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# A 1989 Guide for--- HERBICIDE USE IN NEBRASKA

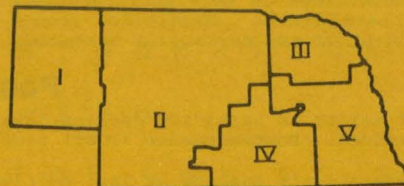
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This circular deals principally with herbicides as an aid for crop production. The suggestions for use are based on results at Nebraska research stations and elsewhere. Reference to commercial products or trade names is made with the understanding that no discrimination is intended and no endorsement by the Cooperative Extension Service is implied.



**RESTRICTED USE HERBICIDES.** Bullet, Cyclone, Extra-zine II, Lasso, Lariat, Gramoxone, Bladex, Hoelon, Tordon are restricted use herbicides. Other herbicides may be classified as restricted use at some future date. The label will indicate if a product is restricted use. Only certified applicators should apply or supervise the application of restricted use herbicides. See your Extension Agent if you need to be certified.



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*"Use Crop Production  
Chemicals Wisely"*

- READ THE LABEL BEFORE EACH USE.
- APPLY ONLY AS DIRECTED.
- STORE IN ORIGINAL LABELED CONTAINERS.
- ELIMINATE HAZARDS FROM CONTAINERS BY RINSING AND PROPER DISPOSAL.
- DO NOT USE 2,4-D ESTER, BANVEL (DICAMBA), COMMAND, AND SIMILAR HERBICIDES NEAR VEGETABLES, ORNAMENTALS, TREES, SHRUBS, AND BROADLEAF CROPS.



Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. Leo E. Lucas, Director of Cooperative Extension Service, University of Nebraska, Institute of Agriculture and Natural Resources.



The Cooperative Extension Service provides information and educational programs to all people without regard to race, color, national origin, sex or handicap.



## HERBICIDE APPLICATIONS

### Soil Applied

**Early preplant** (EPP) treatments are made 10-30 days before planting. **Preplant surface applied** (PPSA) treatments are made 0-10 days before planting. Soil disturbance by some planters may allow weed growth in row where herbicides are applied PPSA or EPP. **Preplant incorporated** (PPI) treatments are made before planting the crop. Thoroughly incorporate with rototiller or two passes of a tandem disc, field cultivator or similar equipment. **Preemergence** (PRE) treatments are applied from planting time to just before crop emergence or weed seed germination. **Surface mix** is the shallow mixing of a preemergence herbicide into the top 1 to 2" of soil using a rototiller, mulch treader, field cultivator or similar implement. Weed control with preemergence treatments may be poor if there is no rain to move the herbicide into the top inch. To overcome dependence on rainfall and to increase dependability, some preemergence herbicides may be incorporated into the surface soil with a rotary hoe. Excessive rainfall may leach some of the more soluble herbicides into the subsoil, especially on sandy soils. Weed control with preplant herbicides is more satisfactory on surface-planted crops. Some weed species are resistant to particular herbicides. Herbicides should be rotated to control a wider spectrum of weeds and to reduce the build-up of any particular herbicide in the soil.

### Postemergence

**Early post** refers to herbicide applications made soon after the crop has emerged; control of emerged weeds may be reduced. **Postemergence** (POST) treatments are applied after emergence of weeds or crop.

**Layby** treatments are applied at last cultivation to provide an extended period of weed control.

**Harvest aid** treatments are applied late in the growing season to reduce weed seed production and make harvest easier.

**Desiccants** are applied after crop maturity to hasten drying and permit earlier harvest.

Excellent growing conditions make weeds more susceptible to postemergence herbicides. Likewise, crops may be more subject to herbicide damage when growing rapidly. **Adjust herbicide dosages downward** when excellent conditions for growth are present the week before application and **upward** when ideal growth is limited by one or more factors. Rate of carrier should be in accordance with label recommendations.

## CONSERVATION TILLAGE SYSTEMS

### No-Till

Early preplant treatments generally provide the most satisfactory weed control. This involves applying residual herbicides 10 to 30 days prior to planting. The objective is to apply the herbicide prior to the germination of summer annual weeds, especially grasses. This may eliminate the need for a nonselective herbicide like Gramoxone or Roundup. It is important to use treatments with adequate residual control. A split herbicide application with a portion applied early preplant and a second increment at planting can be used. This could be helpful with short residual materials or where heavy rains or delayed planting occurs following the first treatment. Early preplant treatments, properly designed, can often provide consistent weed control at lower cost than planting time treatments. Soil disturbance by planter following a preplant treatment may allow weed growth in the row.

**Planting time** treatments of a preemergence herbicide are made at or immediately after planting. When established weeds are present a postemergence herbicide is combined with the preemergence herbicide. Atrazine, Bladex, Extrazine II, Gramoxone Super, Roundup or Bronco will control established broadleaf weeds, grasses or volunteer wheat depending on plant height. If grasses are less than 3" tall, atrazine, Bladex, Conquest and Extrazine will provide acceptable control. Control is improved when crop oil concentrate or 28% nitrogen are added. In corn, 2,4-D ester may also be added for improved weed control. Gramoxone should be applied with X-77 to grasses less than 4" tall. Gramoxone is more effective when applied with a residual herbicide and in 3 to 5 gal/A spray solution. If grasses are taller than 4" and are growing vigorously, apply Roundup<sup>1</sup> at 1 pt/A. Do not mix Roundup with other herbicides. Kill volunteer wheat and annual bromes in April to prevent soil moisture loss.

### Ridge Planting

With the ridge plant system the row has fewer weeds because the weed seed produced the preceding year is not worked into the soil when the seedbed is prepared. During planting, sweeps or discs move soil containing kernels and ears, sorghum seed and/or heads, and most weed seed from the ridge. A banded herbicide treatment should be used at planting time in the row. If timely cultivation is not possible, weed pressure is heavy, or the field contains many hard to control weeds like velvetleaf, a broadcast herbicide treatment at planting time may be necessary.

Select the herbicide treatment from the preemergence treatments of soil applied herbicides. Herbicides, such as atrazine, Bladex, or 2,4-D can be applied in early April prior to planting to keep early summer annual weeds under control. The rate of atrazine used depends on future crops that will be planted.

The early herbicide treatment should eliminate planting through 4-inch or taller weed growth. Weeds like kochia and Russian thistle are troublesome if not killed. The trouble arises along the cutting edge of the planter sweep, where larger broadleaf weeds may not be uprooted or covered. Most early germinating broadleaf weeds can be controlled effectively and economically with 2,4-D. It is better to apply the 2,4-D at planting time from a spray boom on the front end or underbelly of the tractor rather than after planting. If considerable grass weed growth is present before planting, Gramoxone or Roundup should be used. Another option would be to preplant cultivate for row-middle tillage, leaving ridge top weed removal to the planter sweep. This works extremely well on fields where corn was ensiled. Preplant cultivation also allows for rebuilding ridges, which may be desirable if they have been damaged by harvest equipment or livestock tramping.

### Ecofarming

Ecofarming is a system which controls weeds after wheat harvest and throughout the fallow period by using herbicides and/or tillage with minimum disturbance of crop residues and soils. For a more detailed discussion see page 18.



Certain herbicides can persist in the soil to the extent that rotational crops may be injured. The potential for herbicide carryover increases as one goes westward in Nebraska. Lower rainfall and low soil organic matter increases carryover potential. Herbicide carryover potential is greater on eroded soils and soils with pH greater than 6.8. Carryover is also a function of application accuracy. Carryover will be more apparent in headlands and other areas where sprayer overlap is common. Herbicide applications made late in the season have greater carryover potential compared to earlier applications.

Carryover can restrict crop rotation options as well as limit replant options if a crop is lost due to hail or other disasters. Care should be taken when choosing herbicides to fit your rotation sequence. The following is a partial list of herbicides which have carryover potential in Nebraska.

1. Atrazine, AAtrex
2. Atrazine prepacks: Bicep, Bullet, Extrazine II, Lariat, Marksman, Prozone, Sutazine
3. Princep
4. Command, Commence
5. Scepter, Squadron, Tri-Scept
6. Classic, Preview, Lorox Plus
7. Glean
8. Tordon
9. Treflan, Sonalan, Prowl

Consult herbicide labels for rotation intervals and restrictions. Conducting a plant bioassay can be helpful in determining whether carryover will be a problem in your fields. Additional information on conducting bioassays can be obtained in the NebGuide entitled "A Quick Test for Atrazine Carryover", G74-113.

## MINIMIZING GROUNDWATER CONTAMINATION

Pesticide contamination of groundwater is a public concern. Spills and other mishaps which occur during the handling and mixing of pesticides are a major contributing factor. There are several steps we can take to minimize contamination.

Mix pesticides away from wells and other water sources. Many wells are not adequately sealed which increases the risk of contamination in the event of a spill. Using a nurse-tank as a water source helps avoid this problem.

Prevent back-siphoning into the well. Keep the end of the hose above the water level at all times. Anti-backflow devices for hoses can be purchased from irrigation and spray equipment suppliers.

Clean up spills, especially near wells and other water supplies.

Triple-rinse and dispose of pesticide containers and excess pesticides properly.

For help in chemical emergencies involving spills, leaks, fires or exposure, phone 800-424-9300 day or night.

Additional suggestions include following label directions, proper calibration, integrated pest control approaches (rotation, banding, etc.), and using short residual pesticides. It is also helpful to identify high risk areas such as sandy soils low in clay and organic matter, high pH soils, and areas where the water table is near the soil surface.

## MIXING HERBICIDES

Most herbicide labels give mixing sequences for tank mix combinations. If directions are not given, follow these steps:

- (1) Add approximately one-half of the needed water to the tank.
- (2) If called for, add surfactants, wetting agents, fertilizer, or other additives except crop oil.
- (3) Add flowables, dry flowables, or wettable powders and agitate.
- (4) If needed, add emulsifiable concentrates or crop oils and agitate. Don't over agitate.
- (5) Finish filling tank with water and continue agitation.
- (6) Apply as soon as possible after mixing. Avoid holding overnight whenever possible.

Sprayers should provide good agitation of spray solution and be equipped with appropriate strainers and screens to avoid nozzle clogging.

## CLEANING THE SPRAYER

First rinse the sprayer with a material which acts as a solvent for the herbicide. Kerosene and fuel oils carry away oil-soluble herbicides such as 2,4-D ester. Chemicals which form emulsions when mixed with water are oil-soluble. After the oil rinse, a rinse with water containing detergent will help remove the oil. Oil-soluble herbicides are the most difficult to remove. 2,4-D amine salts are water-soluble.

For most water-soluble herbicides repeated rinsing with water is usually enough. Hormone type require extra precautions. If Banvel, or 2,4-D were used, fill the tank with water and ammonia. Add 1 quart of household ammonia to 25 gallons of water. Pump enough solution through the hose and nozzles to fill these parts completely. Then fill these parts completely. Then fill the tank, close and leave for 24 hours before rinsing thoroughly with water.

Activated charcoal can be used after the preliminary rinsing to decontaminate the sprayer. A 3% suspension absorbs the 2,4-D. Agitate the suspension for 2 to 3 minutes and drain, then rinse thoroughly with clear water.

For wettable powder herbicides, see that none of the powder remains in the tank. A thorough rinsing with water is usually sufficient. Thoroughly clean all equipment immediately after use.

### Ally, Glean - Cleanup Procedure

- 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 1/2 gallon chlorine bleach (containing 5 1/4% sodium hypochlorite) per 100 gallons of water. Flush through boom and hoses, allow to sit for 15 minutes with agitation, then drain.
- 3) Repeat Step 2.
- 4) Nozzles 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.



# WEED RESPONSE TO SELECTED HERBICIDES

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## Field Corn, Popcorn \* and Sweetcorn \*\*

Plant response may be altered by growing conditions, genetic variation in crops and weeds, soil type, pH, organic matter and rates of application. Ratings may vary from season to season and geographical areas within the state. Ratings apply when herbicides are used as suggested in this publication.

See pages 32 - 38 for additional problem weeds and their control.

### Response Ratings:

Ratings are for light to moderate weed populations and favorable conditions. High weed populations or adverse conditions will reduce control.

E = Excellent (90-100%)  
G = Good (75-90%)  
F = Fair (50-75%)  
P = Poor (0-50%)

### Herbicide

### Soil Applied Herbicides

Herbicide	annual morning glory	barnyardgrass	b. nightshade	cocklebur	crabgrass	fall panicum	foxtail	jimsonweed	kochia***	lambsquarters	pigweed	ragweed	R. thistle	sandbur	shattercane/sorghum	smartweed	sunflower	velvetleaf	w. buckwheat	crop safety <sup>a</sup>	soil carryover potential in months <sup>b</sup>
AAtrex/Atrazine*,**	E	G	E	G	F	P	G	E	E	E	E	E	E	F	P	E	E	E	E	E	6-24
Bicep or Dual + Aatrex*,**	G	E	E	F	G	G	E	G	E	E	E	E	E	G	F	P	G	G	G	G	6-18
Bladex	E	G	E	G	G	F	G	E	E	E	F	E	E	F	P	E	G	F	E	G	2-4
Bladex + Atrazine or Extrazine II*,**	E	G	E	G	G	F	G	E	E	E	G	E	E	F	P	E	G	G	E	G	6-18
Dual*,**	P	E	G	P	E	E	P	P	G	G	F	P	F	P	P	P	P	P	P	G	2-5
Dual + Atrazine + Sencor	G	E	E	F	G	E	F	G	E	E	E	E	E	G	F	P	G	G	G	G	6-12
Dual + Bladex	G	E	E	F	E	E	E	F	E	G	G	E	G	F	P	G	F	F	G	G	2-5
Dual + Bladex + Sencor	G	E	E	F	E	E	E	F	G	G	G	E	G	F	P	G	F	F	G	G	2-5
Eradicane/Eradicane Extra*,**	G	E	E	P	E	E	E	P	F	G	G	F	P	G	G	P	P	P	F	G	1-2
Eradicane/Eradicane Extra + Atrazine*,**	G	E	E	F	E	E	E	G	E	E	E	G	G	G	G	G	G	G	G	G	6-18
Eradicane/Eradicane Extra + Bladex*	G	E	E	F	E	E	E	G	E	E	G	G	G	G	G	G	F	F	G	G	2-4
Lasso*,**	P	E	G	P	E	E	E	P	P	G	G	F	P	F	P	P	P	P	P	G	2-4
Lariat/Bullet or Lasso + Atrazine*,**	G	E	E	F	G	G	E	F	E	E	E	E	G	F	P	G	G	G	G	G	6-18
Lasso or Dual + (Atrazine + Bladex) or Extrazine II	G	E	E	F	E	E	E	F	E	E	E	E	G	F	P	G	G	G	G	G	6-12
Lasso + Atrazine + Sencor	G	E	E	F	G	E	E	F	G	E	E	E	G	F	P	G	G	G	G	G	6-12
Lasso + Bladex*	G	E	E	F	E	E	E	F	E	G	G	E	G	F	P	G	F	F	G	G	2-4
Lasso + Bladex + Sencor	G	E	E	F	E	E	E	F	G	G	G	E	G	F	P	G	F	G	G	G	2-5
Prowl + Atrazine	G	E	G	F	E	E	E	F	E	E	E	G	G	F	P	G	G	G	G	G	6-18
Prowl + Bladex	G	E	G	F	E	E	E	F	E	E	G	G	G	F	P	G	F	F	F	G	4-12
Sutan+/Genate+*,**	F	E	G	P	E	E	E	P	P	G	F	P	G	G	P	P	P	P	F	G	1-2
Sutan+ + Atrazine*	G	E	E	F	E	E	E	G	E	E	E	G	G	G	G	G	G	G	G	G	6-18
Sutan+ + (Atrazine + Bladex) or Extrazine II*	G	E	G	P	E	E	E	G	E	E	E	G	G	G	G	G	G	F	G	G	6-18
Sutan+ + Bladex*	F	E	G	P	E	E	E	G	E	E	G	G	G	G	G	G	F	F	G	G	2-4
Sutazine+*,**	G	E	E	F	E	E	E	G	E	E	E	G	G	G	G	G	G	G	G	G	6-18

### Postemergence Herbicides

AAtrex/Atrazine + crop oil*,**	E	F	E	E	F	P	G	E	E	E	E	E	F	F	P	E	E	E	E	G	6-18
Banvel	E	P	G	E	P	P	P	F	G	G	G	G	E	P	P	E	G	F	E	E	1-2
Laddok*,**	G	P	G	E	P	P	P	E	G	G	G	E	P	P	P	E	E	E	E	E	2-6
Bladex	G	F	E	G	G	F	G	E	E	E	G	E	F	F	P	E	G	G	G	F	2
Buctril*	E	P	E	E	P	P	P	E	G	G	G	E	G	P	P	E	E	E	E	E	0
Extrazine II*,**	G	F	E	E	G	F	G	E	E	E	G	E	F	F	P	E	G	G	E	G	6-12
Marksman	E	P	E	E	P	P	P	G	G	E	E	E	G	P	P	E	E	E	E	G	2-6
Tandem + Atrazine + COC	E	G	E	E	F	F	G	E	E	E	E	E	F	G	P	E	E	E	E	G	6-18
2,4-D**	E	P	G	E	P	P	P	G	G	G	G	G	E	P	P	F	G	G	P	F	1
2,4-D + Banvel	E	P	E	E	P	P	P	F	G	G	G	G	E	P	P	E	G	G	E	G	1-2
Buctril + Banvel	E	P	E	E	P	P	P	G	E	G	E	G	G	P	P	E	E	E	E	G	1-2

<sup>a</sup>Crop varieties vary in their response to herbicides.

<sup>b</sup>The lower number applied to eastern Nebraska, the large number to western Nebraska. Values will vary with soil and rainfall or irrigation. For more information see "Herbicide Carryover", G83-637.

\*Registered for popcorn.

\*\*Registered for sweet corn.

\*\*\*Kochia in some areas has developed resistance to atrazine, Bladex and other triazines.

## CORN

### No-Till

Herbicide	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy Loam <1 % OM	Silt Loam 1 -2 % OM	Silty-Clay Loam >2 % OM		
<u>Corn, No-Till in Cool-Season Grass Sod</u>					
AAtrex/Atrazine 4L	2 qt	2.4 qt	3 qt	Apply in fall or to new growth in May before corn growth	Weak on warm-season perennial grasses. Cost: \$11.70-\$20.10.
+ Gramoxone Super <sup>1</sup>	1.5-2.5 pt	1.5-2.5 pt	1.5-2.5 pt		
<u>Corn, No-Till in Alfalfa Sod</u>					
2,4-D	1 qt	1 qt	1 qt	Apply in fall or Apr-May to alfalfa with 4" new growth	2,4-D + Banvel used to kill alfalfa. Don't apply with 28% UAN or a triazine herbicide. On sandy soils don't plant corn for 10 days. Cost: \$8.35.
+ Banvel followed by: appropriate herbicide at planting	0.5 pt	0.5 pt	0.5 pt		



Herbicide	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy	Silt	Silty-Clay		
	Loam	Loam	Loam		
	<1 % OM	1 -2 % OM	>2 % OM		
<b>Corn, No-Till in Rye or Winter Wheat</b>					
AAtrex 4L	2 qt	2.4 qt	3 qt		Cost: AAtrex + Gramoxone \$11.70-\$20.105; AAtrex + Bronco \$26.00-\$34.85; Atrazine + Bladex + Gramoxone \$13.55-\$28.10.
+	+	+	+		
Gramoxone Super <sup>1</sup>	1.5-2.5 pt	1.5-2.5 pt	1.5-2.5 pt		
AAtrex 4L	1.2 qt	1.4 qt	1.6 qt	Apply when rye and wheat are more than 4"-1-" and before corn emerges	
+	+	+	+		
Bronco	3 qt	4 qt	4.5 qt		
Atrazine 4L	0.5 qt	0.75 qt	1-1.25 qt		
+	+	+	+		
Bladex 4L	1.25 qt	1.75 qt	2.5-2.75 qt		
+	+	+	+		
Gramoxone Super	1.5-2.5 pt	1.5-2.5 pt	1.5-2.5 pt		

**Corn, No-Till Continuous Row Crop<sup>2</sup>**

AAtrex/Atrazine 4L	2 qt	2.4 qt	3 qt		0-15 days preplant; for 16-30 days preplant in- crease rates 20%	Add 0.5-1 pt of 2,4-D LV ester or 0.5 pt Banvel to control broadleaf weeds. Emerged grass weeds under 1.5 inches are normally controlled with full rates of atrazine or Bladex. Add 1.5-2.5 pt Gramoxone Super <sup>1</sup> to control larger emerged grass. For volunteer corn Use Roundup <sup>1</sup> at 0.75-1 pt/A in 5 gpa water before crop emergence. Cost w/o Gram- oxone Super: \$4.80-\$7.20; Bicep \$12.95-\$17.30; Dual + Atrazine \$13.00-\$17.80; Bladex + Atrazine \$6.50- \$13.30; Lariat \$15.00-\$18.65; Extrazine II + Dual \$11.35- \$23.50; Atrazine + Bladex + Dual \$12.00-\$23.40.
Bicep	2.0 qt	2.4 qt	3 qt			
AAtrex/Atrazine 4L	1.4 qt	1.6 qt	1.8 qt			
+	+	+	+			
Dual	1.5 pt	1.75 pt	2 pt			
AAtrex/Atrazine 4L	1.2 qt	1.6 qt	2 qt			
+	+	+	+			
Lasso MT	2.25 qt	2.25 qt	2.75 qt			
Bullet	3.5 qt	3.75 qt	4.25 qt			
AAtrex/Atrazine 4L	0.75 qt	1.4 qt	2 qt			
+	+	+	+			
Bladex 4L	0.75 qt	1.4 qt	2 qt			
Extrazine II	1.5 qt	2.75 qt	4.0 qt	0-30 days preplant. On sand use at least 14 days preplant.		
with or without	+	+	+			
Dual	1.5 pt	1.75 pt	2 pt			
AAtrex 4L	0.5 qt	0.75 qt	1 qt			
+	+	+	+			
Bladex 4L	1.0 qt	1.5 qt	2 qt			
+	+	+	+			
Dual	1.5 pt	1.75 pt	2 pt			

**FIELD CORN, POPCORN \*, SWEETCORN \*\* Tilled Seedbed**

Herbicide (See Weed Response Chart before selecting herbicides)	Commercial product per Acre			Application Time, Remarks and Approximate Cost/A Broadcast
	Sandy	Silt	Silty-Clay	
	Loam	Loam	Loam	
	<1 % OM	1 -2 % OM	>2 % OM	
AATREX/ATRAZINE DF*,**	2.2 lb	2.6 lb	3.3 lb	EPP, PPSA, PPI, PRE, SURFACE MIX, SPRINKLER or EARLY POST...May affect sensitive crops the following year especially on high pH soils. Can be used at layby. Cost: \$4.80-\$7.20.
BICEP*,**	1.5 qt	1.8 qt	2.4 qt	EPP, PPSA, PRE, SURFACE MIX, SPRINKLER, EARLY POST or LAYBY... Cost: \$10.80-\$17.33.
BLADEX DF	Do not use	2.7 lb	3.6 lb	PPSA, PRE, SURFACE MIX, 4L SPRINKLER or 80W EARLY POST...Injury may occur on soils that are calcareous, sandy or below 1% organic matter. Cost: \$11.75-\$15.30.
BLADEX DF and	0.83-1.38 lb	2.2 lb	2.7 lb	PPSA, PRE, SURFACE MIX, SPRINKLER, or 80W EARLY POST...Injury may occur on soils that are calcareous, sandy or below 1% organic matter. Carryover could affect some crops. Cost: \$6.40-\$12.00.
+	+	+	+	
ATRAZINE DF	0.55 lb	1.1 lb	1.38 lb	
EXTRAZINE II DF*,**	1.66 lb	3.05 lb	4.16 lb	
BLADEX DF	1.30 lb	2.20 lb	3.10 lb	EPP, PPSA, PRE, SURFACE MIX, or LAYBY ...Dual and Dual + AAtrex may be applied through sprinkler systems or early post. Injury may occur with Dual + Bladex on soils that are calcareous, sandy or below 1% organic matter. Cost: Dual \$9.40-\$18.75; Dual + AAtrex \$10.50-\$16.25; Dual + Bladex \$13.00-\$21.90.
+	+	+	+	
ATRAZINE DF	0.40 lb	0.90 lb	1.30 lb	
DUAL 8E*,**	0.75 qt	1.25 qt	1.50 qt	
or	or	or	or	
DUAL 25G*,**	6 lb	10 lb	12 lb	
DUAL 8E*,**	0.67 qt	0.75 qt	1 qt	
+	+	+	+	
AATREX DF*,**	1.10 lb	1.38 lb	1.85 lb	
or with	or	or	or	
BLADEX DF	0.83-1.1 lb	1.94 lb	2.2-2.4 lb	



## FIELD CORN, POPCORN \*, SWEETCORN \*\*

## Tilled Seedbed

Herbicide (See Weed Response Chart before selecting herbicides)	Commercial product per Acre			Application Time, Remarks and Approximate Cost/A Broadcast
	Sandy Loam <1 % OM	Silt Loam 1 -2 % OM	Silty-Clay Loam >2 % OM	
DUAL with ATRAZINE DF and BLADEX DF	1.3 pt + 0.55 lb + 0.55 lb	1.5 pt + 0.55 lb + 1.1 lb	2 pt + 0.69 lb + 1.38 lb	PPSA or PRE...3-way mix. Injury may occur on soils that are calcareous, sandy or below 1% organic matter. Cost: \$11.95-\$19.85.
ERADICANE 6.7E*,**	4.75 pt	5 pt	5 pt	PPI or SPRINKLER BEFORE WEED SEED GERMINATION...Apply PPI treatments to dry surface soil and immediately incorporate by cross tandem discing or similar soil mixing. Injury may occur with Bladex on soils that are calcareous, sandy or below 1% organic matter. See page 35 for shattercane control. Repeated use of Eradicane or Eradicane Extra will lead to reduced weed control. Consider crop rotations. Cost: Eradicane \$12.25; Eradicane Extra + Atrazine \$15.10-\$17.10; Eradicane Extra + Bladex \$17.50-\$21.50.
ERADICANE EXTRA*,**	5.25 pt	5.3 pt	5.5 pt	
ERADICANE 6.7E*,** or ERADICANE EXTRA*,** +	4.75 pt or 5.25 pt +	4.75 pt or 5.3 pt +	4.75 pt or 5.5 pt +	
ATRAZINE DF*,** or BLADEX DF	1.1 lb or 1.1 lb	1.33 lb or 1.77 lb	1.77 lb or 2.2 lb	
EXTRAZINE II DF +	1.38 lb +	1.94 lb +	2.50 lb +	
DUAL or LASSO 4EC	1.3 pt or 2 qt	1.75 pt or 2 qt	2 pt or 2 qt	PPSA, PRE, or EARLY POST...Injury may occur on soils that are calcareous, sandy or below 1% organic matter. Cost: \$14.40-\$18 10
LASSO 4EC*,** or LASSO II 15G*,**	3 qt or	2.5 qt or 17 lb	3 qt or 20 lb	PPSA, PRE, or SURFACE MIX Cost: \$12.30-\$15.00
LASSO 4EC*,** +	2 qt +	2 qt +	2.25 qt +	PPSA, PRE, or SURFACE MIX, Cost: \$11.25-\$13.00.
AATREX/ATRAZINE DF*,**	1.1 lb	1.33 lb	1.77 lb	
LARIAT/BULLET*,**	3.0 qt	3.2 qt	3.5 qt	
LASSO 4EC +	2 qt +	2 qt +	2 qt +	PPSA, or PRE...Injury may occur on soils that are calcareous, sandy or below 1% organic matter. Cost: \$15.00-\$19.40.
BLADEX DF	1.1 lb	1.88 lb	2.2 lb	
LASSO 4EC with ATRAZINE DF and BLADEX DF	2 qt + 0.55 lb + 0.55 lb	2 qt + 0.55 lb + 1.1 lb	2 qt + 0.69 lb + 1.38 lb	PPSA or PRE...3-way mix. Injury may occur on soils that are calcareous, sandy or below 1% organic matter. Cost: \$13.50-\$17.40.
PROWL 4EC with ATRAZINE DF or with BLADEX DF	Do not use	1.5 qt + 1.33 lb or 1.88 lb	1.5 qt + 1.77 lb or 2.2 lb	PRE or EARLY POST...Corn injury may occur if replanting is necessary. Use Bladex 80W for early post. See page 36 for wild proso millet. Prowl + Bladex \$14.90-\$16.30.
PROZINE	Do not use	4.25 lb	4.25 lb	Prowl + Atrazine/Prozine \$10.75.
SUTAN+ 6.7E/GENATE PLUS*	5 pt	5 pt	5 pt	PPI or SPRINKLER BEFORE WEED SEED GERMINATION...Apply PPI treatments to dry surface soil and immediately incorporate by cross tandem discing or similar soil mixing. Repeated use may lead to reduced weed control. Cost: \$10.50.



