurs after treatment. Spot treatment will limit re-infestation. May be aerially applied.
Pasture with bent grass present as a weed For control/ suppression of bent grass before sowing a crop or pasture.	Annual weeds (see Annual Weeds table) and bent grass	Vic, Tas only	1.7 L/ha	Apply late spring when seed heads have developed but before the onset of summer moisture stress. Remove stock prior to spraying to achieve good foliage cover. Ensure plants are actively growing. 10-21 days after spraying fully disturb soil with a tyned implement and then sow summer crop and/or re-seeded pasture or crop the following autumn.
Pasture topping for the reduction of seed set of annual grasses, capeweed and calomba daisy	Annual ryegrass, calomba daisy	NSW, ACT, Vic, Tas, SA, WA, only	310 mL/ha	Use the higher rate for heavy infestation or where annual ryegrass is present. Apply before "haying off". Annual ryegrass and capeweed – apply at flowering. Other weeds – apply at head to milky dough stage. Stock should be removed before spraying to allow regrowth. Pasture legumes may be affected. Do not apply to medic/clover crops to be used for hay or seed. Apply a maximum of 50 L/ha water. Above this water volume add a high quality non-ionic surfactant according to the label directions of that product.
	Barley grass, brome grass, capeweed, silver grass		200 – 310 mL/ha	
Pasture manipulation for the control/ suppression of certain grasses before sowing soybeans, forage crops or leucaena	Carpet grass, kikuyu, paspalum	NSW, ACT, Vic, WA, only	950 mL – 4.0 L/ha	Apply the lower rate for suppression only. The higher rate will provide control. Leucaena – (Qld ONLY) Rows should be 4 m apart. Use 1.7 L/ha with single taper fan nozzle LFI-80 mounted at the rear of a single row planter giving a 1 m swath.
	Carpet grass, paspalum	Qld only	950 mL – 4.0 L/ha	
	Kikuyu		420 mL – 4.0 L/ha	
	Black spear grass, wire grasses, love grasses, red natal grass, barbed wire grass		2.0 L/ha	

SUGAR CANE (RATOON CONTROL) FOR QLD AND NSW ONLY

CROP/SITUATION	WEEDS	RATE	CRITICAL COMMENTS
Sugar cane Ratoon control	Q63, Q87, Q90, Q102, Q117, Q120, Q129, Q130, H56-752, Pindar, Triton	2.0 – 2.65 L/ha	Apply when ratoons are actively growing and are 60 - 100 cm tall. DO NOT apply if plants are under stress from water logging or low moisture. Use the lower rate for suppression or where control by cultivation is planned. Use the higher rate for control. Boom height must allow for correct overlap of the spray pattern at the top of the crop canopy.
	Q86, Q96, Q113	2.65 – 3.3 L/ha	
	Cassius, Q115, Q122, Q94	3.3 – 4.0 L/ha	
	NCO310, Q107	4.0 – 6.0 L/ha	

RICE DIRECT DRILLING FOR NSW ONLY

CROP/SITUATION	WEEDS	RATE	CRITICAL COMMENTS
Rice Application prior to Direct drilling	Annual ryegrass, annual phalaris, barley grass, burr medic, subterranean clover, winter grass	660 – 850 mL/ha	If plants are drought stressed a pre-watering must be applied. If the site has been grazed allow plants to regrow to 6 - 8 cm before treatment. For the control of annual ryegrass use the higher rate and add a high quality non-ionic surfactant at the rate recommended on the label for that product. Crop sowing: – Sow 1 - 14 days after treatment. Residual control will only be achieved by adding another suitable herbicide.

