

South Dakota State University

## Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange

---

SDSU Extension Fact Sheets

SDSU Extension

---

1989

### Weed Control in Sunflowers : 1989

Leon J. Wrage

Paul O. Johnson

Follow this and additional works at: [https://openprairie.sdstate.edu/extension\\_fact](https://openprairie.sdstate.edu/extension_fact)

---

#### Recommended Citation

Wrage, Leon J. and Johnson, Paul O., "Weed Control in Sunflowers : 1989" (1989). *SDSU Extension Fact Sheets*. 1366.

[https://openprairie.sdstate.edu/extension\\_fact/1366](https://openprairie.sdstate.edu/extension_fact/1366)

This Fact Sheet is brought to you for free and open access by the SDSU Extension at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in SDSU Extension Fact Sheets by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact [michael.biondo@sdstate.edu](mailto:michael.biondo@sdstate.edu).

# Historic, archived document

Do not assume content reflects current scientific knowledge, policies, or practices.



For current policies and practices, contact SDSU Extension

Website: [extension.sdstate.edu](http://extension.sdstate.edu)

Phone: 605-688-4792

Email: [sdsu.extension@sdstate.edu](mailto:sdsu.extension@sdstate.edu)

SDSU Extension is an equal opportunity provider and employer in accordance with the nondiscrimination policies of South Dakota State University, the South Dakota Board of Regents and the United States Department of Agriculture.





FS 525SF



# Weed Control in Sunflowers: 1989

Cooperative Extension Service • South Dakota State University • U.S. Department of Agriculture

Leon J. Wrage, Extension Agronomist, Weeds  
Paul O. Johnson, Extension IPM Coordinator

Weeds seriously reduce sunflower yields even though the infestation is not visually dramatic. The most serious losses from annual weed competition occur during the first 4 weeks after crop emergence. Herbicides used in sunflowers are not effective on perennials.

## Tillage and Cultivation

If possible, destroy one crop of weeds with tillage prior to planting. Seed immediately after tillage. If weeds emerge before the sunflowers, use a harrow. Sunflower seeds are large and young seedlings have a strong root system and are not seriously damaged by harrowing.

Use a spike-tooth or flexline harrow, or rotary hoe. Harrow when weeds are in the "white" stage but before crop emerges. After crop emergence, harrowing should be delayed until sunflowers have four leaves. The least crop damage and best weed control is obtained if harrowing is done on a warm clear day.

Planting rate should be increased 10 to 15% to compensate for stand reduction due to harrowing. A firm seedbed reduces damage to the sunflower stand.

If weeds are still a problem after harrowing, row cultivation will provide control for the remainder of the season.

## Herbicide Drift and Carryover

Use caution to prevent droplet or vapor drift to the sunflower crop when spraying nearby small grain or row crop fields. Sunflowers are highly sensitive to herbicides such as 2,4-D, MCPA, or dicamba. Very small amounts of drift can cause serious damage. Also, avoid planting sunflowers where atrazine or chlorsulfuron (Glean) carryover may cause damage.

## Herbicide Suggestions

Information in this publication is based on South Dakota Agricultural Experiment Station research and other research or observations. Herbicides are included only after the chemical is registered by the Environmental Protection Agency (EPA) as to residue tolerances in crops used for food or feed.

The information does not imply a guarantee. Every effort has been made to avoid mechanical error in preparation of this publication. The label should be considered the final guide.

**Weed Problems.** Weeds are grouped as small-seeded annual broadleaves (kochia, lambsquarters, pigweed, etc.) and annual grasses (green or yellow foxtail). Control is rated poor, fair, good, very good, or excellent for each category of weeds.

**Herbicides.** Herbicides are listed by tradename. The common name is also included in the heading in parentheses.

**Rate.** Rates for each treatment are stated as the amount of product per acre. All rates are on a broadcast basis; adjust accordingly for band application.

**Herbicide Cost.** The cost per acre for each treatment is based on average prices for the previous season or current season price information if available. The cost for low and high rates is listed. Prices vary. Consult your dealer for actual price.

### Time To Apply.

**PREPLANT INCORPORATED:** before the crop is planted; incorporated as directed. **SHALLOW PREPLANT INCORPORATED:** preplant incorporated, but herbicide usually restricted to the top 2 inches of soil with single-pass incorporation.

