

READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Nufarm  
**Associate**<sup>®</sup>

Herbicide

**ACTIVE CONSTITUENT: 600g/kg METSULFURON METHYL**

**GROUP B HERBICIDE**

For control of certain brush and broadleaf species in native pastures, rights of way and commercial and industrial areas and for the control of certain broadleaf weeds in winter cereal crops, grass pastures and pasture renovation as per Directions for Use table.

**IMPORTANT: READ THE ATTACHED BOOKLET  
BEFORE USING THIS PRODUCT.**

Net Contents: 100g  
500g

Nufarm Australia Limited  
ACN 004 377 780  
103-105 Pipe Road  
Laverton North Victoria 3026  
Tel: (03) 9282 1000  
Fax: (03) 9282 1001



<sup>®</sup> Associate is a registered trademark of Nufarm Australia Limited

**STORAGE AND DISPOSAL**

KEEP OUT OF REACH OF CHILDREN. Store in the closed, original container in a dry, cool, well ventilated area, away from children, animals, food, feedstuffs, seed and fertilisers. Do not store for prolonged periods in direct sunlight. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemical on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

**SAFETY DIRECTIONS**

May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale dust and spray mist. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water.

**FIRST AID**

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

**MATERIAL SAFETY DATA SHEET**

For further information refer to the Material Safety Data Sheet (MSDS), which can be obtained from your supplier or from the Nufarm website – [www.nufarm.com.au](http://www.nufarm.com.au)

**CONDITIONS OF SALE**

“Any provisions or rights under the Trade Practices Act 1974 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates (“Nufarm”) shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute.”

**In case of emergency: Phone 1800 033 498**

Ask for shift supervisor. Toll free 24 hours.

APVMA Approval No.: 46361/100g/1206

APVMA Approval No.: 46361/500g/1206

Batch No.:

Date of manufacture:

Barcode:

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**ACTIVE CONSTITUENT: 600g/kg METSULFURON METHYL**

**GROUP B HERBICIDE**

For control of certain brush and broadleaf species in native pastures, rights of way and commercial and industrial areas and for the control of certain broadleaf weeds in winter cereal crops, grass pastures and pasture renovation as per Directions for Use table.

READ THOROUGHLY BEFORE USE.

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**DIRECTIONS FOR USE**

**RESTRAINTS:**

- DO NOT** store a suspension of Associate for more than two days otherwise significant breakdown will occur.
- DO NOT** apply to crops under stress.
- DO NOT** store tank mixes of Associate.
- DO NOT** apply if rainfall is expected within 2 hours (for Woody Weeds 4 hours).
- DO NOT** use on furrow or flood irrigated crops.
- DO NOT** apply before the three leaf stage of the crop when used for post emergent weed control.
- DO NOT** treat newly sown pastures as severe damage may occur.
- DO NOT** use on pasture seed crops.
- DO NOT** apply to weeds that are under stress or not actively growing.

**1. CEREALS: ASSOCIATE ONLY - POST CROP AND WEED EMERGENCE BY GROUND AND AERIAL APPLICATION**

Crops	Weeds Controlled	States	Rate g/Ha	Weed Growth Stage at Application	Critical Comments	
Wheat, Barley, Triticale & Cereal Rye	African Turnip Weed ( <i>Sisymbrium thellungii</i> )	Qld only	5	Apply before the 6 leaf stage	<p><b>General</b> Where the two rates are specified, use the higher rate for larger weeds and/or under heavy weed pressures.</p> <p>Where weed growth stage is not specified in the adjacent column, apply when weeds are small (ie. no greater than 5cm in height or diameter) and actively growing.</p> <p>Refer to General Instructions and Crop Safety Directions for further application instructions.</p> <p>Spray actively growing large plants, up to early flowering stage. Plants emerging after spraying may not be controlled.</p>	
	Amsinckia/Yellow Burrweed ( <i>Amsinckia spp.</i> )	WA only				
		SA, Vic, NSW, Tas only	5 or 7			
	Ball Mustard ( <i>Neslia paniculata</i> )	SA only	5			
	Boggabri Weed/Dwarf Amaranth ( <i>Amaranthus macrocarpus</i> )	Qld only	7	Apply at cotyledon to 10cm height or diameter stage		
	Calomba Daisy ( <i>Pentzia suffruticosa</i> )	SA only	5			
	Cape Tulip ( <i>Homeria spp.</i> )	WA only				
	Charlock ( <i>Sinapsis arvensis</i> )	Vic, NSW, SA, Tas only				
	Chickpeas (Volunteer) ( <i>Cicer arietinum</i> )	Qld, NSW, Vic, SA only				
	Chickweed ( <i>Stellaria media</i> )	NSW, Vic, SA, Tas only				
	Chicory ( <i>Cichorium intybus</i> )	Qld only				
	Clover (Subterranean) ( <i>Trifolium subterraneum</i> )	All States				
	Common Sowthistle ( <i>Sonchus oleraceus</i> )	Qld, NSW, Tas, Vic only				Apply up to the 4 leaf stage
	Cutleaf Mignonette ( <i>Reseda lutea</i> )	SA, Tas only	7			
	Deadnettle ( <i>Lamium amplexicaule</i> )	All States	5			
	Denseflower Fumitory ( <i>Fumaria densiflora</i> )	SA, NSW only	5			
Dock (Broadleaf) ( <i>Rumex obtusifolius</i> )	WA only					
	Qld, NSW, Vic, SA, Tas only	5 or 7				
Faba Beans ( <i>Vicia faba</i> )	Vic, SA only	5	Apply after the 3 node stage			
Field Peas ( <i>Pisum sativum</i> )	Vic, SA, WA, Tas only					
	NSW only	7				

