

Product Name: SHARPEN HERBICIDE
APVMA Approval No: 62853 / 121560



Label Name:	SHARPEN HERBICIDE
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Signal Headings:	CAUTION KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	700 g/kg SAFLUFENACIL
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Mode of Action:	GROUP G HERBICIDE
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Statement of Claims:	For the control of a range of broadleaf weeds prior to establishment of crops and forestry plantations, fallows, established citrus, pome and almond orchards, and around commercial, industrial, and agricultural buildings and yards, on established lucerne crops, in rice, harvest-aid application in pulse crops, and late application in cereals; as per the DIRECTIONS FOR USE table.
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Net Contents:	250g 1kg 5kg 10kg 20kg
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Restrains:	This section contains file attachment.
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Directions for Use:	This section contains file attachment.
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Other Limitations:	
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Withholding Periods:	<p>HARVEST PULSES (including Soybean): DO NOT HARVEST GRAIN FOR 7 DAYS AFTER APPLICATION WHEAT, BARLEY, TRITICALE, RICE: NOT REQUIRED WHEN USED AS DIRECTED OTHER CROPS: NOT REQUIRED FOR SHARPEN HERBICIDE WHEN USED AS DIRECTED HOWEVER, REFER ALSO TO THE WITHHOLDING PERIOD OF PRODUCT/ S MIXED WITH SHARPEN HERBICIDE</p> <p>GRAZING PULSES (including Soybean): DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 7 DAYS AFTER APPLICATION WHEAT, BARLEY, TRITICALE: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION. FALLOW GRAZING: DO NOT GRAZE FOR 14 DAYS AFTER APPLICATION LUCERNE: DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 4 WEEKS AFTER APPLICATION. RICE: DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 8 WEEKS AFTER APPLICATION. OTHER CROPS: DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 5 WEEKS AFTER APPLICATION</p>
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Trade Advice:	<p>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, the Export Slaughter Interval is observed before stock are sold or slaughtered.</p> <p>EXPORT SLAUGHTER INTERVAL (ESI) - 30 DAYS Livestock that has grazed on or been fed treated forage, fodder, stubble or fallow should be placed on clean feed for 30 days prior to export slaughter. This ESI requirement must be declared on any Commodity Vendor Declaration accompanying traded fodder.</p> <p>Growers should note that suitable Maximum Residue Limits (MRLs) or import tolerances may not exist in all export markets for crops treated with Sharpen Herbicide. Additionally, some export markets have established MRLs different to those in Australia. Please check with your peak industry body or BASF Australia Ltd for the latest information on MRLs and import tolerances before using Sharpen Herbicide.</p>
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General Instructions:	This section contains file attachment.
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Resistance Warning:	<p>GROUP G HERBICIDE SHARPEN Herbicide is a member of the pyrimidindiones group of herbicides. Its mode of action is through a process of membrane disruption, which is initiated by the inhibition of the enzyme protoporphyrinogen oxidase. This inhibition interferes with the chlorophyll biosynthetic pathway. For weed resistance management SHARPEN Herbicide is a Group G herbicide. Some naturally occurring weed biotypes resistant to SHARPEN Herbicide and other Group G herbicides may exist through normal genetic variability in any weed population and increase if these herbicides are used repeatedly. These resistant weeds will not be controlled by SHARPEN Herbicide or other Group G herbicides.</p>
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Since the occurrence of resistant weeds is difficult to detect prior to use, BASF Australia Limited accepts no liability for any losses that may result from the failure of SHARPEN Herbicide or other Group G herbicides.

Precautions:

RE-ENTRY

Do not enter treated areas until spray has dried. If prior entry is necessary wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and chemical resistant gloves. Clothing must be laundered after each day's use.

Protections:

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

Very toxic to aquatic life. DO NOT contaminate wetlands or watercourses with this product or used containers.

Storage and Disposal:

STORAGE

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

DISPOSAL

Triple 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 deliver empty packaging 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.

Safety Directions:

May irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container, mixing and loading and preparing spray, wear cotton overalls buttoned to the neck and wrist and elbow length chemical resistant gloves. Wash hands after use. After each days use wash gloves and contaminated clothing.

First Aid Instructions:

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

First Aid Warnings:

ADDITIONAL USER SAFETY INFORMATION

WARNING: DO NOT use if pregnant.

RESTRAINT

DO NOT apply tank mix with paraquat by aircraft
DO NOT apply tank mix with diquat by fixed wing aircraft
DO NOT apply after the 3 leaf stage in rice (BBCH 13)

SPRAY DRIFT RESTRAINTS

FALLOW, CEREAL (except RICE) AND PULSES

Specific definitions for terms used in this section of the label can be found at apvma.gov.au/spraydrift.

