



Product Name: AGRO-ESSENCE 2,4-D 300 HERBICIDE
APVMA Approval No: 67261/127907

Label Name:	AGRO-ESSENCE 2,4-D 300 HERBICIDE
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Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
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Constituent Statements:	300 g/L 2,4-D present as the isopropylamine salt
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Mode of Action:	GROUP I HERBICIDE
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Statement of Claims:	For the Control of Emerged Broadleaved Weeds Prior to Sowing Crops and Pastures in Conservation Tillage Situations and For Selective Weed Control in the Crops and Situations as per the Directions for Use THIS IS A PHENOXY HERBICIDE THAT CAN CAUSE SEVERE DAMAGE TO NATIVE VEGETATION AND SUSCEPTIBLE CROPS SUCH AS COTTON, GRAPES, TOMATOES, OILSEED CROPS AND ORNAMENTALS.
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Net Contents:	1 - 1000 L
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Restraints:	This section contains file attachment.
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Directions for Use:	This section contains file attachment.
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Other Limitations:	NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION
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IN TASMANIA, THIS PRODUCT MAY ONLY BE USED FROM 15 APRIL TO 15 SEPTEMBER UNLESS OTHERWISE PERMITTED BY THE REGISTRAR OF PESTICIDES

Withholding Periods:

GRAZING

Pasture, Cereal Crops: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION

Lucerne in Fallow - DO NOT GRAZE, CUT OR CULTIVATE FOR AT LEAST 21 DAYS AFTER SPRAYING

HARVEST: NOT REQUIRED WHEN USED AS DIRECTED

Trade Advice:

General Instructions:

Agro-Essence 2,4-D 300 Herbicide is a water-soluble liquid product with non-selective herbicidal activity against broadleaf weeds. Agro-Essence 2,4-D 300 Herbicide will control emerged weeds only and provides no residual control although certain plant back periods should be observed. Agro-Essence 2,4-D 300 Herbicide is absorbed by plant foliage and accumulates to toxic levels in the regions of growth and reproduction, upsetting the ability of plants to balance the synthesis and use of nutrients. Visible effects are a gradual yellowing and wilting of the plants which advances to complete browning of above ground growth and deterioration of root systems. Effects may not be apparent for 7-10 days or even up to 21 days under cold or cloudy conditions.

DO NOT treat weeds under poor growing or dormant conditions such as occur in drought, water-logging, disease, insect damage, following frost, weeds heavily covered with dust or silt. Reduced results may also occur if weeds are under stress from previous herbicide application.

Rainfall occurring up to 6 hours after application may reduce effectiveness.

DO NOT spray if strong winds prevail.

Crop Establishment

Agro-Essence 2,4-D 300 Herbicide is recommended as a herbicide additive to Glyphosate (450 g/L) for control of emerged weeds prior to crop establishment. When Agro-Essence 2,4-D 300 Herbicide is applied prior to crop establishment, certain Plant Back Periods should be observed to ensure that the herbicide has degraded sufficiently to allow safe sowing of the intended crop. This process is largely-influenced by moisture, temperature and certain soil characteristics and may be delayed particularly when conditions are cold and dry. Refer to the Plant Back Period table for specific information. In seasons of heavy weed growth, or where the following conditions apply, it may be necessary to further delay sowing until a suitable seedbed can be formed. Conditions which can delay crop germination and seedling development include:

- Heavy green or decaying weed growth incorporated into the soil,
- Soil compaction or crusting,
- Cold and wet soils,
- Deep seeding;
- Prior use of residual or pre-emergent herbicides.

To minimise these affects it is suggested that:

- Weed bulk be reduced by grazing and cultivation to leave trash on the surface to dry out,
- A friable seedbed should be produced by cultivation, where necessary,
- The use of pre-emergent herbicides to be avoided if they might contribute to reduced germination,
- A correct seedling depth to be used.

The preferred alternative is to spray early to control any weeds in their less advanced stages and ensure the seedbed is in a suitable condition for early sowing when soil temperatures are not excessively cold.

Application

Boom Equipment

Tank mixtures of Agro-Essence 2,4-D 300 Herbicide and Glyphosate should be applied in spray volumes of between 25-100 L/ha is recommended. When 750g/kg chlorsulfuron or 600g/kg Metsulfuron-methyl is included in the mixture a minimum spray volume of 30 L/ha is recommended. When Simazine is included in the mixture a minimum spray volume of 100 L/ha is recommended. Flat fan nozzle equipment is recommended using pressures in the range of 240-280kPa. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

Aerial Equipment

Tank mixtures of Agro-Essence 2,4-D 300 Herbicide and glyphosate should be applied using either Micronair or boom equipment should in a minimum spray volume of 15 L/ha. Droplets with an average size of 250-350 micron diameter are recommended. Swath width should be 15-17 metres.

Application Under Hot Conditions

High temperatures and/or low relative humidity cause excessive evaporation of spray droplets which may reduce results. When temperatures reach 25 °C increase water volume to 30 L/ha and increase droplet size to at least 300 micron diameter.

DO NOT apply by aircraft when temperature is above 35 °C.

DO NOT use in intensive horticultural cropping areas.

Thoroughly wash aircraft, especially landing gear after each day of spraying to remove herbicide residues.

Equipment Maintenance

Thoroughly clean all equipment after use either by using hot soapy water or 1% solution of ammonia followed by several clean water rinses or use of commercially available Tank & Equipment Cleaner. If using sulfonylurea herbicides (chlorsulfuron or metsulfuron-methyl) it is very important to follow decontamination procedures detailed on those product labels.

Use of Surfactants

DO NOT add a surfactant unless the product is to be used in conservation tillage situations and tank mixed with Glyphosate. In this situation always add a 1000 g/L non-ionic surfactant at its label rate.