# FIELD CORN, POPCORN \*, SWEETCORN \*\*

7

## Tilled Seedbed

Herbicide (See Weed Response Chart before selecting herbicides)	Commercial product per Acre			Application Time, Remarks and Approximate Cost/A Broadcast
	Sandy Loam <1 % OM	Silt Loam 1 -2 % OM	Silty-Clay Loam >2 % OM	
SUTAN+ 6.7E/GENATE PLUS*	3.75 pt	3.75 pt	3.75 pt	PPI or SUTAN/GENATE + ATRAZINE AND PACKAGE MIXES THROUGH SPRINKLER... Apply PPI treatments to dry surface soil and immediately incorporate by cross tandem discing or similar soil mixing. Increase rates for sandbur and shattercane control. Injury may occur with Bladex on soils that are calcareous, sandy or below 1% organic matter. Repeated use of Sutan or Genate may lead to reduced weed con- trol. Cost: Sutan/Genate + Atrazine \$9.80-\$11.20; Sutan/Genate + Bladex \$12.30-\$17.00; Sutazine \$12.20-\$14.40.
with	+	+	+	
ATRAZINE DF*	1.1 lb	1.33 lb	1.77 lb	
or with	+	+	+	
BLADEX DF**	1.1 lb	1.94 lb	2.2 lb	PPI...Tank mix. Apply to dry surface soil. Incorporate immediately by cross tandem discing or equivalent soil mixing. Increase rates for sand- bur and shattercane control. Injury may occur on soils that are calcareous, sandy or below 1% organic matter. Repeated use may lead to reduced weed control. Cost: Sutan + Atrazine + Bladex \$10.60-\$12.50; Sutan/Genate + Extrazine II \$12.10-\$15.10.
SUTAZINE+*	6 pt	7 pt	7 pt	
SUTAN+ 6.7E/GENATE PLUS*	3.75 pt	3.75 pt	3.75 pt	
with	with	with	with	
ATRAZINE DF*	0.55 lb	0.55 lb	0.69 lb	PPI...Tank mix. Apply to dry surface soil. Incorporate immediately by cross tandem discing or equivalent soil mixing. Increase rates for sand- bur and shattercane control. Injury may occur on soils that are calcareous, sandy or below 1% organic matter. Repeated use may lead to reduced weed control. Cost: Sutan + Atrazine + Bladex \$10.60-\$12.50; Sutan/Genate + Extrazine II \$12.10-\$15.10.
and	+	+	+	
BLADEX DF*	0.55 lb	1.1 lb	1.38 lb	
or with	+	+	+	
EXTRAZINE II DF	1.38 lb	1.94 lb	2.2 lb	

OTHER REGISTERED TREATMENTS FOR CORN: AAtrex + Princep (PPI or PRE), Amiben (PRE), Amiben + AAtrex (PRE), Banvel + Lasso (PRE), Knoxweed (PRE), Lorox + AAtrex (PRE), Lorox + Lasso (PRE), Lorox + Atrazine + Lasso (PRE), Princep (PPI or PRE), Prowl (PRE), Prowl + Banvel (PRE), Ramrod (PRE), Ramrod + Atrazine (PRE), 2,4-D (PRE), Lasso or Dual + Sencor/Lexone with Atrazine or Bladex (PRE).

## Postemergence

Herbicide	Rate Per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
AAtrex/*,**	2.2 lb	Broadleaf weeds	Use Atrazine with water-crop oil mix- ture. Lower Atrazine rates control broadleaf weeds. Make layby applica- tions when corn is 20-30" tall and weeds less than 1 1/2" tall. Cost: \$4.80-\$17.30.
Atrazine DF	or	2-6"; grass	
Bicep	2.4 qt	weeds 1" or less; also at layby with Atrazine	
Bladex 80W	2.5 lb	Grass weeds	Use with water or vegetable oils or surfactants. Do not use on sand or loamy sand. Do not use Bladex 4L. Decrease rate if Bladex was used earlier. Cost: \$9.00.
or	or	1" or less;	
Bladex 90DF	2.2 lb	corn before 5-leaf stage	
Buctril*	1-1.5 pt	Broadleaf	Contact herbicide. Thorough coverage, correct nozzles, pressure, spray volume, rate and weed size important. Cost alone: \$5.25-\$7.90; with Atrazine \$6.75-\$9.10.
alone or with	1 pt	weeds 2-6"	
Atrazine		tall; corn	
2,4-D amine**	1-2 pt	3-leaf stage	
or	or	or later	
2,4-D LV ester**	0.5-1 pt	When corn is	Later applications may cause brittle- ness and stalk breakage. Use lower rate when good growing conditions exist to reduce corn injury. Do not use Banvel within 1/2 mile of sugar beets, fieldbeans, alfalfa, soybeans, gardens and ornamentals unless drop nozzles are used on corn over 8". Do not apply between June 20 and Sept. 1 if sensitive crops are nearby. Cost: 2,4-D \$.65-\$2.00; 2,4-D + Banvel \$3.90; Banvel \$3.15; Banvel + Buctril \$8.40.
2,4-D amine	0.25 pt	small, over	
or ester	0.25 pt	10" use drop	
+	+	nozzles	
Banvel	0.5 pt		
Banvel	0.5 pt	Corn 3 leaf	
alone or with	+	and before	
Buctril 2EC	1.0 pt	corn is 24"	
		high; weeds	
		2-6 leaf	
Banvel	1 pt	Corn spike	Use only on silty clay loam soil con- taining more than 2 1/2% organic mat- ter. Observe precautions regarding Banvel use near sensitive crops specified above. Cost: \$6.35.
		to 5"	
Extrazine II 4L*,**	1.25-2 qt	Grass weeds	Use with water only. Do not use on sand or loamy sand. Decrease rate if Bladex was used earlier. Cost: \$4.25-\$7.00.
		1" or less,	
		corn before	
		5-leaf stage	
Laddok*,**	2.4 pt	Broadleaf	Use with crop oil concentrate or 28% UAN, 20 gal water and 40 psi. Increase rate 50% on weeds 3-8" tall. Cost: \$9.45.
		weeds 2-4"	
		high	
Marksman	2-3 pt	Before corn	Observe precautions regarding Banvel use near sensitive crops specified above. Cost: \$4.20-\$6.30.
		exceeds 5-leaf	
		stage	
Tandem	1 pt	Grass weeds	Use with 1 qt/A crop oil concentrate. Cost: \$15.00.
+	+	1-3 leaf	
Atrazine 4L	3 pt		
Dual*,**	1.5-3 pt	Layby before	Apply after furrowing or final culti- vation. Weeds less than 1 1/2" tall may be controlled with Bicep. Cost: Dual \$9.40-\$18.75; Bicep \$10.80-\$17.30.
or		corn is 40"	
Bicep 6L*,**	1.5-2.4 pt	tall	



C O R R E C T I O N    I N F O R M A T I O N

F O R    E C 8 9 - 1 3 0

1 9 8 9   G U I D E   F O R   H E R B I C I D E   U S E   I N   N E B R A S K A

P A G E    8    . . Follow directions below.

P A G E   11    . . Follow directions below.

P A G E   30    . . Please note circled asterisks and write changes as indicated.

On the Response Rating Chart, the weed names were inadvertently omitted. You may replace the entire page for pages 8 and 11, or you may cut out the corrections and paste them into your copy. On page 30, we suggest you write in the corrections as indicated.



## FIELD CORN, POPCORN \*, SWEETCORN \*\*

## Postemergence

Herbicide	Rate Per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
Prowl 4EC alone or with Atrazine	0.75-1.5 qt	Corn 4" to layby	Cover brace roots by cultivation before application. Incorporate by tillage, irrigation or rain within a week. Cost: Prowl \$3.45-\$6.95; Prowl + Atrazine \$5.75-\$9.65.
Prozine	1.0-1.2 qt		
	4.25 lb		
Treflan EC alone or with Atrazine 4L (Chemigation)	1.5-2 pt	Corn 2-leaf through 30", weeds un-emerged	Apply in 1/2-1" sprinkler irrigation water. Should be used in conjunction with a ppi or pre-treatments. Cost: Treflan \$4.40-\$5.90; Treflan + Atrazine \$6.15-\$8.60.
Treflan MTF	1.5-2 pt	Corn 2-leaf through 30"	Cultivate within 24 hours. Cost: \$4.40-\$5.90.

## HARVEST AID

2,4-D LV ester	1 qt	After silk is brown	Rescue for control of sunflower, cocklebur, velvetleaf and other late broadleaf weeds. Only certain brands labeled for this use. Brittleness and kernel fill not affected if silks are dry. Cost: \$2.50.
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## WEED RESPONSE TO SELECTED HERBICIDES

## Sorghum-Grain and FORAGE \*

Plant response may be altered by growing conditions, genetic variation in crops and weeds, soil type, pH, organic matter and rates of application. Ratings may vary from season to season and geographical areas within the state. Ratings apply when herbicides are used as suggested in this publication.

See pages 32-38 for additional problem weeds and their control.

## Response Ratings:

Ratings are for light to moderate weed populations and favorable conditions. High weed populations or adverse conditions will reduce control.

E = Excellent (90-100%)

G = Good (75-90%)

F = Fair (50-75%)

P = Poor (0-50%)

## Herbicide

## Soil Applied Herbicides

AAtrex*/Atrazine	E	G	E	G	F	P	G	G	E	E	E	E	E	F	P	E	E	G	E	F	6-24
Bicep* + Concep II	G	E	E	F	G	G	E	G	E	E	E	E	G	F	P	G	G	F	G	F	6-18
Dual* or Lasso + Seed Safener	P	E	G	P	E	E	E	P	P	G	G	F	P	F	P	P	P	P	P	F	2-5
Dual or Lasso + Atrazine + Seed Safener	G	E	E	F	G	G	E	F	E	E	E	E	G	F	P	G	G	F	G	F	6-18
Lariat + Seed Safener	G	E	E	F	G	G	E	F	E	E	E	E	G	F	P	G	G	F	G	F	6-18
Igran + AAtrex	E	G	E	G	F	P	G	G	E	E	E	E	E	F	P	E	E	G	E	F	6-18
Ramrod	P	G	P	P	G	G	E	P	P	F	G	P	P	P	P	F	P	P	F	E	1-2
Ramrod + Atrazine	G	G	G	F	G	F	E	F	E	E	E	G	G	P	P	G	G	F	G	G	6-18
Ramrod + Bladex	G	G	E	F	G	G	E	F	E	G	F	G	G	F	P	G	F	F	G	F	2-4
Dual or Lasso + Atrazine + Bladex + Seed Safener	G	G	E	F	G	G	E	F	E	G	G	G	G	F	P	G	F	F	G	F	2-4

## Postemergence Herbicides

AAtrex/Atrazine + COC	E	P	E	E	F	P	F	E	E	E	E	E	F	P	P	E	E	E	E	G	6-18
Banvel	E	P	G	E	P	P	P	F	G	G	G	G	E	P	P	E	G	F	E	F	1-2
Laddok	G	P	G	E	P	P	P	E	G	G	G	E	P	P	P	E	E	E	E	G	2-6
Roundup-ropewicks, wipers, etc. <sup>c</sup>	-	-	-	G	-	-	-	G	F	G	G	G	F	-	E	G	F	F	-	G	0
Buctril	E	P	E	E	P	P	P	E	E	G	G	E	G	P	P	E	E	G	E	G	0
2,4-D	E	P	F	E	P	P	P	G	G	G	G	E	P	P	P	P	G	F	P	F	1

<sup>a</sup>Crop varieties vary in their response to herbicides.

<sup>b</sup>The lower number applies to eastern Nebraska, the large number to western Nebraska. Values will vary with soil and rainfall or irrigation. For more information see "Herbicide Carryover", G83-637.

<sup>c</sup>Ratings for weeds tall enough for selective treatment.

\*Registered for forage sorghum.

\*\*Kochia in some areas has developed resistance to Atrazine, Bladex and other triazines.



## FIELD CORN, POPCORN \*, SWEETCORN \*\*

## Postemergence

Herbicide	Rate Per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
Prowl 4EC alone or with Atrazine	0.75-1.5 qt	Corn 4" to layby	Cover brace roots by cultivation before application. Incorporate by tillage, irrigation or rain within a week. Cost: Prowl \$3.45-\$6.95; Prowl + Atrazine \$5.75-\$9.65.
Prozine	1.0-1.2 qt 4.25 lb		
Treflan EC alone or with Atrazine 4L (Chemigation)	1.5-2 pt 1-1.5 qt	Corn 2-leaf through 30", weeds un- emerged	Apply in 1/2-1" sprinkler irrigation water. Should be used in conjunction with a ppi or pre-treatments. Cost: Treflan \$4.40-\$5.90; Treflan + Atrazine \$6.15-\$8.60.
Treflan MTF	1.5-2 pt	Corn 2-leaf through 30"	Cultivate within 24 hours. Cost: \$4.40-\$5.90.

## HARVEST AID

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G = Good (75-90%)

F = Fair (50-75%)

P = Poor (0-50%)

## Herbicide

annual morning glory  
barnyardgrass  
b. nightshade  
cocklebur  
crabgrass  
fall panicum  
foxtail  
jimsonweed  
kochia\*\*\*  
lambquarters  
pigweed  
ragweed  
R. thistle  
sambur  
shattercane/sorghum  
smartweed  
sunflower  
velvetleaf  
w. buckwheat  
crop safety<sup>a</sup>  
soil carryover potential in months<sup>b</sup>

## Soil Applied Herbicides

AAtrex*/Atrazine	E	G	E	G	F	P	G	G	E	E	E	E	F	P	E	E	G	F	F	6-24
Bicep* + Concep II	G	E	E	F	G	G	E	G	E	E	E	E	G	F	P	G	G	F	G	F
Dual* or Lasso + Seed Safener	P	F	G	P	E	E	F	P	P	G	G	F	P	F	P	P	P	P	F	2-5
Dual or Lasso + Atrazine + Seed Safener	G	E	E	F	G	G	E	F	E	E	E	E	G	F	P	G	G	F	G	F
Lariat + Seed Safener	G	E	E	F	G	G	E	F	E	E	E	E	G	F	P	G	G	F	G	F
Igran + AAtrex	E	G	E	G	F	P	G	G	E	E	E	E	F	P	E	E	G	E	F	6-18
Ramrod	P	G	P	P	G	G	E	P	P	F	G	P	P	P	P	F	P	F	E	1-2
Ramrod + Atrazine	G	G	G	F	G	F	E	F	E	E	G	G	P	P	G	G	F	G	F	6-18
Ramrod + Bladex	G	G	E	F	G	G	E	F	E	G	F	G	G	F	P	G	F	F	G	F
Dual or Lasso + Atrazine + Bladex + Seed Safener	G	G	E	F	G	G	E	F	E	G	G	G	G	F	P	G	F	F	G	F

## Postemergence Herbicides

AAtrex/Atrazine + COC	E	P	E	E	F	P	F	E	E	E	E	E	F	P	P	E	E	E	E	G	6-18	
Banvel	E	P	G	E	P	P	P	F	G	G	G	G	E	P	P	E	E	G	F	E	F	1-2
Laddok	G	P	G	E	P	P	P	E	G	G	G	E	P	P	P	E	E	E	E	G	2-6	
Roundup-ropewicks, wipers, etc. <sup>c</sup>	-	-	-	G	-	-	-	G	F	G	G	G	F	-	E	G	F	F	-	G	0	
Buctril	E	P	E	E	P	P	P	E	E	G	G	E	G	P	P	P	E	E	G	E	G	0
2,4-D	E	P	F	E	P	P	P	G	G	G	G	G	E	P	P	P	G	F	P	F	1	

<sup>a</sup>Crop varieties vary in their response to herbicides.

<sup>b</sup>The lower number applies to eastern Nebraska, the large number to western Nebraska. Values will vary with soil and rainfall or irrigation. For more information see "Herbicide Carryover", G83-637.

<sup>c</sup>Ratings for weeds tall enough for selective treatment.

\*Registered for forage sorghum.

\*\*Kochia in some areas has developed resistance to Atrazine, Bladex and other triazines.



## GENERAL REMARKS

EPP treatments which include Bladex or Extrazine II may injure sorghum if the soil stays dry between application and planting. Delay planting until at least 10 days after a soaking rain after treatment. When the interval between herbicide application and planting is expected to be 28 days or more, split applications will generally give better control. If a split application was not made and planting is delayed a preemergence treatment may be needed. If treatments are not applied until 14 days or less before planting, weeds will likely be emerged. Grasses should be 2 inches or less for control with atrazine, Bladex or Extrazine II. The addition of crop oil concentrate, nitrogen fertilizer or nonionic surfactant will increase control. If grasses are more than 2 inches tall, Gramoxone Super at 1.5 to 2.5 pt/A or Roundup at 1.5 qt/A plus X-77 at 1 qt/100 gal should be added. Add 1.0 pt/A 2,4-D LV ester (4 lb/gal) if broadleaf weeds are present.

Herbicide	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy Loam 1 % OM	Silt Loam 1 -2 % OM	Silty-Clay Loam >2 % OM		
<b>Grain Sorghum, No-Till in Alfalfa Sod</b>					
2,4-D	1 qt	1 qt	1 qt	Apply in fall or Apr-May to alfalfa with 4" new growth	2,4-D + Banvel used to kill alfalfa. Don't plant sorghum for 30 days. Cost: \$8.35. Don't combine with UAN or triazine herbicides.
+	+	+	+		
Banvel	0.5 pt	0.5 pt	0.5 pt		
followed by: appropriate herbicide at planting					
<b>Grain Sorghum, No-Till in Rye or Winter Wheat</b>					
AAtrex 4L	Do not use	2.0 qt	2.4 qt	Apply when rye and wheat are 4"-10" tall and before sorghum emerges	Use softened seed with Bronco. Cost: AAtrex + Gramoxone \$12.60-\$18.20; AAtrex + Bronco \$26.00-\$34.85;
+		+	+		
Gramoxone Super <sup>1</sup>		1.5-2.5 pt	1.5-2.5 pt		
AAtrex 4L	1.2 qt	1.4 qt	1.6 qt		
+	+	+	+		
Bronco	3 qt	4 qt	4.5 qt		
<b>Grain Sorghum, No-Till Continuous Row Crop<sup>2</sup></b>					
AAtrex 4L	1.6 qt	2.4 qt	3 qt	Apr 1-15	Use Bladex and Extrazine II treatments west of Hwy. 281. Avoid over 0.8 lb/A Atrazine on sandy soils, eroded soils and soils with pH greater than 7.2. Add 1.5-2.5 pt Gramoxone <sup>1</sup> or 54 oz Land-master if emerged grass weeds are over 2". If only broadleaf weeds are present add 2,4-D LV ester at 1 pt/A. For volunteer corn or sorghum use Roundup <sup>1</sup> at 0.75-1 pt/A in 5 gpa of water prior to planting. If weed population was high last year, use a preemergence herbicide at planting. With Bladex or Extrazine, delay planting until at least 10 days after a soaking rain after treatment. \$7.10-\$11.80; Bladex + Atrazine 28 days \$9.40-\$14.15; Bladex + Atrazine 15 days \$11.80-\$16.50; Extrazine 14 days \$6.30-\$11.00; Extrazine 28 days \$8.50-\$12.50; Extrazine 35 days \$10.50-\$14.00.
Bladex 90DF	2.2 lb	2.8 lb	3.3 lb	28 days EPP	
	2.8 lb	3.3 lb	3.9 lb	35 days EPP	
Bladex 90DF	1.3 lb <sup>C</sup>	1.7 lb	2.2 lb	14 days EPP	
+	+	+	+		
Atrazine 4L	0.6 qt	0.8 qt	1 qt		
	1.8 lb	2.2 lb	2.8 lb	28 days EPP	
+	+	+	+		
	0.8 qt	1 qt	1 qt		
	2.2 lb	2.8 lb	3.3 lb	35 days EPP	
+	+	+	+		
	1 qt	1 qt	1 qt		
Extrazine II DF	2.0 lb <sup>C</sup>	2.6 lb	3.3 lb	14 days EPP	
	2.7 lb	3.3 lb	3.9 lb	28 days EPP	
	3.3 lb	3.9 lb	4.4 lb	35 days EPP	
Extrazine II DF	1.4 lb	1.8 lb	2.2 lb	14 days EPP	
+	+	+	+		
Dual 8E	0.75 qt	0.75 qt	0.87 qt		
	1.6 qt	2.0 qt	2.5 qt	28 days EPP	
+	+	+	+		
	1.0 qt	1.0 qt	1.0 qt		
Dual 8E	1.5 pt	1.75 pt	2 pt	1-20 days preplant	Use Extrazine II west of Highway 281. Seed must be treated with Concep to protect from Dual and Bicep injury or Screen to protect from Lasso, Dual or Bicep injury. Atrazine and Bicep will damage sorghum on sandy and low organic matter soils. If weedy, add Gramoxone Super at 1.5-2.0 pt. Cost: Dual + Atrazine \$10.25-\$16.75; Bicep \$19.40-\$29.45; Lasso + Atrazine \$11.70-\$20.70; Extrazine + Dual 14 days \$9.00-\$20.70; Extrazine + Dual 28 days \$18.75-\$22.25.
+	+	+	+		
AAtrex 4L	0.5-0.75 qt	1 qt	1.5 qt		
Bicep 6L	1.8 qt on 1-1.5% OM	2.1 qt	2.4 qt	Increase rate 20% for 20+ days preplant	
Lasso MT	2 qt	2.5 qt	3 qt	1-20 days preplant	
+	+	+	+		
AAtrex 4L	0.5-0.75 qt	1 qt	1.5 qt		
Igran 4L	Do not use	1.8 qt	2 qt	1-7 days preplant	
+		+	+		
AAtrex 4L		1 qt	1 qt		

<sup>C</sup>21 days preplant on sandy loam.



Herbicide	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy Loam 1 % OM	Silt Loam 1 -2 % OM	Silty-Clay Loam >2 % OM		
AATREX 4L/ATRAZINE 4L*	Do not use	2 qt	2.4 qt		EPP*, PPSA, PPI, PRE or SURFACE MIX... Preplant applications should be made only on fine textured soils. Cost: \$4.80-\$5.75.
BICEP 6L*	1.5 qt on 1-1.5% OM	1.8 qt	2.4 qt		EPP*, PPSA, PRE or SURFACE MIX...Seed must be Concep or Screen treated. Do not use Atrazine on sandy, high pH or calcareous soils. Rain may leach herbicides, especially Bladex and cause sorghum injury. Cost: Atrazine \$4.80-\$5.75; Dual \$9.40-\$15.60; Dual + Atrazine Bladex \$14.00-\$21.30.
DUAL 8E*	1.5 pt	2 pt	2.5 p		
or	or	or	or		
DUAL 25G	6 lb	8 lb	10 lb		
DUAL 8E*	1.5 pt	1.5 pt	1.75-2 pt		
with	+	+	+		
AATREX/ATRAZINE 4L	0.5-0.75 qt	1 qt	1.5 qt		
or with	or	or	or		
ATRAZINE 4L + BLADEX 4L	Do not use	0.4-0.8 qt	0.6-1.0 qt		
IGRAN 4L	Do not use	1.6 qt	1.6 qt		PPSA, PPI, or SURFACE MIX...Apply with-
+	+	+	+		in 2 weeks of planting. Do not feed or
AATREX 4L		0.8 qt	0.8 qt		graze treated forage. Cost: \$11.10.
LESSO MT	2.5 qt	2.5 qt	3 qt		PPSA, PRE or SURFACE MIX...Seed must
					be Concep or Screen treated. Do not
LESSO MT	2 qt	2 qt	2.25 qt		use Atrazine on sandy, high pH or
with	+	+	+		calcareous soils. Rain may leach
ATRAZINE 4L	0.5-0.75 qt	1 qt	1.25 qt		herbicides, especially Bladex, and
or with	or	or	or		cause sorghum injury. Cost: Lasso +
ATRAZINE 4L + BLADEX 4L	Do not use	0.4+0.8 qt	0.6+1.0 qt		Atrazine + Bladex \$14.50-\$19.00; Lasso
LARIAT/BULLET	Do not use	3 qt	3.5 qt		+ Atrazine/Lariat/Bullet \$11.25-\$13.25.
RAMROD FLOWABLE	4 qt	4 qt	4 qt		PRE...May cause skin irritation to
or	or	or	or		applicator. Do not feed treated
RAMROD 20G	20 lb	20 lb	20 lb		forage to dairy animals. Leaches on
					sandy soil. Cost: \$16.80.
RAMROD FLOWABLE	Do not use	3 qt	3 qt		PRE...In southwest Nebraska hold
+	+	+	+		Atrazine rate to 0.75 qt. Rain may
AATREX 4L/ATRAZINE 4L		0.75-1 qt	1.25 qt		leach herbicides and cause sorghum
					injury or poor weed control. Do not
RAMROD FLOWABLE	Do not use	5 pt	5 pt		feed treated forage to lactating
+	+	+	+		dairy animals. Cost: Ramrod +
BLADEX 4L		2.5 pt	2.75 pt		Bladex \$15.50; Ramrod + Atrazine
					\$13.75; Ramrod & Atrazine Flowable
RAMROD & ATRAZINE FC	Do not use	4 qt	4 qt		\$14.50.