**1. CEREALS: ASSOCIATE ONLY - POST CROP AND WEED EMERGENCE BY GROUND AND AERIAL APPLICATION (CONTINUED)**

Crops	Weeds Controlled	States	Rate g/Ha	Weed Growth Stage at Application	Critical Comments	
<b>Wheat, Barley, Triticale &amp; Cereal Rye (cont.)</b>	Hare's Ear/Treacle Mustard ( <i>Conringia orientalis</i> )	Vic only	5	Apply before the 5 leaf stage	Use the higher rate when weed populations are dense and majority of weeds are 4 leaf.	
	Hogweed/Wireweed ( <i>Polygonum aviculare</i> )	WA only		Apply before the 4 leaf stage		
		Vic, SA, NSW, Tas only	5 or 7			
			Qld only	7	Apply when weeds are cotyledon - 3 leaf stage	
	Indian Hedge Mustard ( <i>Sisymbrium orientale</i> )	All States	5		Heavy populations and/or those suffering cold or moisture stress may not be completely controlled - a tank mix with L.V.E. MCPA is recommended.	
	Lincoln Weed ( <i>Diplotaxis tenuifolia</i> )	SA only	7		Apply to actively growing plants from late winter to spring. Plants emerging after spraying may not be controlled.	
	Lupins ( <i>Lupinus albus</i> )	WA, SA, NSW, Vic only	5			
	Mallee Catchfly ( <i>Silene apetala</i> )	SA only				
	Medic ( <i>Medicago spp.</i> )	All States				
	New Zealand Spinach ( <i>Tetragonia tetragonoides</i> )	Qld only	7	Apply before the 4 leaf stage		
	Parthenium weed ( <i>Parthenium hysterophorus</i> )	Qld only	5	Apply up to the 4 leaf stage.		
			7	Apply at the 4 leaf to rosette stage.		
	Paterson's Curse/Salvation Jane ( <i>Echium plantagineum</i> )	Tas, WA only	5			
		SA, NSW only	5 or 7			
	Prickly Lettuce ( <i>Lactuca serriola</i> )	Qld, SA, Vic, Tas only	5 or 7			
		WA only	5			
Red Pegweed ( <i>Portulaca oleracea</i> )	Qld only		Apply before the 6 leaf stage.			
		7	Apply when weed populations are dense and majority of weeds are 6 leaf stage.			
Rough Poppy ( <i>Papaver hybridum</i> )	NSW, Vic, SA, Tas only	5				
Saltbush ( <i>Atriplex muelleri</i> )	Qld only		Apply up to the 4 leaf stage			
		7	Apply at the 4 - 6 leaf stage			
Shepherd's Purse ( <i>Capsella bursapastoris</i> )	NSW, Vic, SA, Tas only	5				

**1. CEREALS: ASSOCIATE ONLY - POST CROP AND WEED EMERGENCE BY GROUND AND AERIAL APPLICATION (CONTINUED)**

Crops	Weeds Controlled	States	Rate g/Ha	Weed Growth Stage at Application	Critical Comments	
Wheat, Barley, Triticale & Cereal Rye (cont.)	Skeleton Weed (Suppression only) ( <i>Chondrilla juncea</i> )	NSW, Vic, SA only	7			
		WA only	5			
	Slender Celery ( <i>Apium leptophyllum</i> )	Qld only	5			
	Smallflower Fumitory ( <i>Fumaria parviflora</i> )	SA only				
	Sorrell ( <i>Rumex acetosella</i> )	SA, Vic, NSW, WA, Tas only				
	Soursob ( <i>Oxalis pes-caprae</i> )	Vic, SA, WA, Tas, NSW only				
	Spiny Emex/Doublegee Threecomered Jack(s) ( <i>Emex australis</i> )	WA only				
		SA, Vic, NSW, Tas, Qld only	5 or 7			
	Stagger weed ( <i>Stachys arvensis</i> )	All States	5			
	Storksbill/Wild Geranium ( <i>Erodium spp.</i> )	Vic, SA, WA, Tas only				
	Turnip Weed ( <i>Rapistrum rugosum</i> )	All States				
	Volunteer Sunflower ( <i>Helianthus annuus</i> )	Qld only				Apply at cotyledon to 4 leaf stage.
			7			Apply at 4 to 8 leaf stage.
	NSW only		Apply at cotyledon to 8 leaf stage.			
Wild/Crow Garlic ( <i>Allium vineale</i> )	Vic, Tas only		Apply at the 1 - 2 leaf stage			
Wild Turnip ( <i>Brassica tournefortii</i> )	All States	5				

**2. CEREALS: ASSOCIATE MIXTURES - POST CROP AND WEED EMERGENCE BY GROUND AND AERIAL APPLICATION**

For the control of weeds in addition to those listed above the following mixtures with their appropriate timings are recommended. For mixing instructions refer to "Spray Preparation" Section.

Crops	Weeds Controlled	States	Rate g/Ha	Crop Stage at Application	Critical Comments
Wheat, Barley, Triticale & Cereal Rye	Capeweed ( <i>Arctotheca calendula</i> ) and Wild Radish ( <i>Raphanus raphanistrum</i> )	NSW, Vic only	5g + 500mL Nufarm Diuron Flowable (or 280g DF) + 500mL of Nufarm MCPA 500	3-5 leaf (Zadoks 13-15) NSW only 5 leaf (Zadoks 15) Vic only	DO NOT apply to Kamilaroi, Shortim or Olympic Wheat. Apply when weeds are 2-5 leaf.
		SA only	5g + 500mL Nufarm Diuron Flowable (or 280g DF) + 500mL of Nufarm MCPA 500	3 to 5 leaf (Zadoks 13-15)	

**2. CEREALS: ASSOCIATE MIXTURES - POST CROP AND WEED EMERGENCE BY GROUND AND AERIAL APPLICATION (CONTINUED)**

Crops	Weeds Controlled	States	Rate g/Ha	Crop Stage at Application	Critical Comments
Wheat, Barley, Triticale & Cereal Rye (cont.)	Capeweed ( <i>Arctotheca calendula</i> ) and Wild Radish ( <i>Raphanus raphanistrum</i> )	WA only	5g + 350mL Nufarm Diuron Flowable (or 195g DF) + 400mL of Nufarm MCPA 500	3 to 4 leaf (Zadoks 13-14)	Apply when weeds are 2-5 Leaf.
Wheat, Barley	Capeweed ( <i>Arctotheca calendula</i> )		5g + 550mL Nufarm Terbutryn 500 or Igran + 600mL of Nufarm MCPA 500	3 leaf - early tillering (Zadoks 13-21)	Apply when weeds are 2-6 leaf.
		SA only	5g + 550mL Nufarm Terbutryn 500 or Igran		
		NSW only	5g + 850mL Nufarm Terbutryn 500 or Igran	3 leaf - early tillering (Zadoks 13-21)	
		NSW, Vic, SA, WA only	5g + 1L Agtryne	3 to 5 leaf (Zadoks 13-15)	Spray actively growing weeds at the 2-6 leaf stage.
Wheat, Barley, Triticale & Cereal Rye		WA only	5g + 750mL Bromicide® MA	3 leaf to full tillering (SA, WA only)	Apply when weeds are up to 6 leaf stage.
		Qld, NSW, Vic, Tas, SA only	5g + 1.4L Bromicide® MA	5 leaf to full tillering (Qld, NSW, Vic, Tas only)	
		WA only			Apply when weeds are 6-8 leaf.
		Qld, NSW, Vic, Tas, SA only	5g + 2.1L Bromicide® MA	3 leaf to full tillering (SA only) 5 leaf to full tillering (Qld, NSW, Vic, Tas only)	Apply when weeds are 6-8 leaf.
	Wild Radish ( <i>Raphanus raphanistrum</i> )	Qld only	5g + 700mL to 1L of Nufarm MCPA 500	Early tillering to before boot (Zadoks 21-39)	Apply the lower rate to seedling weeds (3-6 leaf) and the higher rate on well developed weeds up to rosette.
		NSW only		Apply 700mL rate after crop has reached 5 leaf stage. Use higher rates after the first node can be felt at the base of the tiller and before swelling of the head can be felt in the tiller.	
		SA only	5g + 1.4L of Nufarm MCPA 500	Early tillering to before boot (Zadoks 21-39)	Apply when weeds are seedling to rosette.
Wheat, Barley		WA only	5g + 1.2L of Nufarm MCPA 500	5 leaf- tillering (Zadoks 15-30)	Apply up to the 4 leaf stage and not more than 10cm in diameter.
			5g + 250mL Tigrex*/ Nugrex	Wheat: 3 leaf to late tillering (Zadoks 13-30) Barley: 5 leaf to late tillering (Zadoks 15-30)	
Wheat, Barley, Triticale & Cereal Rye	Saffron Thistle ( <i>Carthamus lanatus</i> )	NSW, Vic, Tas, SA, WA only	5g + 1.1 to 1.6L of Nufarm LVE MCPA 500	5 leaf to commencement of flag leaf (Zadoks 15-37)	Apply up to 2-3 leaf stage only.
		NSW, Vic, Tas, SA, WA only	5g + 1.1 to 1.6L of Nufarm LVE MCPA 500	5 leaf through to commencement of flag leaf (Zadoks 15-37)	Spray young rosettes before leaves become spiny.
		Qld only	5g + 1.4L to 2.1L of Nufarm MCPA 500	Early tillering to before boot (Zadoks 21-39). Higher rates (above 1.4L to 2.1L of Nufarm MCPA 500 only to be used on crops from mid tillering to before boot stage (Zadoks 23-29).	Apply to weeds at seedling to rosette stage. Use the lower rate on seedling weeds and the higher rate on well developed weeds.