If tank mixing with an insecticide (see compatibility below) always add an acidifying surfactant.

DO NOT use an acidifying surfactant if tank mixes include sulfonylurea's (e.g. chlorsulfuron or metsulfuron-methyl).

DO NOT mix with spraying oils, or with any other chemicals except as directed on the label.

Tank Mixtures

Agro-Essence 2,4-D 300 Herbicide is designed to be mixed with Glyphosate. The Product may also be mixed with the following agricultural chemicals provided the directions for use for the tank mix products are followed.

Herbicides

Chlorsulfuron - For the control for a wide range of broadleaf weeds and grasses.

Metsulfuron-methyl - For improved knockdown control of Amsinckia (Yellow burr weed), Chickpeas, Volunteer Chickpeas, Chickweed, Common Sowthistle, Cut-Leaf Mignonette, Dead Nettle, Faba beans, Mallee Catchfly, Soursob, stagger weed, wild garlic. Metsulfuron Methyl does not provide residual in-crop weed control

Insecticides

Chlorpyrifos, Dimethoate, Phosmet and Omethoate

Mixing Instructions

Ensure that the spray tank has been thoroughly cleaned.

1. Half fill the spray tank with clean water, add the required amount of product and begin agitation. DO NOT use mechanical agitators as these may cause excessive foaming when herbicides are added.

2. If an acidifying surfactant is to be added, add to the tank through the top mesh screen.

3. Add the companion herbicide or insecticide to the tank and mix thoroughly.

4. Add Agro-Essence 2,4-D 300 Herbicide and mix thoroughly.
5. Add Glyphosate (450 g/L) and the remaining water.
6. If a non-ionic surfactant is to be added, add near the end to prevent excessive foaming.
7. Maintain agitation during spraying and use the tank mix as soon as possible.

Resistance Warning:

GROUP I HERBICIDE

Agro-Essence 2,4-D 300 Herbicide is a member of the Phenoxy group of herbicides. Agro-Essence 2,4-D 300 Herbicide has the disruptors of plant cell growth mode of action. For weed resistance management Agro-Essence 2,4-D 300 Herbicide is a group I herbicide. Some naturally occurring weed biotypes resistant to Agro-Essence 2,4-D 300 Herbicide 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 Agro-Essence 2,4-D 300 Herbicide or any other Group I herbicide.

Since the occurrence of resistant weeds is difficult to detect prior to use, Agro-Alliance (Australia) Pty. Ltd. accepts no liability for any losses that may result from the failure of Agro-Essence 2,4-D 300 Herbicide to control resistant weeds.

Precautions:

Re-Entry Period

If re-entering treated areas before the spray has dried, workers should wear overalls, elbow-length gloves and water-resistant footwear. Clothing must be laundered after each day's use. DO NOT hand harvest sugarcane for at least 1 day after application.

Protections:

PROTECTION OF CROPS, NATIVE AND NON-TARGET PLANTS

DO NOT apply under weather conditions, or from spraying equipment, that may cause spray to drift onto nearby susceptible plants/crops, cropping lands or pastures.

Avoid spray drift and vapour movement onto susceptible crops such as cotton, tobacco, tomatoes, vines, lupins, fruit trees and ornamentals.

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:

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

Triple-rinse containers before disposal. Add rinsings to the spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, return clean containers to recycler or point of sale. If not recycling, break, crush, or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty container or product.

For Refillable Containers

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

Safety Directions:

Harmful if swallowed. Will damage the eyes. Will irritate the skin. Avoid contact with the eyes and skin.

When opening the container and preparing spray or using undiluted concentrate, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length chemical resistant gloves, goggles and half facepiece respirator with organic vapour/gas cartridge or canister. When using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow-length chemical resistant gloves. If applying by hand

wear half facepiece respirator with organic vapour/gas cartridge or canister. If product in eyes, wash it out immediately with water.
After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles, respirator and if rubber wash with detergent and warm water and contaminated clothing.

First Aid Instructions:	If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766.
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First Aid Warnings:	
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DIRECTIONS FOR USE