**PREEMERGENCE:** after planting, but before crop or weeds emerge.

**POSTEMERGENCE:** after the crop or weeds have emerged.

## SAFETY FIRST

**Follow the Label.** It is a violation of federal pesticide laws to use an herbicide in a manner inconsistent with its labeling. Read the entire label before using.

**Applicator Safety.** The most serious risk of exposure from chemicals is during handling and mixing operations with the concentrated product. Use protective equipment specified on the label. Chemical resistant gloves, eye shield, long sleeved clothing, rubber boots, and appropriate respirator should be used as required. In case of emergency, contact the Poison Control Center via 24 hour phone line:

McKennen Hospital, Sioux Falls, SD 1-800-952-0123  
Dakota Midland Hospital, Aberdeen, SD 1-800-592-1889  
Rapid City Regional Hospital, Rapid City, SD (605) 341-3333

**Water Protection.** Water quality is a public concern. Preventing spills and accidents during handling and mixing reduces risk of groundwater and surface water contamination. Mix herbicides away from wells and water sources. Prevent back siphoning into wells. Install anti-backflow devices in irrigation equipment used for pesticides. Triple rinse containers. Store herbicides properly. Identify high risk areas such as coarse soils or areas where the water table is near the surface. Be aware of herbicide properties that increase the risk of contamination in the critical areas.

630.732  
30 87.29  
FS 525SF



# SUNFLOWER HERBICIDES

## Abbreviations Used

pt = pint  
qt = quart  
gal = gallon  
lb = pound

lb/gal = pound per gallon active ingredient or acid equivalent  
and/+ = split application (and) or as a tankmix (+)  
gpa = gallon per acre  
psi = pound/square inch pressure

G = granule  
E = emulsifiable concentrate  
L = liquid  
DS = dry soluble (spray)

---

### EPTAM or GENEP 7E (EPTC)

(\$6.90-9.65)

#### 2.5-3.5 pt Eptam or Genep (2-3 lb act)

Excellent control of most annual grasses. Good control of wild oats in most tests. Annual broadleaf control limited. Does not control wild sunflower, wild mustard, kochia, or Russian thistle. Consistent results. Good crop tolerance on medium and heavy soils. Not suggested for light, sandy soil. Liquid formulations may be applied in liquid fertilizer or impregnated on certain dry fertilizers. Minimum carrier is 10 gpa. There is no carryover to following crops.

PREPLANT INCORPORATED. Incorporate immediately into the top 2 to 3 inches of soil with a small-bladed tandem disk set to cut 4 to 6 inches deep, field cultivator, or other suitable equipment. A second incorporation insures uniformity, especially in wet, lumpy, or trashy conditions. Follow with harrow or other leveling devices.

---

### TREFLAN, TRIFLURALIN (TRIFLURALIN)

(\$3.30-6.55)

#### 1-2 pt Treflan 4E or 5-10 lb Treflan 10G (.5-1 lb act)

Excellent control of most annual grasses and fair control of small-seeded annual broadleaves such as pigweed and lambsquarters. Consistent performance. Higher rates give fair kochia control. Wild oat control is not consistent but has been fair in some tests. Does not control wild mustard, wild sunflower, or cocklebur. Excellent crop tolerance. Low rate is for light, low organic matter soil; the high rate is for heavy, clay soil. Rate of 1.5 pt/A has been satisfactory in most SDSU tests. Carryover may damage oats or sorghum planted the following year. Liquid formulations may be applied in liquid fertilizer or impregnated on certain dry fertilizers. Minimum carrier is 5 gpa for ground or air. Granules or liquid may be applied in the fall after September 1 or in the spring before planting. Crop residue interferes less with granules than with spray. Fall applications make it possible to limit spring tillage to a single pass which serves as the second incorporation.

#### PREPLANT INCORPORATED:

Spray Formulations: Immediate incorporation preferred, but may be delayed up to 24 hours if soil surface is dry and wind is under 10 mph. Incorporate into the top 2 to 3 inches of soil using a tandem disk with small blades set to cut 4 to 6 inches deep operated at 4 to 6 mph, a field cultivator equipped with three or four rows or sweeps spaced no more than 7 inches apart, or other suitable equipment. A second incorporation improves uniformity, especially under wet, lumpy, or trashy conditions. Follow with a harrow or leveling device. A tandem disk followed by a field cultivator provides good incorporation under a variety of conditions. Improper incorporation reduces control.

Granules: Preferred for fall application. Incorporate within 24 hours. May be applied in standing stubble. A chisel with sweeps may be used for the first incorporation. Incorporate a second time anytime before planting. A few days delay between incorporations is suggested. Incorporation equipment same as for spray. Fall applied granules are especially useful in reduced tillage systems designed to maintain residue in the fall and early spring and reduces spring tillage.