OTHER REGISTERED TREATMENTS FOR SORGHUM: Bladex + Propazine [Milogard] (PRE), Dual 8E + Igran 80W (PRE), Dual 8E + Milogard (PRE), Dual + Modown (PRE), Igran 80W (PRE), Lasso + Modown (PRE).

### SORGHUM Postemergence

Herbicide	Rate Per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
AAtrex/Atrazine 4L	1.2 qt	Broadleaf weeds less than 6"	Use with crop oil concentrate. Atrazine may give partial control of grass weeds under 1". Do not use atrazine on sand or loamy sand. Increase Laddok rate 50% on weeds 3-8" tall. Cost: Atrazine \$3.40; Laddok \$5.50
Laddok	2.4 pt	Broadleaf weeds 2-4"	
Banvel	0.5 pt	Sorghum 3-5 leaves	Observe label precautions when sensitive crops are nearby. Cost: \$3.15.
2,4-D amine	1 pt	After sorghum is 5" tall. If over	Spraying before 5" stage may inhibit root development. Spraying without
or	or	10" use drop	drop nozzles after 12" through early
2,4-D LV ester	0.5 pt	nozzles	boot may inhibit head development; do
Buctril	1-1.5 pt	Broadleaf weeds 2-6"; sorghum up	not use 2,4-D from early boot through
alone or with		to 14"	soft dough stage. Cost: 2,4-D \$.65-
Atrazine			\$1.00; Buctril alone \$5.28-\$7.90;
			with Atrazine \$6.75-\$9.10.

### HARVEST AID

2,4-D LV ester	1 qt	After soft dough	Rescue for late sunflower, cocklebur, velvetleaf and pigweed. Only certain brands labeled for this use. Cost: \$2.50.
Chlorate 3	1.5-2 gal	7-10 days	Desiccant. Products are sodium
or	or	before harvest	chlorate with a fire retardant.
Leafex	1.5-2 gal		Good coverage required. Do not graze
			or harvest forage for 14 days after
			treatment. Cost: \$2.50.



## Soybeans

Plant response may be altered by growing conditions, genetic variation in crops and weeds, soil type, pH, organic matter and rates of application. Ratings may vary from season to season and geographical areas within the state. Ratings apply when herbicides are used as suggested in this publication.

See pages 32 - 38 for additional problem weeds and their control.

## Response Ratings:

Ratings are for light to moderate weed populations and favorable conditions. High weed populations or adverse conditions will reduce control.

E = Excellent (90-100%)

G = Good (75-90%)

F = Fair (50-75%)

P = Poor (0-50%)

## Herbicide

## Soil Applied Herbicides

Commence	P	E	G	F	E	E	E	G	G	E	G	G	-	G	G	E	F	E	-	E	6-15
Command + Treflan or Sonalan or Prowl	P	E	G	F	E	E	E	G	G	E	G	G	-	G	G	E	F	E	-	E	6-15
Dual	P	E	G	P	E	E	E	P	P	G	G	F	P	F	P	P	P	P	P	E	2-5
Dual + Amiben + Sencor/Lexone	P	E	G	F	E	E	E	G	F	E	E	E	G	F	P	G	F	G	E	F	2-4
Dual + Sencor/Lexone or Turbo	P	E	G	F	E	E	E	G	F	E	E	E	G	F	P	G	F	G	E	F	2-5
Lasso	P	E	G	P	E	E	E	P	P	G	G	G	P	F	P	P	P	P	P	E	2-4
Lasso + Amiben + Sencor/Lexone	P	E	G	F	E	E	E	G	F	E	E	E	G	F	P	G	F	G	E	F	2-4
Lasso + Modown	G	G	G	P	G	G	E	G	G	G	E	P	P	F	P	E	P	F	G	F	2-4
Lasso + Sencor/Lexone	P	E	G	F	E	E	E	G	F	E	E	E	G	F	P	G	F	G	E	F	2-4
Lorox + Lasso or Dual	P	E	G	F	E	E	E	F	F	G	E	G	F	F	P	G	F	F	G	G	2-4
Preview + Lasso or Dual	F	E	G	G	E	E	E	G	G	E	E	E	G	F	P	G	G	G	E	G	6-12
Preview + Treflan or Sonalan or Prowl	F	E	F	G	E	E	E	G	G	E	E	E	G	G	G	G	G	G	E	G	6-12
Prowl	P	E	P	P	E	E	E	P	F	G	G	P	G	G	F	P	P	F	P	G	4-12
Prowl + Sencor/Lexone	P	E	P	F	E	E	E	G	G	E	E	E	E	G	F	G	F	G	E	F	4-12
Salute	P	E	P	F	E	E	E	G	G	E	E	E	E	G	G	G	F	G	E	F	6-12
Scepter + Dual or Lasso	P	E	G	G	E	E	E	G	F	E	E	E	-	F	F	E	E	G	-	E	6-15
Scepter + Prowl, Sonalan or Treflan	P	E	F	G	E	E	E	G	G	E	E	E	-	G	G	E	E	G	-	E	6-15
Sonalan	P	E	F	P	E	E	E	P	F	G	G	P	G	G	F	P	P	P	P	G	4
Sonalan + Sencor/Lexone	P	E	F	F	E	E	E	G	G	E	E	E	E	G	F	G	F	G	E	F	4
Squadron	P	E	F	G	E	E	E	G	G	E	E	E	-	G	G	E	E	G	-	E	6-15
Split-Appl.-Treflan/Trifluralin or Prowl + Sencor/Lexone	P	E	P	G	E	E	E	G	G	E	E	E	E	G	G	E	F	E	E	G	6-12
Treflan	P	E	P	P	E	E	E	P	F	G	G	P	G	G	G	P	P	P	P	G	6-12
Treflan/Trifluralin + Sencor/Lexone	P	E	P	F	E	E	E	G	G	E	E	E	E	G	G	G	F	G	E	F	6-12
Treflan + Sencor/Lexone + Command	P	E	G	F	E	E	E	G	G	E	E	E	G	G	G	G	F	E	E	G	6-15

## Postemergence Herbicides

Assure	P	E	P	P	E	E	G	P	P	P	P	P	P	E	E	P	P	P	P	E	1
Basagran + Blazer/Tackle	G	P	G	E	P	P	P	P	P	F	G	E	P	P	P	E	E	G	G	E	0
Basagran + Scepter	F	P	P	E	P	P	P	E	P	P	E	G	P	P	P	E	E	E	G	E	2-6
Basagran with Fertilizer	F	P	P*	E	P	P	P	E	P	P	P	G	P	P	P	E	E	G	G	E	0
Blazer/Tackle	E	P	G	F	F	G	F	E	F	F	E	E	P	F	F	E	P	F	-	G	0
Classic	G	P	-	E	P	P	P	E	-	F	E	E	-	P	P	E	E	F	-	E	6-12
Cobra	G	P	G	G	F	G	F	E	F	F	E	E	P	F	F	E	G	G	-	G	0
Fusilade	P	E	P	P	E	E	G	P	P	P	P	P	P	E	E	P	P	P	P	E	1
Option	P	E	P	P	E	E	G	P	P	P	P	P	P	E	E	P	P	P	P	E	0
Poast	P	E	P	P	E	E	G	P	P	P	P	P	P	E	E	P	P	P	P	E	0
Poast + Basagran	F	E	P	E	G	E	G	E	P	P	P	G	P	E	F	G	E	G	G	E	0
Rescue	P	P	P	G	P	P	P	P	P	P	P	G	P	P	P	G	P	P	P	G	0
Roundup-ropewicks, wipers, etc. <sup>c</sup>	-	-	-	G	-	-	-	G	F	G	G	G	F	F	E	G	F	F	-	E	0

<sup>a</sup>Crop varieties vary in their response to herbicides.

<sup>b</sup>The lower number applied to eastern Nebraska, the large number to western Nebraska. Values will vary with soil and rainfall or irrigation. For more information see "Herbicide Carryover", G83-637.

<sup>c</sup>Ratings for weeds tall enough for selective treatment.

\*Kochia in some areas has developed resistance to Sencor, Lexone and other triazines.

## SPECIAL APPLICATION EQUIPMENT

Crop	Applicator	Herbicide and Ratio-(product:water)	Remarks
Soybeans	1. Recirculating sprayer	Roundup 1:19 (5% concentration)	Weeds 10-12" taller than soybeans.
Soybeans and Sorghum	2. Ropewick-- .Pipewick .Wedgewick .Bobar	Roundup 1:2 (33.3% concentration)	Works best on volunteer corn and shattercane. Weeds should be 10-12" taller than soybeans. Travel both directions in heavy stands. In sorghum, too wet or dripping ropes will cause droplet splash and crop injury.
Soybeans	3. Bean Bar-- straight stream nozzles	Roundup 1:19 (5% concentration)	A marking dye can be added to the spray solution so it is easier to see treated plants.



# WEED RESPONSE TO SELECTED HERBICIDES

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## Soybeans

Plant response may be altered by growing conditions, genetic variation in crops and weeds, soil type, pH, organic matter and rates of application. Ratings may vary from season to season and geographical areas within the state. Ratings apply when herbicides are used as suggested in this publication.

See pages 32 - 38 for additional problem weeds and their control.

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### Herbicide

annual morning glory  
barnyardgrass  
b. nightshade  
cocklebur  
crabgrass  
fall panicum  
foxtail  
jimsonweed  
kochia\*\*\*  
lambsquarters  
pigweed  
ragweed  
R. thistle  
sandbur  
shattercane/sorghum  
smartweed  
sunflower  
velvetleaf  
w. buckwheat  
crop safety<sup>a</sup>  
soil carryover potential in months<sup>b</sup>

## Soil Applied Herbicides

Commence	P	E	G	F	E	E	E	G	G	E	G	G	-	G	G	E	F	E	-	E	6-15
Command + Treflan or Sonalan or Prowl	P	E	G	F	E	E	E	G	G	E	G	G	-	G	G	E	F	E	-	E	6-15
Dual	P	E	G	P	E	E	E	P	P	G	G	F	P	F	P	P	P	P	P	E	2-5
Dual + Amiben + Sencor/Lexone	P	E	G	F	E	E	E	G	F	E	E	G	F	F	P	G	F	G	E	F	2-4
Dual + Sencor/Lexone or Turbo	P	E	G	F	E	E	E	G	F	E	E	E	G	F	P	G	F	G	E	F	2-5
Lasso	P	E	G	P	E	E	E	P	P	G	G	G	P	F	P	P	P	P	P	E	2-4
Lasso + Amiben + Sencor/Lexone	P	E	G	F	E	E	E	G	F	E	E	E	G	F	P	G	F	G	E	F	2-4
Lasso + Modown	G	G	G	P	G	G	E	G	G	G	E	P	P	F	P	E	P	F	G	F	2-4
Lasso + Sencor/Lexone	P	E	G	F	E	E	E	G	F	E	E	E	G	F	P	G	F	G	E	F	2-4
Lorox + Lasso or Dual	P	E	G	F	E	E	E	F	F	G	E	G	F	F	P	G	F	F	G	G	2-4
Preview + Lasso or Dual	F	E	G	G	E	E	E	G	G	E	E	E	G	F	P	G	G	G	F	G	6-12
Preview + Treflan or Sonalan or Prowl	F	E	F	G	E	E	E	G	G	E	E	E	G	G	G	G	G	E	E	G	6-12
Prowl	P	E	P	P	E	E	E	P	F	G	P	G	G	G	F	P	P	F	P	G	4-12
Prowl + Sencor/Lexone	P	E	P	F	E	E	E	G	G	E	E	E	E	G	F	G	F	G	E	F	4-12
Salute	P	E	P	F	E	E	E	G	G	E	E	E	E	G	G	G	F	G	E	F	6-12
Scepter + Dual or Lasso	P	E	G	G	E	E	E	G	F	E	E	E	-	F	F	G	E	E	-	E	6-15
Scepter + Prowl, Sonalan or Treflan	P	E	F	G	E	E	E	G	G	E	E	E	-	G	G	E	E	G	-	E	6-15
Sonalan	P	E	F	P	E	E	E	P	F	G	G	P	G	G	F	P	P	P	P	G	4
Sonalan + Sencor/Lexone	P	E	F	F	E	E	E	G	G	E	E	E	E	G	F	G	F	G	E	F	4
Squadron	P	E	F	G	E	E	E	G	G	E	E	E	-	G	G	E	E	G	-	E	6-15
Split-Appl.-Treflan/Trifluralin or Prowl + Sencor/Lexone	P	E	P	G	E	E	E	G	G	E	E	E	E	G	G	E	F	E	E	G	6-12
Treflan	P	E	P	P	E	E	E	P	F	G	G	P	G	G	G	P	P	P	P	G	6-12
Treflan/Trifluralin + Sencor/Lexone	P	E	P	F	E	E	E	G	G	E	E	E	E	G	G	G	F	G	E	F	6-12
Treflan + Sencor/Lexone + Command	P	E	G	F	E	E	E	G	G	E	E	E	E	G	G	G	F	E	E	G	6-15

## Postemergence Herbicides

Assure	P	E	P	P	E	E	G	P	P	P	P	P	P	E	E	P	P	P	P	E	1
Basagran + Blazer/Tackle	G	P	G	E	P	P	P	E	P	F	G	E	P	P	P	E	E	G	G	E	0
Basagran + Scepter	F	P	P	E	P	P	P	E	P	P	E	G	P	P	P	E	E	E	G	E	2-6
Basagran with Fertilizer	F	P	P*	E	P	P	P	E	P	P	P	G	P	P	P	E	E	G	G	E	0
Blazer/Tackle	E	P	G	F	F	G	F	E	F	F	E	E	P	F	F	E	P	F	-	E	0
Classic	G	P	-	E	P	P	P	E	-	F	E	E	-	P	P	E	E	F	-	E	6-12
Cobra	G	P	G	G	F	G	F	E	F	F	E	E	P	F	F	E	G	G	-	G	0
Fusilade	P	E	P	P	E	E	G	P	P	P	P	P	P	E	E	P	P	P	P	E	1
Option	P	E	P	P	E	E	G	P	P	P	P	P	P	E	E	P	P	P	P	E	0
Poast	P	E	P	P	E	E	G	P	P	P	P	P	P	E	E	P	P	P	P	E	0
Poast + Basagran	F	E	P	E	G	E	G	E	P	P	P	G	P	E	F	G	E	G	G	E	0
Rescue	P	P	P	G	P	P	P	P	P	P	P	G	P	P	P	G	G	P	P	G	0
Roundup-ropewicks, wipers, etc. <sup>C</sup>	-	-	-	G	-	-	-	G	F	G	G	G	F	F	E	G	F	F	-	E	0

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Soybeans	3. Bean Bar-- straight stream nozzles	Roundup 1:19 (5% concentration)	A marking dye can be added to the spray solution so it is easier to see treated plants.



Crop	Applicator	Herbicide and Ratio-(product:water)	Remarks
Soybeans	4. Bean Bar-- spreading nozzles	Basagran 1:100 (1% concentration)	Complete coverage essential. Add 1 gal nitrogen fertilizer to each 25 gal spray. Add Poast and crop oil for shattercane and volunteer corn.
		Poast, Fusilade or Assure 1:100 (1% concentration)	Add 1 qt crop oil conc. or 1/2 pt adjuvant per 25 gal mix.
		Rescue 1:14 (7.5% concentration)	Add appropriate nonionic surfactant.
		Amiben DF 3.6 lb + 2,4-DB 2 oz	Use in 25 gal water. Add 1 qt crop oil conc. or 1/2 pt adjuvant. Labeled for use 33 days after soybean emergence.

Herbicide costs per acre vary from \$1.00 with light weed infestations to \$15.00 in heavy infestations.

### SOYBEANS No-Till

#### GENERAL REMARKS

EPP treatments provide excellent early weed control. However, when the interval between herbicide application and planting is 28 days or more, split applications will generally give better control. If planting is delayed longer than planned after an EPP treatment, a preemergence treatment may be needed.

Herbicide (See Weed Response Chart before selecting herbicides)	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy Loam 1 % OM	Silt Loam 1 -2 % OM	Silty-Clay Loam 2 % OM		
<u>Soybeans, No-Till in Alfalfa Sod</u>					
2,4-D + Banvel	1 qt + 0.5 pt	1 qt + 0.5 pt	1 qt + 0.5 pt	Apply in fall to alfalfa with 4" new growth	2,4-D + Banvel used to kill alfalfa. Cost: \$8.35.
2,4-D ester followed by: appropriate herbicide at planting	2 qt	2 qt	2 qt	Apply in Apr- May to alfalfa with 4" new growth	2,4-D used to kill alfalfa. Don't plant soybeans for 30 days. Cost: \$5.00.

#### Soybeans, No-Till Continuous Row Crops

Lexone/Sencor 75DF	0.5-0.67 lb	0.83-1 lb	1-1.2 lb	15-30 days EPP	Do not use on soils with less than 1% OM. Use the lower rate for calcareous soils. Use a split application of 2/3 EPP, the remaining 1/3 at planting, especially if applied very early. Use higher rate for split application. Split applications cover soil disturbance by planter. 2,4-D LV ester at 0.5 qt/A (4/lb/gal product) can be applied with the first amount for winter annuals or emerged summer annual weeds, if applied 30 days before soybean planting. Prowl in EPP treatments may be less effective if rainfall does not come within 7 days of application.
+ Dual	+ 2 pt	+ 2.5 pt	+ 3 pt		
or	or	or	or		
Lasso MT	2 qt	2.5 qt	3 qt		
or	or	or	or		
Prowl	2 pt	2.5 pt	3 pt		
<hr/>					
Turbo	2.25 pt	2.75 pt	3.25 pt		
	Cost:	with Dual \$22.00-\$41.00; with Lasso \$19.00-\$36.00; with Prowl \$13.60-\$28.50; Tubro: \$21.15-\$30.55			
<hr/>					
Lexone/Sencor 75DF	0.5 lb	0.67 lb	0.83 lb	0-14 days PPSA	Lorox should not be applied more than 5-7 days before planting. Add 0.25% surfactant or 1 qt/A crop oil concentrate for better burn-down of small weeds up to 1.5"-2". If emerged weeds are more than 2", add Gramoxone Super or Roundup as discussed in the pre-emergence section. Split application is not necessary except if planter causes excessive soil disturbance. Do not apply on soils with less than 0.5 OM. Reduce Sencor/Lexone rate by 1/3 on calcareous soils. Do not apply Preview on soils with pH greater than 6.8; corn or grain sorghum should not be planted within 10 months of application.
or	or	or	or		
Lorox 50DF	1.3 lb	1.6 lb	2 lb		
or	or	or	or		
Preview	6 oz	7 oz	8 oz		
+ Dual	+ 2 pt	+ 2 pt	+ 2.5 pt		
or	or	or	or		
Lasso MT	1.5 qt	2 qt	3 qt		
<hr/>					
Turbo	1.75 pt	2.5 pt	2.75 pt		
	Cost:	Lexone/Sencor with Dual \$22.00-\$31.25; Lexone/Sencor with Lasso \$21.25-\$31.75; Lorox with Lasso \$18.25-\$30.50; Preview with Dual \$22.95-\$29.50; Preview with Lasso \$19.95-\$28.75; Turbo: \$16.40-\$25.90			



Herbicide (See Weed Response Chart before selecting herbicides)	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy Loam 1 % OM	Silt Loam 1 - 2 % OM	Silty-Clay Loam >2 % OM		
<b><u>Soybeans, No-Till Continuous Row Crops</u></b>					
Lexone/Sencor 75DF	0.33 lb	0.5 lb	0.67 lb	Preemergence at planting	Add Gramoxone Super at 1.5-2.5 pt/A or Roundup at 1-1.5 qt/A. Add X-77 at 1 qt/100 gal spray solution. If using Roundup in the tank-mix, the addition of 17 lb dry ammonium sulfate per 100 gal spray solution may increase the performance of Roundup. For tank-mixes with either Gramoxone Super or Roundup, use the lower rate for 4"-6" weeds. Control of weeds over 6" will be erratic. Apply in at least 20 gal/A to get thorough coverage. Rainfall within 3 to 5 days of herbicide application will improve weed control, especially with Prowl. When using tank-mixes with Lexone/Sencor, do not use on sand or loamy sand soils. Do not apply Preview on soils with pH greater than 6.8.
or	or	or	or		
Lorox 50DF	1.3 lb	1.6 lb	2 lb		
or	or	or	or		
Preview	6 oz	7 oz	8 oz		
+	+	+	+		
Dual	1.5 pt	2 pt	2.5 pt		
or	or	or	or		
Lasso MT	1.5 qt	2 qt	2 qt		
Turbo	1.5 pt	2.25 pt	2.5 pt		
Cost without Gramoxone or Roundup:					
Lexone/Sencor with Dual \$15.75-\$28.25;					
Lexone/Sencor with Lasso \$13.50-\$22.00					
Lorox with Dual \$17.75-\$29.75;					
Lorox with Lasso \$15.50-\$23.50;					
Preview with Dual \$19.65-\$29.25;					
Preview with Lasso \$17.40-\$23.00;					
Turbo: \$14.10-\$23.50					
Bronco	3.25 qt	4.0 qt	4.0 qt	Preemergence at planting	Apply after planting, but before crop emergence. Apply in 10-30 gal/A spray solution. Add X-77 surfactant at 2 qt/100 gal spray solution. The addition of dry ammonium sulfate at 17 lb/100 gal solution may improve weed control under adverse growing conditions.
+	+	+	+		
Lorox 50DF	1.3 lb	1.6 lb	2 lb		
or	or	or	or		
Lexone/Sencor 75DF	0.33 lb	0.5 lb	0.67 lb		
Cost: Bronco + Lorox \$32.80-\$44.50;					
Bronco + Lexone/Sencor \$30.80-\$43.00;					

## Tilled Seedbed

For cocklebur, sunflower and velvetleaf, see Troublesome Weed Section.

COMMAND	0.75 pt	1.2 pt	1.5 pt	Immediately incorporate, may be surface mixed with Lasso. Use 2.5 qt rate of Lasso for heavy infestation of pigweed and lambsquarter. Command vapor drift may damage green vegetation. Carryover may damage wheat seeded the same fall. or sugar beets and fieldbeans the next year. Cost: Command + Treflan/Commence \$8.65-\$17.25; Command + Sonalan \$8.50-\$17.00; Command + Lasso \$17.50.
with	+	+	+	
TREFLAN	1 pt	1.5 pt	2 pt	
or with	or	or	or	
SONALAN	2 pt	2.5 pt	3 pt	
COMMAND	1 pt	1 pt	1 pt	EPP, PRE, SURFACE MIX or CENTER PIVOT ...To reduce injury on calcareous soil decrease Sencor/Lexone rates by 1/3. Do not use Turbo on calcareous soil. Turbo also labeled split-shot with additional Turbo or Sencor and tank mix with Command or Scepter. Follow label directions. Cost: Dual \$12.50-\$15.65; Dual + Sencor or Turbo \$18.20-\$22.60
with	+	+	+	
LASO 4EC, MT	2 qt	2 qt	2 qt	
COMMENCE	1.75-2 pt	2-2.25 pt	2.66 pt	
DUAL 8E	2 pt	2.5 pt	2.5 pt	
or	or	or	or	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. PRE or SURFACE MIX with Dual or Lasso. Rainfall required to activate all treatments. Do not apply to soils with pH greater than 6.8 or organic matter less than 0.5%. Carryover injury may result, see label for recropping restrictions. Cost: Preview + Prowl or Treflan or Sonalan \$13.00-\$22.50; Preview + Dual \$21.50-\$26.50.
DUAL 25G	8 lb	8 lb	10 lb	
DUAL 8E	Do not use	1.5 pt	2 pt	
+	+	+	+	
SENCOR/LEXONE DF <sup>4</sup>		0.5 lb	0.6 lb	
TURBO 8EC	Do not use	2.0 pt	2.5-2.75 pt	PRE, SURFACE MIX or CENTER PIVOT... To reduce injury on calcareous soil decrease Sencor/Lexone rates by 1/3. Cost: Lasso \$13.50; Lasso + Sencor/Lexone \$19.60-\$20.90.
PREVIEW	6-7 oz	7-8 oz	8-10 oz	
with	+	+	+	
TREFLAN	1 pt	1.5 pt	2 pt	
or with	or	or	or	
SONALAN	2 pt	2.5 pt	3 pt	
or with	or	or	or	
PROWL	1.5 pt	2 pt	2 pt	
or with	or	or	or	
DUAL	1.5 pt	2 pt	2 pt	
or with	Do not use	or	or	
LASSO	use	2 qt	2 qt	
LASSO 4EC	2.5 qt	2.5 qt	2.5 qt	
or	or	or	or	
LASSO II 15G	17 lb	17 lb	17 lb	
LASSO 4EC	Do not use	2 qt	2 qt	
+	+	+	+	
SENCOR/LEXONE DF <sup>4</sup>		0.5 lb	0.6 lb	