**2. CEREALS: ASSOCIATE MIXTURES - POST CROP AND WEED EMERGENCE BY GROUND AND AERIAL APPLICATION (CONTINUED)**

Crops	Weeds Controlled	States	Rate g/Ha	Crop Stage at Application	Critical Comments
<b>Wheat, Barley, Triticale &amp; Cereal Rye</b>	Saffron Thistle ( <i>Carthamus lanatus</i> )	NSW, Vic, Tas, SA, WA only	5g + 300mL Lontrel*/Archer™	4 to 5 leaf stage (Zadoks 14-15).	Spray when weeds are young and actively growing. DO NOT apply Lontrel/Archer to a cereal crop if field peas are to be sown the following season unless the cereal stubble is burnt.
	Variegated Thistle ( <i>Silybum marianum</i> )	Tas only*	5g + 1.2L Nufarm Amicide® 625	5 leaf to early tillering (Zadoks 15-21).	Apply to weeds at seedling to rosette stage.
		NSW only	5g + 700mL to 1.4L Nufarm Amicide® 625	Apply after the first node can be felt at the base of the tiller and before swelling of the head can be felt in the tiller.	Apply to weeds at seedling to rosette stage. Use the lower rate on seedling weeds and the higher rate on well developed weeds.
		Qld only	5g + 0.9L Nufarm Amicide® 625	Mid tillering to before boot (Zadoks 23-39).	Apply to weeds at the seedling to rosette stage.
		Qld only	5g + 1.5L Nufarm MCPA 500	Early tillering to before boot (Zadoks 21-39).	
		NSW, Vic, Tas, SA, WA only	5g + 840mL to 1.1L Nufarm LVE MCPA	Apply from 5 leaf through to commencement of flag leaf (Zadoks 15-37).	Spray at pre-cabbage stage.
<b>Wheat</b>	Slender Thistle ( <i>Carduus tenuiflorus</i> )		5g + 2.1L Nufarm LVE MCPA		Moderately susceptible. Spray young rosettes.
<b>Wheat, Barley, Triticale &amp; Cereal Rye</b>		NSW only	5g + 0.8L to 1.4L Nufarm Amicide® 625	Apply after the first node can be felt at the base of the tiller and before swelling of the head can be felt in the tiller.	Apply to weeds at seedling to rosette stage. Use the lower rate on seedling weeds and the higher rate on well developed weeds.
		Slender Thistles ( <i>Carduus tenuiflorus</i> and <i>Carduus pycnocephalus</i> )	Tas only*	5g + 1.4L Nufarm Amicide® 625	5 leaf to early tillering (Zadoks 15-21).
<b>Wheat, Barley &amp; Triticale</b>	Climbing Buckwheat/Black Bindweed ( <i>Fallopia convolvulus</i> )	Qld, NSW only	5g - 7g + 1L Tordon* 242/ Trooper	Apply from early tillering (when the main shoot has 4 to 5 leaves plus 2 or more new tillers have formed) to start of jointing (first node).	For best control apply at early tillering as this weed becomes increasingly difficult to control as it becomes larger.

**3. CEREALS: ASSOCIATE + GLYPHOSATE - FALLOW/PREPLANT KNOCKDOWN WEED CONTROL**

Crops	Weeds Controlled	States	Rate g/Ha	Weed Stage at Application	Critical Comments
Wheat	Refer to Post Crop and Weed Emergence section of this leaflet (Table 1), and the Nufarm Glyphosate CT and Roundup PowerMAX® Directions for Use.	All States except WA	Associate 5 or 7g + Nufarm Glyphosate CT or Roundup PowerMAX® at label rates	Refer to Post Crop and Weed Emergence section of this leaflet (Table 1), and the Nufarm Glyphosate CT and Roundup PowerMAX® Directions for Use.	DO NOT apply less than 10 days prior to sowing as crop injury may occur, particularly under dry, cold conditions. Apply when weeds are actively growing.
		WA only	Associate 5g +Nufarm Glyphosate CT or Roundup PowerMAX® at label rates		Refer to General Instructions and Critical Comments of the respective labels.  Use the appropriate rate of each product for the target weed spectrum.
Barley, Cereal Rye or Triticale	All States except WA	Associate 5g or 7g + Nufarm Glyphosate CT or Roundup PowerMAX® at label rates	DO not apply less than 6 weeks prior to sowing as crop injury may occur, particularly under dry, cold conditions. Apply when weeds are actively growing. Refer to General Instructions and Critical Comments of the respective labels.		
	WA only	Associate 5g + Nufarm Glyphosate CT or Roundup PowerMAX® at label rates	Use the appropriate rate of each product for the target weed spectrum.		