---

### PROWL (PENDIMETHALIN)

(\$3.05-9.20)

#### 1-3 pt Prowl 4E (.5-1.5 lb act)

Very good to excellent control of most annual grasses and fair control of small-seeded broadleaves such as pigweed and lambsquarters. Consistent performance. Does not control wild mustard, wild sunflower, or cocklebur. Excellent crop tolerance. Low rate is for light, low organic matter soil; the high rate is for heavy, clay soils. Rate of 2.5 pt/A has been satisfactory in most SDSU tests. May be applied in liquid fertilizer or impregnated on certain dry fertilizers. Minimum carrier is 5 gpa for air or 10 gpa for ground. No label restrictions for crops planted the following year. Do not plant winter wheat in the fall if the sunflower crop failed due to dry weather.

PREPLANT INCORPORATED. Field should be worked to incorporate crop residue before application. May be applied up to 60 days before planting. Incorporate within 7 days of planting. Immediate incorporation preferred. Incorporate into the top 1 to 2 inches of soil with a tandem disk with small blades set to cut 3 to 4 inches deep or a field cultivator equipped with sweeps, or other suitable equipment operated 3 inches deep. Single pass incorporation may be adequate if seedbed has been well prepared and incorporated properly. Double incorporation insures uniform mixing. Weed control will be reduced if incorporated too shallowly when topsoil is dry.

FALL. May be applied in late fall when soil temperature is below 45 degrees F but before the ground freezes. Incorporate immediately after application. Use at least one shallow tillage incorporation in the spring before planting. Rates to 3.5 pt/A may be used.

---



---

**SONALAN (ETHALFLURALIN)**

(\$4.05-9.05)

**1.5-3 pt Sonalan 3E (.66-1.1 lb act)**

Excellent control of most annual grasses and fair to good control of small-seeded broadleaves such as pigweed and lambsquarters. Consistent performance. Does not control wild sunflower or cocklebur; wild mustard control is usually not satisfactory. Usually gives fair wild oat control. Excellent crop tolerance. Low rate is for light, low organic matter soil; the high rate is for heavy, clay soils. Rate of 3 pt/A has been satisfactory in most SDSU tests. May be applied in liquid fertilizer or impregnated on certain dry fertilizers. Minimum carrier is 5 gpa. Less soil residual than Treflan; no labeled limitations for common crops for the following year.

PREPLANT INCORPORATED. Apply within 3 weeks before planting. Incorporate into the top 2 to 3 inches of soil. Immediate incorporation preferred; however incorporation may be delayed up to 48 hours. Use suitable equipment to provide uniform mixing. Second pass may improve uniformity under some conditions.

---

**AMIBEN (CHLORAMBEN)**

(\$16.45-24.65)

**4-6 qt Amiben 1.8L or 2.4-3.6 lb Amiben 75DS or 20-30 lb Amiben 10G (broadcast)  
(2-3 lb act)**

Good control of several annual grasses and good to very good control of some small-seeded annual broadleaves such as pigweed, lambsquarters, kochia, or Russian thistle. Control of wild mustard is marginal. Wild oats, cocklebur, and wild sunflowers are not controlled. Rainfall critical. Erratic results under dry conditions. Good crop tolerance. Spray or granule forms appear equally effective. Granules are applied to the soil surface behind the press wheel. Low rates are for light, low organic matter soil. Rate of 3 lb/A active chloramben has been satisfactory in most SDSU tests. Adjust rate for band application. Spray may be applied in liquid fertilizer carrier. Minimum carrier is 10 gpa for ground and 3 to 5 gpa for air. There is no carryover to following crops.

PREPLANT INCORPORATED. Incorporate Amiben spray into top 2 inches of soil with a tandem disk set to cut 3 to 5 inches, a field cultivator set to cut 3 to 4 inches, or other suitable equipment. A second incorporation is suggested to ensure uniform mixing. Avoid excessive depth of incorporation. Performance may be reduced with deep incorporation and heavy rainfall. Preemergence preferred except under low rainfall conditions.

PREEMERGENCE. Must have 1/2 to 1 inch of rainfall within one week after application. Use rotary hoe or harrow if rainfall is not received within 3 to 5 days.

