

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.

READ COMPLETE DIRECTIONS FOR USE BEFORE USING THIS PRODUCT.

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Nufarm

Grow a better tomorrow.

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**DIRECTIONS FOR USE  
RESTRAINTS**

APVMA Approval No.: 46361/100801

- 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**

CROP	WEEDS CONTROLLED	STATE	RATE	WEED GROWTH STAGE AT APPLICATION	CRITICAL COMMENTS
Wheat, Barley, Triticale & Cereal rye	African turnip weed ( <i>Sisymbrium thellungii</i> )	Qld only	5g/ha	Apply before the 6 leaf stage	<b>General:</b> Where the two rates are specified, use the higher rate for larger weeds and/or under heavy weed pressures.  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.  Refer to General Instructions and Crop Safety Directions for further application instructions.
	Amsinckia/Yellow burrweed ( <i>Amsinckia</i> spp.)	WA only			
		SA, Vic, NSW, Tas only	5 or 7g/ha		
	Ball mustard ( <i>Neslia paniculata</i> )	SA only	5g/ha		
	Boggabri weed/Dwarf amaranth ( <i>Amaranthus macrocarpus</i> )	Qld only	7g/ha	Apply at cotyledon to 10cm height or diameter stage	
	Calomba daisy ( <i>Pentzia suffruticosa</i> )	SA only	5g/ha		
	Cape tulip ( <i>Homeria</i> spp.)	WA only			
	Charlock ( <i>Sinapsis arvensis</i> )	Vic, NSW, SA, Tas only			
Chickpeas (Volunteer) ( <i>Cicer arietinum</i> )	Qld, NSW, Vic, SA only				

CROP	WEEDS CONTROLLED	STATE	RATE	WEED GROWTH STAGE AT APPLICATION	CRITICAL COMMENTS		
	Chickweed ( <i>Stellaria media</i> )	NSW, Vic, SA, Tas only		Apply up to the 4 leaf stage			
	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					
Wheat, Barley, Triticale & Cereal rye (cont)	Cutleaf mignonette ( <i>Reseda lutea</i> )	SA, Tas only	7g/ha		Spray actively growing large plants, up to early flowering stage. Plants emerging after spraying may not be controlled.		
	Deadnettle ( <i>Lamium amplexicaule</i> )	All States	5g/ha				
	Denseflower fumitory ( <i>Fumaria densiflora</i> )	SA, NSW only	5g/ha				
	Dock (Broadleaf) ( <i>Rumex obtusifolius</i> )	WA only	Qld, NSW, Vic, SA, Tas only	5 or 7g/ha			
				5g/ha		Apply after the 3 node stage	
	Faba beans ( <i>Vicia faba</i> )	Vic, SA only	5g/ha			Apply after the 3 node stage	
	Field peas ( <i>Pisum sativum</i> )	Vic, SA, WA, Tas only		7g/ha			
		NSW only					
	Hare's ear/Treacle mustard ( <i>Conringia orientalis</i> )	Vic only	5g/ha			Apply before the 5 leaf stage	
	Hogweed/Wireweed ( <i>Polygonum aviculare</i> )	WA only	Vic, SA, NSW, Tas only	5 or 7g/ha		Apply before the 4 leaf stage	Use the higher rate when weed populations are dense and majority of weeds are 4 leaf
					Qld only	7g/ha	
	Indian hedge mustard ( <i>Sisymbrium orientale</i> )	All States	5g/ha			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>Diploaxis tenuifolia</i> )	SA only	7g/ha			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	5g/ha				
	Mallee catchfly ( <i>Silene apetala</i> )	SA only					
	Medic ( <i>Medicago</i> spp.)	All States					
	New Zealand spinach ( <i>Tetragonia tetragonoides</i> )	Qld only	7g/ha		Apply before the 4 leaf stage		
	Parthenium weed ( <i>Parthenium hysterophorus</i> )	Qld only	5g/ha		Apply up to the 4 leaf stage		
			7g/ha		Apply at the 4 leaf to rosette stage		
	Paterson's curse/Salvation Jane ( <i>Echium plantagineum</i> )	Tas, WA only	5g/ha				
		SA, NSW only	5 or 7g/ha				
	Prickly lettuce ( <i>Lactuca serriola</i> )	Qld, SA, Vic, Tas only	5 or 7g/ha				
		WA only	5g/ha				
	Red pigweed ( <i>Portulaca oleracea</i> )	Qld only			Apply before the 6 leaf stage		
			7g/ha		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	5g/ha				
	Saltbush ( <i>Atriplex muelleri</i> )	Qld only			Apply up to the 4 leaf stage		
			7g/ha		Apply at the 4-6 leaf stage		
	Shepherd's purse ( <i>Capsella bursapastoris</i> )	NSW, Vic, SA, Tas only	5g/ha				
	Skeleton weed (Suppression only) ( <i>Chondrilla juncea</i> )	NSW, Vic, SA Only	7g/ha				
		WA only	5g/ha				
Slender celery ( <i>Apium leptophyllum</i> )	Qld only	5g/ha					
Smallflower fumitory ( <i>Fumaria parviflora</i> )	SA only						
Sorrell ( <i>Rumex acetosella</i> )	SA, Vic, NSW, WA, Tas only				Some regeneration from underground rootstocks and new germinations may occur late in the season.		
Soursob ( <i>Oxalis pes-caprae</i> )	Vic, SA, WA, Tas, NSW only				Apply after majority of soursobs have emerged and are actively growing.		

