

Product Name: Nufarm 2,4-D Ester 680 Herbicide  
APVMA Approval No: 60938 / 136325



Label Name:	Nufarm 2,4-D Ester 680 Herbicide
Signal Headings:	POISON KEEP OUT OF REACH OF CHILDREN READ SAFETY DIRECTIONS BEFORE OPENING OR USING
Constituent Statements:	ACTIVE CONSTITUENT: 680 g/L 2,4-D present as the 2-ethylhexyl ester
Mode of Action:	GROUP <b>I</b> HERBICIDE
Statement of Claims:	A specially formulated low volatile herbicide for selective control of various weeds in crops, pastures and non-agricultural areas 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.
Net Contents:	20 - 1000L
Restrains:	see attachment
Directions for Use:	see attachment

Other Limitations:	IN TASMANIA, THIS PRODUCT MAY ONLY BE USED FROM 15TH APRIL TO 15TH SEPTEMBER UNLESS OTHERWISE PERMITTED BY THE REGISTRAR OF PESTICIDES.
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Withholding Periods:	WITHHOLDING PERIODS PASTURES, CEREAL CROPS: DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION. CROP HARVEST WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED.
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Trade Advice:	
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General Instructions:	see attachment
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Resistance Warning:	<p>RESISTANT WEEDS WARNING GROUP 4 HERBICIDE</p> <p>Nufarm 2,4-D Ester 680 Herbicide is a member of the Phenoxy group of herbicides. Nufarm 2,4-D Ester 680 has the disruptors of plant cell growth mode of action. For weed resistance management Nufarm 2,4-D Ester 680 is a Group 4 herbicide. Some naturally-occurring weed biotypes resistant to Nufarm 2,4-D Ester 680 and other Group 4 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 Nufarm 2,4-D Ester 680 or other Group 4 herbicides. Since the occurrence of resistant weeds is difficult to detect prior to use, Nufarm Australia Limited accepts no liability for any losses that may result from the failure of Nufarm 2,4-D Ester 680 to control resistant weeds.</p>
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Precautions:	<p>PRECAUTIONS</p> <p>Re-entry period</p> <p>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.</p> <p>DO NOT hand harvest sugar cane for at least 1 day after application.</p>
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Protections:	<p>PROTECTION OF CROPS, NATIVE AND OTHER NONTARGET PLANTS</p> <p>DO NOT spray crops or weeds outside the stages indicated in "Critical Comments" as damage, loss of yield or inadequate weed control may result.</p> <p>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.</p> <p>Avoid spray drift and vapour movement onto susceptible crops such as cotton, tobacco, tomatoes, vines, lupins, fruit trees and ornamentals.</p> <p>Legume Tolerance</p> <p>If clovers are present, care should be taken to ensure that they have reached the 3-4 leaf stage before spraying. Rates above 410 mL of this product per hectare will destroy most clovers, whilst lucerne and medics are susceptible at any strength.</p> <p>PROTECTION OF HONEY BEES AND OTHER INSECT POLLINATORS</p> <p>Low hazard to bees. May be applied at any time as recommended in the Directions for Use.</p>
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	<p><b>INTEGRATED PEST MANAGEMENT</b>  Toxic to beneficial arthropods. Not compatible with integrated pest management (IPM) programs utilising beneficial arthropods. Minimise spray drift to reduce harmful effects on beneficial arthropods in non-crop areas.</p> <p><b>PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT</b>  Very toxic to aquatic life. DO NOT contaminate streams, rivers or watercourses with the chemical or used container.</p>
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Storage and Disposal:	<p><b>STORAGE AND DISPOSAL</b>  Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight.</p> <p><b>Non-refillable containers</b>  Triple rinse containers before disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available, bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant local, state or territory government regulations. DO NOT burn empty containers and product.</p> <p><b>Refillable containers</b>  Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.</p>
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Safety Directions:	<p><b>SAFETY DIRECTIONS</b>  Hazards and precautions:  Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with the eyes and skin. If product in eyes, wash it out immediately with water.</p> <p>Mixing and loading with open systems for aerial or boom sprayer application or for hand application:  When opening the container and preparing spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length chemical resistant gloves, goggles and half face piece respirator with organic vapour/gas cartridge or canister.</p> <p>Mixing and loading with closed systems (aerial and boom sprayer use):  When opening the container and preparing the spray, wear cotton overalls over normal clothing and elbow length chemical resistant gloves.</p> <p>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.</p> <p>After use:  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.</p>
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First Aid Instructions:	<p><b>FIRST AID</b>  If poisoning occurs, contact a Doctor or Poisons Information Centre. Phone Australia 13 11 26, New Zealand 0800 764 766.</p>
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First Aid Warnings:	
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# Nufarm 2,4-D Ester 680 Herbicide