**4. NATIVE PASTURES, RIGHTS OF WAY, COMMERCIAL AND INDUSTRIAL AREAS - GROUND APPLICATION**

Situation	Weeds Controlled	States	Rate			Critical Comments
			Boom g/ha	Handgun g/100L	Gas gun g/L	
Native Pastures*, rights of way, commercial and industrial areas	Alligator weed ( <i>Alternanthera philoxeroides</i> )	NSW only	80	-	-	Apply in terrestrial situations only. Follow-up applications over at least two seasons are essential for complete control.
	Apple Box ( <i>Angophora floribunda</i> ) Messmate Stringybark ( <i>Eucalyptus obliqua</i> ) Peppermint Gum ( <i>E. radiata</i> ) Red Gum ( <i>E. blakelyi</i> ) Yellow box ( <i>E. melliodora</i> )		-	10 + Pulse® Penetrant (200mL/ 100L)	1 + Pulse® Penetrant (10mL/5L)	Apply to plants up to 4m high. Avoid spraying when plants are stressed. Ensure thorough foliage cover. Results can not be guaranteed where suckers originate from large lignotubers.
	Australian Blackthorn ( <i>Bursaria spinosa</i> )	NSW, Qld, Tas, Vic only	-	10		Apply when bushes are actively growing. Avoid spraying when bushes are stressed. Handgun - Spray to thoroughly wet all foliage, but not to cause run-off.
	Bellyache bush ( <i>Jatropha gossypifolia</i> )	Qld only	-	10 + Pulse® Penetrant (200mL/ 100L)	-	
	Blackberry ( <i>Rubus spp.</i> )	All States & NT	-	10 + mineral crop oil (1L/100L)	1 + Pulse® Penetrant (10mL/5L)	Apply when bushes are actively growing; (Tas only: Apply after petal fall.) (Vic only: Apply between December and April). Spray to thoroughly wet all foliage and canes. Ensure peripheral runners are sprayed. In Tasmania, DO NOT apply to bushes carrying mature fruit.

4. NATIVE PASTURES, RIGHTS OF WAY, COMMERCIAL AND INDUSTRIAL AREAS -  
GROUND APPLICATION (CONTINUED)

Situation	Weeds Controlled	States	Rate			Critical Comments
			Boom g/ha	Handgun g/100L	Gas gun g/L	
Native Pastures*, rights of way, commercial and industrial areas (cont.)	Bitou bush/Boneseed ( <i>Chrysanthemoides monilifera</i> )	NSW, Qld, Vic, SA only	-	10	1 + Pulse® Penetrant (10mL/5L)	Spray to thoroughly wet all foliage. Minimise contact with desirable species.
	Bridal creeper ( <i>Myrisiphyllum asparagoides</i> )	SA only	-	5	-	Apply during mid June to late August. Follow-up applications over at least 2 seasons will be required for complete control. Water volumes of 500-800 L/ha are recommended to minimise the risk of damage to native vegetation.
	Common Bracken ( <i>Pteridium esculentum</i> )	All States & NT	60	10	-	Spray after full frond expansion. Spray to thoroughly wet all foliage, but not to cause run-off. For boom application - adjust boom height to ensure correct spray overlap. Avoid spraying when plants are stressed or in conditions of prolonged dry weather when soils are dry.
	Crofton weed ( <i>Eupatorium adenophorum</i> )	Qld, NSW only	-	15	-	Spray to thoroughly wet all foliage, but not to cause run-off. Extra care should be taken to get good spray penetration when spraying bushes situated in thickets. Apply to actively growing weeds up to early flowering. Best results obtained on younger plants. If regrowth occurs, retreat in the subsequent growth period.
	Darling Pea ( <i>Swainsona spp.</i> )	NSW only	10	-	-	Apply during spring.
	Fennel ( <i>Foeniculum vulgare</i> )	NSW only	-	10	-	Apply to actively growing plants.
	Golden Dodder ( <i>Cuscuta australis</i> )	SA, NSW, Qld, Vic only	-	1	-	Apply as a spot spray to point of run-off. Ensure correct coverage of infested area. Apply pre-flowering.
	Gorse ( <i>Ulex europaeus</i> )	Vic, Tas, SA, NSW only	-	15 + Pulse® Penetrant (200 mL/ 100L)	-	Apply to bushes up to 2m tall. Ensure thorough spray penetration and coverage of the whole plant.
	Great Mullein ( <i>Verbascum thapsus</i> )	NSW only	20 + Pulse® Penetrant (200mL/ 100L)	-	-	Regrowth may occur if growing conditions are not good. Apply during spring at times of good soil moisture to rosettes before stem elongation.
	Hawthorn ( <i>Crataegus laevigata</i> )		-	10	-	Apply when bushes are actively growing. Avoid spraying when bushes are stressed. Spray to thoroughly wet all foliage, but not to cause run-off.
	Inkweed ( <i>Phytolacca octandra</i> )	Qld, NSW only	-	5	-	Spray to thoroughly wet all foliage but not to cause run-off.
	Japanese Sunflower ( <i>Tihonia diversifolia</i> )	NSW only	-	10	-	
	Kangaroo thorn ( <i>Acacia paradoxa</i> )		-	-	-	Apply to bushes up to 2.5m high when actively growing.
Lantana ( <i>Lantana camara</i> )	Qld, NSW only	-	-	2 + Pulse Penetrant (10mL/5L)	Apply to bushes up to 2m tall. Spray to thoroughly wet all foliage and stems. Spray should penetrate throughout the bush. Should regrowth occur retreatment will be necessary.	

