Product Name: Spalding 2,4-D IPA 450 SL Herbicide

APVMA Approval No: 86786/128100

RLP
APPROVED

Label Name:	Spalding 2,4-D IPA 450 SL Herbicide

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

Constituent Statements:	450 g/L 2,4 D present as the isopropyl amine salt

Mode of Action:	GROUP I HERBICIDE

Statement of Claims:	For the Control of Emerged Broadleaf Weeds Prior to Sowing Crops and Pastures in Conservation Tillage Situations and for Selective Weed Control in Crops and Situations Detailed in 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

Net Contents:	20 - 1000 L

Restraints:	This section contains file attachment.

Directions for Use:	This section contains file attachment.

Other Limitations:	IN TASMANIA, THIS PRODUCT MAY ONLY BE USED FROM 15 APRIL TO 15 SEPTEMBER UNLESS OTHERWISE PERMITTED BY THE REGISTRAR OF PESTICIDES

Withholding Periods:	Pasture, Cereal Crops: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION CROP HARVEST: NOT REQUIRED WHEN USED AS DIRECTED

Trade Advice:	

General Instructions:	Spalding 2,4-D IPA 450 SL Herbicide is a water-soluble liquid product with non selective herbicidal activity against broadleaf weeds. Spalding 2,4-D IPA 450 SL Herbicide will control emerged weeds only, and provides no residual control although certain plant back periods should be observed. Spalding 2,4-D IPA 450 SL 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, waterlogging, 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 Spalding 2,4-D IPA 450 SL Herbicide is recommended as a herbicide additive to glyphosate for control of emerged weeds prior to crop establishment. When Spalding 2,4-D IPA 450 SL 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 effects it is suggested that: • Weed bulk be reduced by grazing and cultivating to leave trash on the surface to dry out; • A friable seedbed be produced by cultivation, where necessary; • The use of pre emergent herbicides to be avoided if they might contribute to reduced germination; • A correct seeding depth 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 Application of Spalding 2,4-D IPA 450 SL Herbicide / glyphosate mixtures in spray volumes of 25-100L/ha is recommended. When Chlorsulfuron (750g/kg) or Metsulfuron-methyl (600g/kg) are included in the mixture a minimum spray volume of 30L/ha is recommended. When Simazine is included in the mixture a minimum spray volume of 100 L/ha is

recommended. Boom height must be set to ensure double overlap of nozzle patterns at the top of the weed canopy.

Aerial Equipment
Application of Spalding 2,4-D IPA 450 SL Herbicide / glyphosate mixtures should occur in a minimum spray volume of 15L/ha. Application under hot conditions: High temperature and/or low relative humidity cause excessive evaporation of spray droplets which may reduce results. When temperatures reach 25oC increase water volume to 30L/Ha. 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
Spray solutions of Spalding 2,4-D IPA 450 SL Herbicide and Glyphosate should be mixed, stored and applied only in stainless steel, aluminium, brass, copper, fibreglass, plastic lined containers. Do not mix, store or apply spray solutions in galvanised steel or unlined steel (except stainless steel) containers or spray tanks. Spalding 2,4-D IPA 450 SL Herbicide / Glyphosate spray solutions may react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture that can flash or explode if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source. 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 Spraymate Tank & Equipment Cleaner. If using Sulfonylurea herbicides (chlorsulfuron {750g/kg} or metsulfuron-methyl {600g/kg}) follow decontamination procedures detailed on those product labels.

Compatibility
Spalding 2,4-D IPA 450 SL Herbicide is compatible in tank mixes with Glyphosate herbicides, Glyphosate (540g/L0), Dicamba (200g/kg), Chlorsulfuron (750g/kg), kg Metsulfuron Methyl, Simazine Flowable, Simazine DF, Atrazine flowable (500g/L), Atrazine DF, Paraquat (135g/L) & Diquat (115g/L) mixture, Chlorpyrifos 500EC, Dimethoate.