DO NOT allow bystanders to come into contact with the spray cloud.

DO NOT apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the buffer zone table below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

DO NOT apply unless the wind speed is between 3 and 20 kilometres per hour at the application site during the time of application.

DO NOT apply if there are hazardous surface temperature inversion conditions present at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

DO NOT apply by a boom sprayer unless the following requirements are met:

- spray droplets not smaller than a COARSE spray droplet size category
- **minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for boom sprayers') are observed.**

Buffer zones for boom sprayers

Buffer zones for boom sprayers						
Application rate	Boom height above the target canopy	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
Up to 34 g/ha Sharpen Herbicide	0.5 m or lower	0 metres	0 metres	0 metres	10 metres	0 metres
	1.0 m or lower	0 metres	0 metres	0 metres	35 metres	15 metres
Tank mix with glyphosate	0.5 m or lower	0 metres	0 metres	0 metres	30 metres	0 metres
	1.0 m or lower	0 metres	0 metres	0 metres	80 metres	15 metres
Tank mix with paraquat	0.5 m or lower	0 metres	0 metres	0 metres	30 metres	0 metres
	1.0 m or lower	0 metres	0 metres	0 metres	85 metres	15 metres
Tank mix with diquat	0.5 m or lower	0 metres	0 metres	0 metres	120 metres	0 metres

DO NOT apply by aircraft unless the following requirements are met:

- Spray droplets are not smaller than a COARSE spray droplet size category
- For maximum release height above the target canopy of 3 metres or 25 per cent of wingspan or 25 per cent of rotor diameter, whichever is the greatest, minimum distances between the application site and **downwind sensitive areas are observed (see the following table titled 'Buffer zones for aircraft')**

Buffer zones for aircraft

Buffer zones for aircraft sprayers						
Application rate	Type of aircraft	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
Up to 34 g/ha Sharpen Herbicide	Fixed-wing	0 metres	0 metres	0 metres	120 metres	110 metres
	Helicopter	0 metres	10 metres	0 metres	85 metres	70 metres
Tank mix with glyphosate	Fixed-wing	0 metres	15 metres	0 metres	275 metres	110 metres
	Helicopter	0 metres	20 metres	0 metres	180 metres	70 metres
Tank mix with diquat	Helicopter	0 metres	10 metres	0 metres	675 metres	70 metres

RICE only – GROUND APPLICATION VIA SCWIIRT

DO NOT apply by Boom Sprayer unless the following conditions are observed:

- a minimum droplet size of ULTRA COARSE
- the release height is not greater than 0.5 metres above the ground
- the wind speed is not greater than 20 km/hr
- the nearest downwind water body must be at least 15 cm deep
- minimum distances between the application site and downwind sensitive areas that appear in the 'Mandatory buffer zones' section of the table below

Buffer zones for boom sprayers						
Application rate	Boom height above the target canopy	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
Up to 430 g/ha Sharpen Herbicide	0.5 m or lower	0 metres	0 metres	0 metres	35 metres	20 metres

RICE only – AERIAL APPLICATION (HELICOPTER) VIA SCWIIRT

DO NOT apply by helicopter unless the following conditions are observed:

- a minimum droplet size of SCWIIRT
- the release height is not greater than 2 metres above the ground
- the wind speed is not greater than 20 km/hr
- the nearest downwind water body must be at least 15 cm deep
- minimum distances between the application site and downwind sensitive areas that appear in the 'Mandatory buffer zones' section of the table below

Buffer zones for aircraft sprayers						
Application rate	Type of aircraft	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
Up to 430 g/ha Sharpen Herbicide	Helicopter	0 metres	0 metres	0 metres	40 metres	20 metres

RICE only – AERIAL APPLICATION (FIXED WING) VIA SCWIIRT

DO NOT apply by Fixed Wing aircraft unless the following conditions are observed:

- a minimum droplet size of VERY COARSE
- the release height is not greater than 3 metres above the ground
- the wind speed is not greater than 20 km/hr
- the nearest downwind water body must be at least 15 cm deep-

the minimum distances between the application

site and downwind sensitive areas that appear in the 'Mandatory buffer zones' section of the table below .

Buffer zones for aircraft sprayers						
Application rate	Type of aircraft	Bystander areas	Natural aquatic areas	Pollinator areas	Vegetation areas	Livestock areas
Up to 430 g/ha Sharpen Herbicide	Fixed-wing	0 metres	20 metres	0 metres	375 metres	575 metres

FALLOW, FORESTRY, COMMERCIAL AND INDUSTRIAL, PUBLIC SERVICE AREAS and AROUND BUILDINGS AND YARDS.