## RESTRAINTS

### General Restraints

- DO NOT exceed maximum application rate of 6.6 L/ha.
- DO NOT exceed the maximum daily application rate by backpack spraying of 5.9 L/day.
- DO NOT apply if heavy rains or storms are forecast within 3 days, or if any rain is likely within 6 hours.
- 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 peanut, pasture and sugarcane situations; see restriction tables below.

#### Tasmania:

- DO NOT apply to potato during the months of September to May.
- Only apply in no-till farming systems for the following situations:
  - Preparatory sprays in dryland cropping
  - Pre-emergent application in winter cereals, summer cereals and legumes

#### South Australia:

- Only apply in no-till farming systems for the following situations:
  - Preparatory sprays in dryland cropping
  - Pre-emergent application in winter cereals, summer cereals and legumes

#### Western Australia:

- Only apply in no-till farming systems for pre-emergent applications in winter cereals and legumes.

#### Victoria:

- DO NOT apply to potato at rates exceeding 1.15 L/ha during the months of December to February.

### 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 [www.apvma.gov.au/spraydrift](http://www.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 one to two hours before sunset and persist until one to two hours after sunrise.

### Boom Sprayers

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 target canopy	Mandatory buffer zones (distances given in metres)				
		Bystander Areas	Natural Aquatic Areas	Pollinator Areas	Vegetation Areas	Livestock Areas
Up to 820 mL/ha	0.5m or lower	0	10	0	25	0
	1.0m or lower		40		55	
Up to 1.7 L/ha	0.5m or lower		30		35	
	1.0m or lower		60		100	
Up to 2.4 L/ha	0.5m or lower		30		45	
	1.0m or lower		80		140	
Up to 4.7 L/ha	0.5m or lower		50		100	
	1.0m or lower		160		375	
Up to 6.6 L/ha	0.5m or lower		75		150	
	1.0m or lower		Not supported		Not supported	

### Aircraft

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 metres or 25 per cent of wingspan or 25 per cent of rotor diameter whichever is the greatest, minimum distances between the application site and downwind sensitive areas (see 'Mandatory buffer zones' section of the following table titled 'Buffer zones for aircraft') are observed.

#### Buffer Zones For Aircraft

Application rate	Aircraft Type	Mandatory buffer zones (distances given in meters)				
		Bystander Areas	Natural Aquatic Areas	Pollinator Areas	Vegetation Areas	Livestock Areas
Up to 820 mL/ha	Fixed Wing	0	120	0	170	0
	Helicopter		85		120	
Up to 1.7 L/ha	Fixed Wing		190		300	
	Helicopter		130		190	
Up to 2.4 L/ha	Fixed Wing		240		400	
	Helicopter		160		240	
Up to 4.7 L/ha	Fixed Wing		Not supported		Not supported	
	Helicopter		275		400	
Up to 6.6 L/ha	Fixed Wing		Not supported		Not supported	
	Helicopter		350		625	