Table 1. Pre sowing: FALLOWS, STUBBLE SPRAY PRIOR TO DIRECT DRILLING OR SOWING

Situation & Crop	Weeds Controlled	State	Rate /ha	Critical Comments
<p>Cereals: Wheat, Barley, Oats, Triticale, Rice, Sorghum</p> <p>Grain legumes: Chickpeas, Faba Beans, Field peas, Lentils, Lupins, Narbon Beans, Navy Beans, Persian Clover</p> <p>Oilseeds: Canola, Cotton, Linseed, Safflower, Soybeans, Sunflower</p> <p>Pastures: Balansa Clover, Lucerne, Perennial Ryegrass, Phalaris, Sub Clover, Vetch, White Clover</p> <p>USAGE RESTRICTIONS APPLY. See Table 5: Risk mitigation measures for Dryland cropping, pre-emergent uses</p>	<p>Ball Mustard, Common Sowthistle, Fumitory (white), Indian Hedge Mustard, Turnip Weed, Wild Turnip, Wild Radish</p>	All States	660mL - 1.2L + glyphosate (450 g/L) plus surfactant at recommended label rates.	<p>Rate Selection: Use the lower rate for seedling broadleaf weeds and increase to the higher rate for broadleaf weeds more than 10 cm in height or diameter. Always add Glyphosate (450 g/L) at the recommended label rates. At time of application, all weeds must be actively growing and not under stress from low moisture, frost, cold, disease or water logging.</p> <p>If grazing has occurred allow regrowth to 6-8 cm before spraying and use the higher rate.</p> <p>Always add a non-ionic surfactant. If tank mixing with an insecticide always add a 350 g/L propanoic acid acidifying surfactant.</p>
	<p>Seedlings of: Australian Bindweed, Bellvine, Caltrop, New Zealand Spinach, Raspweed</p>	NSW, ACT, Qld only		
	<p>Ageratum (Blue Top), Charlock, Dock, Fumitory (Red), Medic, Paterson's Curse, Prickly Lettuce, Saffron Thistle, Spear Thistle, Variegated Thistle, Volunteer Lupins, Volunteer Peas, Volunteer Sunflowers</p>	All States	900mL - 1.2L + glyphosate (450 g/L) plus surfactant at recommended label rates.	
	<p>Bathurst Burr, Blackberry Nightshade, Californian Burr, Common Iceplant, Horehound Seedlings, Lincoln Weed Seedlings, Marshmallow Seedlings, Melilotus, Shepherds Purse, Skeleton Weed, (suppression only), Sorrell seedlings, Speedwell, Storksbill (Erodium) seedlings, Sub-Clover Thornapple, Volunteer Vetch, Volunteer Safflower, Wards Weeds, Wireweed (Hogweed) seedlings, White Clover</p>	All States	1.2L - 1.8L+ glyphosate (450 g/L) plus surfactant at recommended label rates.	
	<p>Amaranth, Annual Ground Cherry, Apple of Peru, Bladder Ketmia, Canola, Cow Vine, Fathen, Mexican Poppy, Melons, Native Rosella, Noogoora Burr, Potato Weed, Yellow Vine</p>	NSW, ACT, Qld only	1.8L - 2.7L+ glyphosate (450 g/L) plus surfactant at recommended label rates.	
<p>Winter Cereals</p> <p>USAGE RESTRICTIONS APPLY: See Table 5: Risk mitigation measures for Dryland cropping, pre-emergent uses</p>	Refer to weed table	Vic, NSW, ACT Only	<p>Vic: 465 mL- 2.9 L</p> <p>NSW, ACT: 1.2-3.5 L</p>	<p>Observe plant back periods given in this booklet. Can be mixed with chlorsulfuron, metsulfuron or paraquat when grasses are present. For skeleton weed spraying should be done 6-8 weeks before sowing & subsequent cultivation limited to a minimum.</p>

Situation & Crop	Weeds Controlled	State	Rate /ha	Critical Comments
<p>Winter Cereals, Maize, Sweetcorn, Peanuts</p> <p>USAGE RESTRICTIONS APPLY: See Table 1: Timing restrictions for spraying peanuts and Table 5: Risk mitigation measures for Dryland cropping, pre-emergent uses</p>	Refer to weed table	Qld, NT Only	Qld: 1.2-3.5 L	
Fallow	Lucerne	All states	5L plus 1L/ha glyphosate (450g/L)	<p>Spray in spring when lucerne is actively growing using a minimum spray volume of 50 L/ha.</p> <p>Heavily graze lucerne during winter and early spring to reduce crown and root reserves.</p> <p>Allow lucerne to regrow to 15-30 cm tall before spraying.</p> <p>Successful lucerne stand reduction is more likely if >70 mm of rain falls in the 6-8 weeks prior to application.</p> <p>Add either 0.5% Uptake spray oil or a non-ionic surfactant.</p> <p>Maximum air temperature should not exceed 30°C.</p>
<p>PASTURES: Conservation Tillage - Direct Drilling, Surface Sowing or Fallow Maintenance</p> <p>USAGE RESTRICTIONS APPLY: See Table 2: Application and timing restrictions for application to pastures</p>	Charlock, Mustards, Shepherd's Purse, Saffron, Slender, Spear and Variegated Thistles, Turnip Weed, Wild Radish, Wild Turnip	All States	1.1-3.3L	Apply to actively growing young weeds before sowing. Observe plant back periods given in the table in this leaflet.
	Clover, Sorrel		2.3L plus 280-400mL/ha dicamba (500g/L)	Apply to actively growing plants in autumn. Do not sow pasture seed for at least 30 days after application.

Table 2. FIELD CROPS

Situation & Crop	Weeds Controlled	State	Rate /ha	Critical Comments
Winter Cereals, including Wheat, Barley, Oats, Triticale, Cereal Rye	Refer to Weed Table	NSW, ACT, SA, Vic, Qld, Tas only	675mL - 2.9L Refer to weeds table for specific rates in each state	Apply after when the first node can be felt at the base of a tiller and before swelling of the head can be felt in a tiller. (NSW, ACT, SA only) Apply from tillering to boot stage. (Vic only) Apply from mid tillering to before boot stage. (Qld only) Apply at 5 leaf to fully tillered (Tas only)
Cereals: Wheat, Oats, Barley	Cape Tulip	WA only	1.4L - 2.6L	Apply from the 5-leaf stage up to jointing stage (Zadoks 15-33).
	Dock, Saffron Thistle		2.3L	Apply after the 6-leaf stage (Z.16) for Cranbrook, Jacup, Aroona and Spear Wheat and Mortlock Oats to avoid possible damage.
	Indian Hedge Mustard, London Rocket, Lupin Matricaria,		1.6L	DO NOT spray if lucerne is present. WEED STAGE: 10-15cm. Docks should be sprayed before 5 leaf stage. Cape Tulip - low rate for cormils only.
	Wild Turnip		1.4L	
	Capeweed, Doublegee Erodium, London Rocket Lupin, Mustard, Rapistrum, Wild Radish		375mL plus 500mL/ha Flowable Diuron 500SC	Apply when crop has 4-5 leaves and most weeds have germinated and are in 2-5 leaf stage. Crop and weeds should be dry at time of application. Some temporary yellowing of crop may occur after application. Undersown sub-cloves be slightly retarded. DO NOT apply to undersown medics or sub-clover.
Wheat, Barley	Wild Radish	Vic, SA, NSW, ACT only	165mL plus 850g methabenz-thiazuron (700g/kg)	Spray 2-6 weeks after sowing and not later. DO NOT use on crops undersown with lucerne.
Duboisia	Weeds listed in weed table on label	All states	Apply via high volume spot spray only in accordance with label directions for pasture situations	Apply as a targeted spray under trees or as an interow application. DO NOT apply as an overall foliar application.
Maize, Sweetcorn	Refer to Weed Table	NSW, ACT, SA, Qld, Tas only	1.2L - 2.3L	Apply when crop is 10-20 cm high (NSW, ACT, SA), 10-30 cm high (Qld) or 15-30 cm (Tas) & secondary roots are developing & before tussling, spray with dropped nozzles to avoid chemical contact on whorl & upper leaves. Some leaf twisting lay occur but crop will recover. No WA registration.
Sorghum		NSW, ACT, SA, Vic, only		Apply preferably when crop is 3-6 fully expanded leaf stage but can be sprayed from 2-8 leaf stage. From 6 leaf stage onwards to within 2 weeks of flowering, crop can be sprayed with dropped nozzles to avoid chemical being sprayed into the whorl and on upper leaves.