SITUATION	WEEDS	RATE	CRITICAL COMMENTS
<p>Ground application only</p> <p>Prior to sowing the following broadacre crops:</p> <p>Cereals</p> <p>-Barley</p> <p>-Oats</p> <p>-Wheat</p> <p>Pulses</p> <p>-Chickpeas</p> <p>-Faba beans</p> <p>-Field peas</p> <p>-Lentils</p> <p>-Lupins</p> <p>-Cowpeas</p> <p>Legumes</p> <p>-Sub clover</p> <p>Sorghum</p> <p>Soybeans</p>	For the control of weeds listed in Table A	17-26 g/ha plus 1% Hasten or high quality MSO	<p>DO NOT apply post-sowing pre-emergent</p> <p>ALWAYS apply SHARPEN Herbicide with 1% v/v Hasten Spray adjuvant or high quality methylated seed oil (MSO).</p> <p>Use the lower rates on younger and smaller (up to six leaf) plants or plants growing under good conditions and the higher rates on older plants (up to 10 leaves) or plants growing under less optimum conditions. For marshmallow, Bladder ketmia, volunteer canola and volunteer cotton use lower rates for plants up to 4 leaf and higher rates when targeting weeds up to maximum of 6 leaves.</p>
	For the control of weeds listed in Table B	26-34 g/ha Plus 1% Hasten or high quality MSO	<p>The following rates of SHARPEN Herbicide are recommended for volunteer cotton control: 17g/ha from cotyledon up to 4 leaf, 26g/ha from cotyledon up to 6 leaf.</p> <p>To ensure uptake of SHARPEN Herbicide, DO NOT sow crops for at least 1 hour after application. Crop tolerance to SHARPEN Herbicide by the IBS sowing method is very good and is maximised if the seeder is fitted with knife points and press wheels to remove treated soil from above the seed.</p> <p>Sow crops with a seeder that will move treated soil away from crop row. This is particularly important with lentils and faba beans, cowpeas, sorghum and soybeans. Use of seeders, or planting under conditions that do not move treated soil from the crop row may increase the level of early crop damage. Also be careful when applying SHARPEN to fields just prior to sowing that will be soon after irrigated as soil water may move herbicide into crop row resulting in injury.</p> <p>Refer to the plant-back interval table on this label and also refer to the appropriate companion product label, in case a longer re-crop sowing period is required.</p>
<p>Ground application only</p> <p>To assist in weed control in Commercial, Industrial and Public Service areas, around Agricultural buildings, yards</p>			
<p>Ground and aerial application</p> <p>Prior to starting a fallow, fallow maintenance and prior to establishment of Forestry Plantations</p>	Fleabane (<i>Conyza spp.</i>) 1-6 leaf	17-34 g/ha plus 1% Hasten or high quality MSO	<p>For control of Fleabane use the lower rates for plants up to 4 leaf and the higher rates when targeting weeds up to maximum of 6 leaves. For plants greater than six leaf to bolting stage efficacy of SHARPEN Herbicide may be reduced and regrowth may occur.</p> <p>Fleabane can germinate in all year round and it is important to establish size and age (check tap root as an indication) to ensure control. Fleabane that appears small may in fact be older and have an established tap root and may not be completely controlled.</p> <p>Note: For suppression of fleabane in the rosette stage (6-30 leaf) before bolting use the 26-34g rate.</p>