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## DIRECTIONS FOR USE

### SECTION 1. FIELD CROPS

SITUATION & CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Wheat, Barley	Refer to Weed Table	Vic only	210 - 800 mL/ha	<p><b>CROP STAGES: ALL CEREALS</b></p> <p>Variations between varieties do occur. Check sensitivity and growth stages of varieties before applying. Damage may result if applied too early.</p> <p><b>Vic only:</b> Apply at tillered to boot stages.</p> <p><b>NSW, ACT only:</b> 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.</p>
		SA only	230 - 800 mL/ha	
		Qld, NSW, ACT only	410 - 800 mL/ha	
		Tas only	620 - 800 mL/ha	
		WA only	800 mL/ha	
Triticale	Refer to Weed Table	Qld, NSW, ACT only	410 - 800 mL/ha	<p><b>Qld only:</b> Apply from mid-tillering (5 to 6 fully emerged main stem leaves plus one or more tillers) to before boot stage (visible swelling of the head at the top of the main stem).</p> <p><b>SA, Tas only:</b> Apply from completion of tillering to early jointing stage.</p> <p><b>WA only:</b> Apply from the 5 leaf stage up to jointing stage (Z15-33). Apply only at 6 leaf stage for cranbrook and jacup wheats (Z16) to avoid possible damage.</p>
		SA only	240 - 820 mL/ha	
		Vic only	210 - 800 mL/ha	
Cereal Rye	Refer to Weed Table	NSW, ACT, Qld only	410 - 800 mL/ha	
		Vic only	210 - 800 mL/ha	
Sugar Cane	Refer to Weed Table	NSW, Qld only	1.15 - 2.4 L/ha	Post-emergence.
Stubble/Fallow Spray Prior to Direct Drilling or Sowing. Winter Cereals, Grain legumes (Peanuts Qld only), Canola	Refer to Weed Table	All States	210 - 800 mL/ha	Observe the plant back periods given in the table in this leaflet. Must be tank mixed with a knockdown herbicide such as Nufarm Weedmaster® ARGO®, Roundup PowerMAX®, Roundup® CT, Nufarm Glyphosate 450, Shirquat® 250 or Revolver®. Select appropriate rate from the weed table. For skeleton weed, spraying should only be done 6-8 weeks before anticipated sowing date and subsequent cultivation limited to a minimum.
				Volunteer canola ( <i>Brassica napus</i> ) including Roundup Ready* varieties and canola hybrids with the Optimum GLY* herbicide tolerance trait
Harvest Aid or Salvage Spray -Winter Cereals	Broadleaf weeds Refer to Weed Table	All States	1.7 L/ha	Apply after dough stage of crop. Interval between application and effectiveness is 10-20 days. For desiccation of green matter, estimate harvest date and apply spray approximately 14 days earlier. Rain between spraying and actual harvest can negate results. NB. Where thistles are tall and branching above the crop, spraying can turn the branches down into the crop, presenting more stalks to cause header comb blockages. Spraying may increase seed contamination of harvest by accelerating maturity. <b>DO NOT</b> use with undersown legumes that have not set seed.
Potatoes Pre-harvest Preparation	Broadleaf weeds such as Clover, Variegated thistle & Cruciferous weeds	Vic, Tas only	1.15 - 2.4 L/ha	Apply approximately 4 to 5 weeks before harvest after the potato haulms have dried off. Use the highest rate where weeds are more than 30cm in height. For boom spraying apply at least 100 litres of spray mixture per hectare. If grasses such as Rye grass and Winter grass are also present add Amitrole T Herbicide.

### SECTION 2. PASTURES, NON-AGRICULTURAL USE, INDUSTRIAL

SITUATION & CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS	
Improved Pasture containing Clovers	Refer to Weed Table	NSW, ACT, Tas, SA, Qld only	410 - 800 mL/ha	Clover must be well covered by the grass or extensive damage may result.	
Pastures – non legumes, Rights of Way & Industrial	Refer to Weed Table	NSW, ACT, Tas, SA, WA, Qld only	0.8 - 4.7 L/ha	Control of most perennial weeds, but due to the rooting habits of most species control may take a number of years. Damage may result to legumes in pasture.	
			Vic only	0.8 - 6.6 L/ha	Boom spray
			70 - 620 mL/100 L	Spot spraying	
Pastures – Direct Drilling or Surface Sowing	Charlock, Clover, Medics, Mustards, Paterson's curse, Saffron, Slender, Variegated and Spear thistles, Turnip weed, Wild radish, Wild turnip	NSW, ACT, Qld, WA, Vic, SA, Tas only	0.8 - 1.5 L/ha (Aerial Application)	Apply to young, actively growing weeds. SOWING: DO NOT sow pasture seed for at least 21 days after application. If soil moisture is dry, delay sowing for at least 30 days.	
			0.8 - 1.15 L/ha (Ground Application)		
			3.3 - 4.7 L/ha (Aerial or Ground)		
			As above plus Nufarm Crucial®, Nufarm weedmaster® DST®, Nufarm weedmaster® ARGO®, Nufarm weedmaster® DUO or Nufarm Glyphosate 450		
	As Above plus: Capeweed, Wireweed, Storksbill/Erodium, Flatweed, Horehound (seedlings), Skeleton weed, Nodding or Star thistles				
	St John's wort				
	All of Above plus grasses				

### SECTION 3. SPOT SPRAYING

SITUATION & CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Spot Spraying (All Situations)	Refer to Weed Table	All States	1/100th of rate on Weed Table per 10 L water per 100 m <sup>2</sup>	Apply through knapsack. Thorough wetting of weed is essential.

