

SUNFLOWER WEED CONTROL

Sunflowers are routinely grown for doves and clean fields have historically produced better results. Although herbicides labeled for sunflower production are limited, good weed control can be obtained with proper application. It is recommended that sunflowers be drilled or seeded so that all seed are properly covered with soil. Broadcast seeding may result in poor seed to soil contact and herbicide applications may result in sunflower injury. Reduced rates of preemergence herbicides may be necessary for sunflowers planted on sandy or lighter textured silt loam soils to reduce the potential for injury. Activating rainfall or irrigation is needed for optimum preemergence herbicide activity and weed control.

PREPLANT INCORPORATED HERBICIDES FOR SUNFLOWERS

**For proper incorporation, a disk should be set to cut about twice as deep as placement is desired. A second mixing with shallow disking or field cultivator usually improves weed control. See label for incorporation instructions with other implements.*

Herbicide	Rate/Acre Broadcast		Remarks
	Active Ingredient	Formulation	
Dual Magnum	sandy loam: 0.96-1.27 lbs. silt loam: 1.27-1.59 lbs. silty clay loam: 1.27-1.59 lbs.	1.0-1.33 pts. 1.33-1.67 pts. 1.33-1.67 pts.	Good control of annual grasses, nutsedge and small-seeded broadleaf weeds. Use higher rate to control seedling johnsongrass. Avoid high rates on sandy or silt loam soils. Rates higher than 1.27 lbs. ai (1.33 pts./A) could result in crop injury.
Prowl 3.3 EC or Pendimax 3.3 EC	sandy loam: 0.5-0.74 lbs. silt loam: 0.74-1.0 lbs. silty clay loam: 1.0-1.5 lbs.	1.2-1.8 pts. 1.8-2.4 pts. 1.8-3.6 pts.	Good control of annual grasses and small-seeded broadleaf weeds. Use higher rate to control seedling johnsongrass. For maximum weed control, the herbicide must be incorporated within 7 days of application.
Sonalan HFP	sandy loam: 0.56-0.75 lbs. silt loam: 0.75-0.9375 lbs. silty clay loam: 0.9375-1.125 lbs.	1.5-2.0 pts. 2.0-2.5 pts. 2.5-3.0 pts.	Good control of annual grasses and small-seeded broadleaf weeds. Sonalan HFP must be incorporated after application. Follow soil preparation, application and incorporation application procedures recommended by the label.
Treflan HFP, Trilin, Trifluralin 4 EC	sandy loam: 0.5 lbs.	1.0 pts. 1.25-1.5 pts. 1.5-2.0 pts.	Good control of annual grasses and small-seeded broadleaves. Trifluralin must be incorporated immediately after application.

PREEMERGENCE HERBICIDES FOR SUNFLOWERS

Herbicide	Rate/Acre Broadcast		Remarks
	Active Ingredient	Formulation	
Dual Magnum	sandy loam: 0.96-1.27 lbs. silt loam: 1.27-1.59 lbs. silty clay loam: 1.27-1.59 lbs.	1.2-1.0 pts. 1.33-1.67 pts. 1.33-1.67 pts.	Good control of annual grasses, nutsedge and small-seeded broadleaf weeds. Use higher rate to control seedling johnsongrass. Dual Magnum must be applied immediately after planting to avoid crop injury. Avoid high rates on sandy or silt loam soils. Rates higher than 1.27 lbs. ai (1.33 pts./A) could result in crop injury. Tank mix with Spartan 4F for improved broadleaf weed control.
Prowl 3.3 EC or Pendimax 3.3 EC	sandy loam: 0.5-0.74 lbs.	1.2-1.8 pts.	Good control of annual grasses and small-seeded broadleaf weeds. Pendimethalin must be applied immediately after planting to avoid crop injury. Preemergence applications of pendimethalin on conventional tillage sunflowers may increase the likelihood of crop injury and decrease the herbicide performance when compared to preplant incorporated applications. Tank mix with Spartan 4F to improve broadleaf weed control.
Spartan 4F	0.125 lbs.	4.0 oz	Spartan 4F may be applied on the soil surface at planting to control broadleaf weeds. Spartan must be applied within 3 days of planting to reduce the potential for injury. Tank mixes with Dual Magnum, Prowl 3.3 EC or Pendimax will improve grass control. DO NOT apply Spartan 4F as a

Postemergence Weed Control in Sunflowers

Postemergence herbicides work best under the following conditions: weeds are young and rapidly growing, high humidity, good soil moisture, and good spray coverage. Performance is reduced when weeds are stressed due to drought, disease or cultivation, or when weeds are too large. Select the most effective weed management program for the money you can afford to spend. The following tables should assist with selection of a program for controlling your weeds.

POSTEMERGENCE HERBICIDES FOR SUNFLOWERS

Herbicide	Rate/Acre Broadcast*		Remarks**
	Active Ingredient	Formulation	
Select 2 EC	0.094-.25 lbs.	6-16 oz	For best results, add 1% v/v Crop Oil Concentrate. The addition of AMS has shown improved control for difficult to control weeds like quackgrass, rhizome johnsongrass, and wild oats.
Clearfield Sunflowers Only			
Beyond	0.031 lbs.	4 oz	APPLY to Clearfield Sunflowers ONLY. Applications should be made to actively growing sunflowers during the 2-8 true leaf stage. A nonionic surfactant and a nitrogen based fertilizer must be added for optimum weed control.

EXPECTED WEED RESPONSE TO SUNFLOWER HERBICIDES

	Preplant Incorporated				Preemergence			Postemergence	
	Treflan	Prowl	Dual Magnum	Sonalan	Prowl	Dual Magnum	Spartan	Select	Beyond**
Annual Morningglories	6	6	2	3	6	2	8	0	7
Broadleaf Signalgrass	8	8	8	8	8	8	6	9	7
Cocklebur	0	0	0	1	0	0	6	0	8
Common Ragweed	0	0	0	3	0	0	5	0	6
Crabgrass, Foxtails,	9	9	9	9	9	9	7	9	7
Groundcherries/Black	0	0	7	8	0	7	--	0	--
Hophornbeam Copperleaf	0	0	4	--	0	4	--	0	3
Jimsonweed	0	0	0	3	0	0	7	0	6
Lambsquarters	7	8	6	8	8	6	7	0	5
Pigweed, Palmer	8	8	8	--	6	6	8	0	3
Pigweed, Smooth or	8	7	8	8	7	8	8	0	8
Prickly Sida	0	0	0	3	0	0	6	0	6
Seedling Johnsongrass	9	8	8	9	8	8	6	9	8
Sicklepod	0	0	3	--	0	3	6	0	0
Smartweed	4	3	0	6	3	0	6	0	6
Spotted Spurge	0	0	7	--	0	7	--	0	8
Spurred Anoda	0	0	0	--	0	0	--	0	--
Velvetleaf	2	2	0	--	2	0	7	0	8
Yellow Nutsedge	0	0	8	1	0	8	8	0	0

(u) Restricted Use Pesticide: Refer to label for precautions to be taken during handling and application.

KEY TO SYMBOLS: 0=No control or crop injury; 10=100% control or severe, yield-reducing crop injury; ---=data not available

(Ratings are based on labeled rates of each herbicide, applied at the optimum timing for each weed.)

***Apply ONLY to Clearfield sunflowers or crop injury will result.*