Surfactant Addition
DO NOT add surfactant excepting in conservation tillage where the product is to be tank mixed with Glyphosate 450g/L. In this situation always add either a non ionic surfactant (e.g. 900g/L non-ionic surfactant) or the acidifying surfactant LI 700 in accordance with label directions on the Glyphosate 450g/L product. Use LI 700 with Glyphosate 450g/L if insecticides will be included in the tank mixture of if faster brownout of weeds is required. DO NOT mix with spraying oils, or any other materials or agricultural chemicals except as directed on this label. DO NOT use LI 700 or Bonus if sulfonylurea herbicides (Chlorsulfuron {750g/kg} or Metsulfuron-methyl {600g/kg}) are included in the spray mixture.

Tank Mixtures
The Spalding 2,4-D IPA 450 SL Herbicide directions for use on this label are designed to be used as a tank mixture with Glyphosate 450g/L. However as shown in the compatibility and surfactant addition sections of this label, it is possible to extend/improve weed control to include other foliage applied and/or residual herbicides and adjuvants. A mixture of Spalding 2,4-D IPA 450 SL Herbicide and Glyphosate may be tank mixed with the following herbicides, insecticides and adjuvants where recommended in the Directions for Use tables. Read and follow all label directions, restraints and plant back periods, withholding periods and safety directions for the tank mix products.
Dicamba 500g/L For improved control of Sow Thistle.
Observe any regional use restrictions
Chlorsulfuron 750g/kg Will provide control for a wide range of broadleaf weeds and grasses.
Metsulfuron-methyl 600g/L For improved knockdown control of Yellow Burrweed (Amsinckia), Volunteer Chickpeas, Chickweed, Common Sowthistle, Cut leaf Mignonette, Deadnettle, Faba Beans, Mallee Catchfly, Soursob, Stagger Weed, Wild Garlic. 600g/kg Metsulfuron Methyl does not provide residual in crop weed control.

Insecticides

	Chlorpyrifos 500EC and Dimethoate can be introduced into the tank mix for specific control to prevent insect damage to emerging crops. Mixing Instructions Spalding 2,4-D IPA 450 SL Herbicide mixes readily with water. Ensure the spray tank is free of any residue of previous spray materials. 1. Fill the spray tank with clean water to one half of the required amount and start agitation. Do not use mechanical agitators as these may cause excessive foaming when herbicides are added. 2. Where either Bonus or LI 700 acidifying surfactant is recommended at either 100mL or 300mL/100L, add to tank through top mesh screen. 3. Add recommended herbicide additive / insecticide to the spray tank and mix thoroughly. 4. Add Spalding 2,4-D IPA 450 SL Herbicide and mix thoroughly. 5. Add Glyphosate 450g/L and the remaining water. 6. When non ionic surfactant is used, add near the end of the filling process to minimise foaming. 7. Always maintain adequate agitation during application and use the tank mix promptly.

Resistance Warning:	RESISTANT WEEDS WARNING GROUP I HERBICIDE Spalding 2,4-D IPA 450 SL Herbicide is a member of the Phenoxys group of herbicides. Spalding 2,4-D IPA 450 SL Herbicide has the Disruptors of plant cell growth mode of action. For weed resistance management Spalding 2,4-D IPA 450 SL Herbicide is a Group I herbicide. Some naturally occurring weed biotypes resistant to Spalding 2,4-D IPA 450 SL 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 Spalding 2,4-D IPA 450 SL Herbicide or other disruptors of plant cell growth herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Spalding Holdings Pty Ltd accepts no liability for any losses that may result from the failure of Spalding 2,4-D IPA 450 SL Herbicide to control resistant weeds.

Precautions:	DO NOT hand harvest sugarcane for at least 1 day after application. 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.

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 cool, well-ventilated area. DO NOT store for prolonged periods in direct sunlight. Triple-rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging for appropriate disposal to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation

	and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product. For refillable containers (1000L only) Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

Safety Directions:	Poisonous if absorbed by skin contact or 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 and face shield or goggles. 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 on skin, immediately wash area with soap and water. 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, face shield or goggles 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.