Situation & Crop	Weeds Controlled	State	Rate /ha	Critical Comments
		Qld only (except Central Qld)		Apply when crop has 4 to 8 fully expanded leaves and secondary roots have developed.
Millet	Refer to Weed Table	NSW, ACT, SA, Vic only	1.2L - 2.3L	Spray when secondary roots have developed, when fully tillered and before heads start to form at the base of tillers. DO NOT use on Panorama Millet or Panicum.
		Qld only	1.2L - 1.8L	
Maize, Sweetcorn, Saccaline, Broom Millet	Cape Tulip, Dock, Saffron Thistle, Indian Hedge Mustard, London Rocket, Lupin, Rapistrum, Radish, Wild Turnip	WA only	2.3L	Spray when crop is 10-30cm high and secondary roots have developed and before tasselling. Apply as direct spray to weeds.
Grain Sorghum				Apply when crop is 12cm high. DO NOT apply between tassel and dough stage. Avoid spraying when in flower.
Sugarcane USAGE RESTRICTIONS APPLY: See Table 3: timing restrictions for Sugarcane	Bindy Eye (Star Burr), Blue top, Fleabanes, Jute, Leucas, Needle burr, Spear Thistle, Water Primrose, Ipomea Vines, Convolvulus Vines	Qld, NSW only	3.6L - 7.5L	Add 500mL of 60% Non-Ionic Surfactant to 100L of spray mixture. Agitate well. DO NOT USE on Q63, Q67, Q80 OR Q96 Varieties.
	Chinese Mint, Blue Snakeweed	Qld only	7.3L	
Peanuts USAGE RESTRICTIONS APPLY: See Table 1: timing restrictions for peanuts	Broadleaf weeds except Noogoora Burr, Grasses, except Mossman Burr	Qld, NT only	3.6L or 7.3L	LOWER RATE: Apply as BAND SPRAY as soon as possible after planting in a 55cm band. HIGHER RATE: Apply as OVERALL SPRAY after planting and before crop emergence. Some crop damage may occur if heavy rain falls between application and crop emergence.

Table 3. PASTURES, NON-AGRICULTURAL, RIGHTS-OF-WAY, INDUSTRIAL and PLANTATIONS

Situation & Crop	Weeds Controlled	State	Rate /ha	Critical Comments
Pastures and Non-agricultural USAGE RESTRICTIONS APPLY: See Table 2: Application and timing restrictions for application to pastures	Refer to Weed Table	NSW, ACT, Qld, SA, Tas only	1.1L – 3.5L	Pasture legumes including lucerne, clovers and medics may be damaged unless well protected by grasses. Spot spraying is preferred.
	Amsinckia, Annual Thistle, Bindweed, Caltrop, Capeweed, Docks, Flatweed, Mustard, Paterson's Curse (Salvation Jane), Saffron Thistle, Spear Thistle, Three cornered Jack (Doublegee, Spiny Emex), Wild Radish, Wild	WA only	2.3L	For pastures not containing legumes. Only seedling Docks, Spear Thistle and Saffron Thistle will be controlled.
	Afghan Melons		3.3L plus 1% crop oil	Spray when plants are actively growing preferable before flowering or vining.
	Paddy Melons		1.6-2.3L	
	Prickly Saltwort (Roly Poly)		3.3L	Spray when plants are small.
	Stinkwort		3.3L - 7.5L plus Surfactant	Best results are obtained when plants are small. Use high rate plus Surfactant on larger plants.
	Dove weed		6.6L	Spray after good emergence of seedlings.
	Pastures, Rights-of-Way and Industrial USAGE RESTRICTIONS APPLY: See Table 2: Application and timing restrictions for application to pastures	Boxthorn, Boneseed, Hawthorn	Vic, SA only	165mL/ 10L water
Groundsel		NSW, ACT, Qld, SA only	2.0L/15L water	MISTING: Lightly wet plants.
			600mL/ 100L water	HIGH VOLUME: Thoroughly wet plants.
			500mL/ 15L water	CUT STUMP: Swab the cut stump within one hour of cutting. Apply by a pouring can.
			6.0L-9.1L/ha	AERIAL APPLICATION: Spray when Groundsel is actively growing.
Lantana			600mL/ 100L water	Use a very coarse spray with sufficient pressure to penetrate canopy and wet stems as well as foliage. Spray at the end of a wet summer (March to May). Defoliation should occur but respraying of new growth will be necessary in following Summer to allow the pasture to establish. Damage may result to pasture legumes.
Mother of Millions		NSW, ACT only	825mL/ 100L water	Hand gun and knapsack only. A thorough coverage of leaves and plants is necessary. Use 1000 g/L surfactant at the rate of 1.0mL of surfactant per 1L of mixture.

Situation & Crop	Weeds Controlled	State	Rate /ha	Critical Comments
	Noogoora Burr, Weir Vine (Ipomea), Scarlet Impernel (seedlings only), White Eye (Mexican clover)	Qld only	330mL/ 100L water	In all cases apply to young; actively growing weeds, ensuring thorough coverage. *Spray at rosette stage-Clockweed, Variegated Thistle. +Repeat spraying necessary-Hoary Cress.
	Annual & Perennial Pigweed, Artichoke Thistle Bathurst Burr, Billygoat weed, Blue Snake Weed, Burr Medic, Clockweed*, Fleabanes, Galvanised Burr, Hemlock, Hoary Cress+ Kyalinga Weed (Whisker grass), Knobweed, Milky Cotton Bushes, Parthenium weed, Paterson's Curse (Salvation Jane), Saffron Thistle, Star Burr, Thornapple, Variegated Thistle*	Qld only	660mL/ 100L water	
	Rubber vine		300mL/ 10L water	Apply to freshly cut stump
Oil Tea Tree	Weeds listed in weed table on label	All states	Apply a maximum of 2 L/ha as per label directions	Apply as a shielded spray. Avoid contact with foliage, green stems, exposed nonwoody roots, desirable plants and trees as severe injury or destruction may result. Apply following harvest as a blanket spray only after: All residual tea tree foliage has been removed by mechanical shaving, or by using a burner, No swollen buds are present on stumps. NOTE that buds can burs 8 days after harvest in summer and Surface of cut stumps are dry before spraying commences.
	Purple Top (<i>Verbena bonariensis</i>)		Apply 2 L/ha plus 720 g ai glyphosate /ha in a tank mix	Apply as a shielded spray. Avoid contact with foliage, green stems, exposed nonwoody roots, desirable plants and trees as severe injury or destruction may result.
Hardwood & Softwood Plantations	Broadleaf and woody weeds as per product labels including Grounset and Pinus spp. wildings	All states	3.3L	Apply a single preplant application and/or a maximum of 2 post plant applications using shielded sprayers within the first 2 years following planting. Apply using aircraft (rotary wing only) or ground based equipment. DO NOT spray over or into watercourses. Products may be mixed with glyphosate for pre-plant spray operations.

Situation & Crop	Weeds Controlled	State	Rate /ha	Critical Comments
Preparatory spray for fallow/clear felled <i>Pinus elliotii</i> plantations prior to replanting pine seedlings	Control of groundsel, unwanted seedlings of previous crop ('wildings') and other susceptible broadleaf weeds listed on the product label	All states	Up to 6L with label rates of glyphosate as required	Refer to label precautions. Minimum plant-back period of 14 days. All application is to comply with Forests NSW Manual for the Use of Herbicides. Persons applying pesticides by aircraft in NSW must hold a current NSW pilot (pesticide rating) licence and be employed or engaged by the holder of an aircraft (pesticide applicator) licence.

Table 4. SPRAY GRAZE TECHNIQUES

USAGE RESTRICTIONS APPLY: See Table 2: Application and timing restrictions for application to pastures

Weeds Controlled	State	Rate - /ha	Critical Comments
PRECAUTION: An increased quantity of poisonous plants may be eaten by stock using Spray-Graze e.g. Caltrop, Capeweed, Paterson's Curse (Salvation Jane) and Variegated Thistle and deaths could result from causes such as nitrate poisoning. With Paterson's Curse (Salvation Jane), preferably graze stock soon destined for slaughter and avoid extended periods of grazing. Avoid grazing with young or breeding stock. DO NOT graze horses or pigs on Paterson's Curse (Salvation Jane).			
Docks	Vic only	2.3 L	Apply in September only and follow other recommendations above.
Amsinckia, Thistles, Capeweed, Three Corner jacks (Doublegee, Spiny Emex), Mustard, Paterson's Curse (Salvation Jane), Wild Turnip, Wild Radish, Docks, Geranium, Erodium	SA only	1.1L	Apply from 6 weeks after opening rains in autumn until the end of August. Seven days after spraying, stock paddock at 4-5 times normal rate, preferably with sheep. Maintain this level of grazing for 6 weeks or until pasture shows signs of over grazing. Then return to normal stocking levels. Use high stocking rates in following spring to prevent weeds from flowering. Repeat treatments may be required for 2-3 years for complete control.
Annual Thistles, Capeweed, Mustards, Paterson's Curse (Salvation Jane), Saffron, Thistle, Spear Thistle, Three Corner jacks, (Doublegee, Spiny Emex) Turnip,	Tas, Vic only		
Amsinckia, Docks (seedling only) Capeweed, Three Corner jacks (Doublegee, Spiny Emex), Mustard, Wild Radish, Wild turnip, Annual Thistles, Paterson's Curse (Salvation Jane)	WA only	1.3L	
Spear Thistle, Saffron Thistle.		2.5L	Apply to Saffron Thistle at the end of September when plants are running up to flower. Sub-clovers may be damaged at this rate and use is not recommended for all medic pastures.
Melons		3.3L	Heavy stocking on young plants sprayed with 1.0L/ha provides effective control.
Caltrop, Capeweed, Charlock Mustards, Paterson's Curse (Salvation Jane), Shepherd's Purse, Saffron, Slender, Spear or Variegated Thistle, Turnip Weed, Wild Radish, Wild Turnip	NSW, ACT only	600mL - 2.3L	Spray actively growing 6-8-week-old weeds. Introduce stock 7-10 days after spraying, preferable sheep (cattle are less effective). Stocking rate should be at least 5 times heavier than normal until weeds have been reduced, but before survival of desirable pasture species is threatened. Lucerne and Medics may be damaged and should be grazed short before spraying. Other legumes may be affected.

Table 5. HARVEST AID, LAWNS and SPOT SPRAYING

Application Method	Situation	Target Weeds	State	Rate (/ha)	Critical Comments	Usage Restrictions
Harvest Aid or Salvage Spray	Winter Cereals	Desiccate broadleaf weeds	All States	2.5 – 3.4 L	Apply after dough stage	No usage restrictions.

Application Method	Situation	Target Weeds	State	Rate (/ha)	Critical Comments	Usage Restrictions
	Lawns	Refer weed table	WA, Qld only	3.4-6.8mL/1L water	Wet foliage thoroughly	USAGE RESTRICTIONS APPLY. See Table 4: Application restrictions for TURF
Spot Spraying	High Volume Spraying	Refer To Weed Table	All States	Add 1/10th of rate in weed table to 150 litres of water. Each 150 litres of mix will cover 1000m ² (1/10 th ha) e.g. If rate in weed table is 1.5L use 150mL/150L water.		
	Knapsack Application			Add 1/100th of rate in weed table to 10 litres of water. Each 10 litres of mix will cover 100m ² (1/100 th /ha) e.g. If rate in weed table is 1.5L use 15mL/10L water.		

WEED TABLE

NOTE: Where weeds are to be sprayed in a CROP or PASTURE, use only the rates given for the particular crop or situation indicated under the Directions for Use table. In most cases this will give control, however some hard to kill weeds or those in advanced stages of growth may only be suppressed. The rates listed in the Weed Table below are for use where weeds only are present, and no crop or pasture is involved. Use at these rates in a crop or pasture other than for spot spraying may cause damage. This product should only be used in those states where a rate or range of rates is indicated for the particular weeds listed.

APPLICATION RATE PER HECTARE

Weeds Controlled	Crop						Pastures	Critical Comments
	Vic	NSW ACT	SA	Qld	Tas	WA	NSW, ACT, SA, Qld, Tas only	
Amaranthus spp.	-	1.1L - 2.3L	-	1.8L	-	-	-	Spray young plants.
Apple of Peru	-	1.1L - 2.3L	-	1.8L	-	-	-	Spray young plants. Susceptible when young.
Bathurst Burr	-	1.6L - 2.3L	-	1.8L	-	-	1.6L - 2.3L	Spray seedlings only. (NOT SA)
Blackberry Nightshade	-	1.1L - 2.3L	-	1.8L	-	-	-	
California Burr	-	1.6L - 2.3L	-	1.8L	-	-	1.6L - 2.3L	Spray seedlings only. (NOT SA)
Cape Tulip	-	-	-	-	-	1.4L-	-	Low rate for Cormills only
Capeweed	2.9L	-	3.5L	-	2.9L	1.1L	3.4L - 5.8L	Spray seedlings to rosette stage.
Caltrop	-	1.6L - 3.5L	-	1.8L	-	-	-	Moderately susceptible.
Charlock	1.1L - 1.6L	1.1L - 2.3L	1.1L	-	2.9L	-	1.6L - 2.3L	Spray at rosette stage.
Clover	-	2.5L	-	-	-	-	-	
Common Ice Plant	-	-	2.3L	-	-	-	-	
Docks	2.9L	-	2.9L	2.9L	2.9L	2.3L	6.6L SA only	Spray at multiple leaf stage. - effective only on seedlings.
Fat Hen	-	1.2L - 3.5L	-	1.8L	2.9L	-	-	Spray pre-flowering.
Fumitory - red	-	-	3.5L	-	-	-	-	
Fumitory - white	1.6L	-	1.1L	-	-	-	-	Spray at multiple leaf stage.
Hexham Scent /Melilotus	2.9L	-	2.3L	2.9L	-	-	2.2 - 3.4L	Spray multiple leaf stage before seedling.
Hoary Cress	1.8L - 2.9L	2.3L - 3.4L	2.9L	2.9L	-	-	3.0L - 3.4L	Spray rosettes and pre-flowering.
Hogweed/Wire weed	2.9L	-	-	2.9L	-	-	-	Spray at multiple leaf stage (Vic). Spray at seedling and young plant stage (Qld).

Weeds Controlled	Crop						Pastures	Critical Comments
	Vic	NSW ACT	SA	Qld	Tas	WA	NSW, ACT, SA, Qld, Tas only	
Horehound	-	-	2.9L	-	-	-	4.6-6.6L SA only	Spray seedlings.
Khaki Weed	-	-	-	-	-	-	2.3 - 4.5L NOT SA	Spray seedlings only.
Lincoln Weed	-	-	3.4L	-	-	-	-	Spray early rosettes.
London Rocket	-	-	-	-	-	1.6L	-	
Lupins	-	1.6L -	-	-	-	-	-	
Mexican Poppy	-	-	-	2.9L	-	-	-	Spray seedlings – plants become more resistant with age.
Mintweed	-	2.3L	-	1.8L	-	-	-	Spray seedlings -resistant in later stages.
Mustards	465mL - 1.1L	1.1L - 2.3L	1.1L - 2.9L	1.8L	-	1.6L	1.1L - 2.3L	Spray at 2-4 leaf up to rosette stage.
New Zealand Spinach	-	2.3L - 3.4L	-	-	-	-	-	
Noogoora Burr	-	1.6L - 2.3L	-	1.8L	-	-	1.6L-2.3L NOT SA	Spray seedlings only.
Paterson's Curse	-	2.3L - 3.4L	-	2.9L	-	2.6L	3.4L - 4.6L	Spray rosettes or before plants have 10 leaves. Later stages harder to kill.
Potato Weed	-	1.1L - 2.3L	-	1.8L	-	-	-	
Rapeseed	-	1.6L - 3.4L	-	-	-	-	-	
Rough Poppy	-	2.3L	-	-	-	-	-	
Safflower	-	1.1L - 2.8L	-	-	-	-	-	
Shepherd's Purse	-	2.3L - 3.4L	-	-	2.9L	-	1.6L - 2.3L	Spray young rosettes.
Skeleton Weed	2.9L	2.3L - 3.4L	2.9L	-	-	-	-	Spray rosettes before aerial growth commences.
Sorrel	2.9L	3.4L	2.9L	-	-	-	-	Only moderately susceptible.
Speedwell - ivy leaf	-	-	2.3L	-	-	-	-	
Spiny Emex	-	-	-	2.9L	-	-	-	Only young plants are susceptible.
Stinkwort	-	1.6L -	-	-	-	-	-	
Storksbill / Erodium	-	-	-	-	2.9L	-	3.3L - 6.6L	Spray seedlings to young rosettes.
Sunflower (seedlings)	2.9L	1.1L - 2.8L	-	1.8L	-	-	-	
Thistle:								
- Californian	-	-	-	-	1.2L		6.6L - 7.7L	Repeated applications may be necessary. (NSW, ACT, only).
- Saffron	2.3L	1.1L - 2.8L	2.9L	2.9L	2L	2.3L	2.3L - 3.4L	Low rate only sufficient to control weeds in crops at rosette stage when sprayed early.
- Slender/Shore	-	1.6L - 2.8L	-	-	2.9L	-	2.3L	Suppression only.
- Soldier	2.9	-	-	-	-	-	2.3L - 3.3L (not Tas, NSW, ACT)	Spray young rosette.
- Spear	1.1L	-	-	-	2.9L	-	2.3L - 3.3L	Spray young rosette.