SORGHUM CONTROL

CROP/SITUATION	WEEDS	STATE	RATE	CRITICAL COMMENTS
Sorghum control (desiccation) before harvest	Grain sorghum	Qld, NSW only	950 mL – 1.25 L/ha	DO NOT apply to varieties intended for seed production or varieties prone to lodging. DO NOT apply to crop under stress from factors such as waterlogging, frost, disease, low moisture etc. Apply when grain moisture is less than 25%. The product can be applied when some browning has occurred. Use the lower rate for control of the crop, late tillers and ratoon regrowth. Use the higher rate for better suppression of ratoon regrowth. Treatment may increase potential for crop lodging especially if the crop has been stressed by low moisture. In this situation harvest as soon as possible after sufficient dry brown to prevent further lodging. CAUTION: Sorghum may be naturally toxic to livestock.
Sorghum control after harvest	Sorghum stubble/ regrowth (grain sorghum)	Qld, NSW only	660 – 950 mL/ha for new regrowth from slashed stubble 1.15 – 1.5 L/ha for standing green stubble 750 mL – 1.15 L/ha for fresh spring regrowth	DO NOT apply if plants are stressed from such factors as waterlogging, frost, disease, low moisture, etc. For slashed stubble and spring regrowth apply when regrowth is at least 20 cm high. Standing stubble – apply only if sufficient green leaf is present. Allow regrowth of at least 20 cm if grazing has occurred. Use the lower rate for knockdown and regrowth suppression where cultivation is to follow. Use the higher rate for better control of regrowth. It is important to note that variable results can occur if the crop has been under stress or grown under marginal conditions. The varieties Ruby, Trump, Nugget 2, Goldrush 2, and Prize are particularly susceptible if growing conditions are not ideal. CAUTION: Sorghum may be naturally toxic to livestock.

ANNUAL WEEDS – FOR ALL STATES

WEED CONTROLLED	RATE	CRITICAL COMMENTS
Amaranth, annual ryegrass, barley grass, barnyard grass, brome grass, caltrop, canary grass, capeweed, chickweed, cobbler's peg, fumitory, ground cherry, lesser swinecress, liverseed grass, mintweed, paradoxa grass, Paterson's curse (Salvation Jane), pigweed, potato weed, saffron thistle, silver grass, sowthistle, spear thistle, spiny burr grass, spurge, subterranean clover, variegated thistle, volunteer cereals (barley, wheat, oats, sorghum), wild mustard, wild oats, wild turnip, winter grass	BOOM 1.25 - 2.0 L/ha HANDGUN 330 - 460 mL/100 L KNAPSACK 50 - 70 mL per 15 L	*Apply only to plants which are actively growing and not suffering stress. *Use the lower rate for weeds up to 15 cm and the higher rate for weeds over 15 cm. *The effects of the product may take 3 - 7 days to appear under normal conditions and up to 20 - 30 days in cool conditions. *NO residual control will be provided by this product. Germinations after initial treatment may have to be resprayed. For residual control the product should be tank-mixed with a suitable residual herbicide.

PERENNIAL WEEDS

WEEDS CONTROLLED	STATE	BOOM L/ha	HANDGUN VOL/100 L	KNAPSACK mL/15 L	CRITICAL COMMENTS
African lovegrass	NSW, ACT, Vic, WA only	4.0 L	660 mL	100 mL	Apply to actively growing plants. To restrict seedling re-establishment pasture improvement is recommended.
Artichoke thistle	Vic, SA only	2.0 L	330 mL	50 mL	Apply when plants are at the rosette to early head stage.
Bamboo	All States	-	660 mL	100 mL	Apply to actively growing foliage and/or regrowth, which is between 1 and 2 m tall. Cut stump – dilute the product 1:6, i.e. 1 part Sickle 540 Herbicide to 6 parts water, cut stems back to 20 cm high, pour mixture down hollow stem or paint the cut.
Bent grass	Vic, Tas only	1.7 L	330 mL	50 mL	Apply to plants which have some seed-head development late in the spring. Plants must be actively growing. It is necessary to follow-up spraying with full soil disturbance within 21 days and then plant to a summer crop and/or re-seeded pasture or crop in autumn.
Blady grass	Qld, NSW, ACT only	6.0 L	850 mL	130 mL	Apply to actively growing plants when most plants have reached the head stage.
Bracken	All States	-	950 mL	150 mL	*For best control wiper application is recommended. *Bracken should be slashed in the previous winter/spring so that application is made to new growth. *Apply to actively growing fully unfurled fronds in autumn (March - May) before onset of frosts. *Symptoms may be very slow to appear. *Follow-up treatment is recommended as control will NOT be achieved after one treatment.
Californian thistle	Vic, Tas only	4.0 L	330 mL	50 mL	Apply to actively growing plants at the flowering stage. To ensure maximum shoot emergence the area should not be cultivated prior to spraying. Re-treatment and/or pasture improvement may be necessary to restrict seedling re-establishment.
Carpet grass	All States	2.0 L	330 mL	50 mL	Apply to actively growing plants at early head stage.
Cocksfoot	All States	2.0 L	475 mL	70 mL	Apply to actively growing plants at early head stage.
Couch	All States	6.0 L	850 mL	130 mL	Apply to actively growing plants when most plants are at the early head stage. For best results in WA and SA apply in October - November.
Flatweed/Cat's ear	All States	2.0 L	475 mL	70 mL	Apply at early flower stage to fully developed rosettes.
Guinea grass	All States	6.0 L	850 mL	130 mL	Apply to actively growing plants at early head stage. May be applied by wiper equipment.
Hoary cress	NSW, ACT, Vic, Tas only	950 mL	330 mL	50 mL	Apply late July to early September to actively growing plants at the late rosette to flowering stage. Ensure plants are not stressed at time of spraying. Where stems are long enough wiper equipment may be used. Tasmania: Add a high quality non-ionic surfactant at the recommended rate.
Johnson grass, kangaroo grass, kikuyu	All States	4.0 L	660 mL	100 mL	Apply to actively growing plants at early head stage. May be applied by wiper equipment to Johnson grass.