First Aid Warnings:	

1. PRE SOWING: FALLOWS, STUBBLE SPRAY PRIOR TO DIRECT DRILLING OR SOWING

Situation & Crop	Weeds	State	Rate	Critical Comments
<u>Cereals</u>: Wheat, Barley, Oats, Triticale, Rice, Sorghum <u>Grain legumes</u>: Chickpeas, Faba Bens, Field Peas, Lentils, Lupins, Narbon Beans, Navy Beans, Persian Clover <u>Oilseeds</u>: Canola, Cotton, Linseed, Safflower, Soybeans, Sunflower <u>Pastures</u>: Balansa Clover, Lucerne, Perennial Ryegrass, Phalaris, Sub- Clover, Vetch, White Clover, Persian Clover USAGE RESTRICTIONS APPLY. See Table 5: Risk mitigation measures for Dryland cropping, pre-emergent uses	Fumitory (white), Ball Mustard, Indian Hedge Mustard, Common Sowthistle, Turnip Weed, Wild Turnip, Wild Radish.	All States	440mL/ha – 800mL/ha + 450g/L glyphosate and surfactant at recommended label rates	RATE SELECTION: Use the lower rate for seedling broadleaf weeds and increase to this higher rate for broadleaf weeds more than 10cm diameter/high. Always add Glyphosate 450g/L at recommended label rates. At the time of application, all weeds must be actively growing and not under stress from low moisture, frost, cold, disease or waterlogging. If grazing has occurred allow regrowth to 6-8cm before spraying and use higher rate. Always add either a non-ionic surfactant (e.g. 900g/L non-ionic surfactant) or the acidifying surfactant LI-700 or Bonus in accordance with label directions on the Glyphosate 450g/L product. Use LI-700 with Glyphosate 450g/L if insecticides will be included in the tank mixture or if faster brownout of weeds is required.
	Seedlings of: Australian Bindweed, Bellvine, Caltrop, New Zealand Spinach, Raspweed	NSW, Qld only		
	Ageratum (Blue Top), Dock, Volunteer Lupins, Volunteer Peas, Volunteer Sunflowers, Charlock, Fumitory (Red), Medic, Paterson's Curse, Prickly Lettuce (Wild Lettuce), Saffron Thistle, Spear Thistle, Variegated Thistle	All states	600mL/ha – 800 mL/ha + glyphosate 450g/L and surfactant at recommended label rates	
	Bathurst Burr, Blackberry Nightshade, Californian Burr, Horehound Seedlings, Lincoln Weed Seedlings, Marshmallow Seedlings, Sorrel Seedlings, Thornapple, Volunteer Vetch, Volunteer Safflower, Common Ice-Plant, Storksbill/Erodium Seedlings, Ivyleaf, Speedwell, Melilotus, Shepherd's Purse, Skeleton Weed (Suppression only), Ward's Weed, Wireweed Seedlings (Hogweed), White Clover, Sub-Clover		800mL/ha - 1.2L/ha + glyphosate 450g/L and surfactant at Recommended label rates	
	Amaranth, Apple of Peru, Mexican Poppy, Annual Ground Cherry, Bladder Ketmia, Fat Hen, Melons, Native Rosella, Noogoora Burr, Potato Weed, Cow Vine, Yellow Vine, Rapeseed.	NSW, ACT, Qld only	1.2L/ha – 1.8L/ha + Glyphosate 450g/L and Surfactant at recommended label rates	