Weeds Controlled	Crop						Pastures	Critical Comments
	Vic	NSW ACT	SA	Qld	Tas	WA	NSW, ACT, SA, Qld, Tas only	
- Star	-	-	-	-	-	-	3.3L-6.6L SA only	Use higher rate as flower stalk appears.
- Variegated	-	1.1L - 3.5L	-	1.8L	2.9L	-	2.3L - 3.4L	Spray at rosette stage.
Thornapple	-	1.6L - 2.3L	-	-	-	-	3.3L - 5.0L (NOT SA)	Spray seedlings only.
Tridax (Tridax Daisy)	-	1.8L	-	1.8L	-	-	-	Spray seedling or young stages only.
Turnip Weed/Rapistrum	-	1.1L - 2.3L	-	1.1L	-	1.6L	1.1L - 2.3L	
Vetches/Tares	2.9L	-	2.3L	-	-	-	-	Spray at multiple leaf stage.
Wards Weed	-	-	2.3L	-	-	-	-	
Wild Cabbage	2.9L	-	-	-	-	-	-	Spray multiple leaves.
Wild Poppy	1.1L	-	-	-	-	-	2.3L - 3.4L	Spray rosettes.
Wild Radish	2.9L	3.5L	2.9L	1.8L	2.9L	1.6L	1.6L - 2.3L	Spray up to young rosette stage.
Wild Turnip	465mL - 1.1L	1.1L - 2.3L	660mL	-	2.9L	1.4L	1.1L - 2.3L	Spray 2-4 leaf up to rosette stage.

Plant Back Days for Agro-Essence 2,4-D 300 Herbicide

Plant Back Days for Agro-Essence 2,4-D 300 Herbicide			
Crop	Up to 1.17 L/ha	Up to 2.4 L/ha	Up to 3.53 L/ha
Balansa Clover	7	7	10
Barley %	1	1	3
Chickpeas #	7	14	21
Cotton	10	14	21
Faba Beans	7	7	10
Field Peas	7	14	14
Lentils	7	7	10
Linseed	7	7	14
Lucerne	7	7	10
Lupins +	7	14	21
Medic	7	7	10
Narbon Beans	7	7	10
Navybean	10	10	14
Oats	3	3	7
Perennial Ryegrass	7	7	10
Persian Clover	7	7	10
Phalaris	7	7	10
Canola/Rapeseed	14	21	28
Rice	7	7	14
Safflower #	7	14	21
Sorghum @	3	7	10
Soybean	14	14	21
Sub-Clover	7	7	10
Sunflower @	7	10	14
Triticale %	1	3	7
Vetch	7	7	10
Wheat %	1	3	7
White Clover	7	7	10

IMPORTANT

PLANT BACK PERIODS

WHEN APPLIED TO DRY SOILS AT LEAST 15mm (0.5 inch) OF RAIN MUST FALL PRIOR TO THE COMMENCEMENT OF THE PLANT BACK PERIOD.

NOTES:

- % In Queensland, no rainfall is required to fall prior to commencement of Plant Back Period for Wheat, Barley and Triticale.
- # In Queensland, planting of Canola/Rapeseed, Chickpeas and Safflower must be delayed for at least 14 days following rainfall of at least 15mm.
- @ In Central Queensland, when using 1.67 L/ha or less of Agro-Essence 2,4-D 300 Herbicide, the plant back period for Sorghum and Sunflower is 1 day irrespective of rainfall.
- + In W.A. the plant back period for Lupins at all rates is 28 days.

GENERAL RESTRAINTS

DO NOT exceed maximum application rate of 15L/ha (4500 g ae/ha)

DO NOT exceed the maximum daily application rate by backpack spraying of 13.3L of product per day.

DO NOT apply if heavy rains or storms are forecast within 3 days.

DO NOT irrigate to the point of runoff for at least 3 days after application.

DO NOT apply if crop or weeds are stressed due to dry or excessively moist conditions.

Additional USAGE restrictions apply in some crops, states and seasons, see restriction Tables 1, 2, 3, 4 and 5.