CROP	WEEDS CONTROLLED	STATE	RATE	WEED GROWTH STAGE AT APPLICATION	CRITICAL COMMENTS
	Spiny emex/Doublegee Threecornered Jack(s) ( <i>Emex australis</i> )	WA only			
		SA, Vic, NSW, Tas, Qld only	5 or 7g/ha		
	Stagger weed ( <i>Stachys arvensis</i> )	All States	5g/ha		
Wheat, Barley, Triticale & Cereal rye (cont)	Storksbill/Wild geranium ( <i>Erodium spp.</i> )	Vic, SA, WA, Tas only	5g/ha		
	Turnip weed ( <i>Rapistrum rugosum</i> )	All States			
	Volunteer sunflower ( <i>Helianthus annuus</i> )	Qld only		Apply at cotyledon to 4 leaf stage.	
		NSW only	7g/ha	Apply at 4 to 8 leaf stage.	
				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	5g/ha		

## 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.

CROP	WEEDS CONTROLLED	STATE	RATE	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/ha + 500mL/ha Nufarm Diuron Flowable (or 280g/ha DF) + 330mL/ha of Nufarm Agritone® 750	3-5 leaf (Z13-15) NSW only 5 leaf (Z15) Vic only	DO NOT apply to Kamilaroi, Shortim or Olympic wheat. Apply when weeds are 2-5 leaf.
		SA only	5g/ha + 500mL/ha Nufarm Diuron Flowable (or 280g/ha DF) + 330mL/ha of Nufarm Agritone 750	3-5 leaf (Z13-15)	
	All States	5g/ha + 440mL/ha Nufarm L.V.E. Agritone (up to 4 leaf canola)	3-5 leaf (Z13-15)		
		5g/ha + 880mL/ha Nufarm L.V.E. Agritone (up to 6 leaf canola)			
Wheat, Barley	Capeweed ( <i>Arctotheca calendula</i> ) and Wild radish ( <i>Raphanus raphanistrum</i> )	WA only	5g/ha + 350mL/ha Nufarm Diuron Flowable (or 195g/ha DF) + 270mL/ha of Nufarm Agritone® 750	3-4 leaf (Z13-14)	Apply when weeds are 2-5 Leaf.
			5g/ha + 550mL/ha Nufarm Terbutryn 500 or Igran + 400mL/ha of Nufarm Agritone 750	3 leaf - early tillering (Z13-21)	Apply when weeds are 2-6 leaf.
	Capeweed ( <i>Arctotheca calendula</i> )	SA only	5g/ha + 550mL/ha Nufarm Terbutryn 500 or Igran		
Wheat, Barley, Triticale & Cereal rye		NSW only	5g/ha + 850mL/ha Nufarm Terbutryn 500 or Igran	3 leaf - early tillering (Z13-21)	
		NSW, Vic, SA, WA only	5g/ha + 1L/ha Agtryne	3- 5 leaf (Z13-15)	Spray actively growing weeds at the 2-6 leaf stage.
		WA only	5g/ha + 750mL/ha 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/ha + 1.4L/ha 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/ha + 2.1L/ha 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/ha + 470-670mL/ha of Nufarm Agritone® 750	Early tillering to before boot (Z21-39)	Apply the lower rate to seedling weeds (3-6 leaf) and the higher rate on well developed weeds up to rosette.
NSW only			Apply 470mL rate after crop has reached 5 leaf stage. Use higher rates after the		