4. NATIVE PASTURES, RIGHTS OF WAY, COMMERCIAL AND INDUSTRIAL AREAS -  
GROUND APPLICATION (CONTINUED)

Situation	Weeds Controlled	States	Rate			Critical Comments
			Boom g/ha	Handgun g/100L	Gas gun g/L	
Native Pastures*, rights of way, commer- cial and industrial areas (cont.)	Mistflower ( <i>Eupatorium riparium</i> )	Qld, NSW only	-	5	-	Spray to thoroughly wet all foliage but not to cause run-off. Apply to actively growing weeds up to early flowering.
	Noogoora burr ( <i>Xanthium pungens</i> )	NSW only	-	7.5	-	Apply to actively growing plants. Plants under moisture stress will not be controlled.
	Parthenium ( <i>Parthenium hysterophorus</i> )	Qld only	7	5	-	<b>Handgun</b> - Spray to thoroughly wet all foliage but not to cause run-off. <b>Boom</b> - (Pastures only). Apply up to rosette stage. Spray to thoroughly wet all foliage. Adjust boom height to ensure complete overlap.
		NSW only	-		-	
	Paterson's Curse/Salvation Jane ( <i>Echium plantagineum</i> )	All States	15	-	<b>Boom</b> - Spray to thoroughly wet all foliage. Adjust boom height to ensure correct spray overlap. <b>Handgun</b> - Spray to wet all foliage but not to cause run-off. <b>WA only</b> - Spray plants at early flowering stage (August - September).	
	Privet ( <i>Ligustrum spp.</i> )	Qld, NSW only	-	10	1 + Pulse® Penetrant (10mL/5L)	Apply to bushes up to 3m high. Complete foliar spray coverage is essential for control; partial spray coverage will result in regrowth recovery. DO NOT spray when bushes are stressed.
	Ragwort ( <i>Senecio jacobaea</i> )	Vic, Tas, NSW only	15	5	-	Apply to actively growing plants at rosette to cabbage stage.
	Rubber vine ( <i>Cryptostegio grandiflora</i> )	Qld only	-	15	-	Apply to bushes up to 3m tall in height. Apply from October through April when bushes are actively growing. Ensure thorough spray coverage of all foliage and leaders. Incomplete coverage will result in regrowth.
	Sweet Briar ( <i>Rosa rubiginosa</i> )	NSW, Tas, SA, Vic only	-	10	1 + Pulse® Penetrant (10mL/5L)	Apply when bushes are actively growing. Avoid spraying when bushes are stressed, when leaf fall has commenced or after the end of February. <b>Handgun</b> - Spray to thoroughly wet all foliage, but not to cause run-off. <b>Vic only</b> - Gasgun - Apply to bushes less than 2m high as application to bushes in excess of 2m high may produce variable results. Apply with shots of 25mL of dilute product.
	Tree-of-Heaven ( <i>Ailanthus altissima</i> )	NSW only	-	-	-	Spray to thoroughly wet all foliage, but not to cause run-off.
Wait-a-while (Mysore thorn) ( <i>Caesalpinia decapetala</i> )	NSW, Qld only	-	-	-		
Wild Turnip ( <i>Brassica tournefortii</i> )	NSW only	-	5	-	Apply to actively growing plants.	

\*Will damage legumes in pastures

**5. NATIVE PASTURES, RIGHTS OF WAY, COMMERCIAL AND INDUSTRIAL AREAS, AND FLOODPLAINS - AERIAL APPLICATION BY HELICOPTER**

Situation	Weeds Controlled	States	Rate g/ha	Critical Comments
Native Pastures, rights of way, commercial and industrial areas	Blackberry	NSW, Tas, Vic only	160	Apply when bushes are actively growing. (Tas only: Apply after petal fall. DO NOT apply to bushes carrying mature fruit). (Vic only: Apply between December and April). Use not less than 100L prepared spray/ha.
Flood Plains	<i>Mimosa pigra</i>	NT only	50 or 60	Use the higher rate when air temperature exceeds 35°C. Apply in at least 60L/ha of clean water. Use D6 or D8 nozzles with 45 swirl plates pressurised to 210 kPa to give a large droplet size. Add a non-ionic surfactant. Apply when plant is actively growing. Avoid spraying when plants are stressed.

\*Will damage legumes in pastures

**6. PASTURES, FORESTS, COMMERCIAL AND INDUSTRIAL AREAS, RIGHTS OF WAY, DOMESTIC AND PUBLIC SERVICE AREAS: ASSOCIATE® AND ROUNDUP® HERBICIDE  
ALL STATES**

Situation	Weeds Controlled	Rate - Aerial or Boom	Rate - Handgun or Knapsack	Critical Comments
Pastures Forests Commercial and Industrial areas Rights of way Domestic and public service areas	Blackberry ( <i>Rubus</i> spp.)	8.0L Roundup/ Weedmaster Duo plus 60g Associate per ha	400 mL Roundup/ Weedmaster Duo plus 3g Associate per 100L water	For Blackberries, apply from flowering until prior to leaf yellowing. Due to widespread picking of Blackberries by the public, it is not recommended that the product be applied to bushes bearing mature fruit. Use Pulse Penetrant at the rate of 100mL per 100L water.
	Bracken ( <i>Pteridium esculentum</i> )	4.0L Roundup/ Weedmaster Duo plus 30g Associate per ha		For Bracken, apply when fronds are fully unfurled but prior to first frosts. For boom application, refer to Boom application section. Use Pulse Penetrant at the rate of 100mL per 100L of water.
	Gorse ( <i>Ulex europaeus</i> )			For Gorse, apply when actively growing at any time of year, except Spring. Use Pulse® Penetrant at the rate of 100mL per 100L of water.
	Lantana ( <i>Lantana camara</i> )  St John's Wort ( <i>Hypericum perforatum</i> )  Sweet Briar ( <i>Rosa rubiginosa</i> )			For Lantana, apply when actively growing. DO NOT apply during periods of Summer drought stress. Use Pulse® Penetrant at the rate of 100mL per 100L of water. For St John's Wort, apply when actively growing from Spring to Summer. Use Pulse® Penetrant at 100mL per 100L of water. For Sweet Briar, apply when in full leaf, prior to leaf fall. Use Pulse® Penetrant at 100 mL per 100L of water.

**7. TOLERANT GRASS PASTURES OR IN A PASTURE RENOVATION - GROUND APPLICATION**

Situation	Weeds Controlled	States	Rate g/ha	Critical Comments
<b>ESTABLISHED PASTURES</b>  <b>TOLERANT GRASS SPECIES</b> Perennial phalaris Perennial cocksfoot Stands greater than one year old  <b>OR</b> <b>PASTURE RENOVATION</b> Use in rundown pasture to reduce weed burden before sowing with a pasture in the following year	Cape Tulip: Both one and two leaf ( <i>Homeria spp.</i> )	Vic, SA, NSW, WA & Tas only	5	Apply at bulb exhaustion usually during July/early August. More than one year of application may be required to obtain control.
	Annual Clover ( <i>Trifolium spp.</i> )	Vic, SA, NSW, WA, Qld & Tas only		Apply before flowering.
	Dock spp. ( <i>Rumex spp.</i> )		5-seedlings 10-established	Best results when applied in spring prior to bolting.
	Doublegee/Spiny Emex/Three Cornered Jack(s) ( <i>Emex australis</i> )	WA only	5 to 10	Apply up to the 6 leaf stage. Use the higher rate on dense populations.
	Erodium/Storksbill/Wild Geranium ( <i>Erodium spp.</i> )	Vic, SA, NSW & Tas only		Use the higher rate on dense populations. Spray before flowering.
	Annual Medics ( <i>Medicago spp.</i> )	Vic, SA, NSW, WA and Tas only	5	For best results apply before flowering.
	Onion grass/Guildford grass ( <i>Romulea rosea</i> )		15	Apply at bulb exhaustion usually late June/July before the onset of browning off caused by fungus. When mixing with glyphosate use 10g/ha.
	Paterson's Curse/Salvation Jane ( <i>Echium planatagineum</i> )	Vic, SA, NSW, WA, Qld and Tas only	10 or 15	Apply lower rate to small plants. Apply higher rate before bolting/flowering.
	Ragwort ( <i>Senecio jacobaea</i> )	Vic, SA, NSW & Tas only	15	Apply to actively growing plants at the rosette to cabbage stage.
	Sorrel ( <i>Rumex acetosella</i> )	Vic, SA, NSW, WA & Tas only	5-seedlings 10-established	Best results when applied in spring prior to seed heads appearing.
	Soursob ( <i>Oxalis pes-caprae</i> )		5 to 10	Use the higher rate on dense stands. Spray before flowering for best results.
	Wild Garlic ( <i>Allium vineale</i> )		15	Apply at bulb exhaustion usually July to early August. More than one year of application may be required to obtain control.