PERENNIAL WEEDS (continued)

WEEDS CONTROLLED	STATE	BOOM L/ha	HANDGUN VOL/100 L	KNAPSACK mL/15 L	CRITICAL COMMENTS
Nutgrass	All States	4.0 L	660 mL	100 mL	Non cultivated situation: Apply to actively growing plants in February – April.
		2.0 L + 2.0 L	475 mL + 475 mL	70 mL + 70 mL	Cultivated situations: Make first application when at least 20% of plants have reached early head stage (about February). Make the second application when most plants have re-emerged (about 6 - 8 weeks after first application). Follow up treatments may be necessary as further plants emerge.
Pampas grass	All States	-	660 mL or 850 mL	100 mL or 130 mL	Apply in spring, summer or autumn to actively growing plants. Ensure complete coverage of the foliage. Best results are obtained if plants are sprayed at flowering. Use the lower rate for plants under 1 m tall and the higher rate for larger plants. Plants may be cut prior to application but regrowth must be at least 1 m prior to spraying.
Paragrass	All States	6.0 L	850 mL	130 mL	Apply to actively growing plants at early head stage.
Paspalum	All States	4.0 L	660 mL	100 mL	Apply to actively growing plants at early head stage.
Phalaris	NSW, ACT, Vic, SA only	2.0 or 4.0 L	330 mL or 660 mL	50 mL or 100 mL	Apply in winter - spring to actively growing plants. Use lower rate where only knockdown is required such as prior to burning for a fire break. Burning should not take place for 2 - 3 weeks after spraying. The higher rate should be used for longer term control.
Plantains	All States	2.0 L	475 mL	70 mL	Apply to actively growing plants at the early head stage. Symptoms may be slow to appear.
Prairie grass, Queensland bluegrass, redleg grass, Rhodes grass	All States	4.0 L	660 mL	100 mL	Apply to actively growing plants at the early head stage.
Rope twitch	Vic, Tas only	4.0 L	660 mL	100 mL	Apply in late summer - autumn to actively growing plants with foliage at least 20 cm high. To ensure maximum shoot emergence the area should NOT be cultivated in the period from the preceding winter until the time of spraying.
Sorrel	All States	4.0 L	660 mL	100 mL	Apply to actively growing plants when the majority of plants are at the early bud stage.
Soursob	NSW, ACT, Vic, Tas, SA, WA only	950 mL	330 mL	50 mL	Apply to actively growing plants late July to early September prior to plant senescence (yellowing). Ensure plants are not stressed at time of application. If plants have been grazed or frosted allow regrowth before treatment.
St John's Wort	All States	2.0 L	330 mL	50 mL	Apply to actively growing plants at flowering to post flowering, procumbent stem stage (about November - May). Pasture improvement or re-treatment may be necessary to prevent seedling re-establishment.
Yorkshire fog	All States	2.0 L	475 mL	70 mL	Apply to actively growing plants at the early head stage.