CROP	WEEDS CONTROLLED	STATE	RATE	CROP STAGE AT APPLICATION	CRITICAL COMMENTS
				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/ha + 930mL/ha of Nufarm Agritone 750	Early tillering to before boot (Z21-39)	Apply when weeds are seedling to rosette.
		WA only	5g/ha + 800mL/ha of Nufarm Agritone® 750	5 leaf- tillering (Z15-30)	
Wheat, Barley	Wild radish ( <i>Raphanus raphanistrum</i> )	WA only	5g/ha + 250mL/ha Nugrex®/ Tigrex*	Wheat: 3 leaf to late tillering (Z13-30) Barley: 5 leaf to late tillering (Z15-30)	Apply up to the 4 leaf stage and not more than 10cm in diameter.
Wheat, Barley, Triticale & Cereal rye		NSW, Vic, Tas, SA, WA only	5g/ha + 960mL- 1.4L/ha Nufarm L.V.E. Agritone	5 leaf to commencement of flag leaf (Z15-37)	Apply up to 2-3 leaf stage only.
	Saffron thistle ( <i>Carthamus lanatus</i> )	NSW, Vic, Tas, SA, WA only	5g/ha + 960mL- 1.4L/ha Nufarm L.V.E. Agritone	5 leaf through to commencement of flag leaf (Z15-37)	Spray young rosettes before leaves become spiny.
		Qld only	5g/ha + 930mL- 1.4L/ha Nufarm Agritone 750	Early tillering to before boot (Z21-39). Higher rates (above 1L/ha of Nufarm Agritone 750 only to be used on crops from mid tillering to before boot stage (Z23-29).	Apply to weeds at seedling to rosette stage. Use the lower rate on seedling weeds and the higher rate on well developed weeds.
		NSW, Vic, Tas, SA, WA only	5g/ha + 300mL/ha Archer®/Lontrel*	4 to 5 leaf stage (Z14-15).	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 <sup>^</sup>	5g/ha + 1.2L/ha Nufarm Amicide® 625	5 leaf to early tillering (Z15-21).	Apply to weeds at seedling to rosette stage.
		NSW only	5g/ha + 700mL-1.4L/ha 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/ha + 0.9L/ha Nufarm Amicide® 625	Mid tillering to before boot (Z23-39).	Apply to weeds at the seedling to rosette stage.
		Qld only	5g/ha + 1L/ha Nufarm Agritone 750	Early tillering to before boot (Z21-39).	
		NSW, Vic,	5g/ha + 740-960mL/ha Nufarm L.V.E. Agritone	Apply from 5 leaf through to commencement of flag leaf (Z15-37).	Spray at pre-cabbage stage.
Wheat	Slender thistle ( <i>Carduus tenuiflorus</i> )	Tas, SA, WA only	5g/ha + 1.85L/ha Nufarm L.V.E. Agritone		Moderately susceptible. Spray young rosettes.
Wheat, Barley, Triticale & Cereal rye		NSW only	5g/ha + 0.8-1.4L/ha 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 <sup>^</sup>	5g/ha + 1.4L/ha Nufarm Amicide® 625	5 leaf to early tillering (Z15-21).	Apply to weeds at seedling to young rosette stage.
Wheat, Barley & Triticale	Climbing Buckwheat/Black bindweed ( <i>Fallopia convolvulus</i> )	Qld, NSW only	5-7g/ha + 1L/ha Trooper 242/ Tordon* 242	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

CROP	WEEDS CONTROLLED	STATE	RATE	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 Weedmaster® Argo® Directions for Use.	All States except WA	Associate 5 or 7g/ha + Nufarm Glyphosate CT or Weedmaster® Argo® at label rates	Refer to Post Crop and Weed Emergence section of this leaflet (Table 1), and the Nufarm Glyphosate CT and Weedmaster®	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/ha + Nufarm Glyphosate CT or		

CROP	WEEDS CONTROLLED	STATE	RATE	WEED STAGE AT APPLICATION	CRITICAL COMMENTS
			Weedmaster® Argo® at label rates	Argo® Directions for Use.	Comments of the respective labels.  Use the appropriate rate of each product for the target weed spectrum.