Situation & Crop	Weeds	State	Rate	Critical Comments
Winter Cereals, Maize, Sweetcorn, Peanuts USAGE RESTRICTIONS APPLY: See Table 1: Timing restrictions for spraying peanuts and Table 5: Risk mitigation measures for Dryland cropping, pre-emergent uses	Refer to weed table	Vic, NSW, ACT, Qld, NT only	Vic: 310 mL-1.9 L NSW, ACT, Qld: 800 mL-2.3 L	Observe plant back periods given in the table on 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
PASTURES: Conservation Tillage - Direct Drilling, Surface Sowing or Fallow Maintenance USAGE RESTRICTIONS APPLY: See Table 2: Application and timing restrictions for application to pastures	Charlock, Mustards, Shepherd's Purse, Saffron, Slender, Spear & Variegated Thistles, Turnip Weed, Wild Radish, Wild Turnip	All States	730mL - 2.2L/ha	Apply to actively growing young weeds before sowing. Observe plant back periods given in the table on this leaflet.
	Clover Sorrel		1.5 L/ha plus 280mL-400mL/ha Dicamba 500g/L	Apply to actively growing plants in autumn. Do not sow pasture seed for at least 30 days after application.

2. POST SOWING - PRE AND POST EMERGENT USES

Situation & Crop	Weeds	State	Rate	Critical Comments
Wheat, Barley, Cereal Rye, Triticale, Oats	Refer Weed Table	NSW, ACT, SA, Vic, Qld, Tas only	450mL - 1.9L/ha Refer to weed table for specific rates in each state	Apply after 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, 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	930mL – 1.7L/ha	Apply from the 5 leaf stage up to jointing stage (Zadoks 15-33). Apply after the 6 leaf stage (Z 16) for Cranbrook, Jacup, Aroona and Spear wheat and Mortlock oats to avoid possible damage. 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.
	Dock, Saffron Thistle		1.5L/ha	
	Indian Hedge Mustard, London Rocket, Lupin, Rapistrum, Wild Radish		1.1L/ha	
	Wild Turnip		930 mL/ha	

Situation & Crop	Weeds	State	Rate	Critical Comments
	Capeweed, Doublegee, Erodium, London Rocket, Lupin, Mustard, Rapistrum, Wild Radish, Wild Turnip		250 mL/ha plus 500mL/ha Flowable Diuron 500g/L	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-clovers may be slightly retarded. DO NOT apply to undersown medics.
Maize, Sweetcorn	Refer Weed Table	NSW, ACT, SA only	800mL – 1.5L/ha	Apply when crop is 10-20cm high and secondary roots are developing for an over the top spray. When crop is between 20cm high and just before tasselling, spray with dropped nozzles to avoid chemical being sprayed into the whorl and on upper leaves.
		Qld only		Apply when crop is 10-30cm high and secondary roots have developed. Use drop nozzles and direct spray when crop exceeds 30cm in height and before tasselling.
		Tas only		Apply when the crop is 15-30cm high. Do not spray if the crop is showing signs of stress. Some leaf twisting may occur following application - crop recovers quickly.
Sorghum		NSW, ACT, SA, Vic only		Apply preferably when crop is at 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.
		Qld only (except central Qld)		Apply when crop has 4 to 8 fully expanded leaves and secondary roots have developed.
Millet	Refer Weed Table	NSW, ACT, SA, Vic only	800mL – 1.5L/ha	Spray when secondary roots have developed, when fully tillered and before heads start to form at the base of the tillers. Do not use on panarama or panicum.
		Qld only	800mL - 1.2L/ha	
Maize, Sweetcorn, Saccaline, Broom Millet, Millet	Cape Tulip, Dock, Saffron Thistle, Indian Hedge Mustard, London Rocket, Lupin, Rapistrum, Radish, Wild Turnip	WA only	1.5L/ha	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 spraying SUGARCANE	Bindy Eye (Star Burr), Blue Top, Cobblers Pegs, Fleabanes, Jute, Leucas, Needle Burr, Spear Thistle Water Primrose, Ipomea Vines, Convolvulus Vines	Qld, NSW only	2.4 L-4.9L/ha	Add 170mL of Surfactant 600g/L to 100L of spray mixture. Agitate well. DO NOT use on Q63, Q67, Q80 or Q96 varieties.
	Chinese Mint, Blue Snakeweed		4.9L/ha	

Situation & Crop	Weeds	State	Rate	Critical Comments
Peanuts USAGE RESTRICTIONS APPLY: See Table 1: timing restrictions for peanuts	Broadleaf Weeds except Noogoora Burr, Grasses except Mossman Burr	Qld, NT only	2.4L or 5L/ha	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 fails between application and crop emergence.