# SOYBEANS Tilled Seedbed

Herbicide (See Weed Response Chart before selecting herbicides)	Commercial product per Acre			Application Time, Remarks and Approximate Cost/A Broadcast
	Sandy Loam	Silt Loam	Silty-Clay Loam	
	1 ½ OM	1 -2 ½ OM	>2 ½ OM	
For cocklebur, sunflower and velvetleaf, see Troublesome Weed Section.				
LOROX L	1-1.3 pt	1.5 pt	2 pt	PRE...Lorox not greatly influenced by soil pH. Do not use on soils with less than 0.5% OM. Cost: Lasso + Lorox \$15.05-\$23.40; Dual + Lorox \$16.75-\$25.10.
with	+	+	+	
DUAL 8E	1.5 pt	2 pt	2 pt	
or with	or	or	or	PPI or SURFACE MIX...To reduce injury on calcareous soil decrease Sencor/Lexone rates by 1/3. Lexone not labeled on sandy soil. Cost: Prowl \$3.45-\$5.75; Prowl + Sencor \$9.75-\$14.70.
LASSO 4EC	4 pt	4 pt	4 pt	
PROWL 4EC	1.5 pt	2 pt	2.5 pt	
PROWL	1.5 pt	2 pt	2 pt	PRE or SURFACE MIX with Lasso or Dual. PPI Prowl or Squadron 7 days, Treflan 1 day, or Sonalan 2 days. Crop injury and carryover risk may increase on high pH soils or sandy, eroded soils. Carryover from over application may injure corn and sugar beets the following year. Scepter and Squadron labeled east of Highway 81. Do not plant corn the year following a Scepter or Squadron treatment north of Highway 34. Cost: Scepter + Lasso \$24.00; Scepter + Dual \$26.50; Scepter + Prowl or Sonalan or Treflan \$16.50-\$20.00, with Sencor add \$6.00.
+	+	+	+	
SENCOR/LEXONE DF <sup>4</sup>	0.33 lb	0.5 lb	0.6 lb	
SCEPTER (with or without SENCOR)	0.67 pt (0.33 lb)	0.67 pt (0.33 lb)	0.67 pt (0.50 lb)	PPI...Incorporate within 48 hours. To reduce injury on calcareous soil reduce Sencor/Lexone rate by 1/3. Increase Sonalan rate by 1/2-1 pt for black nightshade control. Cost: Sonalan \$4.65-\$7.40; Sonalan + Sencor/Lexone \$9.80-\$18.30.
with	+	+	+	
LASSO	2 qt	2 qt	2 qt	
or with	or	or	or	PPI...For best results immediately incorporate. To reduce injury on calcareous soil decrease Sencor/Lexone rate by 1/3. Do not use Salute on calcareous soil. Cost: Treflan/Trifluralin \$2.55-\$4.45; Treflan/Trifluralin + Sencor/Lexone/Salute \$8.85-\$13.95.
DUAL	1.5 pt	2 pt	2 pt	
or with	or	or	or	
PROWL	1.5 pt	2 pt	2 pt	SPLIT SHOT, PPI and PRE...Improves broadleaf control. For best results immediately incorporate first application. On calcareous soils reduce Sencor/Lexone rates by 1/3. Lexone not labeled on sandy soil. Cost: Prowl + Sencor/Lexone + Sencor/Lexone \$9.75-\$18.35; Treflan/Trifluralin + Sencor/Lexone + Sencor/Lexone \$8.85-\$16.40; Prowl + Sencor/Lexone + Prowl + Sencor/Lexone \$10.90-\$19.50.
or with	or	or	or	
TREFLAN	1.0 pt	1.5 pt	2 pt	
or with	or	or	or	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
SONALAN	2 pt	2.5 pt	3 pt	
SQUADRON	3 pt	3 pt	3 pt	
SONALAN	2 pt	2.5 pt	3 pt	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
+	+	+	+	
SENCOR/LEXONE DF <sup>4</sup>	0.33 lb	0.5 lb	0.6 lb	
TREFLAN/TRIFLURALIN	1 pt	1.5 pt	2 pt	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
+	+	+	+	
SENCOR/LEXONE DF <sup>4</sup>	0.33 lb	0.5 lb	0.6 lb	
SALUTE	1.5 pt	2.25 pt	3.0 pt	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
PROWL	1.5 pt	2 pt	2 pt	
or	or	or	or	
TREFLAN/TRIFLURALIN (PPI) with	1 pt +	1.5 pt +	2 pt +	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
SENCOR/LEXONE DF <sup>4</sup> PPI	0.2 lb	0.4 lb	0.5 lb	
followed by	+	+	+	
SENCOR/LEXONE DF <sup>4</sup> PRE (Split application)	0.1 lb	0.2 lb	0.2 lb	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
PROWL	1 pt	1.5 pt	1.5 pt	
+	+	+	+	
SENCOR/LEXONE DF <sup>4</sup> PPI	0.2 lb	0.4 lb	0.5 lb	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
followed by	+	+	+	
PROWL	1 pt	1.5 pt	1.5 pt	
+	+	+	+	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
SENCOR/LEXONE DF <sup>4</sup> PRE (Split application)	0.1 lb	0.2 lb	0.2 lb	
COMMAND	0.75 pt	1 pt	1.5 pt	
and	+	+	+	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
SENCOR/LEXONE DF	0.25 lb	0.33 lb	0.5 lb	
with	+	+	+	
TREFLAN	1 pt	1.5 pt	2 pt	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
or with	or	or	or	
SONALAN	2 pt	2.5 pt	3 pt	
or with	or	or	or	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
PROWL	1.5 pt	2 pt	2 pt	
or with	or	or	or	
DUAL	1.5 pt	2 pt	2 pt	PPI with Treflan and Sonalan. PPI or SURFACE MIX with Prowl. SURFACE MIX with Dual or Lasso. 3-way mix. To reduce injury on calcareous soil, reduce Sencor/Lexone rate by 1/3. Command vapor or droplet drift may damage green vegetation. Cost: with Prowl or Treflan \$12.85-\$24.50; with Sonalan \$14.50-\$27.65; with Dual or Lasso \$16.85-\$28.50.
or with	Do not	or	or	
LASSO	use	2 pt	2 pt	

OTHER REGISTERED TREATMENTS FOR SOYBEANS: Alanap (PRE), Amiben (PRE), Amiben + Sencor/Lexone (PRE), Amiben + Treflan (PPI), Command + Sencor/Lexone (PPI), Dual + Amiben (PRE or PPI), Dual or Lasso + Lorox and Lexone (PRE), Dual + Sencor/Lexone + Modown (PRE), Goal (PRE), Goal + Lasso (PRE), Lasso + Amiben (PRE), Lasso + Sencor/Lexone + Modown (PRE), Lexone (PRE), Lorox (PRE), Lorox + Amiben (PRE), Modown (PRE), Prowl + Amiben (PRE), Prowl + Lorox (PRE), Prowl + Amiben + Sencor/Lexone (PPI), Ramrod (PRE, seed beans only), Sencor (PRE), Surflan (PRE), Surflan + Lorox (PRE), Surflan + Sencor/Lexone (PRE), Treflan + Amiben + Sencor/Lexone (PPI), Treflan (PPI) + Modown (PRE), Vernam (PPI) + Amiben (PRE), Vernam (PPI) + Lorox (PRE), Vernam + Treflan (PPI), Dual or Lasso + Modown (PRE), Dual or Lasso + Amiben + Sencor/Lexone, Lorox (PRE or PPI), Lorox Plus + Treflan or Sonalan or Prowl or Dual or Lasso (PRE).



Herbicide	Rate Per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
Basagran 4WS	1 pt		Combining Basagran with Poast reduces effectiveness on volunteer corn and shattercane. Good spray coverage essential. See label for rates and specific weed size. The addition of 2 oz of 2,4-DB improves effectiveness of Basagran and Blazer on larger weeds. Cost: Basagran \$7.60; Blazer/Tackle \$6.85-\$13.40; Basagran + Blazer/Tackle \$10.90-\$13.65; Basagran + Poast \$26.75-\$31.25; Basagran + Scepter + Crop Oil Con. \$18.45.
+ 28% UAN	1 gal		
Blazer/Tackle	1-2 pt		
+ Surfactant or 28% UAN	3-6 oz or 1 gal	Most susceptible weeds less than 4" tall	
Blazer/Tackle	0.5-1 pt		
+ Basagran 4WS	1 pt		
+ 28% UAN	1 gal		
Basagran 4WS	1.5-2 pt	Use Basagran and Poast guidelines	
+ Poast	1.5 pt		
+ Dash	1 qt		
+ 28% UAN	1 gal		
Basagran	1.5 pt	Most susceptible weeds less than 4" tall	
+ Scepter 1.5L	0.33 pt		
+ Crop Oil Conc.	1 qt		
Cobra 2EC	10-12.5 oz	Broadleaf weeds 2-4" tall	Do not apply during periods of stress or weed control will be poor. Do not apply later than 90 days prior to harvest. Use of surfactant or COC recommended if weeds are at or near maximum growth stage. Refer to label for maximum leaf stages for specific weeds. Cost: \$8.50-\$10.00
+ Surfactant or Crop Oil Conc.	1-1.5 pt/100 gal or 0.25-1 pt/A		
Classic	0.5-0.75 oz	Most susceptible weeds less than 4" tall	Do not use on soils above pH 6.8. Thorough spray coverage required. Add 28% N for velvetleaf. Cost: \$8.00-\$11.50.
+ Surfactant or COC	6 oz or 1 qt		
Assure	14-16 oz	Shattercane and corn 12-18"; other annual grasses less than 4"	Crop Oil concentrate or surfactant and good coverage essential for effective control. Volunteer corn and shattercane controlled with 3/4 pint Fusilade, 10 oz Assure. Cost: Fusilade \$11.50-\$16/50; Poast \$11.50, Assure \$11.00-\$13.00.
Fusilade 2000	1-1.5 pt		
Option	0.8-1.2 pt		
Poast	1 pt		
+ Dash + 28% UAN	1 qt + 1 gal		
Rescue (Alanap + 2,4-DB)	3 qt	Weeds under 30"; soybeans after first bloom	Effective primarily on sunflower, cocklebur and giant ragweed. Add surfactant 1/2% v/v. Cost: \$10.60.

**HARVEST AID**

Gramoxone Super	1.25 pt	When 65% if pods are brown	Desiccant. Follow label directions on water volume and X-77 additive. Be careful of drift. Do not graze for 15 days. Cost: \$6.50.
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**WEED RESPONSE TO POSTEMERGENCE HERBICIDES**

**Small grain**

**Response ratings:**

Weeds less than 4" tall except less than 2" for Brominal/Buctril treatments.  
 E = Excellent (90-100%)  
 G = Good (75-90%)  
 F = Fair (50-75%)  
 P = Poor (0-50%)

	blue mustard	erect knotweed	field pennycress	horseweed	kochia	lambsquarters	P. smartweed	prostrate pigweed	redroot pigweed	R. thistle	shepherd's purse	sunflower	tansy mustard	velvetleaf	wild buckwheat	prickly lettuce	wild vetch	soil persistence in months <sup>a</sup>
Ally + 2,4-D	E	F	E	-	G	E	F	E	E	E	E	G	E	G	G	E	F	1-22
Glean + 2,4-D	E	F	E	G	G	E	G	E	E	G	E	E	E	G	F	E	F	6-48
MCFA	F	P	G	P	F	G	F	F	F	F	G	F	G	G	P	F	F	1
Bronate	F	E	E	F	F	E	F	E	G	G	E	E	G	G	E	-	G	1
Buctril	G	E	E	G	F	G	G	F	G	E	E	E	G	E	G	F	F	1
2,4-D	E	F	E	F	F	E	G	E	E	G	E	E	E	E	P	E	G	1
2,4-D + Banvel	F	G	E	F	E	E	E	E	E	E	E	E	E	G	E	G	G	1-2
2,4-D + Buctril	G	E	E	F	G	E	E	E	E	E	E	E	E	E	E	E	G	1
Curtail	E	E	E	E	G	E	E	E	E	G	E	E	E	E	E	E	E	2-4
Tordon + 2,4-D	G	F	E	F	G	E	G	E	E	G	E	E	E	E	E	E	G	6-18

<sup>a</sup>The lower number applies to eastern Nebraska, the large number to western Nebraska. Values will vary with soil and rainfall or irrigation. For more information see "Herbicide Carryover", G74-180.



## BARLEY AND SPRING WHEAT

Herbicide	Rate Per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
2,4-D amine or 2,4-D LV ester	1-1.5 pt or 0.5-1 pt	Spring 5-leaf thru tillering	Follow with small grain on Glean treated fields. For wild buckwheat use Buctril as listed for winter wheat.
Glean + 2,4-D LV ester (Use only east of Hwy. 183)	0.17 oz + 8 oz	Spring with broadleaf weeds less than 2"	For Glean + 2,4-D and Ally + 2,4-D, add surfactant 1 pt/100 gallons of spray solution. Cost: 2,4-D \$.65-\$1.50; Glean + 2,4-D; Ally + 2,4-D \$3.00-\$3.50.
Ally + 2,4-D LV ester	0.10 oz + 8 oz	Spring before May 1	

### HARVEST AID

2,4-D LV ester	1 qt	Hard dough 7 or more days before harvest	Helps desiccate large broadleaf weeds. Only certain brands labeled for this use. Cost: \$2.50.
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## OATS

MCPA	0.5-1 pt	Weeds and oats in 3-4 leaf stage	Cost: MCPA \$.75-\$1.50; Buctril + 2,4-D or MCPA \$6.15-\$9.00;
Buctril 4EC or Buctril 2EC + 2,4-D amine or MCPA	0.5-0.75 pt or 1-1.5 pt + 0.5 pt		
2,4-D amine	0.5-1 pt	3-4 leaf stage of oats	Some injury from 2,4-D may be expected at any stage. Cost: \$1.00.
Glean + 2,4-D amine (Use only east of Hwy. 183)	0.17 oz + 8 oz	Broadleaf weeds less than 2" and 3-4 leaf stage of oats	Follow with small grain. Cost: \$2.85. Add surfactant 1 pt/100 gallons of spray solution. Cost: \$3.00.

### HARVEST AID

2,4-D LV ester	1 qt	Hard dough 7 or more days before harvest	Helps desiccate large broadleaf weeds. Only certain brands labeled for this use. Cost \$2.50.
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## WINTER WHEAT

Herbicide	Rate Per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
2,4-D amine or 2,4-D LV ester	1-1.5 pt or 0.5-1 pt	Early spring, before joint stage	Do not spray winter wheat until well tillered. Spray broadleaf weeds as soon as good growing conditions occur.
Bronate 4EC	1-1.5 pt		Most broadleaf weeds should be in 2-4 leaf stage or mustards in early rosette stage. Cost: \$6.15-\$9.00.
Buctril 4EC or Buctril 2EC + 2,4-D amine	0.5-0.75 pt or 1-1.5 pt + 0.5 pt	Wheat well tillered before canopy covers weeds	
Banvel + 2,4-D amine	2-4 oz + 0.75-1 pt	Spring, before wheat joints	Controls most troublesome broadleaf weeds. Cost: \$1.50-\$2.60.
Curtail	2.0 pt	Before boot stage	Do not use on soils with pH above 7.9. Use Glean in wheat, wheat-fallow or wheat-spring small grain rotations. For Glean + 2,4-D and Ally + 2,4-D, add surfactant 1 qt/100 gallons of spray solution. Cost: Curtail \$5.40; Glean + 2,4-D \$2.85-\$7.50; Ally + 2,4-D \$3.00.
Glean (Use only east of Hwy. 183) + 2,4-D LV ester	0.17-0.33 oz + 8 oz	Spring, 2-4" broadleaf weeds	
Ally + 2,4-D LV ester	0.10 oz + 8 oz		
2,4-D LV ester + Tordon 22K	0.5-0.75 pt + 1-1.5 oz	Spring after resumption of active growth to before joint stage	Use only on fields in continuous cereal or feed grain. Cost: \$1.40-\$2.00.

### HARVEST AID

2,4-D LV ester	1 qt	Hard dough 7 or more days before harvest	Rescue for control of late broadleaf weeds. Only certain brands labeled for this use. Cost: \$2.50.
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**PROSO MILLET Tilled Seedbed**

Herbicide	Commercial product per Acre			Remarks and Approximate Cost/A Broadcast
	Sandy	Silt	Silty-Clay	
	Loam	Loam	Loam	
	1 % OM	1 -2 % OM	2 % OM	
AATREX/ATRAZINE 4L	1-2 pt	2 pt	3 pt	EPP, PPSA, PPI or PRE...Do not use on foxtail millets. Cost: \$1.20-\$2.40.

**PROSO MILLET Postemergence**

Herbicide	Rate Per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
2,4-D amine + Banvel	0.67 pt + 0.25 pt	Proso in 2-5 leaf stage	Broadleaf weeds should be small. Observe all Banvel precautions when susceptible crops are within 1/2 mile of application site. Cost: \$2.25.

**SUNFLOWER Tilled Seedbed**

Herbicide	Commercial product per Acre			Remarks and Approximate Cost/A Broadcast
	Sandy	Silt	Silty-Clay	
	Loam	Loam	Loam	
	1 % OM	1 -2 % OM	2 % OM	
TREFLAN 4EC	1 pt	1.5 pt	2 pt	PPI...For best results immediately in- corporate. Read label for carryover precautions. Sensitive crops may be injured the following year. Cost: \$3.00-\$6.00
SONALAN 3 EC	1.5 pt	2 pt	3 pt	
PROWL	1.5 pt	2 pt	2.5 pt	
AMIBEN DS	2.4 lb	3 lb	3.6 lb	PPI or PRE...Incorporate into the upper 0-2 inches of soil. Cost: \$15.12- \$22.68.
LASSO 4EC	2 qt	2.75 qt	3.5 qt	Surface mix within 7 days before plant- ing or apply PRE within 5 days after planting. Cost: \$10.00-\$17.00.

**SUNFLOWER Postemergence**

Herbicide	Rate Per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
Poast + Dash + 28% UAN	1 pt + 1 gal + 1 qt	Shattercane and corn 12- 18"; other annual grasses less than 4"	Good coverage essential. Cost \$11.50.



## ECOFARMING

Ecofarming (Ecofallow) is a system based on quality winter wheat stubble. Good quality stubble is the result of growing a winter wheat variety competitive with weeds along with good disease and insect resistance. Proper planting date, fertilized according to needs, weed control in the growing wheat, harvested with minimum grain loss and good chaff and long straw distribution all contribute to the success of this program. Also required is excellent herbicide application. If non-selective herbicides are being applied, weather and weed conditions need to be correct for good results. Atrazine, Bladex, Extrazine II, Gramoxone Super, Cyclone, Roundup, Roundup RT, Landmaster II, Landmaster BW or Fallow Master will control established broadleaf weeds, grasses or volunteer wheat depending on plant height. Gramoxone Super can be substituted for Cyclone, but the rate needs to be increased. If grasses are less than 1" tall, atrazine, Bladex, or Extrazine II will provide acceptable control. Control is improved when crop oil concentrate or 28% nitrogen are added. When planting corn, 2,4-D ester may also be added for improved weed control. Cyclone should be applied with X-77 to grasses less than 4" tall. If grasses are taller than 4" and are growing vigorously, apply Roundup<sup>1</sup> or Landmaster<sup>1</sup>. Mixing some herbicides can create antagonism and decrease performance. Kill volunteer wheat and annual bromes in April to prevent soil moisture loss. Consider banding over the row in weedy fields at planting to compensate for disturbing the soil with the planter.

Volunteer winter wheat and/or downy brome or jointed goatgrass are not usually controlled in the fall and spring with July and early August atrazine treatments. A split after harvest treatment with the early application atrazine rate reduced so 1 lb/A of atrazine can be applied in September can be an effective control measure. If maximum rates of atrazine have been applied the previous fall do not add additional atrazine in the spring. Lower rates of atrazine (or none at all) need to be used on eroded areas, on soils with less than 1.2% OM, on soils with a pH of 6.8 or greater, some terraces, Canyon and Rosebud soils, and caliche outcroppings. High atrazine rates may carryover and destroy wheat on these areas. Total atrazine applied last year after wheat harvest plus this year's treatment should not exceed 3.75 lb 80W or 3 qt 4L/A for land to be planted to corn or sorghum. To receive the maximum benefits from ecofarming which includes moisture conservation and preventing weed seed production, treatments applied soon after harvest are usually the most successful. This is on the condition the weeds are not under drought stress and the straw has settled. At that time the weeds are smaller and easier to control with the nonselective translocating herbicide (Roundup, Roundup RT, Landmaster II, Landmaster BW, and Fallow Master). The non-selective, non-translocating herbicides (Cyclone, Gramoxone Super) are usually more effective in controlling small weeds and as they approach maturity.

Fields not treated after harvest with AAtrex/Atrazine are not true ecofallow. Therefore, herbicides might not be as effective and grain yields may be poorer than fields treated in fall. If moisture was present after harvest and weeds produced seed, weed pressure may be great enough that weed control with herbicides at rates that do not cause crop injury may be difficult. Also the moisture lost after harvest may be critical to the crop if the moisture during the winter and spring is limited. With these considerations and if one wishes to try the spring only treatment, the following is suggested: Add or increase the AAtrex/Atrazine to the maximum rate the crop can tolerate and still not cause damage to the succeeding crop. Be sure to add a grass herbicide. Add Cyclone after April 15 to 1.5 to 2 pt depending upon size of weeds. Rates suggested depending on soil type, pH, OM, time of application, and weed size. For corn use 1.5 to 2.5 qt/A AAtrex/Atrazine, for grain sorghum use 1.25 to 2.25 qt/A AAtrex/Atrazine, and for proso millet use 0.75 to 1 qt/A AAtrex.

### PLANTING ROW CROPS NO-TILL INTO LAST YEAR'S SPRING SMALL GRAIN STUBBLE (Oats, Spring Wheat, and Spring Barley)

The spring small grains are not as competitive with weeds as winter wheat. This is because the winter wheat is established in the fall and starts growth early in the spring before most weeds germinate and with good stands of winter wheat, most weeds except for winter annual weeds, are not a problem.

The quality and quantity of winter wheat stubble and straw is also superior and longer lasting than that of the spring grain crops. The winter wheat stubble and straw is more effective in suppressing weeds. Therefore, planting crops no-till into last year's small grain while it can be successful can also be a disaster if the herbicide treatments are not timely, properly selected, applied properly, and results evaluated to determine if retreatment or other weed control measures are necessary.

The most important part of this program is weed control after spring small grain harvest. Keeping the weeds from producing seed and using stored soil moisture is done with a timely herbicide treatment after harvest. The herbicide treatments listed for winter wheat after harvest can be used in small grain stubble in most situations (check label to be sure and also the recropping intervals for the crops in your rotation). Roundup, Roundup RT, Landmaster II, Landmaster BW, and Fallow Master are usually the choice nonselective herbicides for control of emerged summer annual grass weeds that are growing rapidly. As weeds approach maturity, Gramoxone Super and Cyclone have given good results if combined with Atrazine and/or Bladex. If Atrazine is used in the fall treatment, the next crop must be tolerant to it at the rate used (check label).

The spring herbicide treatment is necessary. Again, check the rates, etc. for the crop in the ecofarming section. Check labels and be sure to control volunteer crops. Also, do not disturb the herbicide treatment if a residual herbicide was applied last fall. Read all the general remarks under ecofarming.

SEE FOOTNOTES ON PAGE 38.



# ECOFARMING

Herbicide	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy Loam 1 % OM	Silt Loam 1 -2 % OM	Silty-Clay Loam 2 % OM		
<u>Winter Wheat Stubble, to be Seeded 2-3 Months Later to Winter Wheat (Continuous Wheat)</u>					
Bladex 90DF	2.2 lb	3.1 lb	3.1 lb	70 days prior to planting	For grasses more than 2" tall add 1.5-2.5 pt Cyclone <sup>1</sup> /A or 54-86 oz Landmaster II or BW <sup>1</sup> /A with Bladex. For broadleaf weeds, add 1 qt/A 2,4-D LV ester to Bladex treatment. If volunteer wheat develops later, treat with Roundup RT. To facilitate drilling stubble should be no taller than 12" with good straw and chaff distribution. Cost: Bladex 70 days \$11.55-\$17.50; 45 days \$10.15-\$12.25; Roundup \$9.25-\$17.50; Roundup RT, Landmaster II, Landmaster BW, Fallow Master \$6.25-\$8.50.
	1.8 lb	2.7 lb	2.7 lb	45 days prior to planting	
Roundup or Roundup RT <sup>1</sup>	1-2 pt	1-2 pt	1-2 pt	Postemergence; two or more applications required. Wait 30 days before planting wheat with Landmaster II or BW and Fallow Master	
Landmaster II or BW <sup>1</sup>	54-64 oz	54-64 oz	54-64 oz		
Fallow Master <sup>1</sup>	32-52 oz	32-52 oz	32-52 oz		

## Winter Wheat Stubble to be Seeded 12-14 Months Later to Winter Wheat "FALLOW AID"

Winter Wheat Stubble Free of Grass Weeds					
	1 pt	2 pt	2 pt		
AAtrex 4L	1 pt	2 pt	2 pt	Aug 10-Sept 10 (12 months or more before seeding)	Add 1 qt/A 2,4-D LV ester for broadleaf weed control. Volunteer wheat and downy brome control are better with late Aug. and early Sept. application. Cost: AAtrex \$1.20-\$2.40; Bladex + Atrazine \$9.75-\$12.75.
Bladex 90DF	1.8 lb	2.2 lb	2.2 lb		
+ Atrazine 4L	+	+	+		

## Winter Wheat Stubble with Grass Weeds

	1 pt	2 pt	2 pt		
AAtrex 4L	1 pt	2 pt	2 pt		Spray before weeds produce seed. Volunteer wheat and downy brome control are better with late Aug. and early Sept. application. Add 1 pt 2,4-D LV ester to AAtrex + Cyclone and 1 qt 2,4-D LV ester to Igran + AAtrex to improve control of emerged grass and broadleaf weeds. Cost: AAtrex + Cyclone \$7.65-\$14.55; Igran + AAtrex \$10.55-\$14.15; Bladex + Atrazine + Cyclone + 2,4-D \$13.00-\$19.20; AAtrex + Fallow Master \$15.35-\$29.60; AAtrex + Landmaster II \$11.80-\$18.40; AAtrex + Landmaster BW \$9.50-\$15.65.
+ Cyclone <sup>1</sup>	+	+	+		
1.5-2 pt	1.5-2 pt	1.5-2 pt	1.5-2 pt		
Igran 4L <sup>1</sup>	1.6-2 qt	1.6-2 qt	1.6-2 qt	Aug 10-Sept 10 (12 months or more before seeding)	
+ AAtrex 4L	+	+	+		
1 pt	2 pt	2 pt	2 pt		
Bladex 90DF	1.1 lb	1.1 lb	1.1 lb		
+ Atrazine 4L	+	+	+		
1 pt	1.5 pt	1.5 pt	1.5 pt		
+ Cyclone <sup>1</sup>	+	+	+		
1.5-2 pt	1.5-2 pt	1.5-2 pt	1.5-2 pt		
+ 2,4-D LV ester	+	+	+		
1 pt	1 pt	1 pt	1 pt		
AAtrex 4L	1 pt	2 pt	2 pt		
+ Fallow Master <sup>1</sup>	+	+	+		
32-70 oz	32-70 oz	32-70 oz	32-70 oz		
or Landmaster II or BW <sup>1</sup>	54-86 oz	54-86 oz	54-86 oz		