---

**LIASSO (ALACHLOR)**

(\$15.05-20.05)

**3-4 qt Lasso 4L or 20-26 lb Lasso II 15G (broadcast) (3-4 lb act)**

Very good to excellent control of several annual grasses. Fair control of pigweed with high rates and favorable rainfall. Good crop tolerance. Good choice for grass control with surface applied treatment. Rates vary according to soil type and application method. Rate of 3 lb/A active alachlor has been satisfactory in most preemergence SDSU tests. May be applied in liquid fertilizer. Minimum carrier is 10 gpa for ground. Granule and spray formulation appear equally effective. Granules are applied behind the press wheel. Follow handling directions. Use protective clothing including face shield, rubber gloves and boots when mixing. No carryover. Restricted Use Pesticide.

SHALLOW PREPLANT INCORPORATED. Incorporate Lasso spray into top 2 inches of soil within 7 days of planting with field cultivator, shallow disk, multiweeder, or other suitable implements during final seedbed preparation. Flexline harrow is not satisfactory. Better results than preemergence when rainfall is very limited, but slightly less control than preemergence application with adequate rainfall. May be more consistent in low rainfall areas. Some rainfall improves control; heavy rain reduces results. Proper incorporation may be difficult with trashy, lumpy seedbed. Use 1 pt/A more Lasso than for preemergence. Rate of 3.5 qt/A Lasso have been used in most tests.

PREEMERGENCE. Requires 1/2 to 3/4 inch rainfall within one week after application. Use a harrow or rotary hoe if weeds emerge before rainfall is received. Travel the same direction as the rows if banded.

---

**EPTAM + TREFLAN (EPTC + TRIFLURALIN)**

(\$9.50-12.75)

**2.25 pt Eptam 7E + 1-2 pt Treflan 4E (2+.5-1 lb act)**

---

**EPTAM + SONALAN (EPTC + ETHALFLURALIN)**

(\$9.95-18.70)

**2.5-3.5 pt Eptam 7E + 1.25-3 pt Sonalan 3E (2.2-3 + .66-1.1 lb act)**

Tank-mixes. Excellent control of several annual grasses. Advantage for tank-mix appears somewhat limited for most weed problems when compared to the full rate of each herbicide used alone. Very good to excellent wild oat control. Somewhat improved control of Russian thistle and kochia than for Eptam alone and slightly better wild oat control than for trifluralin or Sonalan alone. Does not control broadleaves such as wild mustard or large seeded broadleaves like cocklebur or wild sunflower. Lower trifluralin rates reduces carryover for sensitive crops. Good crop tolerance on medium and heavy soil. High rates are for high organic matter, heavy soil. Rates of Eptam at 2.5 pt plus 2 pt Sonalan or Eptam at 2.25 plus 1 to 1.5 pt Treflan are adequate for most situations. Minimum carrier is 10 gpa. Note carryover restrictions for Treflan.

PREPLANT INCORPORATED. Incorporate immediately as for Eptam alone.

---



---

**EPTAM and/+ AMIBEN (EPTC and/+ CHLORAMBEN)** (\$14.40-26.20)

2.25-3.5 pt Eptam 7E and/+ 2-4 qt Amiben 1.8L (2-3 and/+ 1-2 lb act)

**SONALAN and/+ AMIBEN (ETHALFLURALIN and/+ CHLORAMBEN)** (\$20.70-33.65)

1.25-3 pt Sonalan 3E and/+ 4-6 qt Amiben 1.8L or 2.4-3.6 lb Amiben 75DS (.66-1.1 and/+ 2-3 lb act)

**TREFLAN and/+ AMIBEN (TRIFLURALIN and/+ CHLORAMBEN)** (\$19.70-31.20)

1-2 pt Treflan 4E and/+ 4-6 qt Amiben 1.8L or 2.4-3.6 lb Amiben 75DS or 20-30 lb Amiben 10G (.5-1 + 2-3 lb act)

**PROWL and/+ AMIBEN (PENDIMETHALIN and/+ CHLORAMBEN)** (\$21.05-32.30)

1.5-2.5 pt Prowl 4E and/+ 4-6 qt Amiben 1.8L or 2.4-3.6 lb Amiben 75DS (.75-1.25 and/+ 2-3 lb act)

Tank-mixes or split applications. Good broad spectrum control program. Combines herbicides that give excellent control of most annual grasses with Amiben for improved control of several annual broadleaves. Good to excellent control of several small-seeded annual broadleaves such as pigweed, lambsquarters, kochia, or Russian thistle. Fair on wild mustard. Good crop tolerance. Rate of 3 pt Eptam or 2.75 pt Sonalan or 1.5 pt Treflan or 2 pt Prowl with Amiben at 4 qt or 2.4 lb of 75DS has been satisfactory in most SDSU tests. Minimum carrier is 10 gpa for tank-mix ground applications. Refer to sections for each herbicide alone for situations or other application information.