#### SECTION 4. USAGE RESTRICTIONS IN SUGARCANE, PASTURE AND PEANUT

##### Timing restriction for spraying in sugarcane

Situation	Region	Timing Restriction (DO NOT APPLY DURING THE MONTHS)		
		Up to 1.15 L/ha	Up to 1.7 L/ha	Up to 2.4 L/ha
No trash blanket present during application	Wet tropics & Baron (upper)	No timing restriction	No timing restriction	No timing restriction
	Burdekin & Baron (lower)	No timing restriction	No timing restriction	October
	Mackay/Whitsunday	No timing restriction	October to November	September to December
	Mary/Burnett	No timing restriction	October to November	April to May & August to December
	Northern NSW & Rocky Point	No timing restriction	No timing restriction	No timing restriction
Trash blanket is present during application	Wet tropics & Baron (upper)	No timing restriction	No timing restriction	No timing restriction
	Burdekin & Baron (lower)	No timing restriction	No timing restriction	October
	Mackay/Whitsunday	No timing restriction	October	October to November
	Mary/Burnett	No timing restriction	October	May & October to November
	Northern NSW & Rocky Point	No timing restriction	No timing restriction	No timing restriction

##### Application and timing restrictions for application to pastures

Situation	State	DO NOT apply above maximum rate (L/ha) below OR label rate, whichever is LOWEST			
		Summer	Autumn	Winter	Spring
Pastures (prior to sowing, conservation tillage)	Queensland & NT	4.7	4.7	4.7	4.7
	New South Wales & ACT	4.7	4.7	4.7	4.7
	Victoria	0.5	1.5	4.7	1.5
	Tasmania	0.5	1.1	3.3	1.5
	South Australia	1.0	1.5	4.7	3.3
	Western Australia	1.5	3.3	4.7	3.3
Pastures (established)	Queensland & NT	6.6	6.6	6.6	6.6
	New South Wales & ACT	6.6	6.6	6.6	6.6
	Victoria	0.9	1.8	6.6	3.3
	Tasmania	0.6	1.5	4.7	2.9
	South Australia	1.3	2.9	6.6	4.7
	Western Australia	3.3	4.7	6.6	4.7

##### 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 1.3 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

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

##### WEED TABLE

NOTE: Where weeds are to be sprayed in a CROP or PASTURE, use only the rates given for the crop in the table below. In most cases this will give control, however some hard to kill weeds or those in advanced stages of growth may only be suppressed. eg. *Rumex* spp. (docks) and *Polygonum* spp. (wireweed, climbing buckwheat) are killed to ground level only.

##### APPLICATION RATE PER HECTARE

WEEDS CONTROLLED	CROP						PASTURE – NON LEGUMES		
	Vic	SA	Tas	NSW, ACT	Qld	WA	Vic	NSW, ACT, TAS, SA, QLD, WA only	CRITICAL COMMENTS
Amaranthus	-	-	-	800 mL	-	-	-	-	
Angled onion	-	-	-	-	-	-	3.3 L	0.8 - 1.7 L	Spray when buds forming or early flowering.
Apple of Sodom	-	-	-	-	-	-	-	2.9 - 3.3 L	
Bathurst burr	-	-	-	800 mL	-	-	1.7 - 3.3 L	1.7 - 3.3 L	Spray from seedling to pre-flowering. Use higher rate as plant matures.
Black knapweed	-	-	-	-	-	-	3.3 L	-	Spray before flowering. <b>DO NOT</b> cultivate these infestations.
Buffalo burr	-	-	-	-	-	-	-	0.8 - 1.15 L (Not Qld & WA)	Spray from seedling to pre-flowering. Use higher rate as plant matures.
California burr	-	-	-	800 mL	-	-	1.7 - 3.3 L	1.15 - 1.7 L (Not SA)	Spray from seedling to pre-flowering. Use higher rate as plant matures.
Caltrop	-	-	-	620 - 800 mL	-	-	1.7 - 3.3 L	-	Spray from seedling to pre-flowering. Use higher rate as plant matures.
Cape tulip	-	-	-	-	-	1.15 L	3.3 L	1.7 - 3.3 L	Spray before flowering.
Capeweed	800 mL	800 mL	800 mL	530 - 800 mL	-	-	-	2.5 - 3.3 L	Spray up to rosette stage.
Charlock	410 mL	410 mL	800 mL	410 mL	-	-	-	800 mL	Spray up to rosette stage.
Clover	-	-	-	620 - 800 mL	-	-	-	800 mL	
Colocynth	-	-	-	-	-	-	3.3 L	-	Spray at seedling stage only.
Dead nettle	-	-	-	800 mL	-	-	-	-	
Devil's claw	-	-	-	800 mL	-	-	1.3 L	1.15 - 1.7 L (Not SA)	Spray prior to pods forming.
Dock	800 mL	800 mL	-	-	800 mL	800 mL	-	1.7 - 2.5 L	Spray at rosette stage to kill top growth only.