**Note: Always add a non-ionic surfactant (1000g ac/L) eg Chemwet 1000 at 200mL/100L of water (0.2% v/v).**

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

**\* IN TASMANIA 2, 4-D CAN ONLY BE APPLIED BETWEEN 15TH APRIL AND 15TH SEPTEMBER UNLESS OTHERWISE AUTHORISED BY THE REGISTRAR OF PESTICIDES.**

**WITHHOLDING PERIOD:**

**CEREALS ASSOCIATE ONLY – NOT REQUIRED WHEN USED AS DIRECTED.**

**CEREALS ASSOCIATE MIXTURES:**

- TANK MIXES AGTRYNE, NUFARM MCPA 500, NUFARM AMICIDE 625, TIGREX, TORDON 242 OR NUFARM TERBUTRYN 500/ IGRAN – DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 7 DAYS AFTER APPLICATION.
- TANK MIXES WITH BROMICIDE MA – DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 14 DAYS AFTER APPLICATION.

**PASTURES AND OTHER USE SITUATIONS – NOT REQUIRED WHEN USED AS DIRECTED.**

### GENERAL INSTRUCTIONS

Associate is a selective systemic herbicide which is adsorbed through the roots and foliage with rapid translocation acting by inhibiting cell division in meristems thus stopping growth.

Some crops are extremely sensitive to low concentrations of this product. See "Sprayer Clean-up" section.

Where treatment is delayed or where weeds are not actively growing due to adverse conditions, results may be slow to appear and weeds may only be stunted or suppressed.

**Instructions specific for cereals:** With the exception of the preplant weed control recommendations, apply at the early post emergence stage of the crop (3 leaf to before booting) when weeds are small (i.e. no greater than 5cm in height or diameter) and actively growing.

Best weed control is obtained when rainfall wets the soil to a depth of 5 to 7.5cm within 4 weeks of application.

Where treatment is delayed or where weeds are not actively growing due to adverse conditions, results may be slow to appear and weeds may be only stunted or suppressed (eg. Indian Hedge Mustard). Associate will remain in the soil for a period of time (see Crop Rotation Recommendations). The persistence of Associate in the soil is dependent on various environmental conditions e.g. soil pH, temperature, soil moisture and organic matter. Wet, warm, acid soils high in organic matter favour breakdown of Associate in the soil. It should be noted that Associate does not provide a commercially acceptable level of soil residual weed control.

Crops other than wheat, barley, triticale and cereal rye may be extremely sensitive to low concentrations of Associate residues in the sprayer or in the soil. See "Sprayer Clean-up" and "Crop Rotation Recommendations".

The recommendation of the addition of Associate to Nufarm Glyphosate CT and Weedmaster 600CT as a pre-plant knockdown is to enhance the control of certain broadleaf weeds (e. g. doublegee, sorrel, erodium, clover, medic and soursob) and to help prevent (or at least minimise) the risk of resistant weeds occurring. Its purpose is not to provide residual control of weeds.

### Instructions specific for brush and herbaceous

**weed control:** Apply when bushes/plants are actively growing. Where treatment is delayed or bushes/plants are not actively growing due to adverse conditions (such as a period of prolonged dry weather) or if partial spray coverage occurs, results may be slow to appear and subsequent regrowth may occur. Should regrowth occur, re-treatment at the recommended rate is advised. Re-treatment of blackberries should only be undertaken once regrowth has reached one (1) metre tall - this may not be until two (2) years after the initial application. For control of bushes previously sprayed with other brush control herbicides or for bushes which may have been burned or slashed ensure two (2) years has elapsed.

Due to the widespread picking of blackberries by the public, it is recommended that the product is not applied to bushes bearing mature fruit.

**Instructions specific for treatment of pasture or pasture renovation:** Allow weeds to recover from grazing before application. Docks and Sorrel in particular require fresh leaf growth for adequate uptake of chemicals. Legumes will be removed from pasture if oversprayed with Associate. Some grasses will be damaged in pasture sprayed with the product and biomass production may be reduced for several months. Associate used on established Perennial Phalaris and/or established Perennial Cocksfoot may cause temporary yellowing and some stunting. Associate can severely damage Annual and Perennial Ryegrass. Associate does not control/damage Silvergrass (*Vulpia spp.*), Brome Grass (*Bromus spp.*) or Winter grass (*Poa spp.*). Sorrel seedlings may germinate after the break in the following year, particularly after cultivation. The ungerminated clover seed bank is not affected by Associate application. Clover vigour is often increased in the year following application where seed banks are reasonable. The seed set of clover in the year of application of Associate will be significantly reduced particularly from the Winter-Spring application. This effect may impact on the clover seed bank therefore re-sowing may be necessary. Where clover seed banks are high re-sowing is not necessary. For pasture topping situations a combination of Associate plus glyphosate can be used, however the Crop Rotation recommendations should be observed. Refer to the Directions of Use section of each product for the appropriate rate and critical comments for the target weed spectrum.

### CROP SAFETY

**DO NOT** use in winter cereal crops undersown with legume pasture species, e. g. medics, clovers.

**DO NOT** apply to wheat varieties King, Jacup, Milling and Harrier.

Care should be taken if it is intended to apply Associate in the same season to a crop already treated with another sulfonylurea herbicide as crop damage may occur.

Consult your local agronomist or Nufarm representative.

**DO NOT** apply other sulfonylurea herbicides in a tank mix with Associate as a pre-plant application.

Use of this product on land having a soil pH of 5.5 or less may result in some crop retardation, particularly if the crop is stressed - see comment in point below.

**DO NOT** apply to crops that are stressed by any cause (such as severe weather conditions, drought, waterlogging, excessive soil acidity or alkalinity, poor nutrient status, disease, nematode or insect damage) as crop injury may result. When treatment is followed by severe stress (such as drought, prolonged cold, waterlogging or frosty conditions) crop yellowing and growth retardation may occur. Crops normally recover without loss in yield. Disease, nematode or insect damage following application may also result in crop injury.

**SPRAY PREPARATION**

Associate is a dry flowable formulation to be mixed with water and applied as a spray. Partially fill the spray tank with water. Using the Associate measuring cone provided, measure the amount of Associate required for the area to be sprayed. Add the correct amount of Associate to the spray tank with the agitation system engaged. Top up to the correct volume with water. **THE MATERIAL MUST BE KEPT IN SUSPENSION AT ALL TIMES BY CONTINUOUS AGITATION.**

When prepared spray solution has been allowed to stand, thoroughly re-agitate before using. In tank mixes Associate must be in suspension before adding the companion herbicide or surfactant.

For application of Associate in liquid fertiliser, slurry the Associate in water then thoroughly mix the slurry into the liquid fertiliser. Check compatibility before mixing Associate in fertiliser solutions. **DO NOT** add a surfactant/wetting agent.

**COMPATIBILITY**

Associate is compatible with the commonly used broadleaf herbicides Agtryne\*, Bromicide® MA, Kamba® 500, Broadstrike, Eclipse, Nufarm Diuron (liquid Flowable and 900DF), Igran/ Terbutryn 500, Jaguar\*, Lontrel\*/Archer®, Nufarm LVE MCPA, Nufarm MCPA 500, Metribuzin, Starane\*, Nugrex/ Tigrex\*, Tordon\*242, Tordon\*75-D, Nufarm Trooper®, Nufarm Amicide® 625 and non-selective glyphosate herbicides (e.g. Glyphosate CT and Roundup PowerMAX®).

Associate is compatible with the commonly used insecticides chlorpyrifos and omethoate (e.g. Comrad®). Some increased temporary crop yellowing may occur when Associate is applied as a tank mix with these insecticides.

To extend the weed range, add Nufarm MCPA 500, Nufarm Amicide® 625, Nufarm Diuron (Flowable and DF) and Terbutryn at label rates (Vic. only).

The compatibility of Associate with grass herbicides varies between products and weed species (refer following table).

<b>NUFARM ASSOCIATE Plus</b>	<b>Biological Compatibility</b>		
	Wild Oats	Annual Ryegrass	Phalaris
Puma <sup>1</sup>	Yes	-	No
Hoegrass* Nugrass®	Refer to notes on Nufarm Associate/ Diclofop Methyl based products or Nufarm Associate/ Tristar mixtures	Refer to notes on Nufarm Associate/ Diclofop Methyl based products or Nufarm Associate/ Tristar mixtures	-
Tristar* Advance			No
Achieve	No	No	No
Mataven* 90	No	-	-

**DO NOT** mix Associate with Achieve and Mataven 90.

**NOTES ON ASSOCIATE/DICLOFOP METHYL BASED PRODUCTS OR ASSOCIATE/TRISTAR MIXTURES.**

- Nufarm Associate Herbicide and diclofop methyl based products or Tristar Advance can be tank mixed, but when this mixture is used, some reduction in grass weed control can be expected.
- For heavy infestation of grass weeds, control may be inadequate - Vic. and Tas. only.
- Significant reduction in grass weed control should be expected - SA only.
- Nufarm Associate Herbicide and diclofop methyl based products or Tristar Advance are not a recommended mixture because they result in significant reduction in grass weed control and/or crop damage - WA only.
- Consult company representatives for further information or advice.

**USE OF SURFACTANT/WETTING AGENT**

**Instructions specific for cereals:** Always add a non-ionic surfactant (1000 g. ac/L) at 100mL/100L of final spray volume (0.1% volume/volume). The use of spraying oils is not recommended.

**Note:** Do not add a surfactant/wetting agent when Associate is tank mixed with Nufarm Terbutryn/ Igran or Nufarm Diuron (Flowable and DF).

**Instructions specific for brush and herbaceous weed control:** If a specific surfactant/wetting agent is not listed in the Directions for Use table, or when mixing glyphosate use a non-ionic surfactant (1000 g. ac/L) at 100mL/100L of final spray volume (ie 0.1% volume/volume).

When an organosilicone penetrant (Pulse) is recommended in the Directions for Use table and with all gasgun applications, use 10mL/5L or 200mL/100L of final spray volume (ie 0.2% volume/volume).

When a mineral spray oil (eg Caltex Sprayplus\*) is recommended in the Directions for Use table, use 1L/100L of final spray volume (ie 1% volume/volume).

**Instructions specific for treatment of pasture and pasture renovation:** Always add a non-ionic surfactant a (1000 g. ac/L) eg Chemwet 1000 at 200mL/100L of final spray volume (0.2% volume/volume).

**BOOM SPRAY APPLICATION**

Use a boom spray property calibrated to a constant speed and rate of delivery to ensure thorough coverage and a uniform spray pattern. Adjust boom height to ensure correct spray overlap. Avoid spraying where drift can go onto crops, are likely to be planted to crops and non target pastures as injury may occur. Avoid overlapping and shut off spray booms while starting, turning, slowing or stopping as injury to the crop may result.

**Cereals:** Apply a minimum of 50L prepared spray/ha.

**Pasture:** Apply a minimum of 70L prepared spray/ha.

**Other use patterns:** Apply in a minimum of 150L prepared spray/ha. Increase to 200L prepared spray/ha or more in dense stands.

### AERIAL APPLICATION

Avoid spraying in still conditions and in winds likely to cause drift onto adjacent sensitive crops or fallow areas likely to be planted to these crops - see Crop Rotation Recommendations. Turn off spray boom whilst passing over creeks and dams.

**DO NOT** apply when a temperature air inversion is likely to occur.

Use of Micronair equipment is not recommended due to greater drift potential.

Apply in a minimum of 20L/ha water. Application in a higher water volume of 30L/ha will improve the reliability of weed efficacy.

#### Other use patterns: – helicopter only

Apply in a minimum of 100L per ha on Blackberries or 60L per ha on *Mimosa pigra* and up to 200L prepared spray/ha. Higher water volumes may be necessary to ensure adequate coverage where bushes are large and terrain is steep. Spray with a properly calibrated helicopter using the half overlap opposite pass technique.

### HANDGUN APPLICATION

#### Pastures and Other use patterns

Spray foliage and canes until wet. Ensure coverage is uniform and complete. Use pressures of 550-750 kPa (80 - 100psi) depending on target species and size of bush. Use larger nozzles and higher pressures for largest bushes. Example:

Size No. 4 or 5 spray nozzle:

small individual bushes or broadleaf weeds - less than 1m high

Size No. 5 or 6 spray nozzle:

medium sized bushes - 1.2m high

Size No. 7 or 8 spray nozzle:

large bushes 2-3m high or of a large diameter

Note: Use large spray nozzle/high volume for blackberry regrowth.

Spray using a wide cone setting as much as possible. Use even, side-by-side spray pattern moving up from the base to the top of the bush as leaves are wet. For blackberries, do not ignore runners to the side or the top of the bush and ensure spray penetrates larger bushes to wet foliage and canes.

### GAS GUN APPLICATION

#### Pastures and Other use patterns

Apply to ensure good coverage of all foliage is achieved. The use of a suitable marker dye is recommended. eg Nufarm Spray Marker Dye.

#### SPRAYER CLEAN-UP

Immediately after spraying thoroughly remove all traces of Associate from mixing and spray equipment as follows:

1. Drain tank, then flush tank, boom and hoses with clean water for a minimum of 10 minutes.
2. Fill the tank with clean water then add 300mL household chlorine bleach (containing 4% chlorine) per 100L of water. Flush through boom and hoses then allow to stand for 15 minutes with agitation engaged, then drain.
3. Repeat step 2.
4. Nozzle and screens should be removed and

cleaned separately. To remove traces of chlorine bleach, rinse the tank thoroughly with clean water and flush through hoses and boom.

**CAUTION: DO NOT** use chlorine bleach with ammonia. All traces of liquid fertilizer containing ammonia, ammonium nitrate or ammonium sulphate must be rinsed with water from the mixing and application equipment before adding chlorine bleach solution. Failure to do so will release a gas with a musty chlorine odour which can cause eye, nose, throat and lung irritation. **DO NOT** clean equipment in an enclosed area.

### RESISTANT WEEDS WARNING

#### GROUP B HERBICIDE

Nufarm Associate Herbicide ("Associate") is a member of the Sulfonylureas group of herbicides. Associate has the inhibitors of acetolactate synthase mode of action. For weed resistance management Associate is a Group B herbicide. Some naturally-occurring weed biotypes resistant to Associate and other Group B 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 Associate or other Group B herbicides. Some populations of Annual Ryegrass and a few broadleaf weeds are already known to be resistant to Associate and other ALS inhibitor 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 Associate to control resistant weeds. To prevent, or at least minimise the risk of resistant weeds occurring, use Associate in tank mixes (if appropriate) and/or rotations with herbicides having different modes of action effective on the same weed species. Large numbers of healthy surviving weeds can be an indication that resistance is developing. Efforts should be taken to prevent seed set of these survivors.

**DO NOT** apply Associate alone for fallow and preplant knockdown weed control.

**DO NOT** make more than one application of an ALS inhibitor herbicide to a crop, either preplant, incorporated-by-sowing or post crop and weed emergence.

If the user suspects that an ALS inhibitor resistant weed is present, Associate or other ALS inhibitor herbicides should not be used. Strategies to minimise the risk of herbicide resistance are available. Consult your farm chemical supplier, consultant, local Department of Agriculture or Primary Industries, or local Nufarm representative.

### CROP ROTATION RECOMMENDATIONS

The use of Associate may prevent early re-establishment of legumes and grasses after treatment. The period that residues persist in the soil will vary according to site conditions such as climate, soil pH, presence of soil microorganisms, soil temperature, soil moisture and the rate used. Breakdown is fastest in warm wet acid soil and

slower in cold dry alkaline soils.  
 Land previously treated with Associate should not be rotated to crops other than those listed in the table following.  
 Tolerance of other crops (grown through to maturity) should be determined on a small scale before sowing into larger areas.  
 The Associate treated area may be replanted to any of the specified crops after the interval indicated in the following table:

Soil pH	Minimum Recropping Interval			
	10 days	6 weeks	9 months	14 months
5.6 - 8.5	Wheat	Barley Cereal Rye Triticale	Chickpeas Faba Beans Linseed Lucerne Lupins Medics** Oats Peas Canola Safflower Subterranean** Clover	Japanese Millet Maize PanoramaMillet White FrenchMillet Sorghum Soybeans Sunflower
8.6 and above	Tolerance of crops (grown through to maturity) should be determined on a small scale, in the previous season, before sowing into larger areas.			

\*\* Involves natural regeneration of subterranean clover and medics.

The Associate treated area may be replanted to any of the specified pasture species after the interval indicated in the following table:

Soil pH*	Pasture Species	Rate g/ha	Minimum Rainfall	Minimum Recrop Interval
5.5 and below	Sub Clover <sup>(a)</sup> and Haifa White Clover	5	150mm	12weeks
		10		20 weeks
		15		20 weeks
	Cocksfoot spp. and Phalaris spp.	5		8 weeks
		10		8 weeks
		15		16 weeks
	Perennial Ryegrass spp. and Fescue spp.	5	100mm	16 weeks
		10		16 weeks
		15		20 weeks
5.6 - 6.5	Sub Clover <sup>(a)</sup> , Haifa White Clover, Perennial Ryegrass spp. and Fescue spp.	Bioassay <sup>(b)</sup>		
		5, 10	175 mm	12 weeks
	Cocksfoot spp. and Phalaris spp.	15	Bioassay <sup>(b)</sup>	
6.6 and above	Bioassay <sup>(b)</sup>			

(a) Varieties: Junee, Karridale, Seaton Park and Trikkala.

(b) Tolerance of pasture species should be

determined on a small scale, in the previous season, before sowing into larger areas.

\* Soil pH is to be determined by laboratory analysis using the 1:5; soil water suspension method.

For rates higher than 15 g/ha the following applies:  
 • For soils with a pH below 7 (1:5 soil: water method) a minimum period of 12 months should elapse before oversowing treated areas with grasses or legumes. It is suggested that small areas be oversown 1 - 2 months prior to the planned time for sowing to check for possible harmful residues.

• For soils with a pH greater than 7 or if planting any other crop, DO NOT replant without first consulting the local Nufarm representative.

**PROTECTION OF CROPS, NATIVE AND OTHER NON-TARGET PLANTS**

Injury to or loss of desirable trees or vegetation may result from failure to observe the following:

**DO NOT** apply or drain or flush equipment on or near desirable trees or other plants or on areas where their roots may extend or in locations where the chemical may be washed or moved into contact with their roots.

**DO NOT** apply or allow spray to drift onto adjacent crops and non-target desirable plants, or onto agricultural land scheduled to be planted to other crops as injury to the crop may occur.

**PROTECTION OF LIVESTOCK**

A nil withholding period is applicable for Associate. It is recommended, however, not to graze treated areas for 2 to 3 days to ensure product efficacy.

**PROTECTION OF WILDLIFE, FISH, CRUSTACEA AND ENVIRONMENT**

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

**STORAGE AND DISPOSAL**

KEEP OUT OF REACH OF CHILDREN. Store in the closed, original container in a dry, cool, well ventilated area, out of direct sunlight. Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemical on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt.

**SAFETY DIRECTIONS**

May irritate the eyes and skin. Avoid contact with eyes and skin. Do not inhale dust and spray mist. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water.

**FIRST AID**

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

**MATERIAL SAFETY DATA SHEET**

For further information refer to the Material Safety Data Sheet (MSDS), which can be obtained from your supplier or from the Nufarm website – [www.nufarm.com.au](http://www.nufarm.com.au)

**CONDITIONS OF SALE**

“Any provisions or rights under the Trade Practices Act 1974 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates (“Nufarm”) shall not accept any liability whatsoever (including consequential loss), or howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute.”

**In case of emergency: Phone 1800 033 498**

Ask for shift supervisor. Toll free 24 hours.

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