## Winter Wheat Stubble to be Seeded 4-5 Months Later to Winter Wheat "FALLOW AID"

	2.7 lb	2.9 lb	3.1 lb		
Bladex 90DF	2.7 lb	2.9 lb	3.1 lb	Mar-Apr 15 or before boot stage of weeds	Do not use on undercut stubble. Controls volunteer wheat, downy brome, jointed goatgrass and broadleaf weeds. Cost: \$15.60-\$24.90.
+ Cyclone <sup>1</sup>	+	+	+		
1.5-2 pt	1.5-2 pt	1.5-2 pt	1.5-2 pt		
Roundup or Roundup RT <sup>1</sup>	1 pt	1 pt	1 pt	Post in Apr or before boot stage of weeds	Roundup \$7.15; Roundup RT \$6.85; Landmaster II \$7.90; Landmaster BW \$8.25; Fallow Master \$8.00.
or Landmaster II or BW <sup>1</sup>	54 oz	54 oz	54 oz		
Fallow Master	44 oz	44 oz	44 oz		
2,4-D LV ester	1 qt	1 qt	1 qt	May-Aug for broadleaf weeds	Do not plant small grain for 20 days after treatment. Cost: \$5.65.
+ Banvel	+	+	+		
0.5 pt	0.5 pt	0.5 pt	0.5 pt		



## ECOFARMING

Herbicide	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy Loam 1 % OM	Silt Loam 1 -2 % OM	Silty-Clay Loam 2 % Om		
<b>Winter Wheat Stubble to be Planted to Corn, Sorghum, or Proso Millet the Next Spring</b>					
"Check Remarks Under Ecofarming"					
<b>Stubble Free of Grass Weeds</b>					
AAtrex/Atrazine 4L	2 qt or 1.5 qt	2.5 qt or 2 qt	3 qt or 2.5 qt	Jul-Aug or Sep-Nov for corn and sorghum	1 qt/A 2,4-D ester or 1 pt Banvel improves annual or perennial broadleaf weed and annual grass control. Spray before weeds produce seed. Use 1-1.2 qt Atrazine 4L in Panhandle. Cost: \$2.40-\$7.20.
AAtrex/Atrazine 4L	1.25 qt or 1 qt	1.5 qt or 1.3 qt	2 qt or 1.6 qt	Jul-Aug or Sep-Nov for proso millet	
<b>Stubble with Grass Weeds</b>					
AAtrex/Atrazine 4L	2 qt or 1.5 qt	2.5 qt or 2 qt	3 qt or 2.5 qt	Jul-Aug or Sep-Nov for corn and sorghum	Spray after wheat harvest and before weeds produce seed. If grasses such as barnyardgrass recover, kill weeds before they develop seed. Use 1-1.2 qt Atrazine in Panhandle. Cost: Atrazine + Cyclone \$10.00-\$19.35; Igran + AAtrex \$12.30-\$18.85; Igran + AAtrex + Cyclone \$14.10; \$23.00; AAtrex + Fallow Master \$15.85-\$27.70; AAtrex + Landmaster II \$13.60-\$20.30; AAtrex + Landmaster BW \$13.25-\$21.90.
+ Cyclone <sup>1</sup>	+ 1.5-2 pt	+ 1.5-2 pt	+ 1.5-2 pt		
AAtrex/Atrazine 4L	1.25 qt +	1.5 qt +	2 qt +	Jul-Aug for Proso millet	
+ Cyclone <sup>1</sup>	+ 1.5-2 pt	+ 1.5-2 pt	+ 1.5-2 pt		
AAtrex/Atrazine 4L	2 qt or 1.5 qt	2.5 qt or 2 qt	3 qt or 2.5 qt	Jul-Aug or Sep-Aug for corn and sorghum	
+ Igran 4L <sup>1</sup>	+ 1.6-2 qt	+ 1.6-2 qt	+ 1.6-2 qt		
AAtrex/Atrazine 4L	2 qt or 1.5 qt	2.5 qt or 2 qt	3 qt or 2.5 qt	Jul-Aug or Sep-Nov for corn and sorghum	Proso millet--Sep-Nov applications reduce AAtrex/Atrazine rate by 20%
with Igran 4L <sup>1</sup>	+ 1.6 qt	+ 1.6 qt	+ 1.6 qt		Volunteer wheat and downy brome control better with late Aug.- Nov.
+ Cyclone <sup>1</sup>	+ 1.5 pt	+ 1.5 pt	+ 1.5 pt		
AAtrex/Atrazine 4L	2 qt or 1.5 qt	2.5 qt or 2.0 qt	3 qt or 2.5 qt	Jul-Aug or Sep-Nov for corn and sorghum	Minimum Rates of Landmaster II with Atrazine 54 oz/A + 2 lb/A or less atrazine 64 oz/A + 3 lb/A or less atrazine Barnyardgrass control requires 70 oz/A of Landmaster
with Fallow Master <sup>1</sup>	+ 44-70 oz	+ 44-70 oz	+ 44-70 oz		
or with Landmaster II or BW <sup>1</sup>	or 54-86 oz	or 54-86 oz	or 54-86 oz		
AAtrex/Atrazine 4L	1.25 qt +	1.5 qt +	2 qt +	Jul-Aug for Proso millet	Minimum Rates of Fallow Master with Atrazine 44 oz/A + 2 lb/A or less atrazine 52 oz/A + 3 lb/A or less atrazine Barnyardgrass control requires 70 oz/A of Fallow Master
with Fallow Master <sup>1</sup>	+ 44-70 oz	+ 44-70 oz	+ 44-70 oz		
or with Landmaster II or BW <sup>1</sup>	or 54-86 oz	or 54-86 oz	or 54-86 oz		
<b>Winter Wheat Stubble to be planted to Soybeans the following Spring<sup>2</sup></b>					
(For Areas With Over 20" Rainfall)					
Landmaster II or BW <sup>1</sup>	54-86 oz or	54-86 oz or	54-86 oz or	2 applications	Volunteer wheat may emerge in fall or spring control with Roundup. Cost: Land-
or Fallow Master	or 40-70 oz	or 40-70 oz	or 40-70 oz		master II \$8.50-\$13.50;
or Roundup or Roundup RT	or 1-1.5 pt	or 1-1.5 pt	or 1-1.5 pt		Landmaster BW \$9.50-\$15.65; Fallow Master \$7.30-\$12.80; Roundup \$7.10-\$10.65; Roundup RT \$6.85-\$10.25;



## ECOFARMING

Herbicide	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy Loam	Silt Loam	Silty-Clay Loam		
	1 ½ OM	1 -2 ½ OM	2 ½ OM		
<b>Corn Planted in Winter Wheat Stubble Treated with AAtrex/Atrazine After Harvest<sup>1,2</sup></b> [If volunteer wheat and/or downy brome were not controlled in the fall, add 1.5-2 pt Cyclone <sup>1</sup> and spray in April or control earlier with Roundup, Roundup RT, or Landmaster II. Low rates (less than 2 lbs active) of Atrazine and/or Bladex with Cyclone usually do not give satisfactory volunteer wheat and downy brome control.]					
Bladex 4L	2 qt	2 qt	2.5 qt	0-30 days preplant	Do not use on sands and loamy sands with less than 1% OM. Cost: Bladex \$9.40-\$11.75; Bladex + Atrazine \$7.40-\$10.65; Bladex + Dual \$16.45+\$21.90.
Bladex 4L + AAtrex/Atrazine 4L	1.25 qt + 0.75 qt	1.5 qt + 1 qt	1.75 qt + 1 qt	0-15 days preplant	
Bladex 4L + Dual 8E	1.5 qt + 0.75 qt	1.75 qt + 1 qt	2 qt + 1 qt		
Dual	2 pt	2.5 pt	3 pt		If annual grasses produced seed in the grain stubble or if areas of field have history of high grass population use higher rates of Dual or Lasso. Cost: Dual \$15.65-\$18.75; Bullet \$14.00-\$15.00; Lasso + AAtrex \$11.70-\$15.90; Lasso + Bladex \$17.85-\$22.90; Bronco \$28.00-\$32.00; Bronco + Atrazine \$29.80-\$34.40.
Dual 8E + AAtrex 4L	1.5 pt + 0.75 qt	2 pt + 1 qt	2 pt + 1 qt	0-20 days preplant	
Bullet + AAtrex 4L or Bladex 4L	3.75 qt + 0.75 qt or 1.5 qt	4 qt + 1 qt or 1.75 qt	4 qt + 1 qt or 2 qt	0-20 days preplant	
Bronco	3.5 qt	4 qt	4 qt		
Bronco + AAtrex 4L	3.5 qt + 0.75 qt	4 qt + 1 qt	4 qt + 1 qt	0-7 days preplant	
<b>Proso Millet Planted in Stubble Treated with Atrazine After Harvest<sup>2</sup></b>					
AAtrex 4L	0.25 qt	0.5 qt	0.5 qt	0-20 days preplant	Add 1.5-2 pt Cyclone <sup>1</sup> if emerged weeds are present. Do not use AAtrex if soil pH is above 7.5. Cost: \$.60-\$1.20.
<b>Soybeans Planted into Winter Wheat Stubble Treated With Landmaster After Harvest<sup>2</sup></b> (For Areas With Over 20" Rainfall and Fields With Low Weed Pressure)					
Dual 8E + Sencor/Lexone 4L	Do not use	2 pt + 0.75 pt	2.15 pt + 0.9 pt	1-20 days preplant	Add 1.5-2 pt Cyclone <sup>1</sup> if there are emerged weeds. Russian thistle, kochia, sunflower, lambsquarters, and velvetleaf may be difficult to control. Follow Sencor/Lexone label for soil type. Check fields within 30 days after planting to determine if postemergence herbicides are needed. Cost: Dual + Sencor/Lexone \$22.00-\$27.00; Lasso + Sencor/Lexone \$22.95-\$27.55; Prowl + Sencor/Lexone \$16.35-\$18.25; Surflan + Sencor/Lexone \$25.20-\$28.85; Bronco + Sencor/Lexone \$41.45-\$43.35.
Prowl 4EC + Sencor/Lexone 4L	Do not use	3 pt + 0.75 pt	3 pt + 0.9 pt		
Surflan AS + Sencor/Lexone 4L	2 pt + 0.6 pt	2.25 pt + 0.75 pt	2.5 pt + 0.9 pt	20 days preplant	
Lasso 4EC or MT + Sencor/Lexone 4L	Do not use	2.5 qt + 0.75 pt	3 qt + 0.9 pt	0-5 days preplant	
Bronco + Sencor/Lexone	Do not use	4 qt + 0.75 pt	4 qt + 0.9 pt		



Herbicide	Commercial product per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Sandy Loam 1 % OM	Silt Loam 1 -2 % OM	Silty-Clay Loam 2 % OM		
<b>Grain Sorghum Planted in Winter Wheat Stubble Treated With AAtrex/Atrazine After Harvest<sup>2</sup></b> [If volunteer wheat and/or downy brome were not controlled in the fall, add 1.5-2 pt Cyclone <sup>1</sup> and spray early or control earlier with Roundup, Roundup RT, or Landmaster II. Low rates (less than 2 lbs active) of atrazine and/or Bladex with Cyclone usually do not give satisfactory volunteer wheat and downy brome control.]					
Bladex 4L	2 qt	2.5 qt	3 qt	28 days preplant	Add 1.5-2 pt Cyclone <sup>1</sup> or 54 oz Landmaster for emerged weeds if Bronco is not used. Seed must be treated with Concep for Dual or Screen for Lasso or Bronco treatments. Cost: Dual \$9.40-\$12.50; Dual + AAtrex \$10.65-\$14.90; Lasso + Atrazine \$12.00-\$15.90; Bronco \$28.00-\$32.00; Bronco + Atrazine \$29.20-\$34.40; Lasso + Bladex \$17.85-\$22.90; Bladex \$9.40-\$14.10; Bladex + Atrazine \$6.40-\$15.30; Bladex + Dual \$20.00-\$24.25;
	2.5 qt	3 qt	3.5 qt	35 days preplant	
Bladex 4L + Atrazine 4L	1.2 qt* + 0.3 qt*	1.5 qt + 0.4 qt	2 qt + 0.5 qt	14 days preplant	
Bladex 4L + Atrazine 4L	1.6 qt + 0.4 qt	2 qt + 0.5 qt	2.5 qt + 0.5 qt	28 days preplant	
Bladex 4L + Atrazine 4L	2 qt + 0.5 qt	2.5 qt + 0.5 qt	3 qt + 0.5 qt	35 days preplant	
Bladex 4L + Dual 8E	1.25 qt + 1.5 pt	1.6 qt + 1.5 pt	2 qt + 1.75 pt	14 days preplant	
Bladex 4L + Dual 8E	1.6 qt + 2 pt	2 qt + 2 pt	2.5 qt + 2 pt	28 days preplant	
Dual 8E	2.0 pt	2.25 pt	2.5 pt	0-20 days preplant	
Dual 8E + AAtrex 4L	1.5 pt + 0.5 qt	2 pt + 1 qt	2 pt + 1 qt		
Lasso MT + AAtrex 4L or Bladex 4L	2 qt + 0.5 qt or 1.5 qt	2.5 qt + 1 qt or 1.75 qt	2.5 qt + 1 qt or 2 qt	0-7 days preplant	
Bronco	3.5 qt	4 qt	4 qt		
Bronco + AAtrex 4L	3.5 qt + 0.5 qt	4 qt + 1 qt	4 qt + 1 qt		
Igran 80W4L	1.6 qt	1.8 qt	2.0 qt	1-7 days preplant	Use on loam or finer textured soils. Do not use on soils with less than 1% OM and pH greater than 7.4. Cost: Igran \$9.30-\$11.70; Igran + AAtrex \$11.25.
Igran 80W4L + AAtrex 80W	1.2 qt + 0.5 lb	1.6 qt + 0.75 lb	1.6qt + 1 lb		
*21 days or more preplant when used on sandy soil.					

\*21 days or more preplant when used on sandy soil.

**Winter Wheat Planted in Less Than Six Months in Winter Wheat Ecofallow Corn/Sorghum-Fallow Rotation**  
(Treat Ecofallow corn or sorghum stubble)

Bladex 4L + 2,4-D LV ester	3 qt + 1.5 pt	3 qt + 1.5 pt	3.5 qt + 1.5 pt	Mar-Apr 10	Early application necessary to control winter annuals. Use Roundup for control of downy brome before heading, volunteer corn or sorghum. Do not plant wheat for 20 days after using 2,4-D and Banvel. Follow-up weed control may be necessary. Cost: Bladex + 2,4-D \$16.00-\$18.35; Bladex + Cyclone \$20.25-\$22.60; Landmaster II \$5.85-\$7.90; Landmaster BW \$6.10-\$8.25; Roundup \$5.35-\$7.15; Roundup RT \$5.10-\$6.85; Fallow Master \$4.00-\$8.00; 2,4-D + Banvel \$5.65.
Bladex 4L + Cyclone <sup>1</sup>	2.5 qt + 1.5-2.5 pt	2.5 qt + 1.5-2.5 pt	3 qt + 1.5-2.5 pt	Apr 15-May 1	
Roundup or Roundup RT <sup>1</sup> or Landmaster II or BW <sup>1</sup> or Fallow Master	12-16 oz or 40-54 oz or 22-44 oz	12-16 oz or 40-54 oz or 22-44 oz	12-16 oz or 40-54 oz or 22-44 oz	Apr 15-May 1	
2,4-D LV ester + Banvel 4WS	1 qt + 0.5 pt	1 qt + 0.5 pt	1 qt + 0.5 pt	Broadleaf weeds less than 4 "	



## WEED RESPONSE TO SELECTED ALFALFA HERBICIDES

Response Ratings: E = Excellent (90-100%) G = Good (75-90%) F = Fair (50-75%) P = Poor (0-50%)													
	barnyardgrass	dandelion	downy brome	field pennycress	foxtail	kochia	lambsquarters	pigweed	R. thistle	sandbur	shepherd's purse	tansy mustard	crop tolerance
<b>Preplant</b>													
Balan	E	P	E	P	E	G	E	G	G	G	P	P	G
Eptam/Genep	E	P	E	P	E	G	G	G	P	G	P	P	G
<b>Seedling or Established</b>													
Butyrac/Butoxone	P	P	P	P	P	P	F	G	F	P	P	P	G
Kerb	G	P	P	P	G	G	F	P	G	G	P	P	G
Poast	E	P	G	P	G	P	P	P	P	E	P	P	E
Buctril	P	P	P	F-G	P	F	G	P	G	P	E	F-G	G
<b>Established</b>													
Karmex	E	F	F	G	E	E	G	G	F	F	E	E	G
Lexone/Sencor	G	G	E	E	F	E*	E	E	G	P	E	E	G
Paraquat	F	P	F	P	F	P	P	P	P	P	P	P	G
Sinbar	F	G	E	E	F	G	E	E	G	F	E	E	G
Velpar	F	G	E	G	P	G	G	G	G	F	E	E	G

\*Poor on Atrazine resistant kochia.

## ALFALFA

Area or Use	Herbicide	Commercial Product per Acre	Application Time	Remarks and Approximate Cost/A Broadcast
To Control Alfalfa, see Troublesome Weeds, Page 30				
ALFALFA (Establishing new stands)	Balan 1.5EC	3-4 qt	Preplant	Apply to dry surface soil and immediately incorporate by cross tandem discing or equivalent soil mixing. Use lower rate on sandy soil. Early legume injury may occur. Controls primarily annual grasses. Cost: Balan \$11.10-\$14.80; Eptam/Genep \$7.65-\$10.70.
	Eptam 7E/Genep	2.5-3.5 pt		
	Poast + Dash	1 pt + 1 qt		
ALFALFA (Seedling or established)	Butyrac or Butoxone (2,4-DB)	1-3 qt	Postemergence. Weeds less than 3" tall; alfalfa 2-4 trifoliate leaves	For broadleaf weeds. Rate varies with formulation and weed size. Do not use treated forage for 60 days. <b>Do NOT confuse with 2,4-D.</b> Use when temperature is above 50 F. Cost: \$3.50-\$10.50.
	Buctril	1-1.5 pt	Weeds less than 2" tall. Alfalfa at least 2 trifoliate leaves	Do not treat when temperature is above 70 F. Cost \$5.75-\$7.80.
	Kerb 50W	1-1.5 lb	Pre- or post-emergence to winter annual grasses late Oct thru mid-March	Controls downy brome in established or seedling alfalfa with 3 or more trifoliate leaves. Moisture necessary for chemical activity. Kerb helps control sandbur. Cost: \$14.70-\$22.05.



Area or Use	Herbicide	Commercial Product per Acre <sup>3</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
ALFALFA (Established one year or more)	Karmex 80W	1.5-3 lb	Late fall to early spring to dormant alfalfa	Primarily for winter annual weeds such as pennycress and other mustards. Sinbar, Velpar, and Lexone/Sencor also control downy brome. Do not use on sand; use lowest rates on soils with less than 1% organic matter. Karmex works best on high pH soils. Spring application of Karmex controls annual warm season grasses such as foxtail and barnyardgrass. Cost: Karmex \$6.00-\$12.00; Sinbar \$10.50-\$21.00; Lexone/Sencor \$9.50-\$19.00, Velpar \$23.60-\$71.00.
	Sinbar 80W	0.5-1 lb	Late fall or early spring	
	Lexone/Sencor DF	0.5-1 lb		
	Velpar	0.5-1.5 lb		

## PASTURES AND RANGES

GRASS SEEDLINGS (Cool and Warm season grasses)	2,4-D	1 pt	Grass 5-leaf stage or beyond	For broadleaf weeds. After grasses are well established, increase rate to 1 qt. Cost: \$.65-\$1.50.
WARM-SEASON GRASSES FOR SEED	AAtrex 4L	1.5-3 qt	Spring or fall before weed emergence	Do not use until second year after seeding. Less effective in heavy plant residues. Use lower rate on sandy soils. Cost: \$3.60-\$7.20.
BIG BLUESTEM AND SWITCHGRASS (Established & new seedlings)	AAtrex 4L	1-2 qt	Preemergence within 1 week after planting	Makes reduced seeding rates possible. Controls many annual grasses and broadleaf weeds. Use the lower rate on sandy, high pH or low organic matter soil. Do not cut for hay or graze for 3 months. Cost: \$4.80.
RANGELAND	AAtrex 4L	1-2 pt	Fall only	Controls winter annual bromes. Injures cool season grasses. Do not hay or graze for 7 months. Reduce grazing pressure to improve grass stands. Apply only on neutral to acid soils. Cost: \$1.20-\$2.40.
NATIVE GRASS RENOVATION (Eastern Nebraska on non-sandy soil with 1% or more organic matter)	AAtrex 4L	2 qt	Fall or early spring	To renovate native pastures containing big bluestem and switchgrass. If remnants are sparse, sod seed. Controls bluegrass, most annual grasses and broadleaf weeds, suppresses smooth brome. Do not cut for hay. Cost: \$4.80.
SOD SEEDING (Legumes into grass)	Gramoxone Super	1.5-3 pt	Before or immediately after legume seeding	Suppresses established sod. Seed legumes with a sod seeder. If grass is less than 3" use lower rate. During year of establishment, graze intensively for short periods only. Add X-77 surfactant. Cost: \$6.50-\$12.20.
SOD SEEDING (Native grass planted no-till into short grass range)	Roundup	1 qt in 10 gal or less water/A	Aug the season prior to seeding	Suppresses established sod. Seed grasses with a sod seeder. Do not graze seeded area until dormancy after second growing season. Apply in no more than 10 gallons water per acre and add 2 qt X-77 and 17 lb ammonium sulfate per 100 gallons. Cost: \$9.00-\$17.50.
ANNUAL OR BIENNIAL BROAD-LEAF WEEDS IN PASTURES AND RANGES (For specific weeds see page 30-36.)	2,4-D	1 qt	Rosette stage in fall or when weeds are small in spring	Withhold milk cows from grazing treated areas for 7 days. With Banvel mixture do not harvest hay for dairy animals within 37 days. Do not use Banvel within 1/2 mile of sensitive crops. Combination controls greater variety of weed species. Cost: 2,4-D \$2.00; 2,4-D + Banvel \$5.15.
	2,4-D + Banvel	1 qt + 0.5 pt		
	Banvel	0.5 pt		
PERENNIAL BROADLEAF WEEDS IN PASTURES AND RANGES (Includes vervains, broom snakeweed, western ironweed, woolly loco, Flodman thistle, and wavy leaf thistle. For other weeds see page 32 - 38.)	2,4-D	1.5 qt	At bud stage of predominant weed. Oct or Apr for dandelions and musk thistle	Annual treatment for 2-3 years may be necessary. Withhold lactating dairy cows from treated areas for 7 days. With Banvel mixture do not harvest hay for dairy animals for 37 days. Do not use Banvel within 1/2 mile of sensitive crops. Cost: 2,4-D \$3.00; 2,4-D + Banvel \$8.35.



## CRP ACRES

## PREPLANT OR PREEMERGENCE

Herbicide	Commercial product/A	Application time	Remarks and approximate cost/A
Roundup	1 pt	Before or at grass seeding	Will control most emerged seedling grass and broad-leaf weeds. Apply Roundup and Deploy in 10 GPA carrier or less and include surfactant at 0.5% v/v. Ammonium sulfate added at 17 lbs per 100 gal solution improve Roundup and Deploy performance. Add Surfactant at 0.25% v/v to Cyclone. Cost: Roundup \$9.00; Cyclone \$9.00-\$11.70; Deploy \$7.00.
Cyclone	1.5-2 pt		
Deploy	1 pt		
2,4-D amine or ester	1-2 pt	At least 30 days before grass seeding	Controls most broadleaf annual weeds. Both treatments may injure grass seedlings if applied less than 30 days before planting. Cost: 2,4-D \$1.25-\$2.50; Landmaster \$7.00-\$12.60.
Landmaster II	40-72 oz		
Glean 75 DF*	0.33 oz	Preemergence to grasses (before or after grass seeding)	Controls most broadleaf weeds. May be tank mixed with Roundup plus surfactant to control emerged grass weeds. Will injure legumes. Cost: \$5.65.
AAtrex 4L	1-2 qt	After planting but before grass emerges	For use on switchgrass and big bluestem stands only. Will injure or kill legumes in grass/legume mixtures. Use lower rate on high pH soils with less than 1% organic matter. May be tank mixed with Roundup or Cyclone to control emerged weeds at application. Cost: \$2.40-\$4.80.
Prowl	1-2 pt	PPI or PRE	For use on legumes only. Incorporate immediately for best results. Cost: Prowl \$2.30-\$4.60; Treflan \$3.00-\$4.50.
Treflan	1-1.5 pt	PPI	

## POSTEMERGENCE

2,4-D amine or 2,4-D ester	1 pt or 0.5 pt	After 5-leaf stage of grass	Controls most broadleaf weeds. Reduce rate 25% if used on warm-season grasses. Will injure or kill legumes. Cost: \$2.50.
Banvel + 2,4-D	0.25-0.5 pt + 0.5 -1 pt	After 5-leaf stage of grass	Controls most broadleaf weeds. Use lower rates warm-season grasses. Do not use on grass/legume mixtures. Established grasses may be treated with 0.5-1 pt Banvel + 0.5-2 pt 2,4-D for perennial weed control. Cost: \$3.75-\$7.60.
Buctril 2EC	1.5-2 pt	After 3-leaf stage of grass	Controls many broadleaf weeds. Apply in minimum 10 GPA by air. May be used on grass/legume mixtures after third trifoliate leaf stage of alfalfa. May be tank mixed with 2,4-D or MCPA for improved control. Tank mix may injure or kill legumes. Cost: \$8.40-\$11.25.
Curtail	2-4 pt	Established grasses	Use only on grasses established one season or longer. Controls most broadleaf weeds including thistles. Do not use on grass/legume mixtures. Cost: \$5.40-\$10.80.
Glean 75 DF*	0.33-0.5 oz	After 3-4 leaf stage of grass	Controls most broadleaf weeds. Do not use on soils with pH greater than 7.9. Do not use on grass/legume mixtures. Add surfactant at 0.25% v/v when weeds are emerged. Cost: \$5.65-\$8.50.
Ally DF**	0.1 oz	After 3-4 leaf stage of grass	Controls most broadleaf weeds. Do not use on soils with pH greater than 8.0. Do not use on grass/legume mixtures. Add surfactant at 0.25% v/v. Cost: \$2.50.

For established grass, see Pasture and Range Section, page 24.

For specific weeds, see Troublesome Weeds Section, page 32 - 38.

\*Glean may be applied preemergence (at not more than 0.33 oz/acre) or postemergence (at not more than 0.5 oz/acre) to the following grasses:

Blue grama, bluestem, meadow or smooth brome grass, buffalograss, galleta, green needlegrass, indian ricegrass, prairie sandreed, sand dropseed, sand lovegrass, side oats grama, switchgrass, wheatgrass, and Russian or beardless wild-rye. Glean may be applied to tillered bentgrass and orchardgrass postemergence only and at not more than 0.5 oz/acre.

\*\*Ally can be applied postemergence only at 0.1 oz/acre to the following grasses:

Meadow and smooth brome grass, orchardgrass, Russian wild-rye, and crested, intermediate, western, tall, bluebunch, pubescent, slender Siberian, streambank, and thickspike wheatgrass.