3. PASTURES, NON-AGRICULTURAL, RIGHTS OF WAY, INDUSTRIAL AREAS

Situation & Crop	Weeds	State	Rate	Critical Comments
Pastures & Non Agricultural USAGE RESTRICTIONS APPLY: See Table 2: Application and timing restrictions for application to pastures	Refer Weed Table	NSW, Qld, SA, Tas only	730 – 2.3L/ha	Pasture legumes including lucerne, clovers, and medics may be damaged unless well protected by grasses. Spot spraying is preferred.
	Amsinckia, Docks, Bindweed, Caltrop, Flatweed, Spear Thistle, Capeweed, Doublegee, Saffron Thistle, Mustard, Wild Radish, Wild Turnip, Annual Thistles, Paterson's Curse	WA only	1.5L/ha	For pastures not containing legumes. Only seedling docks, spear thistles and saffron thistle will be controlled.
	Afghan Melons		2.2L/ha plus 1% crop oil	Spray when plants are actively growing preferably before flowering or vining.
	Paddy Melons		1.1 – 1.5L/ha	
	Prickly Saltwort (Roly Poly)		2.2L/ha	Spray when plants are small.
	Stinkwort		2.2L – 4.4L/ha plus surfactant	Best results are obtained when plants are small Use high rate on larger plants.
	Dove Weed		4.4L/ha	Spray after good emergence of seedlings.
Pastures, Rights-of-Way & **Industrial**	Boxthorn, Boneseed, Hawthorn	Vic, SA only	110mL/10 L water	Spot spraying. For boneseed only, thoroughly wet plants or seedlings
	Groundsel	NSW, Qld, SA only	1.3L/15L water	MISTING Lightly wet plants.
			400mL/100 L water	HIGH VOLUME: Thoroughly wet plants.
			330mL/15L water	CUT STUMP: Swab the cut stump within one hour of cutting. Apply by a pouring can. or knapsack spray.
			4 – 6.1 L/ha	AERIAL APPLICATION: Spray when groundsel ' is actively growing.

Situation & Crop	Weeds	State	Rate	Critical Comments
	Lantana		400mL/100 L water	Use a 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 the following Autumn. Broadcast grass seed and keep stock off following Summer to allow the pasture to establish. Damage may result to pasture legumes.
	Mother of Millions	NSW only	550mL/100 L water	Hand gun and Knapsack only: a thorough coverage of leaves and plantlets is necessary. Use Spraymate Chemwet 1000 at the rate of 1.0mL of surfactant per 1L of mixture.
	Noogoora Burr, Weir Vine (Ipomea), Scarlet Pipernel (seedlings only), White Eye (Mexican Clover)	QId only	220mL/100 L water	In all cases apply to young, actively growing weeds, ensuring thorough coverage. * Spray rosette stage # Repeat spraying if necessary
	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, Weed, Paterson's Curse, Saffron Thistle, Star Burr, Thornapple, Variegated Thistle*		400mL/100 L water	
	Rubber Vine		220mL/100 L water	Apply to freshly cut stump.

4. PASTURES – SPRAY/GRAZE TECHNIQUES

Precaution: An increased quantity of poisonous plants may be eaten by stock using spray-graze, e.g. Caltrop, Capeweed, Paterson's Curse and variegated thistle and deaths could result from causes such as nitrate poisoning. With Paterson's Curse, preferably graze stock soon destined for slaughter and avoid extended period of grazing. Avoid grazing with young or breeding stock. Do not graze horses or pigs on Paterson's Curse.