WOODY WEEDS AND BRUSH

WEEDS CONTROLLED	STATE	HANDGUN VOL/100 L	KNAPSACK mL/15 L	CRITICAL COMMENTS
Bitou bush/boneseed	Qld, NSW, ACT, Vic, Tas only	330 mL or 660 mL	50 mL or 100 mL	Apply to actively growing plants. Do not treat plants which are stressed, particularly drought stressed. Spray to wet all foliage. Best results are achieved when treated during the winter at peak flowering time. Use the higher rate on larger bushes. Follow-up treatment may be required to prevent the establishment of germinating weeds.
Blackberry	All States	660 mL or 850 mL	100 mL or 130 mL	Apply from January to May (flowering to leaf fall). Spray plants which are not under stress to thoroughly wet all foliage. Use the higher rate for dense, old stands over 2 m high. Further treatment may be needed to control seedlings and regrowth. Symptoms may be slow to appear and may not be apparent until next season. Tas. ONLY – Do not spray bushes bearing mature fruit.
Boxthorn	All States	475 mL or 660 mL	70 mL or 100 mL	Spray to wet all foliage. Use the lower rate for young bushes and the higher rate for bigger mature bushes. Do not spray if conditions are hot and dry. Regrowth and seedling germination may have to be retreated.
Crofton weed	Qld, NSW, ACT only	330 mL	50 mL	Apply to plants with full foliage which are actively growing. Spray to wet all foliage. Seedling germination may have to be retreated.
Groundsel bush	Qld, NSW, ACT only	475 mL or 660 mL	70 – 100 mL	Apply to actively growing plants using the higher rate for plants over 2 m tall. Do not spray during summer drought stress conditions or in winter. Spray to wet all foliage. Seedling germination may have to be retreated.
Hawthorn	NSW, ACT, Vic, Tas, SA, WA only	660 – 850 mL	100 – 130 mL	Spray from flowering to leaf fall when plants are actively growing. Use the higher rate for plants over 2 m tall. Spray to thoroughly wet all foliage. Seedling regrowth may have to be retreated.
Lantana	Qld, NSW only	660 mL	100 mL	Apply to plants with full foliage, which are actively growing. Spray to thoroughly wet all foliage and individual plants. Seedling regrowth may have to be retreated.
Mistflower	Qld, NSW, ACT only	330 mL	50 mL	Apply to plants with full foliage, which are actively growing. Spray to thoroughly wet all foliage. Seedling regrowth may have to be retreated.
Sifton bush/Chinese scrub	Qld, NSW, ACT only	660 or 850 mL	100 mL or 130 mL	Apply to actively growing plants ensuring complete coverage. Seedling regrowth may have to be retreated. For high volume application use the higher rate when bushes are over 1 m. For wiper application a double pass application is required. Best results are achieved if bushes are less than 1 m tall and are green at time of application.
Sweet briar	NSW, ACT, Vic, SA, WA only	950 mL or 1.25 L	150 mL or 200 mL	Apply from late flowering to leaf fall to actively growing plants. Spray to thoroughly wet all foliage. Use the higher rate for bushes over 1.5 m tall. Seedling regrowth may have to be retreated.

AQUATIC WEED CONTROL

Reduction in effectiveness may result if more than ¼ of the above ground portion of the weed is submerged at treatment. Submerging the treated plants following treatment may result in the spray being washed from the plant surface, thus reducing effectiveness.

DO NOT apply this product within 0.5 km of potable water intake in flowing water (e.g. river or stream), or within 0.5 km of a potable water intake in a standing body of water such as a lake, pond or reservoir. Applications to moving bodies of water should be made while travelling upstream wherever possible to prevent concentration of this herbicide in water. When making bankside applications, do not overspray more than 0.5 m into open water. Avoid spraying across moving bodies of water where weeds do not exist.

DO NOT ADD EXTRA SURFACTANT/WETTER UNLESS IT IS APPROVED FOR USE IN AQUATIC SITUATIONS.

When spraying floating weeds, use a low volume, low pressure boom sprayer or sprinkler sprayer. DO NOT submerge weeds when spraying as this may wash herbicide off the leaves. When emerged infestations require treatment of the total surface area of impounded water, treating the area in strips may avoid sudden impact on habitat.