CROP	WEEDS CONTROLLED	STATE	RATE	WEED STAGE AT APPLICATION	CRITICAL COMMENTS
Barley, Cereal Rye or Triticale	Refer to Post Crop and Weed Emergence section of this leaflet (Table 1), and the Nufarm Glyphosate CT and Weedmaster® Argo® Directions for Use.	All States except WA  WA only	Associate 5 or 7g/ha + Nufarm Glyphosate CT or Weedmaster® Argo® at label rates  Associate 5g/ha + Nufarm Glyphosate CT or Weedmaster® Argo® at label rates	Refer to Post Crop and Weed Emergence section of this leaflet (Table 1), and the Nufarm Glyphosate CT and Weedmaster® Argo® Directions for Use.	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.  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	STATE	RATE			CRITICAL COMMENTS
			Boom	Handgun	Gas gun	
Native Pastures*, rights of way, commercial and industrial areas	Alligator weed ( <i>Alternanthera philoxeroides</i> )	NSW only	80g/ha	-	-	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> )		-	10g/100L + Pulse® Penetrant (200mL/100L)	1g/L + 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	-	10g/100L	-	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	-	10g/100L + Pulse® Penetrant (200mL/100L)	-	
	Blackberry ( <i>Rubus</i> spp.)	All States & NT	-	10g/100L + mineral crop oil (1L/100L)	1g/L + 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.
	Bitou bush/Boneseed ( <i>Chrysanthemoides monilifera</i> )	NSW, Qld, Vic, SA only	-	10g/100L	1g/L + Pulse® Penetrant (10mL/5L)	Spray to thoroughly wet all foliage. Minimise contact with desirable species.
	Bridal creeper ( <i>Myrsiphyllum asparagoides</i> )	SA only	-	5g/100L	-	Apply during mid June to late August. Follow-up applications over at least 2 seasons will be required for complete control. Water volumes of 500-800L/ha are recommended to minimise the risk of damage to native vegetation.
	Common bracken ( <i>Pteridium esculentum</i> )	All States & NT	60g/ha	10g/100L	-	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	-	15g/100L	-	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</i> spp.)	NSW only	10g/ha	-	-	Apply during Spring.
	Fennel ( <i>Foeniculum vulgare</i> )	NSW only	-	10g/100L	-	Apply to actively growing plants.
	Golden dodder ( <i>Cuscuta australis</i> )	SA, NSW, Qld, Vic only	-	1g/100L	-	Apply as a spot spray to point of run-off. Ensure correct coverage of infested area. Apply pre-flowering.

SITUATION	WEEDS CONTROLLED	STATE	RATE			CRITICAL COMMENTS
			Boom	Handgun	Gas gun	
Native Pastures*, rights of way, commercial and industrial areas (cont)	Gorse ( <i>Ulex europaeus</i> )	Vic, Tas, SA, NSW only	-	15g/100L + Pulse® Penetrant (200mL/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	20g/ha + 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> )	NSW only	-	10g/100L	-	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	-	5g/100L	-	Spray to thoroughly wet all foliage but not to cause run-off.
	Japanese sunflower ( <i>Tihonia diversifolia</i> )	NSW only	-	10g/100L	-	
	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	-	10g/100L	2g/L + 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.
	Mistflower ( <i>Eupatorium riparium</i> )	Qld, NSW only	-	5g/100L	-	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	-	7.5g/100L	-	Apply to actively growing plants. Plants under moisture stress will not be controlled.
	Parthenium ( <i>Parthenium hysterophorus</i> )	Qld only	7g/ha	5g/100L	-	<b>Handgun</b> - Spray to thoroughly wet all foliage but not to cause runoff. <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	15g/ha	-	-	<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	-	10g/100L	1g/L + 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	15g/ha	5g/100L	-	Apply to actively growing plants at rosette to cabbage stage.
	Rubber vine ( <i>Cryptostegia grandiflora</i> )	Qld only	-	15g/100L	-	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.
	Singapore daisy ( <i>Sphagneticola trilobata</i> )	Qld only	-	10g/100L	-	Spray thoroughly to wet all foliage, but not to cause run-off. Minimise contact with desirable species.
	Sweet briar ( <i>Rosa rubiginosa</i> )	NSW, Tas, SA, Vic only	-	10g/100L	1 g/L + 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> – Gas gun - 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	-	5g/100L	-	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