WEEDS CONTROLLED	CROP						PASTURE – NON LEGUMES		
	Vic	SA	Tas	NSW, ACT	Qld	WA	Vic	NSW, ACT, TAS, SA, QLD, WA only	CRITICAL COMMENTS
Fat hen	-	-	-	410 - 800 mL	-	-	-	-	
Flatweed	-	-	-	800 mL	-	-	-	2.5 - 3.3 L	
Fumitory (red)	-	800 mL	-	800 mL	-	-	-	2.5 - 3.3 L	Spray up to rosette stage.
Fumitory (white)	800 mL	410 mL	-	800 mL	-	-	-	2.5 - 3.3 L	Spray up to rosette stage.
Galvanised burr	-	-	-	-	-	-	4.7 L	4.7 L (Not Qld & WA)	Spray from seedling to pre-flowering.
Goosefoots	-	-	-	800 mL	-	-	-	-	
Hard head or Russian knapweed	-	-	-	-	-	-	3.3 - 5.2 L	-	Spray before flowering.
Hogweed, Wireweed	800 mL	800 mL	-	800 mL	800 mL	-	-	1.15 - 1.7 L (Not SA)	Spray up to rosette stage.
Hoary cress, Whiteweed	-	800 mL	800 mL	800 mL	-	-	1.7 - 3.3 L	1.7 - 2.1 L	Spray from late rosette to pre-flowering
Horehound (seedlings)	-	800 mL	-	-	-	840 mL	-	1.7 - 3.3 L	Late Autumn to early Spring.
Ironweed, Corn gromwell	-	-	-	800 mL	-	-	-	1.15 - 1.7 L	
Khaki weed	-	-	-	-	-	-	-	0.8 - 1.15 L (Not SA)	Spray young seedlings only.
Lincoln weed	-	800 mL	-	-	-	-	-	-	Autumn spray before sowing improves control.
London rocket	-	-	-	-	-	570 mL	-	1.6 - 2.5 L (WA only)	
Lupins	800 mL	-	-	410 - 800 mL	-	-	-	-	Spray up to rosette stage.
Melilotus/Hexham scent	800 mL	800 mL	-	-	800 mL	-	-	1.15 - 1.7 L	Spray up to rosette stage.
Melons – camel, paddy	-	-	-	410 - 800 mL	-	-	-	-	
Mustards	330 mL	230 - 800 mL	800 mL	410 - 800 mL	620 mL	620 mL	3.3 L	1.7 - 2.5 L	Spray up to rosette stage.
Mexican poppy	-	2.3 - 3.5 L	-	800 mL	-	840 mL	-	0.8 - 1.15 L (1.15 - 1.5 L WA only)	Spray rosette stage and before flowering.
Mintweed	-	-	-	800 mL	620 mL	-	-	800 mL - 1.15 L	Spray active seedlings only.
Muskweed	800 mL	-	-	-	-	-	-	-	Spray up to rosette stage.
New Zealand spinach	-	-	-	800 mL	-	-	-	-	
Noogoora burr	-	-	-	800 mL	-	-	1.7 - 3.3 L	1.7 - 3.3 L	Spray seedling to pre-flowering.
Nutgrass	-	-	-	-	-	-	3.3 - 5.2 L	-	Spray within 4 weeks of foliage emergence, repeat spray necessary.
Paterson's curse	-	-	-	800 mL	-	840 mL	1.7 - 3.3 L	0.8 - 1.7 L (1.15 - 1.5 L WA only)	Spray seedling to rosette stage.
Poppy wild	410 mL	-	-	-	-	-	-	2.1 - 2.9 L	Spray up to rosette stage.
Ragwort	-	-	-	-	-	-	3.3 L	3.3 L	Spray at rosette to cabbage stage.
Rapistrum	-	-	-	-	-	570 mL	-	840 mL (WA only)	
Rough poppy	-	410 mL	-	410 - 800 mL	-	-	-	800 mL	Spray young seedlings only.
St John's wort	-	-	-	-	-	-	3.3 - 5.2 L	3.3 - 4.7 L	Spray before flowering. Spray before plants are 40cm high.
Safflower	-	-	-	410 - 800 mL	-	-	-	-	
Sand mustard/Sand rocket	-	-	-	-	-	-	3.3 L	-	Spray before flowering.
Shepherd's purse	-	-	-	800 mL	-	-	-	-	
Silver leaf nightshade	-	-	-	-	-	-	3.3 L	-	Spray at flowering. Fallowland: controls top growth only.
Skeleton weed	-	800 mL	-	800 mL	-	-	3.3 L	1.15 - 1.7 L	Spray rosettes before aerial growth commences
Stingless nettle (Dead nettle)	-	800 mL	800 mL	-	-	-	-	2.1 - 2.5 L	
Stinging nettle	800 mL	-	-	-	-	-	-	-	Spray up to rosette stage.
Stinkwort	-	-	-	800 mL	-	-	1.7 - 3.3 L	1.7 - 3.3 L	Spray younger plants. Use higher rate as plants mature.
Storksbill/Erodium	-	-	-	800 mL	-	-	-	-	
Sunflower seedlings	800 mL	-	-	410 - 800 mL	620 mL	-	-	-	Spray multiple leaves.
Thistles:									
- Golden	-	-	-	-	-	-	3.3 L	3.3 L	Spray at rosette stage.
- Nodding	-	-	-	-	-	-	3.3 L	1.15 - 1.7 L	Spray rosette stage to pre-flowering.
- Saffron	620 mL	800 mL	-	410 - 800 mL	800 mL	800 mL	0.8 - 1.7 L	0.8 - 2.5 L	Spray up to rosette stage.
- Sheep	-	-	-	-	-	840 mL	-	0.84 - 3.3 L (WA only)	
- Slender, Shore	-	-	800 mL	800 mL	-	-	1.7 - 3.3 L	0.8 - 3.3 L	Spray at rosette stage.