Crop	Weeds	State	Rate	Critical Comments
	Amsinckia, Thistles, Capeweed, Doublegee, Mustard, Paterson's Curse, Wild Turnip, Wild Radish, Docks, Geranium, Erodium	SA only	730mL/ha	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

	Annual Thistles, Capeweed, Doublegee, Mustards, Paterson's Curse, Turnip, Saffron Thistle, Spear Thistle	Tas, Vic only		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.
	Amsinckia, Docks (seedling only), Capeweed, Doublegee, Mustard, Wild Radish, Wild Turnip, Paterson's Curse, Annual Thistles	WA only	870mL/ha	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.
	Spear Thistle, Saffron Thistle		1.7L/ha	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		2.2L/ha	Heavy stocking on young plants sprayed with 750mL/ha provides effective control.
	Docks	Vic only	1.5 L	Apply in September only and follow other recommendations above.
	Caltrop, Capeweed, Charlock, Mustards, Paterson's Curse, Shepherd's Purse, Saffron, Slender, Spear or Variegated Thistle, Turnip Weed, Wild Radish, Wild Turnip	NSW only	400mL-1.5L/ha	Spray actively growing 6-8 week Qld weeds. Introduce stock 7-10 days after spraying, preferably 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.

5. PLANTATIONS

Situation	Weeds	State	Rate	Critical Comments
Hardwood & Softwood Plantation	Broadleaf and woody weeds as per product labels including groundsel and Pinus spp. wildings	All states	Maximum rate 2.2 L/ha	Apply a single pre-plant 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, following the conditions of use under this permit only.
Preparatory spray for fallow/ clear felled *Pinus elliottii* 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 6 L/ha 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.
Oil Tea Tree	Refer Weed table	All states	Apply a maximum of1.5 L/ha asper label direction	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 burst 8 days after harvest in summer and • Surface of cut stumps are dry before spraying commence.
	Purple Top (*Verbena bonariensis*)		Apply 1.5 L/ha plus 720 g ai glyphosate mix	Apply as a shielded spray. Avoid contact with foliage, green stems, exposed non-woody roots, desirable plants and trees as severe injury or destruction may result.

6. HARVEST AID, LAWNS and SPOT SPRAYING

Application Method	Situation	Targe Weeds	State	Rate (/ha)	Critical Comments	Usage Restrictions
Harvest Aid or Salvage Spray	Winter Cereals Maize & sorghum	Desiccate broadleaf weeds	Qld, NSW ACT only	1.7 – 2.3 L	Apply after dough stage	No usage restrictions.
	Lawns	Refer to Weed table	WA, Qld only	2.3 – 4.5mL/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 (1/10th 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 (1/100th/ha) e.g. If rate in weed table is 1.5L use 15mL/10L water.		

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

WEED TABLE

The rates listed in the Weed Table below are spot spraying rates for use in crop or pasture, or for use where weeds only are present and no crop or pasture is involved. NOTE: Where weeds are to be sprayed in a CROP or PASTURE (other than spot spraying) use only the rates given for the particular crop or situation indicated under the Directions for Use.

WEED TABLE:

Weeds	Application Rate per Hectare							Critical Comments
	Crop						Pastures	
	Vic	NSW	SA	Qld	Tas	WA	NSW, SA, Qld, Tas only	
Amaranthus spp.		730mL-1.5L		1.2L				Spray young plants.
Apple of Peru		730mL-1.5L		1.2L				Spray young plants. Susceptible when young.
Bathurst Burr		1.1-1.5L		1.2L			1.1-1.5L NOT SA	Spray seedlings only.
Blackberry Nightshade		730mL-1.5L		1.2L				
California Burr		1.1-1.5L		1.2L			1.1-1.5L NOT SA	Spray seedlings only.
Cape Tulip						930mL-1.7L		Low rate for cormils only.*
Capeweed	1.9L		2.3L		1.9L		2.3-3.9L	Spray seedlings to rosette stage.
Caltrop		1.1-2.3L		1.2L				Moderately susceptible.
Charlock	730mL-1.1L	730mL-1.5L	730mL		1.9L		1.1-1.5L	Spray at rosette stage.
Clover		1.7L						
Common Ice Plant			1.5L					
Docks	1.9L		1.9L	1.9L	1.9L	1.5L	4.4L SA Only	Spray at multiple leaf stage. – effective only on seedlings.
Fat Hen		800mL-2.3L		1.2L	1.9L			Spray pre-flowering.
Fumitory - red			2.3L					
Fumitory - white	1.1L	730mL						Spray at multiple leaf stage.
Hexham Scent/ Melilotus	1.9L		1.5L	1.9L			1.5-2.3L	Spray at multiple leaf stage, before seeding.
Hoary Cress	1.2-1.9L	1.5-2.3L	1.9L	1.9L			2-2.3L	Spray rosettes and pre-flowering.
Hogweed / Wireweed	1.9L			1.9L				Spray at multiple leaf stage (Vic) Spray at seedling and young plant stage (Qld).
Horehound			1.9L				3.1 – 4.4L SA ONLY	Spray seedlings.
Khaki Weed							1.5-3L NOT SA	Spray seedlings only.
Lincoln Weed			2.3L					Spray early rosettes.
London Rocket						1.1L		
Lupins		1.1-2.3L						
Mexican Poppy				1.9L				Spray seedlings - plants become more resistant with age.
Mintweed		1.5L		1.2L				Spray seedlings - resistant in later stages.
Mustards	310-730mL	730mL-1.5L	730mL-1.9L	1.2L		1.1L	730mL - 1.5L	Spray at 2-4 leaf up to rosette stage.

Weeds	Application Rate per Hectare							Critical Comments
	Crop						Pastures	
	Vic	NSW	SA	Qld	Tas	WA	NSW, SA, Qld, Tas only	
New Zealand Spinach		1.5-2.3L						
Noogoora Burr		1.1-1.5L		1.2L			1.1-1.5L NOT SA	Spray seedlings only.
Paterson's Curse		1.5L-2.3L		1.9L		1.7L	2.3-3.1L	Spray rosettes or before plants have 10 leaves. Later stages harder to kill.
Potato Weed		730mL-1.5L		1.2L				
Rapeseed		1.1-2.3L						
Rough Poppy		1.5L						
Safflower		730mL - 1.9L						
Shepherds Purse		1.5L-2.3L			1.9L		1.1-1.5L	Spray young rosettes.
Skeleton Weed	1.9L	1.5-2.3L	1.9L				2-3.1L	Spray rosettes before aerial growth
Sorrel	1.9L	2.3L	1.9L					Only moderately susceptible.
Speedwell-ivy Leaf			1.5L					
Spiny Emex				1.9L				Only young plants are susceptible.
Stinkwort		1.1L – 1.9L						
Storksbill / Erodium					1.9L		2.2-4.4L	Spray seedlings to young rosettes.
Sunflower (seedlings)	1.9L	730mL - 1.9L		1.2L				
Thistle - Californian					800mL		4.4-5.1L	Repeated applications may be necessary (NSW, Tas only).
Saffron	1.5L	730mL - 1.867L	1.9L	1.9L	1.3L	1.5L	1.5-2.3L	Low rate only sufficient to control weeds in crops at rosette stage when sprayed early.
Slender / Shore		1.1-1.9L			1.9L		1.5L	Suppression only.
Soldier	1.9L						1.5-2.2L NOT NSW, Tas	Spray young rosettes.
Spear	730mL					1.9L	1.5-2.2L	Spray young rosettes.
Star							2.2-4.4L SA ONLY	Use higher rate as flower stalk appears.
Variegated		730mL-2.3L		1.2L	1.9L		1.5-2.3L	Spray at rosette stage.
Thornapple		1.1-1.5L					2.2-3.3L NOT SA	Spray seedlings only.
Turnip Weed/ Rapistrum		730mL - 1.5L		730L		1.1L	730mL – 1.5L	
Wards Weed			1.5L					
Wild Cabbage	1.9L							Spray multiple leaves
Wild Poppy	730mL						1.5-2.3L	Spray rosettes.
Wild Radish	1.9L	2.3L	1.9L	1.2L	1.9L	1.1L	1.1-1.5L	Spray up to young rosette stage.
Wild Turnip	310-730mL	730mL-1.5L	440mL		1.9L	930mL	730mL-1.5L	Spray 2-4 leaf up to rosette stage.
Vetches /Tares	1.9L		1.5L					Spray at multiple leaf stage.

PLANT BACK DAYS FOR SPALDING 2,4-D IPA 450 SL HERBICIDE

	Plant Back Days for **Spalding 2,4-D IPA 450 SL Herbicide**		
Crop	**Up to 0.770 L/ha**	**770 mL to 1.6 L/ha**	**1.6 to 2.3 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

PLANT BACK PERIODS
IMPORTANT: WHEN APPLIED TO DRY SOILS AT LEAST 15mm (½ 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 1.1 L/ha or less of Spalding 2,4-D IPA 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 10 L/ha (4500 g ae/ha).
DO NOT exceed the maximum daily application rate by backpack spraying of 8.9 L 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
			DO NOT APPLY DURING THE MONTHS
Broadcast Spraying, Prior to sowing (Peanuts)	Up to 1.9 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 2.4 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
Fallow Band Spray Prior to Sowing (Peanuts)	Up to 2.5 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 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	7.1	7.1	7.1	7.1
	New South Wales & ACT	7.1	7.1	7.1	7.1
	Victoria	0.8	2.3	7.1	2.3
	Tasmania	0.8	1.7	4.9	2.3
	South Australia	1.6	2.3	7.1	4.9

	Western Australia	2.3	4.9	7.1	4.9
Pastures (Established)	**State**	**Summer**	**Autumn**	**Winter**	**Spring**
	Queensland & NT	10	10	10	10
	New South Wales & ACT	10	10	10	10
	Victoria	1.3	2.7	10	5
	Tasmania	0.9	2.3	7.1	4.4
	South Australia	2	4.4	10	7.1
	Western Australia	5	7.1	10	7.1

Table 3. Timing Restrictions for Spraying Sugarcane

Situation	Rate L/ha	Region	Timing Restriction
			DO NOT APPLY DURING THE MONTHS
Sugarcane	Up to 2.4 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 4.9 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	4.4
	New South Wales & ACT	4.4
	Victoria	3.5
	Tasmania	3.5
	South Australia	3.5
	Western Australia	5.6
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 Buffer Zones** (distances given in metres)				
		Bystander Areas	**Natural Aquatic Areas**	**Pollinator Areas**	**Vegetation Areas**	**Livestock Areas**
Up to 1 L (450 g ae/ha)	0.5 m or lower	0	5	0	5	0
	1.0 m or lower		35		30	
Up to 2 L (900 g ae/ha)	0.5 m or lower		25		20	
	1.0 m or lower		50		50	
Up to 3 L (1350 g ae/ha)	0.5 m or lower		30		30	
	1.0 m or lower		70		70	
Up to 4 L (1800 g ae/ha)	0.5 m or lower		35		35	
	1.0 m or lower		90		85	
Up to 5 L (2250 g ae/ha)	0.5 m or lower		40		35	
	1.0 m or lower		110		110	

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 Buffer Zones** (distances given in metres)				
		Bystander Areas	**Natural Aquatic Areas**	**Pollinator Areas**	**Vegetation Areas**	**Livestock Areas**
Up to 1 L (450 g ae/ha)	Fixed Wing	0	100	0	100	0
	Helicopter		75		75	
Up to 2 L (900 g ae/ha)	Fixed Wing		160		160	
	Helicopter		110		110	
Up to 3 L (1350 g ae/ha)	Fixed Wing		210		210	
	Helicopter		150		140	
Up to 4 L (1800 g ae/ha)	Fixed Wing		275		250	
	Helicopter		180		170	
Up to 5 L (2250 g ae/ha)	Fixed Wing		325		300	
	Helicopter		200		200	