Table 1. Timing Restrictions for Spraying Peanuts

Situation	Rate L/ha	Region	Timing Restriction
Broadcast Spraying, Prior to sowing (Peanuts)	Up to 2.9 L/ha	Cape York	October and November
		Northern Gulf	October and November
		Northern Territory	October and November
		Wet Tropics	No timing restrictions
		Burdekin	October
		Mackay / Whitsunday	September to December
		Mary / Burnett	October to November
	SE Queensland	August to May	
	Up to 3.6 L/ha	Cape York	October and November
		Northern Gulf	October and November
		Northern Territory	October and November
		Wet Tropics	No timing restrictions
		Burdekin	October
		Mackay / Whitsunday	August to December
Mary / Burnett		September to November	
SE Queensland	Use not supported		
Band Spraying, Post-sowing Pre-emergence (Peanuts)	Up to 3.7 L/ha	Queensland dryland	No timing restrictions
		Cape York	No timing restrictions
		Northern Gulf	October and November
		Northern Territory	October and November
		Wet Tropics	No timing restrictions
		Burdekin	No timing restrictions
		Mackay / Whitsunday	No timing restrictions
Mary / Burnett	No timing restrictions		
SE Queensland	October to January		
Broadcast Spray, Post-sowing Pre emergence (Peanuts)	Up to 7.5 L/ha	Queensland dryland	June to August
		Cape York	October and November
		Northern Gulf	October and November
		Northern Territory	October and November
		Wet Tropics	October to December
		Burdekin	September and October
		Mackay / Whitsunday	August to December
Mary / Burnett	April to January		
SE Queensland	Use not supported		

Table 2. Application and Timing Restrictions for Applications to Pastures

Situation	State	Rate L/ha			
DO NOT apply above maximum rate (L/ha) below OR label rate, whichever is LOWEST					
Pastures (Prior to sowing, conservation tillage)	State	Summer	Autumn	Winter	Spring
	Queensland & NT	11	11	11	11
	New South Wales & ACT	11	11	11	11
	Victoria	1.2	3.5	11	3.5
	Tasmania	1.2	2.6	7.4	3.5
	South Australia	2.4	3.5	11	7.4
Western Australia	3.5	7.4	11	7.4	

	State	Summer	Autumn	Winter	Spring
Pastures (Established)	Queensland & NT	15	15	15	15
	New South Wales & ACT	15	15	15	15
	Victoria	2	4	15	7.5
	Tasmania	1.4	3.5	11	6.6
	South Australia	3	6.6	11	11
	Western Australia	7.5	10.6	15	11

Table 3. Timing Restrictions for Spraying Sugarcane

Situation	Rate L/ha	Region	Timing Restriction
			DO NOT APPLY DURING THE MONTHS
Sugarcane	Up to 3.6 L/ha	Wet Tropics	No timing restrictions
		Burdekin	No timing restrictions
		Mackay / Whitsunday	October and November
		Mary / Burnett	October and November
		Northern NSW	No timing restrictions
	Up to 7.4 L/ha	Wet Tropics	October to December
		Burdekin	September and October
		Mackay / Whitsunday	August to December
		Mary / Burnett	April to January
		Northern NSW	October and November

Table 4. Application Restrictions for Turf

Situation	State	Rate L/ha
DO NOT apply above maximum rate (L/ha) below OR label rate, whichever is LOWEST		
Turf	Queensland & NT	6.7
	New South Wales & ACT	6.7
	Victoria	5.3
	Tasmania	5.3
	South Australia	5.3
	Western Australia	8.3
If applying to golf courses in Tasmania, DO NOT apply to fairways adjacent to natural water bodies		

Table 5. Risk Mitigation Measures for Dryland Cropping, Pre-emergent Uses

Situation	Risk Mitigation Measures
Dryland cropping, Preparatory spray	Only apply in no-till farming systems (Tasmania, South Australia)
Winter cereals, pre-emergent uses	Only apply in no-till farming systems (Tasmania, South Australia, Western Australia)
Summer cereals, pre-emergent uses	Only apply in no-till farming systems (Tasmania, South Australia)

SPRAY DRIFT RESTRAINTS

DO NOT apply by a vertical sprayer.

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 relevant buffer zone table/s 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 1 to 2 hours before sunset and persist until 1 to 2 hours after sunrise.

Boom Sprayer Application

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

- Spray droplets are not smaller than a VERY 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

Application Rate	Boom Height Above the Canopy	Mandatory Downwind Buffer Zones (distances given in metres)				
		Bystander Areas	Natural Aquatic Areas	Pollinator Areas	Vegetation Areas	Livestock Areas
Up to 2.9 L (880 g ae/ha)	0.5 m or lower	0	20	0	20	0
	1.0 m or lower		50		50	
Up to 3.5 L (1080 g ae/ha)	0.5 m or lower		25		25	
	1.0 m or lower		60		55	
Up to 7.5 L (2250 g ae/ha)	0.5 m or lower		40		35	
	1.0 m or lower		110		110	
Up to 9.1 L (2750 g ae/ha)	0.5 m or lower		45		45	
	1.0 m or lower		130		130	

Aircraft Application

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

- Spray droplets are no smaller than a VERY COARSE spray droplet size category.
- For maximum release heights above the target canopy of 3 m or 25% of wingspan or 25% of rotor diameter whichever is the greatest, minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer Zones for Aircraft') are observed.

Buffer Zones for Aircraft

Application Rate	Boom Height Above the Canopy	Mandatory Downwind Buffer Zones (distances given in metres)				
		Bystander Areas	Natural Aquatic Areas	Pollinator Areas	Vegetation Areas	Livestock Areas
Up to 2.9 L (880 g ae/ha)	Fixed Wing	0	110	0	110	0
	Helicopter		160		150	
Up to 3.5 L (1080 g ae/ha)	Fixed Wing		130		120	
	Helicopter		180		180	
Up to 7.5 L (2250 g ae/ha)	Fixed Wing		200		200	
	Helicopter		325		300	
Up to 9.1 L (2750 g ae/ha)	Fixed Wing		230		230	
	Helicopter		325		300	