WEEDS CONTROLLED	CROP						PASTURE – NON LEGUMES		
	Vic	SA	Tas	NSW, ACT	Qld	WA	Vic	NSW, ACT, TAS, SA, QLD, WA only	CRITICAL COMMENTS
- Soldier	-	-	-	-	-	-	3.3 L	-	Spray at rosette stage.
- Spear	800 mL	-	800 mL	-	-	-	0.8 - 2.5 L	1.15 - 2.1 L	Spray at seedling to rosette stage. Use higher rate as plants mature (pastures).
- Stemless	-	-	-	-	-	-	3.3 L	2.5 - 3.3 L	Spray rosette stage to flowering.
- St Barnaby's	-	-	-	-	-	-	-	1.15 - 1.7 L	
- Star	-	-	-	800 mL	-	-	1.7 - 3.3 L	1.15 - 1.7 L	Spray seedling to rosette stage. Use higher rate as plants mature.
- Variegated	-	-	800 mL	410 - 800 mL	620 mL	-	0.8 - 2.5 L	0.8 - 3.3 L	Spray at rosette stage. Can cause stock poisoning
Thornapple	-	3.5 L	-	410 - 800 mL	-	-	3.3 L	0.8 - 1.7 L	Spray at seedling stage.
Tree hogweed	800 mL	-	-	-	-	-	-	-	Spray up to rosette stage.
Turnip weed	-	410 mL	-	410 - 800 mL	410 mL	620 mL	-	800 mL	Spray seedlings only.
Vetches/Tares	800 mL	620 mL	800 mL	-	-	-	-	-	
Ward's weed	-	410 mL	-	-	-	-	-	-	Spray at seedling stage.
Wild cabbage	800 mL	-	-	-	-	-	-	-	Spray up to rosette stage.
Wild garlic	-	-	-	-	-	-	6.6 L	-	Suppresses aerial growth only.
Wild mignonette	-	-	-	-	-	840 mL	3.3 L	-	Spray at rosette stage.
Wild mustard	-	-	-	-	-	570 mL	-	1.6 - 2.5 L (WA only)	
Wild radish	800 mL	800 mL	800 mL	410 - 800 mL	800 mL	570 mL	-	800 mL (840 mL WA only)	Spray up to rosette stage.
Wild sage	-	-	-	-	-	-	-	2.5 - 3.3 L	
Wild teasel	-	-	-	-	-	-	1.7 - 3.3 L	-	Spray at rosette stage. Use higher rate as plants mature.
Wild turnip	210 mL	230 mL	800 mL	410 - 800 mL	-	400 mL	-	800 mL (840 mL WA only)	Spray up to rosette stage.