WEEDS CONTROLLED	STATE	BOOM L/ha	HANDGUN VOL/100 L	KNAPSACK mL/15 L	CRITICAL COMMENTS
Brown beetle grass	NSW, ACT only	2.0 L	55 mL	330 mL	Apply to actively growing plants. Do not apply to partially submerged plants.
Cumbungi	All States	6.0 L	130 mL	850 mL	Spray during summer or autumn period during the heading stage. Except for Tasmania, wiper equipment can be used. Refer to information in Application Equipment section of the label.
Paragrass	All States	6.0 L	130 mL	850 mL	Spray at early head stage when plants are in active growth.
Phragmites (common reed)	All States	6.0 L	130 mL	850 mL	If the wiper technique is to be used, refer to "Wiper Equipment" section in the booklet. Spray when plants are getting close to early head stage and actively growing. Spray symptoms may not be observed for a season or more.
Rushes	All States	See Critical Comments			Use wiper technique ensuring a high percentage of green matter is present. Refer to section of this booklet entitled "Wiper Equipment" for direction for use.
Tall sedge	NSW, ACT, Vic, Tas only				
Water couch	All States	6.0 L	130 mL	850 mL	Spray actively growing plants in February/March period. 75% of plants should be visible above the water line at time of spraying.

GENERAL USES – FOR ALL STATES UNLESS SPECIFIED

SITUATION	WEEDS CONTROLLED	RATE	CRITICAL COMMENTS
Agricultural areas	See Weeds Controlled Tables for Annual and Perennial Weeds and Brush and Woody Weeds	See Weeds Controlled tables	For the control of weeds listed in "Weeds Controlled" prior to sowing of any crop.
Domestic areas, Commercial and Industrial areas, Public Service areas, Rights of Way		7 mL per litre of water	*Ensure weeds are actively growing at time of application. *Complete and uniform coverage is necessary to ensure the best results. *Symptoms may take 3 - 21 days to appear. *NO residual control is provided.
Forestry situations		See Weeds Controlled tables	The product may be used: 1. In site preparation before planting. 2. Before establishment of nurseries. 3. Amongst established trees by using selective wiper equipment, directed or shielded spray. The product must NOT contact foliage or green bark of desirable trees. The wiper should not contact any part of the tree.
HORTICULTURAL CROPS Avocado, bananas, blueberries, citrus fruits, custard apples, duboisia, figs (dessert), guava, kiwifruit, litchi, mango, monstera, nuts (almond, pecan, macadamia, pistachio, walnut), olives, paw paw, persimmon, pome fruit, stone fruit, raspberries, tea, vineyards.		See Weeds Controlled Tables	The product can be used as a shielded or directed spray, or using Wiper equipment. DO NOT apply near trees or vines less than 3 years old unless they are adequately protected from spray and spray drift. DO NOT allow spray or spray drift to contact bark, leaves wounds or any other plants parts as severe injury may occur. Tea – Apply a maximum of 2.65 L/ha by a shielded spray or a directed off centre nozzle or 330 mL/100 L by directed handgun or knapsack to avoid injury to crop.
Pasture		See Weeds Controlled Tables	The product may be used by the following methods: *Spot application – To remove weeds by spot application within a pasture. This product is non-selective and may damage or kill any plant in the sprayed area. To prevent seedling re-establishment pasture improvement and/or re-treatment may be necessary. *Boom application – This product may be used to suppress or kill existing pasture prior to reseeding or establishment of other crops. *Selective application – see Wiper equipment under General Instructions.
Peanuts, cotton, soybeans & sugarcane (USING SELECTIVE APPLICATION EQUIPMENT ONLY) Qld, NSW ONLY		See Weeds Controlled Tables	WIPER EQUIPMENT Apply to the weeds growing between the rows or to weeds growing at least 15 cm above the crop. DO NOT allow the herbicide to contact the crop or to drip from the applicator as serious crop injury may occur. SHIELDED SPRAYERS (Cotton only) Apply to the weeds growing between the rows using a shielded sprayer. DO NOT apply unless the crop is at least 20 cm high. Do not allow herbicide or drift to contact crop.

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

WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED