READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Dow AgroSciences

Starane™ Advanced

Herbicide

ACTIVE CONSTITUENT: 333 g/L FLUROXYPYR present as meptyl ester

GROUP I HERBICIDE

For the control of a wide range of Broadleaf weeds in Fallow, Lucerne, Maize, Millets, Pastures, Poppies, Sorghum, Sugar cane, Sweet corn, Winter cereals.

Also for the control of Woody Weeds in Agricultural Non-Crop Areas, Commercial and Industrial Areas, Forests, Pastures and Rights-of-Way, as specified in the Directions for Use.

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DIRECTIONS FOR USE

RESTRAINTS:

DO NOT apply to plants which may be stressed (not actively growing) due to prolonged periods of extreme cold, moisture stress (waterlogged or drought affected), poor nutrition, presence of disease, or previous herbicide treatment as reduced levels of control may result.

Thorough coverage of both foliage and stems, to the point of runoff, is essential for high volume applications (see GENERAL INSTRUCTIONS; APPLICATION METHODS WOODY WEED SITUATIONS section).

DO NOT spray if rain is likely within one hour.

1. WOODY WEED SITUATIONS

Table A: High Volume Spraying: Dilute product with water.

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

• Legumes present at the time of spraying will be severely damaged.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS (including SOFTWOOD PLANTATIONS), PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /100 L WATER**	**CRITICAL COMMENTS**
Bathurst burr (*Xanthium spinosum*)	Seedlings and young plants up to 40 cm high	45 mL	
Bellyache bush (*Jatropha gossypiifolia*)	Seedlings and young plants up to flowering	300 mL	
Blue heliotrope (*Heliotropium amplexicaule*)	Flowering	600 mL	
Black bindweed (Climbing buckwheat) (*Fallopia convolvulus*)	Seedlings and young plants before flowering	180 mL	
Blackberry nightshade (*Solanum nigrum*)	Seedlings and young plants up to flowering	300 mL	
Bokhara clover (*Melilotus albus*)	Seedlings and young plants up to flowering		
Broad-leaf pepper tree (*Schinus terebinthifolius*)	Mature leaves, fruiting	300 mL	Winter application only. Contact Ecosciences Precinct, Biosecurity Qld, for more information.
Caltrop (Yellow vine) (*Tribulus terrestris*) (*T. micrococcus*)	Seedlings and young plants up to 30 cm diameter		
Cobblers pegs (*Bidens pilosa*)	Up to 15 cm high		
Cockspur thorn (*Maclura cochinchinensis*)	Up to 3 m high		

Table A: High Volume Spraying: Dilute product with water *continued*

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

• Legumes present at the time of spraying will be severely damaged.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS (including SOFTWOOD PLANTATIONS), PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /100 L WATER**	**CRITICAL COMMENTS**
Common sensitive plant (*Mimosa pudica*)	Seedlings and young plants up to flowering	300 mL	Add Uptake™ Spraying Oil (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).
Common sowthistle (*Sonchus oleraceus*)	Seedlings and young plants up to bolting		Add a surfactant (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).
Creeping lantana (*Lantana montevidensis*)	At flowering		
Crofton weed (*Ageratina adenophora*)	Seedlings and young plants up to flowering		
Docks (*Rumex* spp.)	Seedlings and rosettes up to 30 cm high		
Flannel weed (*Sida cordifolia*)			
Giant sensitive tree (*Mimosa pigra*)	Apply from mid to late summer	180 mL	Add Uptake Spraying Oil (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).
Hexham scent (*Melilotus indicus*)	Seedlings and young plants up to flowering	300 mL	Boom spray: Starane™ Advanced at 180 mL/ha + 400 mL/ha of 2,4-D amine (625 g/L).
Hiptage (*Hiptage benghalensis*)	Seedlings plants up to 1.3 m high		
Honey locust (*Gleditsia triacanthos*)	Seedlings and young plants up to 2 m high		
Lantana (*Lantana camara*)	Seedlings and regrowth 0.5 to 1.2 m high		Apply to actively growing plants from October to April. Some regrowth may occur particularly when treating old woody plants with sparse canopies.
	Plants and regrowth 1.2 to 2 m high	600 mL	
Limebush (*Eremocitrus glauca*)	Infestations up to 1.5 m high only		
Madeira vine (*Anredera cordifolia*)	Apply at time of active growth	300 mL	
Milkweed (*Euphorbia heterophylla*)	3 leaf to flowering	600 mL	Repeat applications will be necessary to control subsequent germinations.

Table A: High Volume Spraying: Dilute product with water *continued*

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

• Legumes present at the time of spraying will be severely damaged.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS (including SOFTWOOD PLANTATIONS), PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /100 L WATER**	**CRITICAL COMMENTS**
Mistflower (*Ageratina riparia*)	Seedlings and young plants up to flowering	300 mL	
Mother-of-millions (*Bryophyllum* spp.)	Seedling and young plants before flowering	360 mL	Add a surfactant (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).
Noogoora burr (*Xanthium pungens*)	Seedlings and young plants up to 40 cm high	45 mL	
Ochna (*Ochna serrulate*)	Plants up to 2 m high	600 mL	
Paddy's lucerne (*Sida rhombifolia*)	Active growth		Plants which have been continually slashed or grazed over many seasons may be difficult to control and regrowth may occur.
Prickly acacia (*Vachellia nilotica*)	Seedling and young plants up to 2 m high that are actively growing.	450 mL	Add Uptake Spraying Oil (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section). Consult Tropical Weeds Research Centre, Biosecurity Qld, Charters Towers for specific advice on application.
Scrub nettle (Perennial) (*Urtica incisa*)	Flowering plants up to 1 m high	300 mL	
Siam weed (*Chromolaena odorata*)	Plants up to 2 m high and up to flowering	210 mL	
Sida (*Sida* spp.)	Seedlings and young plants up to flowering	600 mL	
Silverleaf nightshade (*Solanum elaeagnifolium*)	From onset of flowering to early berry-set (usually spring to mid-summer)	300 mL	To ensure maximum effect, delay application until the majority of shoots have emerged. Follow-up treatment of regrowth is critical for best control.
Small flowered mallow (Marshmallow) (*Malva parviflora*)	Seedlings and young plants up to flowering		
Snakeweed (Dark and light blue) (*Stachytarpheta* spp.)	Seedling and young plants before flowering	450 mL	Add Uptake Spraying Oil (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).
St. John's wort (*Hypericum perforatum*)	Flowering to early seed set	300 mL	Late spring to early summer.

Table A: High Volume Spraying: Dilute product with water *continued*

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

• Legumes present at the time of spraying will be severely damaged.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS (including SOFTWOOD PLANTATIONS), PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /100 L WATER**	**CRITICAL COMMENTS**
Stinking passion flower (*Passiflora foetida*)	Established plants and regrowth	270 mL	
Wandering Jew (*Tradescantia albiflora*)	Young plants up to and including flowering	900 mL	Some regrowth will usually occur and will require re-treatment.
Wattles including; *Acacia aulacocarpa* *A. decora* *A. harpophylla* *A. leiocalyx* *A. salicinas*	Seedling plants or regrowth 0.5 to 1.2 m high	300 mL	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.
	Plants or regrowth 1.2 to 2 m high only	600 mL	
White lupin (*Lupinus albus*)	Young plants up to and including flowering	300 mL	
Yellow-flowered devil's claw (*Ibicella lutea*)	Seedlings and young plants up to flowering		

Table B: Aerial Application

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS, PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Giant sensitive tree (*Mimosa pigra*)	Actively growing plants	1.8 L	Add Uptake Spraying Oil at the rate of 1 L/100 L spray mix. Apply to actively growing plants from mid to late summer. Contact the Department of Land Resource Management, NT for further information.

Table C: Basal Bark Application

Dilute product with diesel only.

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS (including SOFTWOOD PLANTATIONS), PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /100 L OF DIESEL**	**CRITICAL COMMENTS**
Broad-leaf pepper tree (*Schinus terebinthifolius*)	Plants up to 5 cm basal diameter	2.1 L	
Calotrope (*Calotropis procera*)	Plants up to 3 m high and 10 cm basal diameter	3 L	Plants should be cut as close to the ground (5 cm) as possible for reliable results.
Chinee apple (*Ziziphus mauritiana*)	Up to 15 cm basal diameter	1.8 L	Treat circumference of stem to a height of 45 cm from the ground. Contact the Department of Agriculture & Fisheries, Qld, for further information.
Chinese celtis (*Celtis sinensis*)	Young plants up to 2 m high and 20 cm basal diameter	2.1 L	Treat stems from ground level to where multi-stemmed trunks branch.
Cockspur thorn (*Maclura cochinchinensis*)	Up to 5 cm basal diameter	1.2 L	
Giant sensitive tree (*Mimosa pigra*)		1 L	Apply during active growth periods.
Honey locust (*Gleditsia triacanthos*)	Plants up to 10 cm basal diameter	900 mL	Treat circumference of stem to a height of 45 cm from the ground. Contact the Department of Agriculture & Fisheries, Qld, for further information.
	Plants 10 to 20 cm basal diameter	1.8 L	
	Plants >20 cm basal diameter	3 L	
Mimosa bush (*Acacia farnesiana*)	Up to 5 cm basal diameter	1.8 L	
Ochna (*Ochna serrulate*)	Plants up to 2 m high and 10 cm basal diameter	2.1 L	

Table C: Basal Bark Application *continued*

Dilute product with diesel only.

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS (including SOFTWOOD PLANTATIONS), PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /100 L OF DIESEL**	**CRITICAL COMMENTS**
Pond apple (*Annona glabra*)	Plants up to 20 cm basal diameter	900 mL	DO NOT apply to trees growing in a body of water. Treat circumference of stem to a height of 50 cm from the ground wetting thoroughly to allow the spray mix to soak through the bark.
Prickly acacia (*Acacia nilotica*)	Up to 10 cm basal diameter		
Siam weed (*Chromolaena odorata*)	Plants up to 2.5 m high and 10 cm basal diameter		
Sisal hemp (*Agave* spp.)	All growth stages	1.8 L	Treat as an overall spray. Contact the Department of Agriculture & Fisheries, Qld, for advice to control large infestations.
		6 mL undiluted product per plant	Lever out centre of plant with crowbar and immediately treat the exposed cut area.

Table D: Cut Stump/Brushcutter Application

Dilute product with diesel only.

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS (including SOFTWOOD PLANTATIONS), PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /100 L OF DIESEL**	**CRITICAL COMMENTS**
Calotrope (*Calotropis procera*)	Plants up to 3 m high and 10 cm basal diameter	3 L	Plants should be cut as close to the ground (5 cm) as possible for reliable results.
Chinee apple (*Ziziphus mauritiana*)	Up to 15 cm basal diameter	1.8 L	Contact the Department of Primary Industries & Fisheries, Qld, for further information.
Giant sensitive tree (*Mimosa pigra*)		1 L	Apply during active growth periods.
Hiptage (*Hiptage benghalensis*)	Plants greater than 1.3 m high	2 L	Plants should be cut as close to the ground (5 cm) as possible for reliable results.
Mimosa bush (*Vachellia farnesiana*)	Up to 5 cm basal diameter	1.8 L	
Prickly acacia (*Vachellia nilotica*)	Up to 10 cm basal diameter	900 mL	
Honey locust (*Gleditsia triacanthos*)	All plants up to and greater than 20 cm basal diameter	3 L	Contact the Department of Agriculture & Fisheries, Qld, for further information.

Table E: Low Volume, High Concentrate Application

Using a drench gun or gas-powered gun.

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

AGRICULTURAL NON-CROP AREAS, COMMERCIAL AND INDUSTRIAL AREAS, FORESTS (including SOFTWOOD PLANTATIONS), PASTURES AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /10 L WATER**	**CRITICAL COMMENTS**
Limebush (*Eremocitrus glauca*)	Isolated bushes up to 1.2 m high only	600 mL	Apply a 50 mL dose per 5 m^2 of bush surface area.
Ochna (*Ochna serrulate*)	Isolated bushes up to 1 m high only	300 mL	
Tree Violet (*Hymenanthera dentata*)	Apply from late flowering to green fruit up to 1.2 m high	600 mL	Apply a 50 mL dose per cubic metre of bush.

Table F: Boom Application
See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

ESTABLISHED GRASS PASTURES			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Blue billygoat weed (*Ageratum houstonianum*) Common sensitive plant (*Mimosa pudica*) Giant sensitive plant (*Mimosa invisa*) Spinyhead sida (*Sida acuta*)	Apply before flowering	900 mL	Add Uptake Spraying Oil at 1 L/ha.
Paddy's lucerne (*Sida rhombifolia*)	Apply to actively growing plants from late spring to late summer	2.4 L or 1.2 L + 1.6 L 2,4-D amine (625 g/L)	
St. John's wort (*Hypericum perforatum*)	Apply from bud to full bloom (usually late Nov to early Jan)	1.8 L	Some regrowth will occur. Treat regrowth the following season for best results. Use at least 200 L water/ha.
Silverleaf nightshade (*Solanum elaeagnifolium*)	From onset of flowering to early berry-set. (usually spring to mid-summer)	450 - 600 mL or 225 mL + 1.2 L - 1.6 L 2,4-D amine (625 g/L)	Add Uptake Spraying Oil at 1 L/ha. To ensure maximum effect, delay application until the majority of shoots have emerged. Follow-up treatment of regrowth is critical for best control.
FORESTRY (SOFTWOOD PLANTATIONS), ROADSIDES, INDUSTRIAL AREAS AND RIGHTS-OF-WAY			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Woody and herbaceous weeds, as above	Pre-plant spray operations in forestry or general broadleaf weed growth	600 mL - 1.8 L	Helicopter (Forestry (softwood plantations only)) or ground base application only. Can be mixed with rates of glyphosate up to 2.9 kg a.i./ha.
	Post-plant spray operations		Ground based directional spraying to the inter-row zone only in forestry.

2. BROADACRE CROPPING SITUATIONS

Table A: Sorghum

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
Apply when secondary roots are present, from 4 fully expanded leaves (15 cm tall) up to boot (also see CRITICAL COMMENTS)	Annual ground cherry (*Physalis angulata*) Wild gooseberry (*Physalis minima*)	2 to 8 leaf up to 15 cm tall	300 mL	**Sorghum:** From 8 leaf to boot stage, use dropper nozzles to prevent herbicide coming in contact with the crop's leaves and the growing point (meristem). ❶ This treatment may be slightly damaging to the crop. To minimise crop damage apply using dropper nozzles **at all crop stages.**
		15 to 30 cm tall	450 mL	
	Apple-of-Peru (*Nicandra physalodes*)	Seedling plants up to 15 cm tall		
	Bathurst burr (*Xanthum spinosum*) Noogoora burr (*Xanthium pungens*)	2 to 8 leaf up to 20 cm tall	300 mL	
		20 to 50 cm tall	450 mL	
	Red pigweed (*Portulaca oleracea*)	Up to 10 cm diameter	300 mL	
		10 to 30 cm diameter	450 mL	
	Sesbania pea (*Sesbania cannabina*)	2 to 6 leaf up to 10 cm tall	900 mL	
	Silverleaf nightshade ❶ (*Solanum elaeagnifolium*)	Full flower to early berry	450 mL + Uptake at 1 L/ha	
	Thornapples (*Datura* spp.)	2 to 8 leaf up to 15 cm tall	450 mL	
	Volunteer sunflower (*Helianthus annuus*)	2 to 5 leaf up to 20 cm tall	600 mL	

Table A: Sorghum *continued*

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
Apply when secondary roots are present, from 4 fully expanded leaves (15 cm tall) up to boot (also see CRITICAL COMMENTS)	*Amaranthus* spp. including; Boggabri weed (*A. mitchellii*) Dwarf amaranth (*A. macrocarpus*) Green amaranth (*A. viridis*) Redshank (*A. cruentus*)	Seedling plants up to 15 cm tall or rosettes up to 15 cm diameter	300 mL + 1.25 L atrazine flowable (600 g/L) or 450 mL + 1.67 L atrazine flowable (600 g/L)	**Use the low rate** (300 mL + 1.25 L) when weeds are small (5-7 cm tall/diameter). **Use the high rate** (450 mL + 1.67 L) when weeds are larger (7-15 cm tall/diameter). Starane Advanced is generally more compatible with **liquid atrazine products.** (See GENERAL INSTRUCTIONS; COMPATIBILITY section). Add a surfactant (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section). **DO NOT** add an oil to mixtures of Starane Advanced and atrazine.
	Anoda weed (*Anoda cristata*)			
	Bladder ketmia (*Hibiscus trionum*)			
	Black pigweed (*Trianthema portulacastrum*)			
	Butterfly pea (*Clitoria laurifolia*)			
	Caltrop (Yellow vine) (*Tribulus terrestris*)			
	Spineless caltrop (*Tribulus micrococcus*)			
	Cowvine (Peach vine) (*Ipomoea lonchophylla*)			
	Hairy wandering Jew (*Commelina benghalensis*)			
	Mintweed (*Salvia reflexa*)			
	Euphorbia davidii	Cotyledons to 4 nodes up to 15 cm	600 mL + 1.67 L atrazine (600 g/L)	
	Starburr (*Acanthospermum hispidum*)	Up to 12 leaf and before flowering	900 mL or 450 mL + 1.67 L atrazine (600 g/L)	
	Volunteer peanuts (*Arachis hypogaea*)	Up to 15 cm diameter	600 mL + 3.75 L atrazine (600 g/L)	

Table B: Maize and Sweet Corn
See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
Apply when secondary roots are present, from 3 fully expanded leaves (10 cm tall) up to just before tasselling. (See CRITICAL COMMENTS)	Annual ground cherry (*Physalis angulata*) Wild gooseberry (*Physalis minima*)	2 to 8 leaf up to 15 cm tall	300 mL	**Maize:** From 6 leaf to just before tasselling, use dropper nozzles to prevent the herbicides coming in contact with the crop's leaves and the growing point (meristem). **Sweet corn:** From 4 leaf to just before tasselling, use dropper nozzles to prevent the herbicide coming in contact with the crop's leaves and the growing point (meristem).
		15 to 30 cm tall	450 mL	
	Apple-of-Peru (*Nicandra physalodes*)	Seedling plants up to 15 cm tall		
	Bathurst burr (*Xanthum spinosum*) Noogoora burr (*Xanthium pungens*)	2 to 8 leaf up to 20 cm tall	300 mL	
		20 to 50 cm tall	450 mL	
	Red pigweed (*Portulaca oleracea*)	Up to 10 cm diameter	300 mL	
		10 to 30 cm diameter	450 mL	
	Sesbania pea (*Sesbania cannabina*)	2 to 6 leaf up to 10 cm tall	900 mL	
	Thornapples (*Datura* spp.)	2 to 8 leaf up to 15 cm tall	450 mL	
	Volunteer sunflower (*Helianthus annuus*)	2 to 5 leaf up to 20 cm tall	600 mL	

Table B: Maize and Sweet Corn *continued*

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
Apply when secondary roots are present, from 3 fully expanded leaves (10 cm tall) up to just before tasselling. (See CRITICAL COMMENTS)	*Amaranthus* spp. including; Boggabri weed (*A. mitchellii*) Dwarf amaranth (*A. macrocarpus*) Green amaranth (*A. viridis*) Redshank (*A. cruentus*)	Seedling plants up to 15 cm tall or rosettes up to 15 cm diameter	300 mL + 1.25 L atrazine flowable (600 g/L) or 450 mL + 1.67 L atrazine flowable (600 g/L)	**Use the low rate** (300 mL + 1.25 L) when weeds are small (5-7 cm tall/diameter). **Use the high rate** (450 mL + 1.67 L) when weeds are larger (7-15 cm tall/diameter). Starane Advanced is generally more compatible with **liquid atrazine products.** (See GENERAL INSTRUCTIONS: COMPATIBILITY section). Add a surfactant (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section). **DO NOT** add an oil to mixtures of Starane Advanced and atrazine.
	Anoda weed (*Anoda cristata*)			
	Bladder ketmia (*Hibiscus trionum*)			
	Black pigweed (*Trianthema portulacastrum*)			
	Caltrop (Yellow vine) (*Tribulus terrestris*)			
	Spineless caltrop (*Tribulus micrococcus*)			
	Cowvine (Peach vine) (*Ipomoea lonchophylla*)			
	Hairy wandering Jew (*Commelina benghalensis*)			
	Mintweed (*Salvia reflexa*)			
	Euphorbia davidii	Cotyledons to 4 nodes up to 15 cm	600 mL + 1.67 L atrazine (600 g/L)	
	Starburr (*Acanthospermum hispidum*)	Up to 12 leaf and before flowering	900 mL or 450 mL + 1.67 L atrazine (600 g/L)	
	Volunteer peanuts (*Arachis hypogaea*)	Up to 15 cm diameter	600 mL + 2.7 L atrazine (600 g/L)	

Table B: Maize and Sweet Corn *continued*

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
Sweet corn (Tas only) 3 to 5 leaf	Blackberry nightshade (*Solanum nigrum*) Volunteer potatoes (*Solanum tuberosum*)	3 to 5 leaf	600 mL	

Table C: Millets

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE/ha	CRITICAL COMMENTS
Spray when secondary roots have developed, usually early to mid-tillering, and not later than before heads start to form at the base of tillers. (See CRITICAL COMMENTS)	Annual ground cherry (*Physalis angulata*) Wild gooseberry (*Physalis minima*)	2 to 8 leaf up to 15 cm tall	300 mL	**Millets:** DO NOT use mixes of Starane Advanced + atrazine on Japanese millet (*Echinochloa esculenta*). Starane Advanced + atrazine can be safely applied to: French millet (*Panicum miliaceum*) Foxtail millet (*Setaria italica var. panorama*)
		15 to 30 cm tall	450 mL	
	Apple-of-Peru (*Nicandra physalodes*)	Seedling plants up to 15 cm tall		
	Bathurst burr (*Xanthum spinosum*) Noogoora burr (*Xanthium pungens*)	2 to 8 leaf up to 20 cm tall	300 mL	
		20 to 50 cm tall	450 mL	
	Red pigweed (*Portulaca oleracea*)	Up to 10 cm diameter	300 mL	
		10 to 30 cm diameter	450 mL	
	Sesbania pea (*Sesbania cannabina*)	2 to 6 leaf up to 10 cm tall	900 mL	
	Thornapples (*Datura* spp.)	2 to 8 leaf up to 15 cm tall	450 mL	
	Volunteer sunflower (*Helianthus annuus*)	2 to 5 leaf up to 20 cm tall	600 mL	

Table C: Millets *continued*

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE/ha	CRITICAL COMMENTS
Spray when secondary roots have developed, usually early to mid-tillering, and not later than before heads start to form at the base of tillers. (See CRITICAL COMMENTS)	*Amaranthus* spp. including; Boggabri weed (*A. mitchellii*) Dwarf amaranth (*A. macrocarpus*) Green amaranth (*A. viridis*) Redshank (*A. cruentus*)	Seedling plants up to 15 cm tall or rosettes up to 15 cm diameter	300 mL + 1.25 L atrazine flowable (600 g/L) or 450 mL + 1.67 L atrazine flowable (600 g/L)	**Use the low rate** (300 mL + 1.25 L) when weeds are small (5-7 cm tall/diameter). **Use the high rate** (450 mL + 1.67 L) when weeds are larger (7-15 cm tall/diameter). Starane Advanced is generally more compatible with **liquid atrazine products.** (See GENERAL INSTRUCTIONS; COMPATIBILITY section) Add a surfactant (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section). **DO NOT** add an oil to mixtures of Starane Advanced and atrazine.
	Anoda weed (*Anoda cristata*)			
	Bladder ketmia (*Hibiscus trionum*)			
	Black pigweed (*Trianthema portulacastrum*)			
	Caltrop (Yellow vine) (*Tribulus terrestris*)			
	Spineless caltrop (*Tribulus micrococcus*)			
	Cowvine (Peach vine) (*Ipomoea lonchophylla*)			
	Hairy wandering Jew (*Commelina benghalensis*)			
	Mintweed (*Salvia reflexa*)			
	Starburr (*Acanthospermum hispidum*)	Up to 12 leaf and before flowering	900 mL or 450 mL + 1.67 L atrazine flowable (600 g/L)	

Table D: Winter Cereals Boom Application
See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

WHEAT, BARLEY, OATS and TRITICALE				
CROP GROWTH STAGE	**WEEDS CONTROLLED**	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Apply from 3 leaf to flag (Zadoks 13 to 39)	Bedstraw (*Galium tricornutum*)	3 to 6 whorl	300 mL + Uptake	Add Uptake Spraying Oil at 500 mL/100 L water.
	Black bindweed (Climbing buckwheat) (*Fallopia convolvulus*)	2 to 4 leaf	300 mL + Uptake ❶	Useful suppression only
		2 to 6 leaf	450 mL or 300 mL + 5 g metsulfuron (600 g/kg) ❶	**Mixtures:** Mixing partners with Starane Advanced may reduce crop selectivity. Apply at crop growth stages according to the mixing partner's recommendation.
	Cleavers (*Galium aparine*)	1 to 3 whorl	600 mL	
	Common sowthistle (*Sonchus oleraceus*)	2 to 5 leaf	600 mL	DO NOT use Starane Advanced + metsulfuron mixtures on oats or durum wheat.
	Deadnettle (*Lamium amplexicaule*)	2 to 6 leaf	900 mL or 300 mL + 5 g metsulfuron (600 g/kg) ❶	
	Doublegee (Spiny Emex) (*Emex australis*)	2 to 4 leaf		
	Prickly lettuce (*Lactuca serriola*)	2 to 5 leaf	300 mL + Uptake or 600 mL	
	Volunteer lupins (*Lupin angustifolius*)	2 to 8 leaf	900 mL	
	Volunteer potato (*Solanum tuberosum*)	10 to 15 cm tall		Plants 15 to 30 cm tall will only be suppressed.
	Wireweed (Hogweed) (*Polygonum aviculare*)	2 to 3 leaf	300 mL + 5 g metsulfuron (600 g/kg) ❶	

❶ Add either Uptake or a surfactant (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).

Table D: Winter Cereals Boom Application *continued*
See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

WHEAT, BARLEY, OATS and TRITICALE				
CROP GROWTH STAGE	**WEEDS CONTROLLED**	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Apply from 3 leaf to flag (Zadoks 13 to 39)	Bittercress (*Coronopus didymus*) Mustards (*Sisymbrium* spp.) Shepherd's purse (*Capsella bursa-pastoris*) Turnip weed (*Rapistrum rugosum*) Wild radish (*Raphanus raphanistrum*) Wild turnip (*Brassica tournefortii*)	Up to 8 leaf and up to 15 cm diameter	300 to 900 mL + metsulfuron (600 g/kg) ❶ or Dow AgroSciences LVE 600 MCPA or Canvas 750	The Starane Advanced rate depends on what other weeds are present as listed above. See **Mixtures** comment above metsulfuron @ 5 g/ha (This mix does not control wild radish). Dow AgroSciences LVE 600 MCPA @ 580 mL/ha, Canvas 750 (MCPA amine) @ 670 mL/ha.

❶ Add either Uptake or a surfactant (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).

Table E: Established Lucerne (NSW only) Boom Application
See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	**WEEDS CONTROLLED**	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Established crops at least 18 months old	Annual ground cherry (*Physalis angulata*) Bathurst burr (*Xanthum spinosum*) Noogoora burr (*Xanthium pungens*) Wild gooseberry (*Physalis minima*)	2 to 8 leaf up to 15 cm high	300 mL	To minimise crop injury and to maximise weed control, cut, slash or heavily graze the lucerne before application. Wherever possible, irrigate before application to stimulate weed growth. **DO NOT** treat crops growing on sandy or stony soils. **DO NOT** treat crops after the summer growing season (after end of March). To broaden the spectrum of weeds controlled, Starane Advanced can be mixed with 2,4-DB amine.
	Red pigweed (*Portulaca oleracea*)	Up to 10 cm diameter		

Table F: Sugar Cane

See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
From early tillering to maturity	Balsum pear (*Momordica charantia*)	Apply from 2 to 3 leaf until flowering	**Ground:** 780 mL **Aerial:** 900 mL	For optimal weed control, delay application until just before the "close-in" stage. **Aerial application:** Apply in not less than 60 L/ha water and add Uptake Spraying Oil at 1 L/100 L spray mixture. **Ground application:** Apply in 100 - 400 L/ha water and add Uptake Spraying Oil at 500 mL/100 L of spray mixture.
	Blackberry nightshade (*Solanum nigrum*)			
	Blue billygoat weed (*Ageratum houstonianum*)			
	Centro (*Centrosema pubescens*)			
	Cowpea (*Vigna unguiculate*)			
	Giant sensitive plant (seedlings only) (*Mimosa invisa*)			
	Lablab bean (*Lablab purpureus*)			
	Noogoora burr (*Xanthum pungens*)			
	Phasey bean (*Macroptilium lathyroides*)			
	Pinkburr (*Urena lobata*)			
	Prickly African cucumber (*Cucumis metuliferus*)			
	Spinyhead sida (*Sida acuta*)			
	Stinking passion flower (seedlings only) (*Passiflora foetida*)			

Table F: Sugar Cane *continued*
See GENERAL INSTRUCTIONS – APPLICATION section for APPLICATION METHOD details.

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
From early tillering to maturity	Bellvine (*Ipomoea plebeia*)	Apply from 2 to 3 leaf until flowering	**Ground:** 780 mL **Aerial:** 900 mL As above + 800 mL 2,4-D amine (625 g/L)	For optimal weed control, delay application until just before the "close-in" stage. **Aerial application:** Apply in not less than 60 L/ha water and add Uptake Spraying Oil at 1 L/100 L spray mixture. **Ground application:** Apply in 100 - 400 L/ha water and add Uptake Spraying Oil at 500 mL/100 L of spray mixture.
	Morning glory (*Ipomoea purpurea*)			
	Pink convolvulus (*Ipomoea triloba*)			
	Red convolvulus (*Ipomoea hederifolia*)			
	Star-of-Bethlehem (*Ipomoea quamoclit*)			
	Milkweed (*Euphorbia heterophylla*)	Seedlings and young plants up to flowering	1.8 L or 1.38 L + 3.33 L atrazine flowable (600 g/L)	Better control will be achieved with the atrazine mixture. Delay application until just before the cane reaches the "close-in" stage. This will improve control and minimise the number of seedlings that germinate.
	Stinking passion flower (*Passiflora foetida*)	Established or ratoon plants with at least 1 m of regrowth	270 mL	**Spot spray application:** Thoroughly wet plants to the point of run-off.

Table G: Poppies (Tas only)
See GENERAL INSTRUCTIONS – APPLICATION section for application method details

CROP GROWTH STAGE	WEEDS CONTROLLED	WEED GROWTH STAGE	RATE /ha	CRITICAL COMMENTS
4 to 6 leaf	Cleavers (*Galium aparine*) Fumitory (*Fumaria* spp.)	2 to 6 leaf	600 mL	
	Shepherd's purse (*Capsella bursa-pastoris*) Wireweed (Hogweed) (*Polygonum aviculare*)		600 mL + 5 L Asulox®	
8 to 10 leaf	Common sowthistle (*Sonchus oleraceus*) Prickly lettuce (*Lactuca serriola*)	2 to 5 leaf	600 mL	**DO NOT** apply Starane Advanced to poppies later than the 8 to 10 leaf growth stage as a reduction of alkaloid content could occur.
	Black nightshade (*Solanum nigrum*)	Cotyledon to 4 leaf	900 mL	
	Fumitory (*Fumaria* spp.)	6 to 10 leaf		
8 to 10 leaf	Volunteer potato (*Solanum tuberosum*)	From tuber initiation to flower bud	900 mL	This rate will provide season long control of volunteer potato, but will not control all daughter tubers and will only suppress potatoes over 15 cm tall.

3. FALLOW SITUATIONS

Table A: Boom Application

See GENERAL INSTRUCTIONS – APPLICATION section for application method details.

WINTER FALLOW			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Bedstraw (*Galium tricornutum*)	Up to 5 whorl	600 mL ❶	When mixing with glyphosate (450 g/L) to control both grass and broadleaf weeds, refer to the glyphosate product label for use rates and adjuvants recommended for the grasses. (See GENERAL INSTRUCTIONS; COMPATIBILITY section).
Cleavers (*Galium aparine*)			
Black bindweed (Climbing buckwheat) (*Fallopia convolvulus*)	2 to 8 leaf up to 10 cm diameter	450 mL ❶	
Common sowthistle (*Sonchus oleraceus*)	2 to 5 leaf up to 10 cm diameter	600 mL ❶	
Prickly lettuce (*Lactuca serriola*)			
Doublegee (Spiny emex) (*Emex australis*)	2 to 8 leaf	900 mL ❶	
Wireweed (Hogweed) (*Polygonum aviculare*)	2 to 3 leaf up to 10 cm tall		
Doublegee (Spiny emex) (*Emex australis*)	2 to 8 leaf	300 mL ❷ + 5 g metsulfuron (600 g/kg)	
Wireweed (Hogweed) (*Polygonum aviculare*)	2 to 3 leaf up to 10 cm tall		
Common sowthistle (*Sonchus oleraceus*)	2 to 5 leaf up to 10 cm diameter	300 mL + 600 mL glyphosate (450 g/L)	When mixing with glyphosate (450 g/L) to control both grass and broadleaf weeds, refer to the glyphosate product label for use rates and adjuvants recommended for the grasses. (See GENERAL INSTRUCTIONS; COMPATIBILITY section).
Prickly lettuce (*Lactuca serriola*)			
Wireweed (Hogweed) (*Polygonum aviculare*)	2 to 3 leaf up to 10 cm tall		
Small-flowered mallow (*Malvia parviflora*)	Up to 8 leaf or up to 20 cm diameter	300 mL + 1.2 L glyphosate (450 g/L)	

❶ Add Uptake Spraying Oil (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).
❷ Add Uptake or a surfactant (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).

Table B: Boom Application
See GENERAL INSTRUCTIONS – APPLICATION section for application method details

SUMMER FALLOW			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Annual ground cherry (*Physalis angulata*)	2 to 8 leaf, up to 15 cm tall	450 mL ❶	❶ Add Uptake Spraying Oil (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section). ❷ Delay treatment until the maximum number of shoots have emerged, but before the onset of fruiting. (late summer) DO NOT treat plants showing symptoms from previous treatment. Use the high rate when longer term weed control (6-10 months) is required and delay planting crops during this period. The low rate will require follow-up treatments.
Bathurst burr (*Xanthium spinosum*)	2 to 8 leaf, up to 20 cm tall		
Noogoora burr (*Xanthium pungens*)			
Perennial ground cherry ❷ (*Physalis virginiana*)	Bud to early flowering up to 20 cm tall	900 mL ❶ or 1.8 L ❶	
Polymeria (*Polymeria pusilla*)	2 to 10 leaf up to 20 cm diameter	600 mL ❶	
Red pigweed (*Portulaca oleracea*)	Up to 10 cm diameter	300 mL ❶	
Rhynchosia (*Rhynchosia minima*)	Seedlings to early flowering	600 mL ❶	
Silverleaf nightshade (*Solanum elaeagnifolium*)	Full flower to early berry-set (usually Dec - Feb)	450 to 600 mL	Add Uptake Spraying Oil at the rate of 1 L/100 L spray mixture. To ensure maximum effect, delay application until the majority of shoots have emerged. Follow-up treatment will be required to control regrowth and is critical for optimal control. If wanting to prevent seed set repeat applications may be needed in the same season, although this does not lead to better long term control.
Small-flowered mallow (*Malva parviflora*)	Up to 8 leaf or up to 20 cm diameter	300 mL + 1.2 L glyphosate (450 g/L)	When mixing with glyphosate (450 g/L) to control both grass and broadleaf weeds, refer to the glyphosate product label for use rates and adjuvants recommended for the grasses. (See GENERAL INSTRUCTIONS; COMPATIBILITY section)
	Up to 8 leaf or up to 20 cm diameter	600 mL ❶	❶ Add Uptake Spraying Oil (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).
Thornapple (*Datura* spp.)	2 to 8 leaf up to 15 cm tall	450 mL ❶	
Sesbania pea (*Sesbania cannabina*)	2 to 6 leaf up to 10 cm tall	900 mL ❶	

Table B: Boom Application *continued*
See GENERAL INSTRUCTIONS – APPLICATION section for application method details

SUMMER FALLOW			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Volunteer sunflowers (*Helianthus annuus*)	2 to 5 leaf up to 20 cm	600 mL ❶	❶ Add Uptake Spraying Oil (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section).
Wild gooseberry (*Physalis minima*)	2 to 8 leaf, up to 15 cm tall	450 mL ❶	
Red pigweed (*Portulaca oleracea*)	Up to 10 cm diameter	225 mL + 1.2 L glyphosate (450 g/L)	When mixing with glyphosate (450 g/L) to control both grass and broadleaf weeds, refer to the glyphosate product label for use rates and adjuvants recommended for the grasses. (See GENERAL INSTRUCTIONS; COMPATIBILITY section)
Rhynchosia (*Rhynchosia minima*)	Seedlings to early flowering		
Bellvine (*Ipomoea plebeia*)	Pre-flowering	300 mL + 1.2 L glyphosate (450 g/L)	
Bladder ketmia (*Hibiscus trionum*)	4 to 8 leaf up to 10 cm tall		
Black bindweed (Climbing buckwheat) (*Fallopia convolvulus*)	2 to 10 leaf up to 20 cm diameter		
Cowvine (Peach vine) (*Ipomoea lonchophylla*)	2 to 10 leaf up to 10 cm diameter		
Caltrop (Yellow vine) (*Tribulus terrestris*)	Up to 15 cm diameter		
Polymeria (*Polymeria pusilla*)	2 to 10 leaf up to 20 cm diameter	300 mL + 1.2 L glyphosate (450 g/L)	When mixing with glyphosate (450 g/L) to control both grass and broadleaf weeds, refer to the glyphosate product label for use rates and adjuvants recommended for the grasses. (See GENERAL INSTRUCTIONS; COMPATIBILITY section)
Red pigweed (*Portulaca oleracea*)	10 to 30 cm diameter		
Spineless caltrop (*Tribulus micrococcus*)	Up to 15 cm diameter		
Thornapple (*Datura* spp.)	2 to 8 leaf up to 15 cm tall		
Sesbania pea (*Sesbania cannabina*)	2 to 6 leaf up to 10 cm tall		
Black bindweed (Climbing buckwheat) (*Fallopia convolvulus*)	10-12 leaf up to 30 cm diameter	450 mL + 1.2 L glyphosate (450 g/L))	
Red pigweed (*Portulaca oleracea*)	Up to 60 cm diameter		

Table B: Boom Application *continued*
See GENERAL INSTRUCTIONS – APPLICATION section for application method details

SUMMER FALLOW			
WEEDS CONTROLLED	**WEED GROWTH STAGE**	**RATE /ha**	**CRITICAL COMMENTS**
Silverleaf nightshade (*Solanum elaeagnifolium*)	Full flower to early berry-set (usually Dec - Feb)	225 mL + 1.2 - 1.6 2,4-D amine (625 g/L)	Add Uptake Spraying Oil at the rate of 1 L/100 L spray mixture. To ensure maximum effect, delay application until the majority of shoots have emerged. Follow-up treatment will be required to control regrowth and is critical for optimal control. If wanting to prevent seed set repeat applications may be needed in the same season, although this does not lead to better long term control.
Volunteer peanuts (*Arachis hypogaea*)	Up to 15 cm diameter	600 mL + 3.75 L atrazine (600 g/L)	Add a surfactant (see GENERAL INSTRUCTIONS: OILS and SURFACTANTS section). **Important:** (See GENERAL INSTRUCTIONS; COMPATIBILITY section).
Volunteer Roundup Ready Flex Cotton (*Gossypium* spp.)	2-6 leaf, up to 10 cm tall	450 mL	
	5-7 node, up to 25 cm tall	600 mL	

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

WITHHOLDING PERIODS

Crops and Pastures: **DO NOT GRAZE FAILED CROPS AND TREATED PASTURES OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.**

Poppies: **DO NOT SPRAY POPPIES LATER THAN 10 WEEKS BEFORE HARVEST.**

Winter and Summer Cereals, Sugar Cane: **NO WITHHOLDING PERIOD REQUIRED WHEN USED AS DIRECTED.**

MINIMUM RECROPPING PERIODS

Plant-back periods for crops following the application of Starane Advanced for rates up to 900 mL/ha.			
RATE mL/ha	**225**	**450**	**900**
CROP	**Days**		
Barley	7	7	7
Wheat	7	7	7
Chickpea	7	7	7
Cotton	14	14	28
Soybean	7	7	14
Sunflower	7	7	7
Maize	7	7	7
Sorghum	7	7	7

Restraint: DO NOT plant susceptible crops, including cotton, pigeon peas and other pulse crops, into irrigated fields with soils containing less than 25% clay content, within 12 months of treatment with Starane Advanced.