CROP	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
Native Pastures <sup>‡</sup> , rights of way, commercial and industrial areas	Blackberry	NSW, Tas, Vic only	160g/ha	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	Mimosa pigra	NT only	50 or 60g/ha	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 210kPa to give a large droplet size. Add a non-ionic surfactant. Apply when plant is actively growing. Avoid spraying when plants are stressed.

<sup>‡</sup>Will damage legumes in pastures

### 6. PASTURES, FORESTS, COMMERCIAL AND INDUSTRIAL AREAS, RIGHTS OF WAY, DOMESTIC AND PUBLIC SERVICE AREAS: ASSOCIATE<sup>®</sup> AND ROUNDUP<sup>®</sup> HERBICIDE ALL STATES

PLANTING INTERVAL: 1 DAY PER GRAM ASSOCIATE A MINIMUM BEFORE PLANTING

SITUATION	WEEDS CONTROLLED	RATE – AERIAL OR BOOM	RATE – HANDGUN OR KNAPSACK	CRITICAL COMMENTS
Pastures and Forests. Planting interval: wait a minimum of 1 day per gram Associate before planting.  Commercial and Industrial areas, Rights of way, Domestic and public service areas  DO NOT USE ON ALKALINE SOILS	Blackberry ( <i>Rubus</i> spp.) Volunteer pine wildings (suppression only)	8.0L Roundup <sup>®</sup> / Weedmaster <sup>®</sup> Duo <sup>®</sup> plus 60g Associate per ha	400mL Roundup <sup>®</sup> / Weedmaster <sup>®</sup> Duo <sup>®</sup> 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 500mL per 100L water. Application to Pine wildings less than 50cm in height should be controlled when actively growing.
	Bracken ( <i>Pteridium esculentum</i> )	4. Roundup <sup>®</sup> / Weedmaster <sup>®</sup> Duo <sup>®</sup> plus 30g Associate <sup>®</sup> per ha  60g 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 500mL per 100L of water. <b>Use the 60g rate in Spring and the tank mixture in Autumn for best control option for Bracken.</b> <b>DO NOT disturb Bracken for minimum 6 weeks after application.</b>
	Fog grass ( <i>Holcuslanatus</i> ) Gorse ( <i>Ulex europaeus</i> ), Lantana ( <i>Lantana camara</i> ), St John's wort ( <i>Hypericum perforatum</i> ), Sorrel ( <i>Rumex acetosella</i> ) Sweet briar ( <i>Rosa rubiginosa</i> ) Topped lavender ( <i>Lavandula stoechas</i> )	4.0L Roundup <sup>®</sup> / Weedmaster <sup>®</sup> Duo <sup>®</sup> plus 30g Associate <sup>®</sup> per ha		<b>Use Pulse<sup>®</sup> Penetrant at the rate of 500mL per 100L of water.</b> For Gorse, apply when actively growing at any time of year, except Spring. For Lantana, apply when actively growing. DO NOT apply during periods of Summer drought stress. For St John's wort, apply when actively growing from Spring to Summer. For Sweet briar, apply when in full leaf, prior to leaf fall. For Topped lavender, Fog grass and Sorrel, apply when actively growing. For Sorrel apply 10-30g when actively growing. DO NOT apply during periods of Summer drought stress.