## NON-CROP AREAS

Area or Use	Herbicide <sup>3</sup>	Commercial Product <sup>5,6</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
ROADSIDES (Broadleaf weed control)	2,4-D	1 qt/A	Broadleaf weeds 2-6"	Repeat treatments may be necessary. Do not use Banvel or Tordon near susceptible plants/trees. Cost: 2,4-D \$2.00; 2,4-D + Banvel \$8.35; Tordon \$46.00.
	2,4-D + Banvel	1 qt/A + 1 pt/A		
	Banvel	1 pt/A		
GRASS SUPPRESSION	Oust	1 oz/A	Grass 6"-12"	Do not apply to bare soil. May move if soil moves. Suppresses height and heading of brome grass and other cool season grasses. Do not use year after year in order to avoid development of resistant weeds. Trace amounts can harm crops and gardens. Imperative that label directions are read and followed. Cost: \$7.50-\$15.00.
IRRIGATION DITCHBANKS	Karmex 80W	5-10 lb/A	Soon after ditches are open. Treat before weeds appear or soon thereafter	Use enough water to insure good coverage. Use 50 mesh to coarser screens. May injure nearby trees and shrubs. Cost: Karmex \$23.00-\$46.00; AAtrex/Atrazine \$14.40; Princep \$23.40.
	AAtrex/Atrazine 4L or Princep 4L	1.5 gal/A or 1.5 gal/A		
	2,4-D	1 qt/A	Broadleaf weeds 2-6"	Cost: \$2.00.
	Roundup 3WS	1-4 qt in 10 gal or less water/A	Postemergence when good growth is present	Nonselective. No residual control. Use the lower rate on annual weeds and perennial grasses, the higher rates on perennial broadleaf weeds. Cost: \$20.50-\$82.00.
	Roundup in Herbie Applicator	1 qt in 1 gal water		
LONG TERM VEGETATION CONTROL	Arsenal	1 oz/1000 sq ft	Treat before weeds appear or soon thereafter	Kochia has become resistant to triazines in some areas. Consult label for specific instructions on problem weeds and conditions. Do not use near root zones of trees or other desirable plants. Do not use on land subject to erosion unless erosion is controlled. Cost/1000 sq ft: Pramitol \$8.40; Hyvar \$3.25; Krovar \$4.30; Atrazine \$.30-\$.60; Karmex \$1.15-\$2.30; Princep \$.50-\$1.00; Spike \$2.50-\$5.00; Arsenal \$1.00.
	Pramitol 25E or Pramitol 5PS	4 pt/1000 sq ft or 10-20 lb/1000 sq ft		
	Hyvar X 80W or Hyvar XL 2WS	0.5 lb/1000 sq ft or 0.75 pt/1000 sq ft		
	Krovar I 80W	0.5 lb/1000 sq ft		
	Atrazine 4L	0.25-0.5 pt/1000 sq ft		
	Karmex 80W	0.25-0.5 lb/1000 sq ft		
	Princep 4L	0.25-0.5 pt/1000 sq ft		
	Spike 80W or Spike 5G	0.12-0.25 lb/1000 sq ft or 2-4 lb/1000 sq ft		
	Roundup	2 qt/A in 10 gal or less water/A		
	Amitrol-T/ Cytrol-T 2WS	2 gal/A		
PERENNIAL GRASSES (including brome grass and quack-grass)			Full foliage	Nonselective. Perennial grasses should have good top growth. Kills all annuals. Cost: Roundup \$32.00; Amitrol-T \$40.00.



## WEED RESPONSE TO HERBICIDES IN SELECTED CROPS

Plant response may be altered by growing conditions, genetic variation in crops and weeds, soil type, pH, organic matter and rates of application. Ratings may vary from season to season and geographical areas within the state. Ratings apply when herbicides are used at rates suggested.

### Response Ratings:

Ratings are for light to moderate weed populations and favorable conditions. High weed populations or adverse conditions will reduce control.

E = Excellent (90-100%)

G = Good (75-90%)

F = Fair (50-75%)

P = Poor (0-50%)

Herbicide and Application Site

(PPI or PRE on soil or POST on foliage)

annual morning glory  
barnyardgrass  
cocklebur  
crabgrass  
fall panicum  
foxtail  
jimsonweed  
kochia  
lambquarters  
nightshade  
pigweed  
ragweed  
R. thistle  
sandsbur  
shattercane/sorghum  
smartweed  
sunflower  
velvetleaf  
w. buckwheat  
crop safety<sup>a</sup>  
soil carryover potential in months<sup>b</sup>

### Potatoes

Eptam/Genep-ppi	G	E	P	E	E	E	P	F	G	E	G	F	P	E	E	P	P	F	G	1-2
Eptam/Genep + Treflan or Prowl-ppi	F	E	P	E	E	E	P	E	G	F	G	P	F	E	E	P	P	F	E	6-12
Sencor/Lexone-pre	P	G	F	G	G	G	G	F	E	F	E	E	G	P	P	G	F	G	E	2-6
Sencor/Lexone + Dual or Turbo-pre	P	E	F	F	E	E	P	F	E	G	E	E	G	F	P	G	F	G	E	2-6
Sencor/Lexone-post	P	P	G	F	P	F	P	G	E	P	E	G	E	F	P	G	G	F	P	2-6
Poast-post	P	E	P	E	E	G	P	P	P	P	P	P	P	E	E	P	P	P	E	0

### Fieldbeans

Basagran-post*	F	P	E	P	P	P	E	P	P	P*	P	G	P	P	P	E	E	G	G	E	0
Dual + Treflan-ppi	F	E	P	E	E	E	P	F	G	G	G	P	F	E	G	P	P	P	F	E	6-12
Eptam/Genep or Eptam + Sonalan-ppi	G	E	P	E	E	E	P	F	G	E	G	F	P	E	E	P	P	P	F	G	1-2
Eptam/Genep + Treflan or Prowl-ppi	F	E	P	E	E	E	P	E	G	G	G	P	F	E	E	P	P	P	F	E	6-12
Eptam/Genep + Dual-ppi	F	E	P	E	E	E	P	F	G	E	G	P	F	E	G	P	P	P	F	E	2-5
Eptam/Genep + Lasso-ppi	F	E	P	E	E	E	P	G	G	E	E	P	F	E	G	P	P	P	F	E	2-4
Lasso or Dual-pre	P	E	P	E	E	E	P	P	G	G	G	G	P	F	P	P	P	P	P	G	2-4
Lasso + Treflan-pre	F	E	P	E	E	E	P	G	G	G	G	P	F	E	G	P	P	P	F	E	6-12

### Sugar Beets

Antor-pre	P	E	P	E	G	E	P	P	F	G	G	P	P	G	F	P	P	P	P	G	2-3
Eptam/Genep layby	G	E	P	E	E	E	P	F	G	E	G	F	P	E	E	P	P	P	F	G	1-2
Nortron-pre	-	G	F	G	G	G	-	G	G	F	E	-	F	F	-	G	P	-	G	G	5+
Nortron + Antor-pre	P	E	P	E	G	E	P	G	E	F	E	P	F	G	F	G	P	P	G	G	4
Ro-Neet-pre	P	E	P	E	E	E	P	P	G	G	E	F	P	G	G	P	P	P	P	G	1-2
Betanal + Betanex or Betamix-post	F	P	-	P	P	P	F	F	G	F	G	F	P	P	P	F	F	P	G	G	1
Betanex-post	F	P	-	P	P	P	P	F	G	F	G	F	P	P	P	F	F	P	F	G	1
Herbicide 273-post	P	F	-	P	P	F	P	F	F	F	P	P	P	P	G	G	P	P	G	G	1
Poast-post	P	E	P	E	E	G	P	P	P	P	P	P	P	E	E	P	P	P	P	E	0
Stinger	P	P	G	P	P	P	F	P	P	P	P	G	P	P	P	F	G	P	G	G	12

### Onions

Dacthal 75W-pre	P	G	P	E	P	E	P	P	E	F	E	P	P	G	P	P	P	P	P	G	3-8
Buctril 2EC-post	E	P	G	P	P	P	E	F	G	E	G	E	G	P	P	E	E	E	E	G	0
Goal-post	P	P	G	P	P	P	-	F	G	F	G	-	F	P	P	-	-	-	-	G	1-2
Fusilade-post	P	E	P	E	E	G	P	P	P	P	P	P	P	E	E	P	P	P	P	E	0

### Vine Crops

Dacthal 75W-pre	P	G	P	E	P	E	P	P	E	F	E	P	P	G	P	P	P	P	P	G	3-8
Treflan-pre	P	E	P	E	E	E	P	G	G	P	G	P	G	G	G	P	P	P	P	G	6-12
Prefar 4E + Alanap-pre	P	E	G	E	F	E	-	-	G	-	G	G	-	F	F	-	-	-	-	G	4-6
Poast-post	P	E	P	E	E	G	P	P	P	P	P	P	P	E	E	P	P	P	P	E	0

<sup>a</sup>Crop varieties vary in their response to herbicides.

<sup>b</sup>The lower number applied to eastern Nebraska, the large number of western Nebraska. Values will vary with soil and rainfall or irrigation. For more information see "Herbicide Carryover", G74-180.

\*Good control of hairy nightshade.



## POTATO AND FIELDBEAN HERBICIDES

Herbicide	Commercial product per Acre			Application Time, Remarks and Approximate Cost/A Broadcast
	Sandy	Silt	Silty-Clay	
	Loam	Loam	Loam	
	1 % OM	1 -2 % OM	2 % OM	
Potatoes				
EPTAM 7E/GENEP	3.5 pt	3.5 pt		PPI, DRAG-OFF or LAYBY...Apply and incorporate before planting or after potato plants have emerged. The Superior variety is sensitive to EPTC. Cost: \$10.70.
EPTAM 7E/GENEP +	2.5 pt +	2.5 pt +	2.5 pt +	PRE UP TO and JUST BEFORE DRAG-OFF...Incorporate chemical immediately after application. Set incorporation equipment so that herbicide is not concentrated over the row. The Superior variety is sensitive to EPTC and injury may occur. Cost: Eptam/Genep + Treflan \$13.15; Eptam/Genep + Prowl \$11.40-\$12.55.
TREFLAN 4EC	1 pt	1 pt	1 pt	
EPTAM 7E/GENEP +	3 pt +	3 pt +	3 pt +	
PROWL 4EC	1 pt	1.5 pt	1.5 pt	
SENCOR/LEXONE 4L	0.5-1 pt	0.5-1 pt	0.5-1 pt	POST BEFORE WEEDS ARE 1" TALL...Highest rate of sunflower and kochia. Do not use on red skinned or early maturing white varieties or within 60 days of harvest. Cost: \$6.30-\$12.60.
SENCOR/LEXONE 4L	1 pt	1.5 pt	2 pt	PRE, PPI, or DRAG-OFF AS PER LABEL...Do not plant treated area to sensitive crops such as onions or sugar beets during next growing season. Superior and Atlantic varieties are sensitive to Sencor/Lexone. Cost: Dual + Sencor/Lexone \$25.60-\$28.80; Sencor/Lexone \$12.60-\$25.20; Genep + Sencor/Lexone \$23.10; Prowl + Sencor/Lexone \$15.10-\$16.35; Turbo \$18.75-\$32.80.
SENCOR/LEXONE 4L with	1 pt +	1 pt +	1 pt +	
DUAL 8E or with	2 pt or	2.5 pt or	2.5 pt or	
GENEP 7E or with	3.5 pt or	3.5 pt or	3.5 pt or	
PROWL	1 pt	1.5 pt	1.5 pt	
TURBO	2-2.5 pt	3-3.5 pt	3-3.5 pt	
POAST	1-1.5 pt	1-1.5 pt	1-1.5 pt	Most susceptible weeds less than 4" tall. Potatoes tolerant at all growth stages. Add 2 pints of crop oil concentrate. Good coverage essential for effective control. Cost: \$10.50-\$15.50.

OTHER REGISTERED TREATMENTS FOR POTATOES: Dacthal (PRE), Dowpon M (PRE), Lorox (PRE), and Treflan (PRE).

## Fieldbeans

BASAGRAN 4WS + CROP OIL CONC. on some species	0.75-1 qt	0.75-1 qt		POSTEMERGENCE...At least one trifoliolate leaf fully expanded. Broadleaf weeds 2-4" tall. Weeds showing moisture stress or over 6" tall are poorly controlled. Controls hairy but not eastern black nightshade. Cost: \$11.75-\$16.25.
EPTAM 10G or EPTAM 7E/GENEP	30 lb or 3.5 pt	30 lb or 3.5 pt		PPI...Apply to dry surface soil; immediately incorporate with disc or field cultivator. Apply layby at time of last cultivation as a directed spray or direct granules to the base of the plants before bean pods start to form. Do not feed or pasture vines within 45 days after application. Cost: \$10.70.
EPTAM 7E/GENEP with SONALAN 3EC or with PROWL 4EC	2.5 pt + 2 pt or 2 pt	2.5 pt + 2 pt or 2 pt		PPI...Apply to dry surface soil, immediately incorporate with a disc or field cultivator. Sonalan may injure sugar beets and sorghum the following year. Plowing reduces injury. Cost: Eptam/Genep + Dual \$17.00; Eptam/Genep + Lasso \$18.40; Eptam/Genep + Sonalan \$14.20; Sonalan + Dual \$17.60; Sonalan + Lasso \$19.00; Eptam/Genep + Prowl \$12.60.
EPTAM 7E/GENEP or SONALAN 3EC with DUAL 8E or with LASSO 4EC	2.5 pt or 2 pt + 1.5 pt or 4 pt	2.5 pt or 2 pt + 1.5 pt or 4 pt		
EPTAM 7E/GENEP + TREFLAN 4EC TREFLAN 4EC with DUAL 8E or with LASSO 4EC	2.25 pt + 1 pt 1 pt + 1.5 pt or 4 pt	2.25 pt + 1 pt 1 pt + 1.5 pt or 4 pt		PPI...Do not follow with fall seeded small grain. Sugar beets and sorghum may be injured the next year. Plowing reduces injury. Cost: Lasso + Treflan \$12.35; Dual + Treflan \$11.95; Eptam/Genep + Treflan \$9.40.
LASSO 4EC or DUAL 8E	3 qt or 2.5 pt	3 qt or 2.5 pt		PRE, PPI or SURFACE MIX...Surface mixing will improve weed control and reduce crop injury. Cost: Dual \$15.65; Lasso \$15.00.

OTHER REGISTERED TREATMENTS FOR FIELDBEANS: Amiben (PRE), Dacthal (PRE), Furlor (PRE), Treflan (PPI).



# SUGAR BEET HERBICIDES

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Herbicide	Commercial Product per Acre						Application Time, Remarks and Approximate Cost/A Broadcast
	Sandy Loam 1 % OM			Silt Loam 1 -2 % OM			
	Broad-	Product/7" Band		Broad-	Product/7" Band		
	cast	22" Row	30" Row	cast	22" Row	30" Row	

## PPI or PRE

ANTOR 4ES	3 qt	30 oz	22 oz	4 qt	41 oz	30 oz	PPI or PRE...Furrow irrigation apply preplant and incorporate 1 to 2"; for sprinkler irrigation apply preemergence at planting or shortly after and immediately irrigate with 0.5" water. Cost: Antor \$28.00-\$46.60; Nortron \$35.45-\$59.00; Nortron + Antor \$21.10-\$26.40.
NORTRON 1.5EC	3 qt	30 oz	22 oz	5 qt	51 oz	36 oz	
NORTRON 1.5EC	2.5 qt	25 oz	18 oz	4 qt	40 oz	29 oz	
+ ANTOR 4ES	+ 1 qt	+ 10 oz	+ 7 oz	+ 1.5 qt	+ 15 oz	+ 11 oz	
RO-NEET 6E	2.5 pt	12 oz	9 oz	3.3 pt	17 oz	12 oz	PPI...Immediately mix into dry soil with power incorporator 2 to 3". Crop injury may occur on sandy soils below 1% organic matter or with highly saline or alkaline soil conditions. Use lower rate if postemergence treatments are planned. Primarily annual grass control. Cost: \$15.80-\$25.90.
or	or	or	or	or	or	or	
RO-NEET 10G	18 lb	5.75 lb	4 lb	25 lb	8 lb	5.75 lb	

## Layby

EPTAM 7E/GENEP	2.25 pt	11.5 oz	8 oz	3.5 pt	18 oz	13 oz	Apply Eptam after thinning and clean cultivation; incorporate immediately 2" deep with a cultivator. Cost: \$6.85-\$10.70.
or	or	or	or	or	or	or	
EPTAM 10G	20 lb	6 lb	4.5 lb	30 lb	9.5 lb	7 lb	
TREFLAN 4EC	1 pt	5 oz	3.5 oz	1.25 pt	6 oz	4.5 oz	Sugar beets 2-6" tall. Cover exposed beet roots with soil before Treflan application to reduce root girdling. Cost: \$2.50-\$3.00.

## Postemergence

Herbicide	Rate Per Acre			Application Time	Remarks and Approximate Cost/A Broadcast
	Pints Brdcst	Ounces Per 7" Band	22" Row 30" Row		
Betamix 1.3EC	2 3	10 15	7.5 11	Any stage of sugar beet growth. Weeds cotyledon stage. <u>Repeat in 5-7 days.</u>	Use lower rates on small beets or when using a split-application. Works best on Nortron or Ro-Neet treated fields but wait till 4-leaf stage if beets show signs of injury. Treat in late afternoon to reduce injury. Use highest rate as weed size increases. Cost: Brdcst \$37.10-\$48.20; 22" row \$11.60-\$15.30; 30" row \$8.25-\$11.00.
Betamix 1.3EC	4.5-6	23-31	17-22	Sugar beets past two true leaf stage	
Herbicide 273	2-4	10-21	8-15	Beets 4-6 true leaves; weeds less than 5" tall	Use higher rates on large weeds. Apply when temperatures are above 60 F. Do not apply when sugar beets are past the 8 leaf stage of growth. Primarily for wild buckwheat and sunflower control. Cost: Brdcst \$9.90-\$19.80; 22" row \$3.15-\$6.35; 30" row \$2.30-\$4.55.
Poast	1-2	5-10	3-7	Grass 1-3"	Rates listed for a broadcast treatment. Use higher rate for larger grass or grass under drought stress. Requires 1 qt crop oil concentrate per acre. See label. Cost: \$11.50-\$21.50.
Stinger	0.25-0.66	1.3-3.4	1.0-2.5	Beets 2-8 true leaves; Canada thistle rosette to pre-bud.	Use lower rates for annual weeds and higher rates for Canada thistle. Do not plant or rotate for 1 year after treatment to any crop except small grains. Cost: \$18.00-\$48.00

OTHER REGISTERED TREATMENTS FOR SUGAR BEETS: Betanal (POST), Endothall (POST), Endothall (PRE), Eptam (PPI), Pre-Beta (PPI), Pyramin W (PRE), Pyramin W + Dowpon M (POST), Pyramin W + Endothall (PRE), Pyramin W + TCA (PRE), TCA (PRE), Tillam (PPI).



## VINE CROPS AND ONIONS

Herbicide	Commercial Product per Acre	Application Time	Remarks and Approximate Cost/A Broadcast
<b>Melons and Cucurbits</b>			
Prefar 4E + Alanap-L	4-6 qt + 4-8 qt	Preplant	Immediately incorporate to a depth of 1". Use lower rate on sandy soil. Controls many annual grasses and broadleaf weeds. Cost: \$45.50-\$75.50.
Dacthal 75W	8-14 lb	Crop 4-5 true leaves	Crop should be weeded prior to application. Controls annual grasses. Use lower rate on sandy soil. Cost: \$36.00-\$63.00.
Treflan	1-1.5 pt	Crop 3-4 true leaves	Direct material to soil between the rows and mechanically incorporate. Controls germinating annual grasses and some broadleaves. Use the lower rate on sandy soils. Cost: \$3.00-\$4.50.
Poast	1-1.5 pt	Grasses most susceptible under 4"	Don't apply within 14 days of harvest. Crop oil concentrate and good coverage essential for effective control. Cost: \$10.50-\$15.50.

Dacthal 75W	8-14 lb	Preemergence at seeding or transplanting and/or at layby	Preplant incorporation not recommended. Use lower rate on soils with less than 1% organic matter. Cost: \$36.00-\$63.00.
Buctril 2EC	1-1.5 pt	Postemergence; onions should have 2-5 true leaves	Water volume is important. Use 50-70 gal of water per acre. Do not add surfactants. Cost: \$5.65-\$8.50.
Goal 1.6E	0.6-1.25 pt	Onions 2 fully developed true leaves; weeds 2-4 leaves	Do not apply to onions under drought stress. Do not mix Goal with oil, surfactant or fertilizer. Cost: \$4.30-\$9.00.
Fusilade 2000	1.5	Shattercane and corn 12"-18". Other annual grasses less than 4"	Crop oil concentrate and good coverage essential for effective control. Don't tank mix with Buctril. Cost: \$15.50.

## Onions

Herbicide	Rate Per Acre	Application Time	Remarks and Approximate Cost/A Broadcast
*Casoron 50W or Casoron 4G or *Norosac 4G	8 lb or 100 lb or 100 lb	Preemergence on trees at least 2 years old	Apply 20" band on each side of tree row after trees are planted. Some injury to trees may result on low organic matter soil. Cost: \$122.00.
Dacthal 75W	14-16 lb	Preemergence	Application must be made before weed seed germination. Two applications may be necessary for season long weed control. Cost: \$63.00-\$72.00.
2,4-D amine	1 qt	Postemergence to weeds	Keep off new bark and foliage. Controls broadleaf weeds. Cost: \$2.00.
*Fusilade 2000 or *Poast	2 pt or 2 pt	Postemergence before grasses tiller	Use on fruit trees limited to nonbearing trees. Add 1 qt crop oil concentrate per acre. Thorough coverage required. On ornamentals use nonionic surfactant with Fusilade. Cost: Fusilade \$21.50; Poast \$21.50.
Goal 2E	2-4 qt	Pre- or post-emergence to weeds	Conifers only. Grasses should be treated before they are beyond 2-leaf stage. Use before bud break or after new growth hardens. Cost: \$36.00-\$72.00.
*Karmex 80W	2.5-5 lb	Preemergence on trees at least 2 years old	Karmex use limited to conifers, honey locust, green ash, apples and peaches. Cost: \$10.00-\$20.00.
*Gramoxone Super	1.5-3 pt	Directed post-emergence	Nonselective contact herbicide. <b>Keep spray off tree foliage.</b> Add X-77 surfactant. Cost: \$6.50-\$12.20.
*Princep 80W	1-5 lb	Preemergence on trees at least 2 years old; use only on fruit trees planted 1 year or longer	Kochia may become resistant with repeated use. Use 1 lb on sandy, low organic matter, or high pH soils. Apply 20" band on each side of tree row after trees are planted. Some injury to trees may result on low organic matter soils. Gives poor control of Russian thistle. Cost: \$4.90-\$16.25.
*Roundup	1-4 qt in 10 gal water/A	Directed post-emergence	<b>Do not spray green bark or foliage.</b> Spray may contact brown bark. Use lower rate on annuals. Cost: \$17.50-\$68.00.
*Solicam 80WP	2.5-5.0 lb	Preemergence, late fall or early spring	Fruit trees only. May be combined with Karmex and Princep for improved broadleaf control. Cost: \$25.00-\$50.00.
*Surflan A.S.	2-4 qt	Preemergence	Fruit trees only. May be combined with Karmex and Princep for improved broadleaf control. Cost: \$28.00-\$56.00.



## VINE CROPS AND ONIONS

Herbicide	Commercial Product per Acre	Application Time	Remarks and Approximate Cost/A Broadcast
<b>Melons and Cucurbits</b>			
Prefar 4E + Alanap-L	4-6 qt + 4-8 qt	Preplant	Immediately incorporate to a depth of 1". Use lower rate on sandy soil. Controls many annual grasses and broadleaf weeds. Cost: \$45.50-\$75.50.
Dacthal 75W	8-14 lb	Crop 4-5 true leaves	Crop should be weeded prior to application. Controls annual grasses. Use lower rate on sandy soil. Cost: \$36.00-\$63.00.
Treflan	1-1.5 pt	Crop 3-4 true leaves	Direct material to soil between the rows and mechanically incorporate. Controls germinating annual grasses and some broadleaves. Use the lower rate on sandy soils. Cost: \$3.00-\$4.50.
Poast	1-1.5 pt	Grasses most susceptible under 4"	Don't apply within 14 days of harvest. Crop oil concentrate and good coverage essential for effective control. Cost: \$10.50-\$15.50.

**Onions**

Dacthal 75W	8-14 lb	Preemergence at seeding or transplanting and/or at layby	Preplant incorporation not recommended. Use lower rate on soils with less than 1% organic matter. Cost: \$36.00-\$63.00.
Buctril 2EC	1-1.5 pt	Postemergence; onions should have 2-5 true leaves	Water volume is important. Use 50-70 gal of water per acre. Do not add surfactants. Cost: \$5.65-\$8.50.
Goal 1.6E	0.6-1.25 pt	Onions 2 fully developed true leaves; weeds 2-4 leaves	Do not apply to onions under drought stress. Do not mix Goal with oil, surfactant or fertilizer. Cost: \$4.30-\$9.00.
Fusilade 2000	1.5	Shattercane and corn 12"-18". Other annual grasses less than 4"	Crop oil concentrate and good coverage essential for effective control. Don't tank mix with Buctril. Cost: \$15.50.