Note: Before using Starane Advanced in tank mixes with other herbicides, check the plant-back information on all product labels. The time between spraying and planting will be determined by the most residual product, *i.e.* the product with the longest plant-back period.

GENERAL INSTRUCTIONS

MIXING

Starane Advanced may be mixed with water or diesel.

Mix only sufficient chemical for each days use and avoid storing.

Mixing in Water: Half fill the spray tank with water and add the required quantity of Starane Advanced and complete filling. Agitate continuously to ensure thorough mixing before and during application.

Mixing in Diesel: Half fill the spray tank with diesel and add the required quantity of Starane Advanced. Add the remainder of the diesel and agitate or shake to mix contents.

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 (Starane Advanced). Add spraying OILS and SURFACTANTS (wetters) last. (See COMPATIBILITY section for glyphosate (450 g/L) for additional instructions when mixing with glyphosate.)

OILS AND SURFACTANTS

Oils:

Use only Uptake Spraying Oil at the rate of 500 mL/100 L of spray mix. When using less than 100 L/ha spray volume, ensure a minimum of 250 mL/ha of Uptake is used, unless 1 L/100 L or 1 L/ha is specified.

Surfactants (wetters):

Use a 100% concentrate non-ionic surfactant such as BS1000® at 100 mL/100 L of spray mix where required.

COMPATIBILITY

Starane Advanced is compatible with the **herbicides** listed.

Follow any regional restrictions, and all directions and restrictions on the label, of any chemical mixed with Starane™ Advanced.

atrazine (see below), Broadstrike™, Crusader™, Dow AgroSciences LVE 600 MCPA (MCPA LVE), Canvas™ 750 (MCPA amine), diclofop methyl, Eclipse®, Esteron™ LV, Garlon™ 600, Garlon™ FallowMaster, glyphosate, Hotshot™, Lontrel™ Advanced, MCPA, metsulfuron methyl, Paradigm™, Statesman™ 720, Stinger™, Topik® 240 EC (see below), Tordon™ 75-D, Touchdown® and 2,4-DB.

ATRAZINE

AVOID USING HARD WATER WHEREVER POSSIBLE.

Where hard water cannot be avoided, the addition of a water conditioning agent to the spray tank, at 100 g/100 L water, before adding any herbicide may improve compatibility.

AGITATION IS VERY IMPORTANT WHEN MIXING STARANE ADVANCED AND ATRAZINE.

Starane Advanced plus atrazine tank mixes must be agitated vigorously and continuously during mixing and application. After mixing DO NOT allow to stand without agitation. Ensure that the time from mixing to the end of application is not more than 2 hours. If settling out occurs re-suspension is difficult, even with vigorous agitation. Agitation using only the pump's by-pass is usually inadequate, particularly with larger tanks (more than 2000 L). Additional mechanical agitation will be necessary in large tanks, computer sprayers and mixing tanks. When additional surfactant is required, add a 100% concentrate non-ionic surfactant at 100 mL/100 L of spray mix. DO NOT use a spraying oil when tank mixing Starane Advanced and atrazine.

Guidelines For Tank Mixing Starane Advanced And Common Atrazine Formulations:

Tank Mix	Rate (/ha)	Water Hardness			Minimum Water Volume (L/ha)		Comments
		Soft	Medium	Hard	Ground	Aerial	
Starane	450 mL	4	4	4	50	35	
Starane + Gesaprim® 600 FW	450 mL + 1.67 L	4	4	4	50 - 100	35	Precipitate can be easily resuspended
Starane + Atradex® 900 WG	450 mL + 1.1 kg	4	6	6	100	Do not use	Precipitate may be difficult to resuspend and may block nozzles
Starane + Nu-Trazine® DF	450 mL + 1.1 kg	4	6	6	100	Do not use	Sediment may be difficult to resuspend and may block nozzles
Starane + Nu-Trazine® 500 FW	450 mL + 2 L	4	4	6	100	Do not use	Precipitate may be difficult to resuspend and may block nozzles

TOPIK 240 EC

Always use Uptake Spraying Oil with Starane Advanced + Topik 240 EC tank mixes at 500 mL/100 L of spray mix with a minimum of 250 mL/ha.

DO NOT mix Starane Advanced with Topik 240 EC if the grass weeds are not actively growing. Always use the maximum label rate of Topik 240 EC for the appropriate grass growth stage.

DO NOT use Starane Advanced at more than 450 mL/ha in tank mixes with Topik 240 EC.

Glyphosate (450 g/L)

When mixing Starane Advanced with glyphosate (450 g/L) to control both grass and broadleaf weeds, refer to the glyphosate product label for use rate recommended for grasses. DO NOT use glyphosate (450 g/L) at less than 1.2 L/ha in tank mixes with Starane Advanced, when barnyard grass, buttongrass, crowsfoot grass, native millet and liverseed grass are the target species.

Mixing Instructions for glyphosate + Starane Advanced + other tank-mix partners:

Step 1: Fill the spray tank to 1/2 full with clean water, start and maintain agitation.

Step 2: Where ammonium sulphate (crystalline or liquid form) is recommended, wash crystalline form at 0.08 % w/v (800 g/100 L spray solution) through a top mesh screen into the tank OR add Liase® at 2 % v/v (2 L/100 L spray solution) and mix thoroughly for several minutes.

Step 3: Add glyphosate (450 g/L) and allow mixing thoroughly for several minutes.

Step 4: For other tank-mix partners: Add dry flowable formulations (e.g. metsulfuron) first, followed by suspension concentrates (flowables e.g. atrazine), water soluble salts (e.g. Statesman 720).

Step 5: Then add emulsifiable concentrate formulations, such as Starane Advanced, and allow mixing thoroughly for several minutes.

Step 6: Add remaining water to desired final fill level.

Step 7: Add a 100% non-ionic surfactant at 0.2% v/v near the end of the filling process to minimize excessive foaming.

Step 8: Removing hose from tank immediately after the filling will prevent back siphoning into water source. Always maintain adequate agitation during application and use the tank load promptly.

APPLICATION METHODS and WATER RATES

BROADCAST APPLICATION IN CROPPING, PASTURE AND FALLOW SITUATIONS.

A. Ground Application (Boom)

Apply Starane Advanced with an accurately calibrated boom sprayer, in at least 50 L/ha water (100-400 L/ha for sugar cane).

Flat fan nozzles applying a medium quality spray (ASAE-S572) are recommended.

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

B. Ground Directed Application (Dropper nozzles)

To minimise crop effects, dropper nozzles should be used in sorghum when the crop is beyond the 8 leaf growth stage and in maize and sweet corn when the crop is beyond the 6 leaf growth stage.

Adjust the nozzles to direct the spray into the base of the crop and away from the leaves and the growing point. See manufacturers' directions for setting up and calibration of dropper nozzles.