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

SITUATION	WEEDS CONTROLLED	STATE	RATE	CRITICAL COMMENTS
ESTABLISHED PASTURES	Cape tulip: Both one and two leaf ( <i>Homeria</i> spp.)	Vic, SA, NSW, WA & Tas only	5g/ha	Apply at bulb exhaustion usually during July/early August. More than one year of application may be required to obtain control.
TOLERANT GRASS SPECIES	Annual clover ( <i>Trifolium</i> spp.)	Vic, SA, NSW, WA, Qld & Tas only		Apply before flowering.
	Dock spp. ( <i>Rumex</i> spp.)		5g/ha -seedlings 10g/ha - established	Best results when applied in Spring prior to bolting.
Perennial phalaris Perennial cocksfoot Stands greater than one year old	Doublegee/Spiny emex/Three Corned Jack(s) ( <i>Emex australis</i> )	WA only	5-10g/ha	Apply up to the 6 leaf stage. Use the higher rate on dense populations.
	Erodium/Storksbill/Wild geranium ( <i>Erodium</i> spp.)	Vic, SA, NSW & Tas only		Use the higher rate on dense populations. Spray before flowering.
OR PASTURE RENOVATION Use in rundown pasture to reduce weed burden before sowing with a pasture in the following year	Annual medics ( <i>Medicago</i> spp.)	Vic, SA, NSW, WA and Tas only	5g/ha	For best results apply before flowering.
	Onion grass/Guildford grass ( <i>Romulea rosea</i> )		15g/ha	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 15g/ha	Apply lower rate to small plants. Apply higher rate before bolting/flowering.
	Ragwort ( <i>Senecio jacobaea</i> )	Vic, SA, NSW & Tas only	15g/ha	Apply to actively growing plants at the rosette to cabbage stage.
	Sorrel	Vic, SA, NSW,	5g/ha -seedlings	Best results when applied in Spring prior to seed heads

	( <i>Rumex acetosella</i> )	WA & Tas only	10g/ha - established	appearing.
	Soursob ( <i>Oxalis pes-caprae</i> )		5-10g/ha	Use the higher rate on dense stands. Spray before flowering for best results.
	Wild garlic ( <i>Allium vineale</i> )		15g/ha	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 /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 AGRITONE 750, 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 absorbed 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 Cleanup" 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® Argo® 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, Comet® 400, Eclipse, Nufarm Diuron (liquid Flowable and 900DF), Igran/ Terbutryn 500, Jaguar\*, Archer®/Lontrel\*, Nufarm L.V.E. Agritone®, Nufarm Agritone® 750, Metribuzin, Starane\*, Nugrex®/ Tigrex\*, Tordon\* 242, Tordon\* 75-D, Nufarm Trooper® 242, Nufarm Amicide® 625 and non-selective glyphosate herbicides (e.g. Glyphosate CT, Weedmaster® Argo® and Weedmaster® Duo®).

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 Agritone® 750, Nufarm Amicide® 625, Amicide Advance™ 700, 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).

NUFARM ASSOCIATE Plus	Biological Compatibility		
	Wild Oats	Annual Ryegrass	Phalaris
Wildcat*	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 (1000g 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 (1000g 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 gas gun 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 (1000g 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 550-750kPa (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**

<b>GROUP</b>	<b>B</b>	<b>HERBICIDE</b>
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Nufarm Associate Herbicide ("Associate") is a member of the Sulfonylurea 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 Panorama millet White French millet 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 <sup>v</sup>	Pasture Species	Rate	Minimum Rainfall	Minimum Recrop Interval
5.5 and below	Sub Clover <sup>(a)</sup> and Haifa white clover	5g/ha	150mm	12weeks
		10g/ha		20 weeks
		15g/ha		20 weeks
	Cocksfoot spp. and Phalaris spp.	5g/ha		8 weeks
		10g/ha		8 weeks
		15g/ha		16 weeks
	Perennial ryegrass spp. and Fescue spp.	5g/ha	100mm	16 weeks
		10g/ha		16 weeks
		15g/ha	150mm	20 weeks
5.6 - 6.5	Sub Clover <sup>(a)</sup> , Haifa white clover, Perennial ryegrass spp. and Fescue spp.	Bioassay <sup>(b)</sup>		
		Cocksfoot spp. and Phalaris spp.	5, 10g/ha	175mm
			15 g/ha	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.

<sup>v</sup> Soil pH is to be determined by laboratory analysis using the 1:5; soil water suspension method.

For rates higher than 15g/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 50 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

Harmful if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. When opening the container and preparing spray wear elbow-length PVC gloves and goggles. If applying by hand wear cotton overalls, over normal clothing, buttoned to the neck and wrist, a washable hat, and elbow-length PVC gloves. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, goggles and contaminated clothing.

#### 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)

**In case of emergency: Phone 1800 033 498** Ask for shift supervisor. Toll free 24 hours.

#### CONDITIONS OF SALE:

"Any provisions or rights under the Competition and Consumer Act 2010 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."

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