**Trees and Shrubs** — — ~~Onions~~ *Including Christmas and Fruit\* Trees*

Herbicide	Rate Per Acre	Application Time	Remarks and Approximate Cost/A Broadcast
*Casoron 50W or Casoron 4G or *Norosac 4G	8 lb or 100 lb or 100 lb	Preemergence on trees at least 2 years old	Apply 20" band on each side of tree row after trees are planted. Some injury to trees may result on low organic matter soil. Cost: \$122.00.
Dacthal 75W	14-16 lb	Preemergence	Application must be made before weed seed germination. Two applications may be necessary for season long weed control. Cost: \$63.00-\$72.00.
2,4-D amine	1 qt	Postemergence to weeds	Keep off new bark and foliage. Controls broadleaf weeds. Cost: \$2.00.
*Fusilade 2000 or *Poast	2 pt or 2 pt	Postemergence before grasses tiller	Use on fruit trees limited to nonbearing trees. Add 1 qt crop oil concentrate per acre. Thorough coverage required. On ornamentals use nonionic surfactant with Fusilade. Cost: Fusilade \$21.50; Poast \$21.50.
Goal 2E	2-4 qt	Pre- or post-emergence to weeds	Conifers only. Grasses should be treated before they are beyond 2-leaf stage. Use before bud break or after new growth hardens. Cost: \$36.00-\$72.00.
*Karmex 80W	2.5-5 lb	Preemergence on trees at least 2 years old	Karmex use limited to conifers, honey locust, green ash, apples and peaches. Cost: \$10.00-\$20.00.
*Gramoxone Super	1.5-3 pt	Directed post-emergence	Nonselective contact herbicide. <b>Keep spray off tree foliage.</b> Add X-77 surfactant. Cost: \$6.50-\$12.20.
*Princep 80W	1-5 lb	Preemergence on trees at least 2 years old; use only on fruit trees planted 1 year or longer	Kochia may become resistant with repeated use. Use 1 lb on sandy, low organic matter, or high pH soils. Apply 20" band on each side of tree row after trees are planted. Some injury to trees may result on low organic matter soils. Gives poor control of Russian thistle. Cost: \$4.90-\$16.25.
*Roundup	1-4 qt in 10 gal water/A	Directed post-emergence	<b>Do not spray green bark or foliage.</b> Spray may contact brown bark. Use lower rate on annuals. Cost: \$17.50-\$68.00.
*Solicam 80WP	2.5-5.0 lb	Preemergence, late fall or early spring	Fruit trees only. May be combined with Karmex and Princep for improved broadleaf control. Cost: \$25.00-\$50.00.
*Surflan A.S.	2-4 qt	Preemergence	Fruit trees only. May be combined with Karmex and Princep for improved broadleaf control. Cost: \$28.00-\$56.00.



## TREES AND SHRUBS INCLUDING CHRISTMAS AND FRUIT \*TREES

Herbicide	Rate Per Acre	Application Time	Remarks and Approximate Cost/A Broadcast
Treflan/ Trifluralin	1-2 pt	Preplant	Incorporate 2-3" deep prior to planting. After planting adjust machine to throw treated soil towards trees in the row. Cost: \$3.00-\$6.00.
Velpar L	1.8-3.6 qt	Pre- or post-emergence to weeds at least 2 months after transplanting	Use on Scotch, Austrian and Ponderosa Pine only. Use lower rates on sandy soils, soils low in organic matter, and on first year plantings. May be applied directly over the trees before bud break. Adjacent broadleaf trees may be injured. Cost: \$38.00-\$76.00.

\*Denotes products registered for use on fruit trees.

## AQUATIC WEED CONTROL

Slow Moving and Still Water

**Important:** Before treating any body of water containing fish, contact the Game and Parks Commission local representative. Whenever possible treat before aquatic weed growth becomes dense to avoid fish suffocation due to oxygen depletion from decaying vegetation. When dense weed growth is present in fish containing waters, treat no more than one-half of the area. After vegetation in the treated area disappears treat the remainder of the water.

Herbicide	Rate Per AF (Acre Foot) or SA (Surface Acre)	Weeds Controlled	Application Time	Remarks and Approximate Cost
COPPER SULFATE CRYSTALS or COPPER CHELATES (Cutrine plus, Algetol or Algecide)	5.4 lb/SA or 0.67-1.25 gal/AF	Algae (Moss) Chara	When growth first becomes visible	No restrictions on water usage at recommended rates. Copper compounds can be corrosive to equipment. Use Chelated Copper in high pH water. Cost/SA: Copper Sulfate \$3.65.
AQUATHOL G or AQUATHOL K	13-135 lb/AF or 0.3-3.2 gal/AF	Burreed Coontail Milfoil Pondweed Naiad	Water has warmed and growth is visible	Handle with caution, extremely irritating. Overdose can be harmful to fish. Do not use water within 14 days for irrigation or domestic uses. Cost/AF: \$13.00-\$135.00.
AQUAZINE (Simazine)	1.7-6.8 lb/AF	Algae (Moss) Chara Coontail Duckweed Naiad Pondweed Milfoil	Spring before heavy weed growth appears	Treat total water volume. Best suited for still water. Do not use water for irrigation or livestock use. Cost: \$8.85-\$35.35.
DIQUAT	1-2 gal/SA	Arrowhead Cattail Bulrush Elodea Pondweed Coontail	Post on foliage or on surface for submerged species	Do not use water for 10 days for swimming, livestock or irrigation. Not effective in water with suspended silt. Cost \$63.20-\$126.40.
NOROSAC 10G	100-150 lb/1000 sq ft	Duckweed Naiad Milfoil	Before weed growth occurs	Do not use water for irrigation, livestock or humans. Do not use fish for 90 days. Cost: \$8.00-\$12.00/1000 sq ft.
2,4-D amine or ester or 2,4-D 20G	1.50-4 qt/AF or 7.50-20 lb/AF	Water Hyacinth Water Lily Water Primrose Duckweed Arrowhead Pondweed Milfoil	Use sprays on emerged weeds when in full leaf stage. Apply granules when first growth appears	Do not use water for 14 days for livestock or irrigation. Cost: \$3.75-\$10.00.
RODEO + ORTHO X-77	1 gal/SA + 2 qt	Most annual and perennial weeds	Apply to well emerged vegeta- tion	Can be applied to most water situations. No restrictions on use of water for irrigation, recreation and domestic purposes. Cost: \$102.00.

## STOCK AND NURSE TANKS

Dissolve 1 oz copper sulfate in 1 pt of water in a glass jar. Add 7.5 tablespoons of the prepared solution to each 1,000 gallons of water. Mix thoroughly. Water can be used for crop spraying and livestock watering. Increase rate if water is extra hard.



## TROUBLESOME WEEDS AND WOODY PLANTS

Best control will be obtained if treatments are made when plants are actively growing. Plan to make more than one treatment. An application just before flowering and a second application on fall regrowth will give best results on most perennials. Dust on leaves may interfere with herbicide activity.

Weed	Herbicide <sup>3</sup>	Product Per Acre or Per 100 Gallons <sup>5,6</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
ALFALFA (for control of alfalfa in corn or sorghum)	2,4-D amine + Banvel (corn only)	0.5 pt + 0.5 pt	Alfalfa with 4-6" growth	Use drop nozzles on crop taller than 8". See no-till section of corn, sorghum or soybeans to kill alfalfa prior to planting. Sorghum 3-5 leaf stage. Cost: 2,4-D + Banvel \$4.20; Banvel \$3.20
	or Banvel	or 0.5 pt		
	2,4-D	1.5-2 qt		
ALFALFA (for control prior to planting soybeans, fieldbeans, wheat, potatoes and sugarbeets)	2,4-D	1.5-2 qt	For potatoes and sugarbeets rotations apply in fall or Apr-May with 4" new growth.	Delay planting wheat 15 days and delay planting fieldbeans and soybeans 30 days after application. Ester formulations are more persistent than amine formulations. Cost: \$3.75-\$5.00.
ARTICHOKE JERUSALEM	2,4-D amine + Banvel	0.5 pt + 0.5 pt	12-18" tall	For use in corn. Use drop nozzles on corn taller than 8". Cost: \$4.20.
	2,4-D LV ester	1 qt	18-24" tall	For use where no crop is present. Cost: \$2.50.
	2,4-D LV ester	0.5 pt	Nov 15-Mar 15 before blue mustard stem elongation	Use only on fully tillered wheat. Cost: \$.65-\$1.00.
BLUE MUSTARD	2,4-D amine	1 pt		
	Glean 75DF (East of Hwy. 183) + 2,4-D LV ester	0.17-0.33 oz + 4.0 oz	Spring, 2"-4" broadleaf weeds	Do not use on soils with pH of 7.9 or higher. Use only in continuous wheat or wheat fallow. Cost: Ally \$2.50; Glean + 2,4-D \$3.10-\$6.00.
	Ally 60 DF + 2,4-D LV ester	0.1 oz + 4.0 oz		
BUCKBRUSH (snowberry)	2,4-D LV ester	1-2 qt	Full foliage (May 10-25)	Use sufficient water to insure good coverage. Cost: \$2.50-\$5.00.
BUFFALOBUR	Atrazine 4L	3 qt	Preplant or preemergence in corn	Reduced rates less effective. Cost: \$7.20.
	Buctril 2EC	1.5 pt	Weeds 3-5 leaf stage in corn or sorghum	Plants taller than 4" not controlled. Cost: \$8.45.
	Blazer 2S	1 qt	Weeds 3-4 leaf stage in soybeans	Weeds must be small. Follow-up treatments necessary. Cost: \$20.00.
	Eradicane 6.7E or Eradicane Extra	5 pt or 5.5 pt	Preplant to corn	Apply to dry surface soil and immediately incorporate by cross tandem discing or similar mixing. Cost: \$13.75-\$17.90.
	2,4-D + Banvel	1 pt + 0.5 pt	Postemergence on corn	Plants must be small. Cost: \$4.20.
BURCUCUMBER and WILD CUCUMBER	Buctril 2EC	1.5 pt	Weeds 3-5 leaf stage in corn	Thorough coverage required. Cost: \$8.45.
	Atrazine 4L	3 qt	Preemergence in corn	Atrazine can also be used post-emergence. Cost: Atrazine \$7.20; Princep \$11.70.
	Princep 4L	3 qt	Preemergence in trees or corn	
BURSAGE, SKELETON-LEAF AND WOOLLYLEAF	Sencor/Lexone 4L (split-application)	0.5 pt + 0.5 pt	Preplant plus preemergence	Split-shot in soybeans. Cost: \$12.60.
	Tordon 22K	2 qt	Flower bud stage or when growing actively	Non-crop areas. Tordon may remain in soil for three or more years. Cost: \$46.00.
	2,4-D + Banvel	1 qt + 1 qt	Jun or when growing actively	See remarks for field bindweed. If soil moisture conditions are poor, use oil-water emulsions as a carrier. Cost: \$5.20.

(Continued next page)



## TROUBLESOME WEEDS AND WOODY PLANTS

Weed	Herbicide <sup>3</sup>	Product Per Acre or Per 100 Gallons <sup>5,6</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
CANADA THISTLE	Tordon 22K	2 qt	Fall-actively growing or spring-early flower bud	For non-crop areas and spot treat- ment in pasture and range. Tordon may remain in the soil for 3 or more years. Cost: \$46.00.
	2,4-D + Banvel	1 qt + 1 qt	Fall-actively growing or spring-early flower bud	Do not plant small grains for 45 days or sugar beets the following year. See remarks for field bind- weed. Cost: \$14.70.
	Roundup	2-3 qt in 10 gal or less water	Flower bud stage or in fall when growing ac- tively	Idle ground or spot treatment in cropland before head or pod fill of crop. Avoid tillage for 3 days. Cost: \$34.00-\$51.00.
	Banvel	1-2 qt	Fall-actively growing or spring-early flower bud	Idle ground or grassland. Avoid tillage for 5 days. Injury to forage grasses may occur. Broad- leaf crops may be injured for 2 years after treatment. Cost: \$12.70-\$25.40.
	Curtail	2-4 pts	Rosette to pre-bud or in fall when actively growing	Curtail -- use lower rate in wheat and barley, higher rate in fallow or CRP. Stinger for use in sugar- beets. Cost: Curtail \$5.40- \$10.80; Stinger \$36.00-\$48.00.
	Stinger	0.5-0.67 pts		
	Ally + Surfactant	0.1 oz		Telar for use in non crop land only. Use Ally in wheat, barley, or fallow to be planted to winter wheat. One application suppresses Canada thistle. Cost: \$2.85-\$5.70.
	Telar + Surfactant	0.5 oz	Rosette to 4"-6" stage	Use the equivalent of 150 gal of water per acre. Retreat regrowth as necessary. Cost: 2,4-D \$15.00; Dowpon \$27.00.
CATTAILS	2,4-D LV ester	1.5 gal + 5% diesel oil + 0.5% emulsifier	Boot to early flowering	
	Dowpon M 74SP	13.5 lb + 0.5% emulsifier	After flowering to fruiting	
	Roundup	3 qt in 10 gal or less water	At flowering	Avoid water contamination. Cost: \$51.00.
CHEATGRASS	See Downy Brome			
COCKLEBUR	See Velvetleaf			
COTTONWOOD, WILLOWS & SIBERIAN ELM	2,4-D LV ester	2-3 qt	Full foliage (Jun-Jul); basal treat- ment anytime	2,4-D with aerial equipment at least 5 gal carrier/A; annual treatment for 2-3 years may be necessary. Basal or stump treat- ment: 2 qt of herbicide/10 gal of diesel; apply to point or runoff. Cost: 2,4-D \$5.00- \$7.50; Crossbow \$40.00.
	Crossbow	1 gal		
	Krenite S	2-3 gal in 100 gal water + surfactant	Late Jul, Aug and Sep	Has little effect on grasses. Results show the following spring. Cost: \$81.00-\$121.00.
	Spike 20P	0.25 oz/1" dia	Spring or fall	Apply under drip line. Cost: \$8.00/lb.
	Velpar RP	4 ml/1" dia	Spring with spot gun to tree base	Cost: \$.07/tree inch.
DEVILSCLAW	See Velvetleaf for control in corn & milo			
DOCK; CURLED & PALE	2,4-D + Banvel	1 qt + 0.5 pt	Before flower- ing in spring or fall	For use on idle ground or grass- land. Cost: \$5.20.
DOGWOOD	Banvel	1-2 qt		
	Crossbow	1.0 to 1.5 gal	Full foliage during Jun	Ground application only. Observe all drift precautions when using within 1/2 mile of sensitive crops. Cost: Banvel \$12.70- \$25.40; Crossbow \$60.00.
	Spike 20P	0.25 oz/1" dia	Spring or fall	Apply under drip line. Cost: \$8.00/lb.
DOWNY BROME	AAtrex or Atrazine 4L	2 qt	Preemergence (fall or spring prior to Apr 1)	Use in waste areas such as fence rows and ditchbanks. See pages 24 and 25 for control in alfalfa and rangeland; page 12 for control in fallow. Cost: AAtrex/Atrazine \$4.80; Princep \$7.80; Oust \$7.50.
	Princep 4L	2 qt		
	Oust (non-cropland)	1-2 oz	Early spring	
	Far-Go 10G	15 lb	Preplant to winter wheat	Approx. 80% control. Wheat must be planted with hoe drill. Will not control emerged downy brome. Cost \$13.50.
	Crop Rotation			Include a spring seeded crop in the rotation.

(Continued next page)



## TROUBLESOME WEEDS AND WOODY PLANTS

Weed	Herbicide <sup>3</sup>	Product Per Acre or Per 100 Gallons <sup>5,6</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
FIELD BINDWEED (use herbi- cide rates on pages & when treating crops)	2,4-D	1 qt	Vigorous fall growth or flower bud stage in spring	Avoid tillage 5 weeks before and 1 week after application. Do not plant small grains for 15 days after 2,4-D and 45 days after Banvel. Plant to treat for several consecutive years. Cost: 2,4-D \$2.00; 2,4-D + Banvel \$8.35.
	2,4-D + Banvel	1 qt + 0.5 - 1 pt		
	Tordon 22K	2 qt	Vigorous fall growth or flower bud stage in spring	Tordon for non-crop areas and spot treatment in pasture and rangeland. Carefully observe all label precautions. Cost: \$46.00.
	Roundup 3WS + 2,4-D amine or Banvel	1 pt + 1 pt or 0.5 pt	Late summer or fall when actively grow- ing	Use AMS plus surfactant. For Roundup apply in 10 gal or less water per acre, add 2 qt X-77 or similar surfactant plus 17 lb ammonium sulfate per 100 gallons. Avoid tillage for 5 days. Do not plant small grains for 15 days after 2,4-D and 22 days after Banvel. Broadleaf crops may be injured 2 years after high rates of Banvel in western Nebraska. Cost: Roundup + 2,4-D \$9.80; Roundup + Banvel \$11.65; Banvel \$12.75-\$25.40; Landmaster \$7.00.
	Banvel	1-2 qt		
	Landmaster BW	54 oz		
GROUNDSEL, RIDDELL GUMWEED	2,4-D LV ester	1 qt	May 15-Jun 15	Cost: \$2.50.
HEMP (Marijuana)	2,4-D	1 qt	June	
HEMP DOGBANE	2,4-D	1 qt	2-12" tall	Cost: \$1.00-\$2.00.
	2,4-D	1 qt	Flower bud stage-spring	Use lower rates in crops. Cost: \$2.00.
	2,4-D amine + Banvel	1 qt + 0.5 pt	After corn silks turn brown or milo is in the soft dough stage. Apply to dog- bane before leaves start to turn yellow	Use lower 2,4-D rate in milo. Do not plant small grains for 15 days after treatment. Do not apply Banvel within 30 days of harvest. Dogbane roots should have pink swollen buds. Do not use Banvel within 1/2 mile of sensitive crops before Sept. 1. Cost: 2,4-D \$2.00-\$3.00; 2,4-D + Banvel \$5.15.
	Roundup	4 qt	Late summer or fall	Idle ground or spot treatment in cropland before head or pod fill of crop. Avoid tillage for at least 7 days after treatment. Cost: \$68.00.
HOARY CRESS	2,4-D LV ester	2 qt	Rosette stage in the fall or early bud in spring	Suppression only. Growth starts in early spring. Treat twice a year for 2 to 3 years. Cost: \$5.00.
JOHNSONGRASS (see shatter- cane for seedling control)	Fusilade 2000	1.5 pt	12-18" new growth	For use in soybeans. Add 1 qt/A crop oil concentrate. Cost: Fusilade \$16.50; Poast \$16.50.
	Poast + Am sulfate	1.5 pt + 2.5 lb		
	Roundup	2-3 qt	12" through boot stage	Idle ground or spot treatment in cropland before head or pod fill of crop. Avoid tillage for 7 days. Cost: \$34.00-\$51.00.
JOINTED GOATGRASS	AAtrex or Atrazine 4L	2 qt	Preemergence (fall or spring prior to Apr 1)	Use atrazine + Princep on waste areas such as fence rows and ditchbanks. See pages 16 and 17 for control in alfalfa and range- land; page 32 for control in fallow. Fargo will give approx. 80% control. Wheat must be planted with hoe drill. Will not control emerged weeds. Cost: AAtrex/Atrazine \$4.80; Princep \$7.80; Fargo \$13.50.
	Princep 4L	2 qt		
	Far-Go 10G	15 lb	Preplant to winter wheat	
	Crop Rotation			Include a spring seeded crop in the rotation.

(Continued next page)



## TROUBLESOME WEEDS AND WOODY PLANTS

Weed	Herbicide <sup>3</sup>	Product Per Acre or Per 100 Gallons <sup>5,6</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
Kochia (triazine resistant). May have to spray twice or cultivate for row crops.				
Preplant				
Corn or Sorghum	Cyclone or Landmaster	1.5 pt 54 oz	Kochia less than 5" tall	Wait 20 days before planting sorghum. Include appropriate preemergence herbicides. Cost: Cyclone \$7.50; Landmaster \$8.40; Banvel \$3.15.
	Banvel	0.5 pt	Kochia less than 2" tall	
Postemergence				
	Banvel	0.5 pt	Kochia less than 2" tall	Sorghum must have 3-5 leaves when using Banvel. Buctril + Banvel on corn only. Cost: Banvel \$3.15; Brominal/Buctril \$5.25-\$7.90; Buctril + Banvel \$8.45.
	Brominal ME4 or Buctril 2EC	0.5-1 pt or 1.0-1.5 pt		
	Buctril 2EC alone or with Banvel	1 pt + 0.5 pt		
	Command 4EC	1.5 pt	ppi, before kocia emerges	Do not rotate to small grains. Cost: \$11.25
Fallow prior to Winter Wheat	Cyclone or Landmaster	1.5 pt 54 oz	Kochia less than 5" tall	Include appropriate preemergence herbicides. Cost: Cyclone \$7.50; Landmaster \$8.40; Glean \$5.60.
	Glean	0.33 oz		
LEAFY SPURGE	2,4-D LV ester	2 qt	Bud stage spring or late fall	Retreatment necessary. Annual applications gradually reduce infestation. Cost: 2,4-D LV \$5.00; 2,4-D + Tordon \$13.50.
	2,4-D amine + Tordon 22K	1 qt + 1 pt		
	Tordon 22K	2-4 qt	Fall or spring	Tordon for non-crop areas and spot treatment in pasture and range. Cost: Tordon \$46.00-\$92.00; Roundup + 2,4-D \$20.50.
	Roundup + 2,4-D amine	1 qt + 1 qt	Sep to early Oct + spring	
	Banvel	2 qt	Full foliage during Jun; cut stump or basal treat- ment anytime	Ground application only. Observe all drift precautions. See cottonwood for basal and cut stump treatment. Cost: Banvel \$25.40; Garlon \$18.00-\$54.00.
	Crossbow	1.0 - 1.5 gal		
LOCUST, HONEY AND BLACK	Spike 20P	0.25 oz/1" dia	Spring or fall	Apply under drip line. Cost: \$8.00/lb.
	Velpar RP	4 ml/1" dia	Spot gun- spring	Cost: \$.07/tree inch.
	2,4-D + Banvel	1 qt + 0.5 pt	Flower bud to bloom stage	Do not plant small grains for 15 days after 2,4-D + Banvel treat- ment. 2,4-D + Banvel suppresses growth for 1 year. Cost: \$5.15.
	Roundup	3 qt in 10 gal or less water/A	Flowering thru maturity, ropewick application in soybeans	Idle ground or spot treatment on cropland before head or pod fill of crop. Avoid tillage for 7 days. Cost: \$51.00.
MILKWEED, COMMON	2,4-D amine	1-2 pt	Before vines reach 3' in length	For use in corn or sorghum. Use lower rates in sorghum. Gives suppression only. Cost: \$.65- \$1.30.
MILKWEED, HONEYVINE (climbing)	2,4-D LV ester	0.5-1 pt		
MULLEIN, COMMON	Tordon 22K	0.5 pt	Late fall on rosettes or spring before flowering stalks lengthen	Essential to apply in rosette stage. Cost: \$5.75.
MUSK AND PLUMELESS THISTLE	2,4-D	1.5-2 qt	Late fall treatment of rosettes or spring before flowering stalks length- en	Annual treatments necessary for control of new seedlings. Fall applications after trees drop leaves and before leafing out in the spring reduces damage. Do not apply after "soil freeze- up" in the fall. For use on ranges and permanent pastures only. Cost: 2,4-D \$3.00-\$4.00; 2,4-D + Banvel \$5.15; Tordon \$4.30-\$5.75.
	2,4-D + Banvel	1 qt + 0.5 pt		
	Tordon 22K (musk only)	6-8 oz	Oct 1-Dec 1 or spring be- fore flowering stalks lengthen	
	OAKS	Banvel	2 qt	Full foliage Jun to Jul; cut stump or basal treat- ment anytime Spring or fall Spot gun-spring to tree base
Crossbow	1.5 gal			
Spike 20P Velpar RP	0.25 oz/1" dia 4 ml/1" dia			

(Continued next page)



## TROUBLESOME WEEDS AND WOODY PLANTS

Weed	Herbicide <sup>3</sup>	Product Per Acre or Per 100 Gallons <sup>5,6</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
OSAGE ORANGE	Crossbow	1.0 - 1.5 gal	Full foliage Jun to Jul; basal treat- ment anytime	Non-crop areas only. See remarks for cottonwood. Cost: Crossbow \$40.00-\$60.00; Spike \$8.00/lb; Velpar RP \$.07/tree inch.
	Spike 20P	0.5 oz/1" dia	Spring or fall	
	Velpar RP	4 ml/1" dia	Spring. Spot gun. Apply to tree base	
PERENNIAL SOW THISTLE	2,4-D LV ester	1.5 qt	Fall rosette or spring bud stage	See remarks for field bindweed. Cost: \$3.75.
POISON IVY	Crossbow	1.0 - 1.5 gal		
	Amino Triazole/ Weedazol 90SP	2 tbs/gal of water	Full foliage (Jun)	Thoroughly wet all vegetation. Do not apply to cropland. Cost: \$1.00/1000 sq ft.
	or Amitrol-T/ Cytrol-T 2WS	0.5 cup/gal of water		
POISON HEMLOCK	2,4-D +	1 qt +	Rosettes-fall or early spring	Cost: \$5.15.
	Banvel	0.5 pt		
PRICKLYPEAR	Tordon 22K	1-2 pt	Early summer	Spot treatment in grazing and non- cropland. Cost: \$11.50-\$23.00.
PUNCTUREVINE	2,4-D LV ester	1 qt	Pre-bud stage most effective	Mature burs not affected by 2,4-D. Retreatment necessary on new plants. Cost: \$2.50.
PURSLANE	2,4-D LV ester	1 qt	When growing actively	Till 5-7 days after treatment. Do not plant small grains for 15 days. Cost: 2,4-D \$2.50; Banvel \$3.15-\$6.25.
	Banvel	0.5-1 pt		
	Ally +	0.1 +	Early post	Add surfactant when used post- emergence. Cost: Ally + 2,4-D \$2.75.
	2,4-D	4 oz		
RAGWEED, WESTERN (perennial)	2,4-D LV ester	1 qt	Early summer	Follow-up treatments may be necessary. Cost: \$2.50.
RED CEDAR	Spike 20P	0.5 oz/1" dia	Spring or fall	Spike for use in non-crop areas only. Tordon and Velpar RP can be used on grazingland. Cost: Spike \$8.00/lb; Tordon \$92.00; Velpar RP \$.07/tree inch.
	Tordon 22K	4 qt/100 gal	Spring or fall	
	Velpar RP	4 ml/1" dia	Spot gun in spring to tree base	
RUSSIAN KNAPWEED	Banvel 4WS	1-2 qt	Early flower bud stage	Idle ground or grassland. Avoid tillage for 7 days. Injury to forage grasses may occur. Broad- leaf crops may be injured for 2 years after treatment. Cost: Banvel \$12.70-\$25.40; Tordon \$46.00.
	Tordon 22K	2 qt		
RUSSIAN OLIVE	2,4-D +	2 qt +	Full foliage (early Jun)	See remarks for cottonwood. Cost: \$16.70.
	Banvel 4WS	1 qt		
	Spike 20P	0.5 oz/1" dia	Spring or fall	Use on non-cropland only. Cost: \$8.00/lb.
SAGEBRUSH (sand and fringed and green sagewort)	2,4-D LV ester	1.5-2 qt	4-8" new growth (Jun)	1.5 qt/A 2,4-D adequate on sand sagebrush. Cost: \$3.75-\$5.00.
SANDBUR	Tandem +	1 pt +	Postemer- gence in	Cost: \$15.00.
	Atrazine 4L	3 pt	Corn. Sand- bur 1-3	
	+	+	leaf	
	Oil	2 pt		

Treatments listed for shattercane also control or suppress sandbur.