C. Aerial Application

Apply in a minimum volume of at least 35 L/ha water (60 L/ha in sugar cane).

Use equipment calibrated to produce a coarse quality spray (ASAE-S572).

DO NOT apply when the temperature is above 30°C, when there is no wind or when the wind is blowing toward susceptible crops.

DO NOT spray when wind speed is less than 3 km/hr or more than 20 km/hr.

WOODY WEED SITUATIONS

Weeds must be actively growing to attain optimal effect. Delay the treatment of re-growth following bulldozing, slashing, burning, ploughing or a previous chemical treatment until it has at least 1 metre of new, vigorous, growth.

A. High Volume Application

Hand Gun

Apply the recommended mix to obtain full coverage of leaves and stems using a number 6 - 8 tip at 700 to 1500 kPa. To obtain good coverage, a spray volume of 1500 to 4000 L/ha (15 to 40 L/100m^2) is required per infested hectare.

Ensure thorough coverage to the point of runoff.

Knapsack and 12 Volt Sprayer Packs

Only recommended for the control of herbaceous weeds such as cobblers peg, docks and wandering jew. DO NOT use knapsacks or 12 volt sprayer packs to treat woody weeds.

B. Aerial Application

Apply in 200 L of water/ha using an aircraft to apply 100 L per pass on a double overlap pattern using nozzle configurations to produce a coarse quality spray (ASAE-S572).

The potential for damage from drift can be greatly reduced by avoiding unsuitable spraying conditions and using spray pressure and nozzles to minimise the production of small droplets.

DO NOT spray when wind speed is less than 3 km/hr or more than 20 km/hr and/or air temperature reaches 35°C.

C. Basal Bark and Cut Stump Application

Basal Bark

DO NOT apply to wet stems as this can repel the diesel mixture.

Spray or paint the recommended mixture around the base of each stem from ground level to a height of at least 30 cm from the ground, wetting the bark to the point of runoff.

Apply with a paint brush or a pressure sprayer with an appropriate lance and solid cone nozzle. If using spray equipment use low pressures (≤ 200 kPa) sufficient to form a cone of spray.

Old rough bark will require more spray than smooth or young thin bark.

Cut Stump

Apply the recommended mixture liberally to the freshly cut stump immediately after cutting.

Apply by spraying or painting the cut surface and sides of the stump.

Best results are obtained when the stems are cut less than 15 cm above the ground.

D. Low Volume, High Concentrate Application

Drench Gun or Gas-Powered Gun

Apply the recommended mixture uniformly across the foliage by applying 50 mL shots to cover 4 to 5 m^2 of surface area of plant. This is approximately equivalent to 20 droplets per cm^2 of the leaf surface. Use a marking agent as recommended by the equipment manufacturer to check spray coverage.

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 watercourses.

Cleaning equipment after using water-based sprays:

Rinsing: After using Starane Advanced 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 and nozzles. Drain and repeat the rinsing procedure twice.

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

Wash the tank and rinse the system as above.

Then quarter fill the tank and add an alkali detergent at 500 mL/100 L of water or the powder equivalent at 500 g/100 L 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 to drain.

Cleaning equipment after using diesel-based sprays:

On completion of spraying, use a degreaser to remove traces of diesel from the sprayer. Rinse tank and spray through nozzles with water to remove degreaser.

Then, quarter fill the tank with clean water and add an alkali detergent at 50 mL/10 L of water or the powder equivalent at 50 g/10 L of water. Shake sprayer, to circulate the washing solution throughout the sprayer, then spray the solution through the nozzles. Rinse well with clean water to remove the detergent.

To clean brushes and containers, spray liberally with degreaser. Hose off with clean water and repeat using detergents as above.

DO NOT use this equipment for any other purpose.

RESISTANT WEED WARNING

GROUP I HERBICIDE

Starane Advanced Herbicide is a member of the pyridine group of herbicides. The product has a disrupters 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 Group I herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, Dow AgroSciences 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, NATIVE AND OTHER NON-TARGET PLANTS

Susceptible crops include but are not limited to clovers, cotton, fruit, hops, lupins, ornamentals, peas, pine tree, potatoes, navy beans, safflower, shade trees, soybeans, sunflower, tobacco, tomatoes, vegetables, and vines.

Starane Advanced can be damaging to susceptible crops during both growing and dormant periods.

Grasses are normally unaffected by Starane Advanced and establish quickly after treatment. Transitory damage can occur on some species particularly those that spread by stolons such as couch grass (*Cynodon dactylon*), Kikuyu grass and carpet grass (*Axonopus* spp.).

DO NOT allow spray to drift onto susceptible crops, shade trees and *Pinus* spp.

DO NOT use under weather conditions or from spraying equipment which could be expected to cause spray to drift onto nearby susceptible plants.

PROTECTION OF LIVESTOCK

DO NOT graze or cut treated crops for stock food except as specified under withholding periods.

Poisonous plants may become more palatable after spraying, therefore livestock should be kept out of the area until the plants have died down.

DO NOT allow stock to re-enter paddocks containing treated poisonous plants, until the plants have died down.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

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

Alongside waterways, treat only noxious weeds and poisonous plants.

STORAGE AND DISPOSAL

Keep Out of Reach of Children.

Store in 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.

The method of disposal of the container depends on the container type. Read the STORAGE AND DISPOSAL instructions on the label that is attached to the container.

SPILL AND LEAK MANAGEMENT

DO NOT touch or walk through spilled material.

Wear a face shield or goggles, overalls buttoned to neck and wrist, chemical resistant gloves and footwear. Stop leak when safe to do so. Dam area and prevent entry into waterways and drains.

Small spills/leaks: Absorb with material such as sand, soil or sawdust. Collect spilled product and place in sealable container for disposal. Spill residues may be cleaned using water and detergent. Contain and absorb wash water for disposal. Absorb and collect washings and place in the same sealable container for disposal. Dam the area of large spills and report them to Dow AgroSciences Emergency Services at 1-800 033 882.

SAFETY DIRECTIONS

- Will irritate the eyes and skin. Avoid contact with eyes and skin.
- Repeated exposure may cause allergic disorders.
- When opening the container, and preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, (when using the spray for high volume applications with a hand gun or knapsack wear cotton overalls, over normal clothing, buttoned to the neck and wrist and a washable hat) and elbow-length PVC gloves, a face shield or goggles.
- After each day's use, wash gloves, face shield or goggles and contaminated clothing.
- Wash hands after use.

FIRST AID

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

MATERIAL SAFETY DATA SHEET

Additional information is listed on the Material Safety Data Sheet for **STARANE™ ADVANCED 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

APVMA Approval No: 62287/103387

EMERGENCY RESPONSE (ALL HOURS)
RING FROM ANYWHERE IN AUSTRALIA
1-800 033 882
(LOCAL CALL FEE ONLY)

IN A TRANSPORT EMERGENCY ONLY
DIAL 000
FOR POLICE OR FIRE BRIGADE