

# Weed Management

There is a comprehensive range of very good and cost effective herbicides for the control of grass weeds in sunflower. This means that sunflower should be a preferred crop in those paddocks where grass weeds are or could be a problem.

In this situation sunflower would, in most cases, be economically and agronomically preferable to growing a cereal crop eg. sorghum where high rates of a residual herbicide are required for effective grass control.

Conversely there are not as many herbicide options for broadleaf weed control. The only options available are for pre-emergent application, see table.

Effective weed control, particularly of broadleaf weeds, will be best achieved by a combination of crop rotation and good fallow weed control to compliment the in-crop herbicide options together with inter-row cultivation.

## FALLOW WEED CONTROL

The increasing use of herbicides during the fallow period provides the same benefits to sunflower that it does to other crops. However sunflower is sensitive to some commonly used residual herbicides such as Atrazine, Chlorsulfuron and Picloram. These products need to be avoided in areas which could be planted to sunflower.

Some other chemicals used in fallow weed control have the potential to affect crop emergence if the crop is sown too soon after the chemical application. To reduce this risk a plant back period is recommended. The adjacent table provides a guide to some commonly used chemicals.

## HERBICIDE PLANT BACKS FOR SUNFLOWER

Rainfall or irrigation after herbicide application has major implication for most plant-back periods. Consult the label or a local agronomist, for an accurate assessment of your situation.

- Glean® and Seige® are not recommended for use on soils of pH 8.6 and above.
- Longer interval needed in soils with pH above 7.8 with Harmony® M.
- Not less than 400 mm of rainfall between Harmony® M application and sowing of rotation crop.
- Do not use 400 ml/Ha Spinnaker® on dryland unless intending to recrop with a leguminous crop.
- On shallow soils of less than 30cm depth, DO NOT plant until two years after application.

## Herbicides Plant Back Periods for Sunflower

Herbicides	Rate/Ha Application Parameters	Plant Back Period
Tordon 242/75D	Label	12 months
Dicamba (500 g/l)	0.16 l - 0.24 l	1 day
2,4-D Amine (625g/L)	0.7 l 1.4 l 2.1 l	7 days 10 days 14 days
2,4-D Ester (800 g/l)	0.35 l 0.7 l 1.1 l	7 days 10 days 14 days
Surpass® (300 g/Lamine)	1.5 l 1.5 - 3.0 l 3.0 - 4.6 l	7 days 10 days 14 days
Baton® (800 g/Lamine)	0.4 kg 0.4 - 0.9 kg 0.9 - 1.3 kg	7 days 10 days 14 days
Express®	Label - soil temp requirement	7 days
Garlon® 600	160 mL	7 days
Starane® 200	1.5 l	7 days
Atrazine (500g/l)	up to 2.5 l	6 months
Atrazine (900 g/kg)	up to 1.4 kg	6 months
NU-TRA-D® (320 g/l)	up to 4 l	9 months
Atrazine (500 g/l)	2.5 - 6.5 l	18 months
Atrazine (900 g/kg)	1.4 - 3.6 gk	18 months
NU-TRA-D® (320 g/l)	4 - 10 l	18 months
Spinnaker®	(f) Label	22 months
Broadstrike®	(p) Label	9 months
Ally® Associate®	pH 5.6-8.5 Significant rainfall required	14 months
Amber®	Post-label	14 months
Glean® Siege®	(a) pH 6.5 or less pH 6.6-7.5 700mm min rainfall required	18 months 16 months
Harmony® M	(c) (b) PH <7.8 >8.3 Significant rainfall required	14 months
Logran® N Nugran®	pH 6.5 or less pH 6.6 - 7.5 pH 7.6 or above 900mm min rainfall required	18 months 18 months 24 months

Source – NSW, *Weed control in summer crops 1997-99*,  
Andrew Storrie, NSW Agriculture.  
- Qld National Registration Authority



## IN CROP WEED CONTROL

Effective weed control to ensure maximum yields and a clean grain sample is best achieved by a combination of crop rotation, good fallow weed control, judicious use of the range of registered herbicides, inter-row cultivation and shielded spraying.

### GRASS WEED CONTROL

**THE LIST OF REGISTERED GRASS HERBICIDES is included in the regional section of this package**

#### Resistance in Grass Weeds

Herbicide resistance in grass weeds is occurring in a range of cropping systems. The greatest danger to resistance is in the Group A herbicides. If more than four (4) group A herbicides have been used, eg in the past 6 years or less, look to use a herbicide from another group even if it means a change of crop.

## BROADLEAF WEED CONTROL IN SUNFLOWER

	PRE-PLANT		POST-PLANT	PRE-EMERGENT	
<b>Weeds controlled</b>	<b>Pendimethalin</b> 330/440/455 g/L Various	<b>Trifluralin</b> 400/480 g/L Various	<b>Pendimethalin</b> 330/440/455 g/L Various	<b>*Prometryn</b> 900 g/kg Prometryne 900 DF Nufarm	<b>Eptam</b> 720g/L
<b>Herbicide group</b>	(a) D	D	D	(b) C	
<b>Amaranthus</b>	2.5 - 3.0 L <input type="checkbox"/>	1.2 to 2.8 L	4.5 L <input type="checkbox"/>	1.6 to 2.2 Kg/Ha	4 L/Ha
<b>Blackberry</b>	3.0 L (S)			1.6 to 2.2 Kg/Ha	
<b>Blackberry nightshade</b>					4 L/Ha
<b>Bladder ketmia</b>					
<b>Common heliotrope</b>	2.5 - 3.0 L <input type="checkbox"/>		4.5 L <input type="checkbox"/>		
<b>Cotton-volunteer</b>					
<b>Crested goosefoot</b>	2.5 - 3.0 L <input type="checkbox"/>		4.5 L <input type="checkbox"/>		
<b>Cudweed</b>					4 L/Ha
<b>Fat hen</b>	2.5 - 3.0 L <input type="checkbox"/>				4 L/Ha
<b>Giant pigweed</b>		1.2 to 2.8 L <input type="checkbox"/>			4 L/Ha
<b>Indian hedge mustard</b>					4 L/Ha
<b>Mexican poppy</b>					4 L/Ha
<b>Mintweed</b>	3.0 L (S) <input type="checkbox"/>		4.5 L (S) <input type="checkbox"/>		
<b>Morning glory</b>				1.6 to 2.2 Kg/Ha	
<b>Noogoora burr</b>				1.6 to 2.2 Kg/Ha	
<b>Pigweed</b>	2.5 - 3.0 L <input type="checkbox"/>	1.2 to 2.8 L <input type="checkbox"/>	4.5 L <input type="checkbox"/>		4 L/Ha
<b>Scarlet pimpernel</b>	2.5 - 3.0 L <input type="checkbox"/>		4.5 L <input type="checkbox"/>		
<b>Sow thistle</b>			4.5 L (S)		
<b>Thornapple</b>					
<b>Wild gooseberry</b>					
<b>Wireweed</b>	2.5 - 3.0 L <input type="checkbox"/>	1.2 to 2.8 L <input type="checkbox"/>	4.5 L <input type="checkbox"/>		
<b>Yellow vine</b>	3.0 L (S) <input type="checkbox"/>	1.2 to 2.8 LT/Ha <input type="checkbox"/>	4.5 L (S) <input type="checkbox"/>	1.6 to 2.2 Kg/Ha	

Additions: Use Metochlor 720g/960g/L various for Hairy Wandering Jew - Pre plant or Pre-emergent 2-4 L/HA registered Qld, NSW and ACT.

(S) = Suppression (a) = Incorporate within 24 hours (b) = Apply to bare, moist soil. Incorporate with 24 hours.

Use lower rate for sandy soils. Registered at 1 July 1997

Key  = Registered Queensland - July 1 1997. Rate eg. 2.5 - 3.0 L = Registered NSW - July 1 1997

Source - NSW, Weed control in summer crops 1997-99, Andrew Storrie, NSW Agriculture.

- Qld, National Registration Authority, June 1997 - Infopest January 2004 \* Registered in Qld and NSW only.

### Warning

When using Post-Plant Pre-emergent Prometryn, plant injury and/or death may occur if heavy rain occurs after chemical application and before crop emergence, especially, but not only, if shallow planting, and/or on loamy soils.

### Important

You must use a product registered for the required purpose. Always check the label and follow the label instructions. State registration and label instructions supercede all recommendations in this publication.



## BROADLEAF WEED CONTROL

Whilst there is a short list of herbicides for the control of broadleaf weeds in sunflower (refer table) the range of options is limited. Therefore careful paddock selection where broadleaf weeds have been contained through rotation, fallow control or the sunflower planting time is important.

**Note:** For sporadic weed populations, eg. Datura, Noogoora Burr, Johnson Grass, the time proven method of land chipping or spot spraying is often the most effective and economical control and avoids expensive contaminations at harvest.

## HERBICIDES PLANT BACK PERIODS FOR SUNFLOWER

Herbicides	Rate/Ha Application Parameters	Plant Back Period
Tordon 242/75-D	Label	12 months
Dicamba 500g/L	0.16 to 0.240 L	1 day
2,4-D Amine (625 g/L)	0.7 L 1.4 L 2.1 L	7days 10 days 14 days
2,4-D Ester (800 g/L)	0.35 L 0.7 L 1.1 L	7days 10 days 14 days
Surpass(r) (g/Lamine) 300	1.5 L 1.5 - 3.0 L 3.0 - 4.6 L	7 days 10 days 14 days
Baton(r) (800g/Lamine)	0.4 kg 0.4 - 0.9 kg 0.9 - 1.3 kg	7 days 10 days 14 days
Express(r) (Soil Temp Requirement)	Label	7/21 days
Garlon(r) 600	160 mL	7 days
Starane(r) 200	1.5 L	7 days
Atrazine (500g/L)	Up to 2.5 L	6 months
Atrazine (900 g/kg)	Up to 1.4 kg	6 months
NU-TRA-D(r) (320 g/L)	Up to 4 L	9 months
Atrazine (500 g/L)	2.5 - 6.5 L	18 months
Atrazine (900 g/kg)	1.4 - 3.6 gk	18 months
NU-TRA-D(r) (320 g/L)	4 - 10 L	18 months
Spinnaker(r)	(f) Label	22 months
Broadstrike(r)	(p) Label	9 months
Ally(r) Associate(r) (Significant Rainfall Required)	pH 5.6 - 8.5	14 months
Amber(r)	Post - Label	14 months
Glean(r) Siege(r) (700mm min Rainfall Requirement)	(a) pH 6.5 or less pH 6.6 - 7.5	18 months 16 months
Harmony(r) M (Significant Rainfall Required)	(c) (b)	14 months @ pH > 8.3 4 months @ pH < 7.8
Logran(r)N Nugran(r) (900 mm min Rainfall Required)	pH 6.5 or less pH 6.6 - 7.5 pH 7.6 or above	18 months 18 months 24 months



# GRASS WEED CONTROL QUEENSLAND AND NEW SOUTH WALES



	PRIOR TO SOWING	POST PLANT - PRE EMERGENT POPSA		POST EMERGENT									
		Pendimethalin 330/455/440 g/L Various	Metolachlor 720/960 g/L Various	* Eptam 720g/L 4L/ha	Butroxydim 250 g/L Falcon(r)WG	Fluazifop-p 212g/L Fusilade(r)	Haloxifop Various % Several	Sethoxydim 120 g/L Sertin(r)Plus	Sethoxydim 186 g/L Sertin(r)186EC	Quizalofop- P-Ethyl Several			
Herbicide	Trifluralin 480/400 g/L Various Seed only												
Herbicide group	D	D	K		A	A	A	A	A				A
Weed controlled	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Barnyard grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Couch grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Crowsfoot grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Johnson grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Liverseed or		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Urochloa grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Native millet		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Nut grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Panic		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Paspalidium		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Pigeon grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Old Blue grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Red finders grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Rhodes grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spiny burr grass	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spring or Early		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Spring grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Stink grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Summer or Crab		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Grass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Volunteer Cereal		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Volunteer Maize		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Volunteer Sorghum		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Volunteer Wheat		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Weeping lovegrass		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Wild or Black oat	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Kikuyu		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Source: InfoPest January 2004. List of herbicides registered and approved for use in Queensland and New South Wales on Sunflower.

Note: A selection of common weeds from the supplied list are shown. For a more complete list check the label.

This table is a guide only. Note Label recommendation and state regulation should always take precedence.

\*Registered in NSW/Vic/ACT only. Use 2, 2 DPA 740g/kg for post-emergent grass control (directed spray) GROUP J HERBICIDE registered Qld/NSW