PREPLANT INCORPORATED. Incorporate immediately as for Eptam, Sonalan, Treflan, or Prowl alone. Avoid excessive incorporation depth. Performance of Amiben may be diminished with deep incorporation and heavy rainfall. Preemergence or shallow incorporated systems usually preferred for Amiben.

SPLIT PREPLANT INCORPORATED AND PREEMERGENCE. Preferred application method for most situations. Incorporate usual rate of Eptam, Sonalan, Treflan, or Prowl before planting and apply Amiben preemergence. Rainfall required. Amiben may be banded to reduce cost. Harrow or rotary hoe in same direction as the rows if weeds emerge before rainfall received. Preferred application method for most situations.

---

**LASSO + AMIBEN (ALACHLOR + CHLORAMBEN)** (\$28.95-39.70)

2.5-3 qt Lasso 4L + 4-6 qt Amiben 1.8L or 2.4-3.6 lb Amiben 75DS (2.5-3 + 2-3 lb act)

Very good to excellent control of several annual grasses. Good to excellent control of several small-seeded annual broadleaves such as pigweed, lambsquarters, kochia, or Russian thistle. Fair on wild mustard. Good broad spectrum weed control program for sunflowers. Good crop tolerance. Rate of 2.5 qt/A Lasso + Amiben at 4 qt or 2.4 lb/A of 75DS is suggested for most preemergence applications. High rate for heavily infested fields. Minimum carrier is 10 gpa for ground. Refer to sections for Lasso or Amiben alone.

SHALLOW PREPLANT INCORPORATED. Tank-mix. Incorporate as for Lasso alone. The higher Lasso rate is suggested.

PREEMERGENCE. As for Lasso or Amiben alone.

---

**POAST (SETHOXYDIM)** (\$6.05-30.15)

.5-2.5 pt Poast 1.5L (.1-.5 lb act)

Very good control of annual grasses including wild proso millet, foxtail, and wild oats. Also useful to suppress quackgrass. Cultivation 7 days after application improves quackgrass control. Useful in no-till systems. Grasses should be actively growing for best results. Do not cultivate 5 days before or 7 days after application. Minimum carrier is 5 gpa for ground or air. Minimum pressure is 40 psi for ground. Good coverage improves results. Always add 1 qt/A crop oil concentrate.

POSTEMERGENCE. Use .5 pt for wild proso millet (4-10 in.), 1 pt for foxtail (3-8 in.) and wild oats (1-4 in.), and 1.5 pt for volunteer cereals (to 6 in.) per acre. Quackgrass suppression requires 2.5 pt/A; retreat if necessary.

---



---

**ASSERT (IMAZAMETHABENZ-METHYL)**

(\$8.25-16.50)

**.6-1.2 pt Assert 2.5L (.2-.4 lb act)**

Provides very good to excellent control of wild mustard and very good control of wild oats. Other grasses and most other broadleaves are not controlled. Excellent crop tolerance. Weed control is best under favorable growing conditions; some variability in wild oat control noted under severe drought stress. Rate varies according to weed species. Wheat, barley, corn, and potatoes may be planted the following season. Most other crops require 15 month interval. Treated fields should not be used for forage. Minimum carrier is 5 gpa for air and 8 gpa for ground. Add .3 fl oz of non-ionic surfactant or crop oil for each gallon of carrier in excess of 10. Maintain agitation during mixing and spraying.

POSTEMERGENCE: For wild mustard, apply .6 to .8 pt/A when weeds are at seedling stage but before bloom. For wild oats, apply 1.2 pt/A when weeds are at the 1- to 4-leaf stage. Sunflowers should be under 15 inches.

---

**GRAMOXONE SUPER 1.5L (PARAQUAT)**

(\$8.30-27.60)

**1.5-2.5 pt Gramoxone Super 1.5L (.3-.5 lb act)**

Harvest aid desiccant for use on oil seed varieties only. Useful for more rapid drying in late, wet fall or to hasten drying of less mature plants within a field. Generally not necessary for early planted sunflowers in normal seasons. Less drying time in the field reduces bird damage. Treated fields usually may be harvested 7 to 21 days after application. Contact treatment, so thorough coverage important. The higher rate is for heavy, dense growth under poor drying conditions. Rate of 1.5 pt/A has usually been satisfactory in most fields. Use 1 qt X-77 spreader per 100 gal of solution. Minimum carrier is 5 gpa for aerial application. Follow handling precautions. Paraquat is highly toxic. Restricted Use Pesticide.

HARVEST AID. Apply when sunflower seeds are physiologically mature; when the back side of the head is yellow, and bracts around the outer edge of the head are turning brown. This usually corresponds to seed moisture content of 35% or less. Earlier treatments will reduce yield and test weight.

**3-5 pt Gramoxone 1.5L (.5-.9 lb act)**

NO-TILL. Paraquat is a non-selective, contact herbicide used to control emerged annual grasses and broadleaves before crop emerges in no-till or reduced tillage systems. No residual. Minimum carrier is 20 gpa for ground or 5 gpa for air. Use 1 pt X-77 spreader per 100 gallons of solution. Follow handling precautions. Paraquat is highly toxic. Restricted Use Pesticide.

---

**SODIUM CHLORATE, LEAFEX-3 (SODIUM CHLORATE)**

(\$11.20)

**1.5-2 gal Sodium Chlorate-3L or Leafex 3L (4.5-6 lb act)**

Harvest aid desiccant for oil seed or confectionary varieties. Useful to facilitate harvest when fall conditions are unfavorable. Also reduces bird damage associated with harvest delay. Contact action. Apply when crop is fully mature. Rate is 1.5-2 gal/A for product containing 3 lb/gal active. Product labels vary; adjust rates accordingly for products with other concentration. Apply in minimum of 5 to 7 gpa carrier for air or 20 gpa for ground application, depending on product label.

HARVEST AID. Apply to mature heads at least 7 days before normal harvest. Treated fields cannot be grazed or used for forage after treatment with some products.

---

## NO-TILL SUNFLOWERS

Herbicide programs for no-till sunflowers are limited. Control of anticipated weed problems should be evaluated based on herbicide choices. Gramoxone Super may be used as a burndown for emerged weeds at planting. Lasso and Amiben may be used preemergence. Poast is approved for postemergence grass control. Assert is used postemergence for wild mustard and wild oats. Refer to the section for each herbicide.

No-till sunflowers can be successful if weeds are controlled. It's advisable to include plans for row cultivation, if necessary, to control escaped weeds.



## WEED RESPONSE TO HERBICIDES

### WEED RESPONSE

Weed control percentages are intended as a guide for comparing alternatives. Percentages are estimated based on favorable conditions.

E = Excellent.	90-95%	Usually over 90% Seldom 100%.	Best choice for weed.
G = Good.	80-90%	Sometimes under 80% Seldom over 90%.	Usually satisfactory.
F = Fair.	65-80%	Sometimes under 65% Seldom over 80%.	Sometimes unsatisfactory. Moderate infestation.
M = Marginal.	40-65%	Seldom over 65% Erratic.	Seldom satisfactory. Light infestations only.
P = Poor.		Usually under 40% or no control.	Not recommended.

### CROP RESPONSE

Crop response is based on visual symptoms. Early season symptoms do not necessarily cause yield losses.

N = none; VS = very slight; S = slight; M = moderate; H = high  
+ = usually high part of range

HERBICIDE TREATMENT	WEED RESPONSE							CROP RESPONSE
	FOXTAIL	WILDOAT	GEN. BROADLEAF	MUSTARD	KOCHIA	COCKLEBUR SUNFLOWER	PERENNIALS	CROP INJURY
Treflan	E	F+	F	P	M+	P	P	N
Prowl	E	F+	F	P	M+	P	P	N
Eptam	E	G+	M	P	P	P	P	S
Sonalan	E	G	F	P	M	P	P	N
Treflan/Amiben	E	F+	G+	F	G+	P	P	VS
Prowl/Amiben	E	F+	G+	F	G+	P	P	VS
Sonalan/Amiben	E	G	G+	F	G+	P	P	VS
Treflan/Eptam	E	E	F	P	M	P	P	VS
Amiben	F+	P	G	M	G+	P	P	VS
Lasso	E	M	M	P	P	P	P	VS
Lasso/Amiben	E	M	G	M	G	P	P	VS
Poast	E	G+	P	P	P	P	P	VS
Assert	P	G+	P	G+	M	P	P	VS