	<p>For the control of broadleaf and grass weeds listed in Table A and B as well as:</p> <p>Amsinckia (<i>Amsinckia spp.</i>) Annual ryegrass (<i>Lolium spp.</i>) Barley grass (<i>Hordium spp.</i>) Brome grass (<i>Bromus spp.</i>) Charlock (<i>Sinapis arvensis</i>) Cowvine/peachvine (<i>Ipomoea lonchophylla</i>) Indian hedge mustard (<i>Sisymbrium orientale</i>) Kochia (<i>Kochia scoparia</i>) Penny cress (<i>Thlaspi arvense</i>) Prickly lettuce (<i>Lactuca serriola</i>) Silver grass (<i>Vulpia spp.</i>) Snoutbean (<i>Rhynchosia minima</i>) Volunteer/wild oat (<i>Avena spp.</i>)</p>	<p>17-34 g/ha plus recommended label rate of glyphosate herbicide plus 1% Hasten or high quality MSO</p>	<p>Refer to Critical Comments above and in addition:</p> <p>Weed growth stage should be 2 to 10 leaf.</p> <p>Reduction of glyphosate activity on summer grasses may occur from the tank mix, which may result in reduced control of certain grass weeds. If summer grasses, particularly barnyard and liverseed grasses are present and their control is important, it is recommended that the highest labeled rate of glyphosate be used for the use situation encountered.</p> <p>If grass weeds recover, a follow up application of a knockdown herbicide with another mode of action may be required. Refer also to the product label for the knockdown herbicide used.</p> <p>Use the lower rates on younger plants or plants growing under good conditions and the higher rates on older plants or plants growing under less optimum conditions.</p> <p>Refer to the plant-back interval table on this label and also refer to the appropriate companion product label, in case a longer re-crop sowing period is required.</p>
<p>Ground application only</p> <p>Prior to sowing crops and for fallow maintenance</p>	<p>For the control of broadleaf and grass weeds listed in Weed Table A as well as:</p> <p>Annual ryegrass (<i>Lolium spp.</i>) Brome grass (<i>Bromus spp.</i>) Chickweed (<i>Stellaria spp.</i>) Silver grass (<i>Vulpia spp.</i>)</p>	<p>17-26g/ha plus recommended label rate of paraquat herbicide plus 1% Hasten or high quality MSO</p>	<p>Refer to Critical Comments above and in addition:</p> <p>Use of SHARPEN Herbicide with paraquat herbicide may increase the speed at which broadleaf and grass weeds develop visible symptoms and improve control of a range of grass and broadleaf weeds (compared to results achieved with paraquat applied alone).</p> <p>Apply only as a tank mix with recommended rates of herbicide containing paraquat. Ensure to observe and understand all restraints, rates, safety directions, first aid instructions and general instructions on the paraquat product label.</p> <p>Hasten at 1% v/v must be added when applying SHARPEN Herbicide with paraquat herbicides.</p>

LEGUME/PULSE CROPS/WHEAT, BARLEY, TRITICALE

CROP	TARGET	RATE	CRITICAL COMMENTS
<p>Ground application and aerial application with glyphosate only</p> <p>Prior to harvest of: Field Pea, Faba/Broad Bean, Chickpea, Lentil, Lupin</p>	<p>Harvest-aid to avoid uneven maturity, improve speed of maturity, reduce broadleaf weed biomass and increase harvest efficiency.</p>	<p>34 g/ha</p> <p>plus</p> <p>370-970 g ai/h glyphosate or 100-200 g ai/ha paraquat</p> <p>plus</p> <p>1 % Hasten or high quality MSO</p>	<p>ALWAYS apply SHARPEN Herbicide with 1% v/v Hasten Spray adjuvant or high quality methylated seed oil (MSO).</p> <p>Apply at crop maturity at least 7 days before harvest as per growth stage timings described below. Early applications than described below may result in grain yield penalties.</p> <p>Desiccation timing: Faba bean: Hilum black in the pods at the top of the canopy (30-80% of pods ripe and dark) Field pea: 30% seed moisture or when lower 75% of pods are brown with firm seeds and leathery pods Chickpea: 80-85 % of pods within crop have turned yellow-brown Lentil: just after crop starts to yellow (or senesce) Narrow leaf lupin: at 80% leaf drop. To ensure minimal risk to grain quality, check the seed maturity before desiccation. Lupin crops have been found to suffer substantial yield losses if the crop has not reached appropriate physiological maturity at or before the timing of application. Crops should be checked thoroughly before desiccation for any late maturing areas likely to be impacted by application</p> <p>Pulse desiccation success can rely on seasonal conditions, especially in higher rainfall areas or after wet Springs where uneven pod development can occur on plants due to prolonged flowering. Application to immature pods is likely to result in grain yield penalties. Apply SHARPEN to direct harvested lupin, application prior to windrowing will result in severe loss of grain yield.</p> <p>In order to guarantee good coverage it is recommended to apply SHARPEN at minimum 100 L/ha volume.</p> <p>SHARPEN may have a negative effect on lentil germination. Do not use SHARPEN on lentil crops for seed production.</p>
<p>Ground and aerial application</p> <p>Prior to harvest of: Mung bean, Soybean</p>	<p>Harvest-aid to avoid uneven maturity, improve speed of maturity, reduce broadleaf weed biomass and increase harvest efficiency.</p>	<p>34 g/ha</p> <p>plus</p> <p>370-970 g ai/h glyphosate or 400-600 g ai/ha diquat</p> <p>plus</p> <p>1 % Hasten or high quality MSO</p>	<p>ALWAYS apply SHARPEN Herbicide with 1% v/v Hasten Spray adjuvant or high quality methylated seed oil (MSO).</p> <p>Apply at crop maturity at least 7 days before harvest as per growth stage timings described below. Early applications than described below may result in grain yield penalties.</p> <p>Desiccation timing: Mung bean: Apply crops when majority of pods are physiologically mature: where 90% of the pods have turned either yellow or black Soybean: apply to mature crops when pods are yellow/brown and very late leaf fall (85-90%)</p> <p>In order to guarantee good coverage it is recommended to apply SHARPEN at minimum 100 L/ha volume.</p>

<p>Ground application only</p> <p>Late application in Wheat, Barley and Triticale</p>	<p>Fleabane (<i>Conyza bonariensis</i>), Indian hedge mustard (<i>Sisymbrium orientale</i>), Sowthistle/Milk thistle (<i>Sonchus oleraceus</i>), Prickly lettuce (<i>Lactuca serriola</i>), Turnip weed (<i>Rapistrum rugosum</i>), Wild gooseberry (<i>Physalis minima</i>), Wild Radish (<i>Raphanus raphanistrum</i>)</p> <p>– for the reduction of weed seed set and viability of weed seeds</p>	<p>34 g/ha plus 1 % Hasten or high quality MSO</p>	<p>ALWAYS apply SHARPEN with 1% v/v Hasten Spray adjuvant or high quality methylated seed oil (MSO)</p> <p>DO NOT apply before growth stage Z71 (BBCH71) – watery ripe where first grains have reached half their final size. Apply at least 14 days prior to harvest. DO NOT apply after BBCH 83 (early dough).</p> <p>SHARPEN can be applied from watery ripe stage (Z71 / BBCH 71). Applications made to an earlier growth stage may results in yield penalties.</p> <p>Application should be made as soon as the crop reaches the watery ripe (Z71) maturity stage to maximise reduction of weed seed set and seed viability. Weeds will be desiccated however complete control may not occur and some regrowth may occur however significant reductions in seed set will be achieved.</p> <p>Following the application of SHARPEN minor scaring on wheat stems and grain heads may be visible but have been shown not to cause yield or quality reductions.</p> <p>In order to guarantee good coverage it is recommended to apply SHARPEN at minimum 100 L/ha volume.</p> <p>SHARPEN may have a negative effect on triticale germination.</p>
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LUCERNE

CROP	WEEDS	RATE	CRITICAL COMMENTS
Ground application only Lucerne (Established Crops – at least 12 months old)	For the control of weeds listed in Table A	17-26 g/ha plus 1% Hasten or high quality MSO	ALWAYS apply SHARPEN Herbicide with 1% v/v Hasten Spray adjuvant or high quality methylated seed oil (MSO). Use the lower rates on younger and smaller (up to six leaf) weeds or weeds growing under good conditions and the higher rates on older weeds (up to 10 leaves) or weeds growing under less optimum conditions. For marshmallow, Bladder ketmia use lower rates for plants up to 4 leaf and higher rates when targeting weeds up to maximum of 6 leaves. For khaki weed, use the lower rate for control of young weeds and the higher rate for suppression of older weeds. Sharpen will control subterreanean clover in lucerne.
	For the control of weeds listed in Table B	26-34 g/ha Plus 1% Hasten or high quality MSO	In order to increase spray coverage and consequently improve weed control is recommended to apply SHARPEN following grazing or hay cut. Crop damage will be visible as soon as few days following the application of SHARPEN. The lucerne crop fully recovers by 6 to 10 weeks after the application.
	Fleabane (<i>Conyza spp.</i>) 1-6 leaf Note: For suppression of fleabane in the rosette stage (6-30 leaf) before bolting use the 26-34g rate	17-34 g/ha plus 1% Hasten or high quality MSO	For control of Fleabane use the lower rates for plants up to 4 leaf and the higher rates when targeting weeds up to maximum of 6 leaves. For plants greater than six leaf to bolting stage efficacy of SHARPEN Herbicide may be reduced and regrowth may occur. Fleabane can germinate in all year round and it is important to establish size and age (check tap root as an indication) to ensure control. Fleabane that appears small may in fact be older and have an established tap root and may not be completely controlled.
	For the control of broadleaf and grass weeds listed in Weed Table A as well as: Annual ryegrass (<i>Lolium spp.</i>) Brome grass (<i>Bromus spp.</i>) Chickweed (<i>Stellaria spp.</i>) Silver grass (<i>Vulpia spp.</i>)	17-26g/ha plus recommended label rate of paraquat herbicide plus 1 % Hasten or high quality MSO	Refer to Critical Comments above and in addition: Use of SHARPEN Herbicide with paraquat herbicide may increase the speed at which broadleaf and grass weeds develop visible symptoms and improve control of a range of grass and broadleaf weeds (compared to results achieved with paraquat applied alone). Apply only as a tank mix with recommended rates of herbicide containing paraquat. Refer to the appropriate label for weed sizes and follow all label directions. Hasten at 1% v/v must be added when applying SHARPEN Herbicide with paraquat herbicides.

ORCHARD and TREE CROPS

SITUATION	WEEDS	RATE	CRITICAL COMMENTS
Ground application only	See Weed Table A	17-26 g/ha plus 1% Hasten or high quality MSO	For use in established citrus, pome and almond orchards, apply as a directed or shielded spray or using wiper equipment. DO NOT allow wiper surface to contact any part of the tree or plant. DO NOT allow spray or spray drift to contact green bark or stems, canes, laterals, suckers, fresh wounds, foliage or fruit. DO NOT apply as spray near trees less than 3 years old unless they are effectively shielded from spray and spray drift.
Established Citrus, Pome and Almond orchards	See Weed Table B	26-34 g/ha Plus 1% Hasten or high quality MSO	
	Fleabane (<i>Conyza spp.</i>) 1-6 leaf Note: For suppression of fleabane in the rosette stage (6-30 leaf) before bolting use the 26-34g rate	17-34 g/ha plus 1% Hasten or high quality MSO	For control of Fleabane use the lower rates for plants up to 4 leaf and the higher rates when targeting weeds up to maximum of 6 leaves. For plants greater than six leaf to bolting stage efficacy of SHARPEN Herbicide may be reduced and regrowth may occur. Fleabane can germinate in all year round and it is important to establish size and age (check tap root as an indication) to ensure control. Fleabane that appears small may in fact be older and have an established tap root and may not be completely controlled.
	For the control of broadleaf and grass weeds listed in Table A and B as well as: Amsinckia (<i>Amsinckia spp.</i>) Annual ryegrass (<i>Lolium spp.</i>) Barley grass (<i>Hordium spp.</i>) Brome grass (<i>Bromus spp.</i>) Charlock (<i>Sinapis arvensis</i>) Cowvine/peachvine (<i>Ipomoea lonchophylla</i>) Indian hedge mustard (<i>Sisymbrium orientale</i>) Kochia (<i>Kochia scoparia</i>) Penny cress (<i>Thlaspi arvense</i>)	17-34 g/ha plus recommended label rate of glyphosate herbicide plus 1% Hasten or high quality MSO	Refer to Critical Comments above and in addition: Weed growth stage should be 2 to 10 leaf. Reduction of glyphosate activity on summer grasses may occur from the tank mix, which may result in reduced control of certain grass weeds. If grass weeds are present and their control is important, it is recommended that the highest labeled rate of glyphosate be used for the use situation encountered. If grass weeds recover, a follow up application of a knockdown herbicide with another mode of action may be required. Refer also to the product label for the knockdown herbicide used. Use the lower rates on younger plants or plants growing under good conditions and the higher rates on older plants or plants growing under less optimum conditions.

RICE

SITUATION	WEEDS	RATE	CRITICAL COMMENTS
Ground and aerial application Rice (except long grain varieties)	Dirty Dora (<i>Cyperus difformis</i>) Arrowhead (<i>Sagittaria montevidensis</i>) Water plantain (<i>Alisma plantago aquatica</i>) Starfruit (<i>Damasonium minus</i>)	360 to 430 g/ha	<p>DO NOT use on long grain rice varieties as unacceptable crop damage may occur.</p> <p>DO NOT mix with a crop oil as excessive crop damage may occur.</p> <p>Apply to rice at the 2 - 3 leaf stage (BBCH 12-13).</p> <p>DO NOT apply before the 2 leaf stage in rice (BBCH 12).</p> <p>Apply to permanent water only via SCWIIRT by tractor, 4-wheel motor bike, fixed wing aircraft or helicopter.</p> <p>Treated water must not be released into district drains for 28 days after application.</p> <p>Use the lower rates on younger weeds or weeds growing under good conditions and the higher rates on older weeds or weeds growing under less optimum conditions.</p> <p>Under very cold conditions DO NOT apply permanent water too early as crop may be drowned. A proportion of the second leaf must show above the water.</p> <p>Water depth at application should be sufficient to enable distribution of product throughout the bay and to ensure full water coverage of soil is maintained for a lock-up period of 5 days. Ensure water inlets are closed securely to prevent water movement. Bays may be topped up for normal water management after the 5-day lock-up.</p> <p>Water coverage should be maintained to ensure satisfactory weed control. Reduced weed control may occur where soil is exposed. Cold and/or muddy water may also reduce efficacy.</p> <p>DO NOT use SHARPEN HERBICIDE if excess rice and weed vegetation will impede re-distribution of SHARPEN HERBICIDE in water resulting in inadequate control.</p> <p>Under certain conditions minor and transient rice injury may occur. Plants will recover and yield will not be affected.</p>

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

WEED TABLES

Weed Table A	
Amaranth	<i>Amaranthus spp.</i>
Australian crasula	<i>Crassula sieberiana</i>
Bindweed/climbing buckwheat	<i>Fallopia convolvulus</i>
Blackberry nightshade	<i>Solanum nigrum</i>
Bladder ketmia	<i>Hibiscus trionum</i>
Caltrop	<i>Tribulus terrestris</i>
Capeweed	<i>Arctotheca calendula</i>
Common Catsear	<i>Hypochaeris radicata</i>
Crassula/stonecrop	<i>Crassula colorata</i>
Fat Hen	<i>Chenopodium album</i>
Heliotrop	<i>Heliotropium europaeum</i>
Marshmallow/Small flowered mallow	<i>Malva parviflora</i>
Medics	<i>Medicago spp.</i>
Muskweed	<i>Myagrum perfoliatum</i>
Patersons curse	<i>Echium plantagineum</i>
Prickly lettuce	<i>Lactuca serriola</i>
Scarlet Pimpernel	<i>Anagallis arvensis</i>
Slender thistle	<i>Carduus pycnocephalus</i>
Sowthistle	<i>Sonchus oleraceus</i>
Spiny emex	<i>Emex australis</i>
Stinging nettle	<i>Urtica dioica</i>
Volunteer canola max 4 leaf including Roundup* Ready® varieties	<i>Brassica napus</i>
Volunteer cotton seedlings including Roundup* Ready Flex® varieties	<i>Gossypium spp.</i>
Volunteer pulse crops including lupin and chickpea	<i>Lupinus angustifolius</i> <i>Cicer arietinum</i>
Wild turnip/turnip weed	<i>Rapistrum rugosum</i>

Weed Table B	
Khaki Weed	<i>Alternanthera repens</i>
Shepherd's purse	<i>Capsella bursa pastoris</i>
Storksbill	<i>Erodium spp.</i>
Wild radish	<i>Raphanus raphanistrum</i>
Wireweed	<i>Polygonium aviculare</i>

GENERAL INSTRUCTIONS

SHARPEN Herbicide is a fast acting contact herbicide and aids in control of weeds through a process of membrane disruption. The foliar uptake of SHARPEN Herbicide is rapid and plant desiccation can occur within 4 days of application. Application of SHARPEN Herbicide should target small actively growing weeds. Subsequent germinations will not be controlled.

SYMPTOMS

SHARPEN Herbicide is rapidly absorbed through the foliage of plants. Within a few hours following application, the foliage of susceptible weeds will show signs of desiccation, and in subsequent days necrosis and death of the plant.

MIXING

Add half the required volume of water to spray tank and start agitation. Add the measured amount of SHARPEN Herbicide and allow product to disperse. Add any partner SC or WG herbicide next if it should be added, before an EC. Add balance of water to tank and add Hasten Spray Adjuvant or a high quality methylated seed oil (mso) at 1%. Maintain good agitation at all times until spraying is completed.

TIMING

For uses prior to establishing crops or starting a fallow, application should be made to small, actively growing weeds up to 10 leaf stage (Note: Fleabanes, small flowered mallow, bladder ketmia and volunteer cotton, maximum 6 leaf; volunteer canola, maximum

4 leaf). As SHARPEN Herbicide is a contact herbicide, best control is achieved when weeds are exposed and are not shielded by other weeds and/or stubble.

Use patterns for seed set reduction in winter cereals should be made as soon after the required growth stage of the cereal crop is reached for maximum opportunity to reduce weed seed production.

For use as a desiccant in pulses, check the seed maturity of the crop before desiccation to ensure minimal risk to grain quality. Crops should be checked thoroughly before desiccation for any late maturing crop areas likely to be impacted by application

APPLICATION - All crops except rice

The best application conditions are when soil is moist, weather fine and rain unlikely within one hour or as specified for the knockdown herbicide. SHARPEN Herbicide should always be used with Hasten Spray Adjuvant or a high-quality methylated seed oil (mso). SHARPEN Herbicide is rainfast one hour after application. Burndown activity may be reduced if rain or irrigation occurs within one hour of application. Extremes in environmental conditions eg. temperature and moisture, soil conditions and/or cultural practices may affect the activity of SHARPEN Herbicide.

When used for seed set reduction in winter cereals, weeds will be desiccated however complete control may not occur and some regrowth may occur especially if rainfall is received after application.

SHARPEN Herbicide is a light activated herbicide and under intense light, warm and moist conditions, herbicide symptoms may be accelerated. Under very dry conditions, the expression of herbicidal symptoms is delayed and weeds hardened off by drought are less susceptible to SHARPEN Herbicide.

Stubble loads will interfere with coverage and could affect the performance of SHARPEN Herbicide. Reduced performance may also occur where weeds are covered with dust or silt.

Ground sprayers

Apply SHARPEN Herbicide as a broadcast application using a conventional boom sprayer with either mechanical or by-pass agitation.

Aerial application

SHARPEN Herbicide is a contact foliar-absorbed herbicide. It is important to apply in sufficient water to achieve thorough coverage of target foliage or weeds.

Nozzles

Spray equipment should be properly calibrated to ensure correct and uniform application. Use a spray volume of minimum 80 to 250 litres per hectare. Increase water volume if weed infestation is dense and/or tall. To minimise off-target drift use the lowest pressure and boom height which provides uniform coverage. Use only COARSE spray quality or greater.

APPLICATION - Rice only

SHARPEN Herbicide should be dripped directly into the bay by SCWIIRT rig (min. 5 L water/ha), e.g. by tractor, 4-wheel motorbike or helicopter.

Aerial application

SHARPEN Herbicide may be applied using a fixed wing SCWIIRT application using a Bickley boom that conforms to the following specifications:

- Two nozzles mounted on droppers, one either side with droppers positioned just outside the first boom hanger (28 – 35% of wingspan).
- Dropper length approximately 40-60 cm or lower below the trailing edge of the wing.
- Solid stream nozzles with bore sufficient to apply desired volume at a pressure of 240 to 310 kPa (35 to 45 psi).
- Nozzles orientated rearwards and parallel to the airstream.
- **Check valves (Spraying Systems diaphragm type 12328, ¾ inch) located behind nozzle to eliminate “trailing” after shut off.**

Spray at a maximum wheel height of 2 m above the water surface and at a maximum swath width of 25 m. Ensure a minimum water depth of 10 cm on the high side of bays prior to treatment. A minimum application volume of 20 L/ha is recommended for Bickley boom application.

Before applying SHARPEN Herbicide to contoured bays evaluate the layout of the bays to be treated and select the optimum flight pattern to ensure all bays receive the recommended rate of SHARPEN Herbicide.

SCWIIRT application by helicopter

Dilute the required amount of SHARPEN Herbicide in water (total volume of 5 to 10 litres/ha) and apply to flooded bay at a distance of 20 to 30 metres between runs. Position dripper nozzles no more than 50cm from the water surface and maintain pressure at or below 200kPa (30 PSI or 2 bar). Control of advanced weeds by SCWIIRT may not be satisfactory where excess vegetation impedes re-distribution of SHARPEN Herbicide in water.

COMPATIBILITY

All crops except rice

SHARPEN Herbicide is compatible with most glyphosate products, including Roundup*, Roundup* Ready Herbicide with Plantshield*, Roundup* PowerMAX, Gladiator* Optimax, Nufarm Weedmaster* DST and Nufarm Crucial* Advanced Technology Herbicide.

SHARPEN Herbicide is also compatible with herbicides commonly used with knockdown herbicides including, Amicide* Advance 700, Amicide* 625, Nufarm Surpass* 475, Estericide* Xtra 680, Nugran* (triasulfuron), Rifle* 440, Stomp® Xtra, Triflur XCEL* (trifluralin), Spray-Seed* 250 Herbicide, Gramoxone* 250 and Gramoxone* Pro,.

Other compatible products include Revolver*, Nuquat*, Alliance*, Nufarm Amitrole T*, Nu-trazine* 600, Nu-trazine* 900DF, Reglone* Non-Residual Herbicide, Verdict* 520 EC and Spinnaker® 700 WDG Herbicide.

As formulations of other manufacturer's products are beyond the control of BASF, and the quality of water may vary with location, all mixtures should be tested prior to mixing commercial quantities.

Rice

SHARPEN is compatible with molinate and thiobencarb (Saturn*). DO NOT use in a tank mix with clomazone as the solution may precipitate and result in reduced efficacy. DO NOT mix with a crop oil as excessive crop damage may occur.

CROP PLANT BACK & ROTATION RECOMMENDATIONS

SHARPEN Herbicide does not provide long-term residual activity; however, certain crops show sensitivity to soil residues. Refer to the following table for application-to-sow intervals applicable to the maximum label rate.

All uses except rice

1 hour	1 day	6 weeks	16 weeks
Barley Wheat Oats Corn Chickpea Faba bean Field pea Lentil Lupin Sub clover	Cowpea Sorghum Soybean	Cotton Canola	Sunflower Other crops

Following use in rice

4 months	12 months
Barley, Wheat, Oats, Corn Chickpea, Faba bean, Field pea, Lentil, Lupin	All other crops

Check the label of any product mixed with SHARPEN Herbicide, to determine any plant back periods or restrictions on use.