#### CROP SAFETY AND ESTABLISHMENT

##### Plant back days for Nufarm 2,4-D Ester 680

CROP	RATES		
	Up to 510 mL/ha	510 mL - 1 L/ha	1 - 1.6 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
Medics	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:

WHEN APPLIED TO DRY SOILS AT LEAST 15mm (1/2 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 730mL/ha or less of Nufarm 2,4-D Ester 680, the Plant Back Period for sorghum and sunflower is 1 day irrespective of rainfall.

+ In WA the Plant Back Period for lupins at all rates is 28 days.

## Nufarm 2,4-D Ester 680 Herbicide

### GENERAL INSTRUCTIONS

Before opening, carefully read Directions For Use, Precautionary Statements, Safety Directions and First Aid Instructions.

#### Application Information

This product may be used in either high or low volume sprays. Just pour into water and stir.

**Boom Spraying** - Use 30 - 100 litres water per hectare.

**Aerial Spraying** - Use 20 - 90 litres water per hectare.

NOTE: Refer to the Department of Agriculture/Primary Industries in your state for the current restricted spraying areas.

#### Spray Applications and Drift Risk Assessment



For aerial application it is recommended where possible for this product to be applied by an aerial applicator business that holds current accreditation for the Aerial Improvement Management System (AIMS), issued by the Aerial Application Association of Australia Ltd.

Checklist:

- Have you cleaned/decontaminated your boom sprayer?
  - Have you contacted your neighbour prior to spraying?
  - Is your sprayer set-up correctly for the particular application?
  - Check
    - boom calibration
    - at nozzle - nozzle choice
    - low drift/what spray quality
    - very coarse or larger spray quality?
    - boom height - speed of intended application
    - water volume
  - You must check, determine and record the weather conditions immediately prior to, and immediately after the spray application is made.
  - Record
    - Temperatures
    - Relative Humidity
    - Delta T
    - Wind speed
    - Is there a temperature inversion?
  - Night Spraying - Extra care is required to ensure that inversion conditions are not present. Use smoke generator to determine wind direction and presence of inversion conditions.
- For further information refer to [nufarm.com.au/spraywise](http://nufarm.com.au/spraywise)



[spraywisedecisions.com.au](http://spraywisedecisions.com.au) is an online weather forecasting program and is recommended for use when planning your pesticide application

When spraying in or near areas with sensitive crops such as cotton, check online at [satacrop.com.au](http://satacrop.com.au) for the proximity of sensitive crops mapped by growers

#### Equipment Maintenance and Usage

Keep the spray unit for herbicides only if possible. Otherwise wash out the unit with hot soapy water followed by several clear water rinses. **DO NOT** use wooden spray vats as they cannot be cleaned. Hoses cannot be cleaned and new hoses should be fitted when the unit is to be used for any other purpose.

#### Tank Mixing Instructions

- Fill the spray tank 1/4 full with water and agitate.
- Add wettable powders and water dispersible granules first.
- Agitate until these are uniformly dispersed, while adding water until the tank is 90% full.
- Add suspension concentrates (flowables) then soluble concentrates. Add emulsifiable concentrates last.
- Top up the tank with water and continue agitation until all the ingredients are properly mixed.
- Observe any mixing sequence instructions specifically stated on the tank mix products