Weed	Herbicide <sup>3</sup>	Product Per Acre or Per 100 Gallons <sup>5,6</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
SHATTERCANE	Eradicane Extra 6E	6.7 pt	Preplant to corn	Incorporate immediately by cross tandem discing or equivalent soil mixing. Do not use Princep or Bladex treatment on sand. Plant corn the year following Princep treatment. Repeated use of Eradi- cane Extra or Sutan+ will lead to reduced weed control. Under high shattercane population, herbicides may not give acceptable control. Rotate to small grain, soybeans, or alfalfa. Lasso and Dual pro- vides suppression of light infesta- tions. Cultivation improves con- trol. For Treflan chemigation apply in 1/2-1" sprinkler irri- gation water. Cost: Treflan \$3.00-\$6.00; Treflan + Atrazine \$6.15-\$8.60; Eradicane Extra \$20.75; Sutan/Genate \$15.00; Eradicane Extra + Bladex \$22.15- \$25.60; Eradicane Extra + Princep \$20.50-\$23.80; Sutan + Bladex \$24.15; Sutan + Princep \$24.60; Treflan \$5.10-\$6.40; Lasso \$22.60; Prowl \$6.90; Dual \$15.65; Sonalan \$8.25.
	Sutan+/Genate Plus	7.3 pt		
	Princep or Bladex 4L	2 qt		
	+ Eradicane Extra	+ 5-5.3 pt		
	or Sutan+/Genate Plus	or 7.3 pt	Preplant to corn. Repeat at 1/2 rate at planting	
	Lasso 4EC	4 qt		
	Dual 8E	2.5 pt		
	Prowl 4EC	3 pt		
	Sonalan or Treflan 4EC	3 pt 1 - 2.5 pt	Corn 2-leaf through 30 weed unemerged	Use with crop oil concentrate. Cost: Assure \$9.00; Fusilade \$9.00; Option \$9.75; Poast \$11.50.
	Treflan 4EC	1.5 - 2 pt		
	alone or with Atrazine 4L	1 - 1.5 pt		
	(chemigation)			
	Assure	0.65 pt	Postemergence in soybeans. Cane 6-12"	
	Fusilade 2000	0.75 pt		
	Option	0.8 pt		
	Poast	1 pt		

An alternate system -- Ridge or till-plant corn and apply Dual or Lasso with Princep or Bladex and cultivate.

SOAPWEED (Yucca)				No labeled herbicide.
SPOTTED KNAPWEED	2,4-D	1 qt	Rosette stage	
SUMAC	2,4-D LV ester	1-2 qt	Full foliage	Use sufficient water for good coverage. Cost: \$2.50-\$5.00.
SUNFLOWER	See Velvetleaf			
SWAMP	2,4-D LV ester	1 qt	When growing vigorously	On crops use lower rates and amine formulations. Cost \$8.85.
SMARTWEED (tanweed, shoestring)	+ Banvel	+ 1 pt		
	Roundup	3-4 qt in 10 gal or less water/A	Full foliage mid to late summer	Idle ground or spot treatment in cropland before head or pod fill of crop. Avoid tillage for 7 days. Cost: \$51.00.

Corn and Sorghum treatments (also control cocklebur, Devils claw & Common sunflowers)

VELVETLEAF	AAtrex/ Atrazine 4L	1.2 qt		Use crop oil concentrate with AAtrex/Atrazine and Laddock. Cost: AAtrex/Atrazine \$4.40; Basagran \$7.60-\$14.60; Brominal/Buctril \$5.25/\$7.90; 2,4-D \$.65-\$1.25; Marksman \$4.80-\$8.40. Laddock \$5.50-\$7.50.
	Basagran + 28% N	1-2 pt + 1 gal	Velvetleaf less than 4"	
	Laddock	2 2/5 - 3 3/5 pt		
	Buctril 2EC	1-1.5 pt		
	+ Atrazine 4L	+ 1-2 pt		
	2,4-D LV ester	0.5-1 pt	Velvetleaf less than 12"	
	Marksman	2-3.5 pt	Before 5-leaf stage of corn	
VELVETLEAF	Soybean treatments			
	Command 4 EC + other soil applied herbicides	1-1.5 pt	PPI to soybean planting	Command drift may damage green vegetation. Command residue may damage wheat planted the same fall. Cost: Command \$7.50-\$11.75 and additional herbicide costs. Basagran \$7.60; Classic \$8.00- \$11.50.
	Basagran + 28% N	1 pt + 1 gal	Velvetleaf less than 4"	
	Classic + 28% N	0.5-0.75 oz + 1 gal		
	+ Surfactant	+ 1/8% V/V		

OTHER HELPFUL TREATMENTS FOR VELVETLEAF: Corn and milo--full rates of atrazine applied PPI; Soybeans--Vernam + Amiben (PPI), Amiben + Sencor (PRE), Vernam (PPI) + Sencor/Lexone (PRE), Treflan + Sencor/Lexone Split-Application, Vernam or Reward + Prowl + Sencor (PPI).



Weed	Herbicide <sup>3</sup>	Product Per Acre or Per 100 Gallons <sup>5,6</sup>	Application Time	Remarks and Approximate Cost/A Broadcast
WILD OATS	In Nebraska probably weedy annual brome.		See Downy brome.	
WILD PROSO MILLET	Eradicane Extra or Sutan <sup>†</sup> 6.7/ Genate Plus	5-5.3 pt or 5 pt	Preplant to corn	Apply to dry surface soil and incorporate immediately with disc or field cultivator. Repeated use of Eradicane extra or Sutan <sup>†</sup> will lead to reduced weed control. Cost: Eradicane/Extra \$12.75-\$16.25; Sutan/Genate \$10.50.
	Prowl 4EC + Bladex 80W	1 qt + 1.25 lb	Spike stage of corn. Wild proso millet less than 1"	Cost: \$9.10.
	Prowl 4EC	1.5 qt	Layby to corn	Direct weed spray to cover the base of the corn plant and in between corn rows. Incorporate with irrigation water or with cultivation. Cost: \$6.90.
	Fusilade 2000	0.5 pt	Postemergence on 4-8" wild proso millet	Fusilade and Poast on soybeans; only Poast on sugar beets. Add 1 qt crop oil concentrate per acre. Cost: Fusilade \$6.50; Poast \$6.50.
	Poast	0.5 pt		
	Eptam/Genep	3.5 pt	Preplant to fieldbeans	Apply to dry surface soil and incorporate immediately with a disc or field cultivator. Cost: Eptam/Genep \$11.20; Ro-Neet \$20.00-\$23.00.
	Ro-Neet	3.3-4 pt	Preplant to sugar beets	
	Tandem 4L + Bladex 80W	1.5 pt + 1.25 lb	Wild proso millet 1-3 leaf stage. Corn 4 true leaves or less	Follow label directions. Cost: \$18.00.

<sup>1</sup>Add X-77 spreader 2 pt per 100 gal spray solution for Cyclone and Gramoxone, 4 pt per 100 gal if Gramoxone is used at less than 10 gal water per acre. For Roundup, Roundup RT, Landmaster II, Landmaster BW, and Fallow Master application, apply 10 gal or less water per acre, and add 17 lbs ammonium sulfate (fluid or feed grade) per 100 gal spray solution. (Landmaster II, Landmaster BW, and Fallow Master contain sufficient surfactant.)

<sup>2</sup>The addition of 0.5 to 1 pt 2,4-D LV ester improves control of broadleaf weed. Do not apply 2,4-D pre-emergence after planting sorghum.

<sup>3</sup>Low volatile ester and salt formulations preferred over volatile esters such as butyl and isopropyl because of fume hazards. 2,4-D and MCPA calculated on the basis of 4 lb/gal of acid equivalent (the chemicals responsible for herbicidal effects). For other formulations see Conversion Table.

<sup>4</sup>Do not use on soils with less than 1% organic matter. Increased injury risk on soils where triazine carryover exists.

<sup>5</sup>For spot treatment add 1 1/2 tablespoons of herbicide per gallon of water for each 1 qt per acre required broadcast, and apply to 1000 sq ft.

<sup>6</sup>Rates per 100 gallons pertain to handgun on a power sprayer.

## CONVERSION TABLES

Rate Per Acre To 1000 Square Feet		Active Ingredient Per Gallon Conversions			
1. Known Facts and Assumptions:	1 acre = 43,560 sq ft	Pounds of active material per gal of commercial product	Pints of commercial product needed per acre to give the following pounds of herbicide per acre		
	1 pt = 16 oz; 1 qt = 32 oz		1/4 lb	1/2 lb	1 lb
	1 oz = 2 tablespoons = 6 teaspoons				
	Herbicide rate per acre from bulletin or label		2.00	1	2
	Hand sprayers apply about 1 gal per 1000 sq ft		2.64	3/4	1 1/2
			3.00	2/3	1 1/3
			3.34	3/5	1 1/5
			4.00	1/2	1
			6.00	1/3	2/3
					1 1/3
2. Convert Herbicide Rate Per Acre to Ounces:					
For example, 2 qt per acre = 64 oz					
3. Convert 64 oz per acre to oz per 1000 sq ft					
64 43 = 1.50 oz or 3 tablespoons per					
4. Add 3 tablespoons of the product to 1 gal of water and apply uniformly to 1000 sq ft					
		Metric Conversions			
		Symbol	When You Know	Multiply By	To Find Symbol
		lb	pounds	0.45	kilograms kg
		pt	pints	0.47	liters l
		qt	quarts	0.95	liters l
		oz	ounces	30.00	milliliters ml
		A	acres	0.40	hectares ha
		ha	hectares	2.50	acres A

### Equivalent Amounts of Different Formulations

- 1 qt AATrex or Atrazine 4L = 1.25 lb AATrex or Atrazine 80W = 1.1 lb AATrex Nine-0  
 1 qt Bladex 4L = 1.25 lb Bladex 80W = 1.1 lb Bladex 90DF  
 1 qt Ramrod Flowable = 1.5 lb Ramrod 65W  
 0.5 pt Sencor/Lexone 4L = 0.5 lb Sencor/Lexone 50W = 0.33 lb Sencor/Lexone DF



AAtrex--A trade name for atrazine. Ciba-Geigy.

Accent (DPX-V9360)--Postemergence grass control in corn. Section 18 label pending. DuPont.

Alachlor--Active ingredient in Lasso and Arena. Monsanto.

Alanap (naptalam)--A pre- and postemergence broadleaf and grass herbicide for soybeans and vine crops. Uniroyal.

Ally (metasulfuron methyl)--Used in wheat, barley, and fallow for broadleaf and certain grass weed control. 3-6 week residual. DuPont.

Amber (CGA-131036)--Similar to Glean for broadleaf control in wheat. Registration pending. CIBA-GEIGY.

Amiben (chloramben)--A pre- and early postemergence herbicide for grass and broadleaf weeds in soybeans. Rhone-Poulenc.

Amino Triazole--Trade name for amitrole. American Cyanamid.

Amitrole--A translocated herbicide that inhibits chlorophyll formation and regrowth from root buds. Trade names are Amino Triazole, Cytrol and Weedazol.

Amitrol-T--Amitrole + ammonium thiocyanate. Rhone-Poulenc.

Amizine (amitrole + simazine)--A combination of amitrole and simazine for use in tree plantings and non-crop areas. Rhone-Poulenc.

Antor--A selective soil applied herbicide for weed control in sugar beets. NOR-AM.

Arena--Generic alachlor. Monsanto.

Aquathol (endothall)--An aquatic herbicide for use in still water. Pennwalt.

Aquazine (simazine)--An aquatic herbicide for use in still water. Ciba-Geigy.

Arsenal--Provides total vegetation control for non-crop areas. American Cyanamid.

Assert--Control wild oats not annual bromes in wheat. American Cyanamid.

Assure (quizalofop)--A postemergence grass herbicide for use in soybeans. DuPont.

Asulox (asulam)--For postemergence weed control in turf, ornamentals, Christmas trees and non-crop areas. Rhone-Poulenc.

Atrazine--A preplant, preemergence and postemergence s-triazine for broadleaf and certain grass weeds in corn, sorghum and rangeland. Available under several private labels.

Avenge (difenzoquat)--Controls wild oats not annual bromes postemergence in spring small grain. American Cyanamid.

Balan (benefin)--A preplant incorporated herbicide for annual grass control in alfalfa. Elanco.

Banvel (dicamba)--A post- and preemergence herbicide for selective broadleaf weed control in corn, sorghum, small grains and grasses. Sandoz.

Basagran (bentazon)--A postemergence fieldbean, corn, sorghum and soybean herbicide for velvetleaf, cocklebur and other broadleaf weeds under 6". BASF-Wyandotte.

Beacon (CGA-136872)--Postemergence grass control in corn. Section 18 label pending. CIBA-GEIGY.

Betamix (phenmedipham + desmedipham)--A prepackaged combination of Betanol + Betanex for postemergence

broadleaf weed control in sugar beets. NOR-AM.

Betanal (phenmedipham)--Postemergence broadleaf weed control in sugar beets. NOR-AM.

Betanex (desmedipham)--Used postemergence for redroot pigweed control in sugar beets. NOR-AM.

Bicep 6E (metolachlor + atrazine)--A combination of 3.33 lbs Dual + 2.67 lbs AAtrex for preemergence use in corn and sorghum safened with Concep II. Ciba-Geigy.

Bladex (cyanazine)--A short residual triazine for grass and broadleaf weed control in corn and sorghum. DuPont.

Blazer (acifluorfen)--A postemergence herbicide for broadleaf weed control in soybeans. BASF.

Brominal ME4--Name changed to Torch 4EC. Rhone-Poulenc.

Brominal 3+3--A combination of bromoxynil and MCPA for use in small grains. Rhone-Poulenc.

Bronate--A combination of bromoxynil and MCPA for use in small grain. Rhone-Poulenc.

Bronco (alachlor + glyphosate)--A prepackaged combination of Lasso + Roundup for use in no-till corn, soybeans, and screen safened sorghum. Monsanto.

Buctril (bromoxynil)--A contact herbicide for broadleaf control in corn, sorghum and small grains. Rhone-Poulenc.

Bullet (Alachlor MT + Atrazine)--A combination of 2.5 lb Lasso MT plus 1.5 lb Atrazine. Monsanto.

Butoxone (2,4-DB)--For selective control of cocklebur in soybeans and some small broadleaf weeds in seedling alfalfa. Vertac.

Butyrac (2,4-DB)--Similar to Butoxone. Rhone-Poulenc.

Canopy--Combinations of 10.7% Classic and 64.3% metribuzin, for preemergence use in soybeans. DuPont.

Carbyne (barban)--Used for wild oat control in spring small grain. Sandoz.

Casoron (dichlobenil)--Used for preemergence weed control in woody plants and certain herbaceous perennials. Uniroyal.

Chem-Hoe (propham)--Used pre- and postemergence for winter annual grasses in alfalfa. Chevron.

Chlorate-3 (sodium chlorate)--Used as a sorghum desiccant. Midwest Companies.

Chloro IPC (chlorpropham)--Similar to Chem-Hoe, Chevron.

Classic (chlorimuron ethyl)--A postemergence herbicide for broadleaf weed control in soybeans. DuPont.

Cobra (lactofen)--Used postemergence for broadleaf weed control in soybeans. Chevron.

Command (FMC 57020)--A preplant incorporated herbicide for grass and broadleaf weed control in soybeans. FMC.

Commence--A prepack of 3 lbs Trifluralin + 2.25 lbs Command for use in soybeans. FMC, Elanco.

Concep II (cyoxmetrinil)--A protectant for sorghum seed to prevent Dual and Bicep injury. Ciba-Geigy.

Confidence--Generic Alachlor.



Copper Sulphate--Available as crystals or in chelated form for algae control in moving and still water. Several brand names.

Crossbow (2,4-D + trichlopyr)--Ester formulation of 2,4-D and Garlon for broadleaf weeds and woody plants. Dow.

Curtail--A twin package of clopyralid + 2,4-D for postemergence broadleaf control in small grain. Dow.

Cyclone (paraquat)--A 2 lb/gal formulation of paraquat for weed control in fallow situations. ICI Americas.

Cytrol--Trade name for amitrole. Am. Cyanamid.

Dacamine--An oil soluble amine salt formulation of 2,4-D. Fermenta.

Dacthal (DCPA)--Used preemergence for annual grass and certain broadleaf weeds in turn, ornamentals and horticultural crops. Fermenta.

Dalapon--Primarily for perennial grass control. Vertac.

Deploy (glyphosate)--Roundup without a surfactant. For use in set-aside. Monsanto.

Diquat (diquat)--Used for aquatic weed control and desiccation of legume, soybean and grain sorghum seed crops. Chevron-Ortho.

Direx (diuron)--Similar to Karmex. Griffin.

Dowpon--Trade name for dalapon. Vertac.

Dual (metolachlor)--Used preplant or preemergence for annual grass and some broadleaf weeds in corn, sorghum and soybeans. Ciba-Geigy.

Endothall (endothall)--Used preemergence and postemergence for annual grass and broadleaf weeds in sugar beets and as a desiccant. Penwalt.

Enide (diphenamid)--Used preemergence for annual grasses and some broadleaf weeds in potatoes and other horticultural crops. Upjohn.

Eptam (EPTC)--Used preplant soil incorporated for grass and certain broadleaf weeds in corn, legumes, sugar beets and many horticultural crops. ICI.

Eradicane (EPTC + R-25788 antidote)--Used preplant incorporated in corn. The antidote provides greater crop safety. ICI.

Eradicane Extra (EPTC + R-25788 antidote + R-33865 extender)--The extender restores performance on soils where Eradicane has ceased to perform. ICI.

Evik (ametryn)--Used as a directed postemergence contact spray for weeds in corn. CIBA-GEIGY.

Express--A short residual herbicide for broadleaf weed control in cereal crops. EUP. DuPont.

Extrazine II (cyanazine + atrazine)--A combination of 3.0 lbs Bladex + 1.0 lb atrazine for PPI or preemergence use in corn. DuPont.

Fallow Master (glyphosate + dicamba)--A combination of 1.5 lb Roundup plus 0.6 lb Banvel. Monsanto.

Far-Go (triallate)--For preplant control of downy brome and other grasses in winter wheat. Monsanto.

Freedom (trifluralin + alachlor)--A combination of 2.67 lbs Lasso + 0.33 lbs Treflan for preplant incorporated use in soybeans. Monsanto.

Furloe (chlorpropham)--Used PPI and preemergence for smartweed in soybeans. Chevron.

Fusilade 2000 (fluazifop)--A selective postemergence herbicide for shattercane, volunteer corn and other grasses in soybeans, nursery stock and ornamentals. ICI Americas.

Galaxy (bentazon + acifluorfen)--A 9:2 ratio of Basagran and Blazer for postemergence broadleaf control in soybeans. BASF.

Gemini--4.6% Classic + 55.4% linuron (Lorox) on an active ingredient basis for preemergence use in soybeans. DuPont.

Genate Plus (butylate)--Similar to Sutan+. Chevron.

Genep (EPTC)--Similar to Eptam. Chevron.

Glean (chlorsulfuron)--A pre- and postemergence broadleaf herbicide for small grains. DuPont.

Goal (oxyfluorfen)--A preemergence herbicide for soybeans, onions and nursery stock. Rohm & Haas.

Gramoxone--Trade name for paraquat. ICI Americas.

Graslan (tebuthiuron)--Used for brush control in rangeland. Elanco.

Harmony--Chemistry and uses similar to Glean and Ally with reduced residual activity. DuPont.

Herbicide 273 (endothall)--A postemergence sugar beet herbicide especially effective against broadleaf weeds. Penwalt.

Hoelon (dichlorofop)--Used postemergence for annual grass in soybeans and wheat. American Hoechst.

Hyvar (bromacil)--Used as a soil sterilant and for woody plant control. DuPont.

Igran (terbutryn)--A short residual s-triazine for use in sorghum. Generally combined with AAtrex or Milogard for broader spectrum control and reduced carryover. Ciba-Geigy.

Judge--Generic Alachlor.

Karmex (diuron)--A substituted urea for selective annual weed control at low rates and as a soil sterilant at higher rates. DuPont.

Kerb (pronamide)--Used preemergence and early postemergence in alfalfa. Rohm & Haas.

Knoxweed--A combination of Eptam and 2,4-D for preemergence annual weed control in corn. Do not use on sandy soils. ICI.

Krenite (fosamine)--A water soluble brush control agent that can be used on noncropland areas adjacent to water. DuPont.

Krovar--A combination of Hyvar and Karmex. DuPont.

Laddok (bentazon + atrazine)--A combination of Basagran + atrazine for postemergence broadleaf weed control in corn. BASF.

Landmaster BW--A combination of 1.2 lb glyphosate (Roundup) and 1.6 lb 2,4-D primarily for no-till. Monsanto.

Landmaster II (glyphosate + 2,4-D amine)--A combination of 1.2 lb Roundup plus 1.0 lb 2,4-D amine. Monsanto.

Lariat--A prepack of 2.5 lbs Lasso + 1.5 lb atrazine. Monsanto.

Lasso (alachlor)--Used preplant and preemergence for annual grass and some broadleaf weeds in corn, sorghum, soybeans and fieldbeans. Monsanto.

Lasso-Atrazine Flowable--A prepackaged combination of 2.5 lbs Lasso and 1.5 lb atrazine. Monsanto.

Leafex-3 (sodium chlorate)--Used as a sorghum desiccant. Occidental.

Lexone--Trade name for metribuzin. DuPont.



Linex--Trade name for linuron. Griffin.

Linuron--Used primarily preemergence for broadleaf weeds in corn, sorghum and soybeans. Linex and Lorox.

Lorox--Trade name for linuron. DuPont.

Lorox Plus--A 18:1 ratio of Lorox + Classic. DuPont.

Marksmen--A combination of 1.1 lb dicamba and 2.1 lbs atrazine for postemergence weed control in corn. Sandoz.

Matrix (Express + Harmony)--A non-residual herbicide for broadleaf weeds in wheat, barley and fallow. EUP. DuPont.

MCPA--A phenoxy similar to 2,4-D but safer on oats and legumes. Often used in combination. Many trade names. Rhone-Poulenc.

Metribuzin--Used for annual broadleaf weeds in soybeans, alfalfa and potatoes; often used in combination. Trade names - Lexone and Sencor.

Milocep (metolachlor + propazine)--A combination of Dual + Milogard for use on sorghum planted with Concep II treated seed. Ciba-Geigy.

Milogard (propazine)--Used preemergence in sorghum. Performs best on soils low in organic matter. Often combined with AAtrex and Igran for improved annual grass control. Ciba-Geigy.

Modown (bifenox)--Used preemergence for broadleaf and certain grass weeds in soybeans, corn and sorghum. Rhone-Poulenc.

MSMA (monosodium methanearsonate)--Used for selective crabgrass control in turn and johnsongrass in noncrop areas. Rhone-Poulenc.

Norosac--Same as Casoron. PBI-Gordon.

Nortron (ethofumesate)--A preemergence or preplant incorporated herbicide for sugar beets. NOR-AM.

Option (fenoxaprop)--Formerly called Whip. A post-emergence grass herbicide similar to Fusilade and Poast. FMC.

Oust (sulfometuron methyl)--A noncropland herbicide that also provides suppression of perennial grasses at lower rates. DuPont.

Paraquat--A nonselective contact herbicide used for no-till and ecofarming, soybean and sunflower desiccation, and on noncropland. Gramoxone Super. ICI Americas.

Paraquat+Plus--Now Gramoxone Super. ICI Americas.

Pendimethalin--Common name for Prowl. Also active ingredient in some preemergence turf herbicides.

Phytar (cacodylic acid)--Nonselective contact herbicide used for weed control on noncropland.

Picloram--Common name for Tordon.

Pinnacle (DPX-M6316)--Similar to Classic. Pinnacle is used postemergence for broadleaf control in soybeans. Registration pending. DuPont.

Poast (sethoxydim)--A postemergence herbicide for shattercane, volunteer corn and other grass weeds in soybeans and other broadleaf crops. BASF-Wyandotte.

Pramitol (prometon)--Used primarily for season long control of annual and perennial weeds in noncropped areas. Ciba-Geigy.

Prefar (bensulide)--Used preplant for grass and broadleaf weeds in cantaloupe, cucumbers and watermelons. ICI.

Preview--10 parts Lexone + 1 part Classic on an active ingredient basis. For use in soybeans.

DuPont.

Princep (simazine)--A long lasting preemergence or preplant herbicide for corn, shelterbelts and for fall weed control in alfalfa. Ciba-Geigy.

Propachlor--Active ingredient in Ramrod. Used for grass weed control in corn and sorghum.

Propazine--See Milogard.

Prowl (pendimethalin)--Used preemergence on corn and preemergence or preplant on soybeans grown on soils with more than 1.5% organic matter. American Cyanamid.

Prozine--A prepack of Prowl + atrazine. American Cyanamid.

Pursuit (imazethapyr)--Same family as Scepter under development for use in soybeans. American Cyanamid.

Pursuit Plus (imazethapyr + pendimethalin)--A 6:1 ratio of Prowl and Pursuit for preplant incorporation use in soybeans. American Cyanamid.

Pyramin (pyrazon)--Used for preemergence for broadleaf weeds in sugar beets. BASF-Wyandotte.

Ramrod--Trade name for propachlor. Monsanto.

Ramrod-atrazine Flowable--A combination of 3 lbs Ramrod and 1 lb atrazine for broad spectrum weed control in corn and sorghum. Monsanto.

Randex (CDAA)--A preemergence grass herbicide for corn, sorghum and soybeans grown for seed. Randex T for use on corn only, combines Randex with TCBC for improved broadleaf weed control. Monsanto.

Rescue (Alanap + 2,4-DB)--Used postemergence in mid-season for broadleaf weeds in soybeans. Uniroyal.

Reward (vernolate + R-33865 extender)--The extender lengthens the control span of Vernam. ICI.

Rodeo (glyphosate)--Special formulation of glyphosate for aquatic weed control. Similar to Roundup. Monsanto.

Ro-Neet (cycloate)--Used preplant incorporated in sugar beets for annual grass and some broadleaf weeds. ICI.

Roundup (glyphosate)--A postemergence nonselective translocated herbicide for annual and perennial grasses and broadleaf weeds. No soil residual. Monsanto.

Roundup RT (glyphosate)--Same as Roundup, but available only in a 100-gallon returnable shuttle. Monsanto.

Saddle--Generic Alachlor

Salute 4EC--Package blend of 1.33 lb metribuzin (Sencor) and 2.66 lbs trifluralin for soybeans. Mobay.

Salvo--A low volatile ester of 2,4-D. Vertac.

Scepter (imazaquin)--A preplant incorporated, preemergence and postemergence grass and broadleaf weed control herbicide for soybeans. American Cyanamid.

Screen--A protectant for application to sorghum seed to prevent Lasso injury. Monsanto.

Sencor--Trade name for metribuzin. Mobay.

Sinbar (terbacil)--Used for dormant season control of annual grass and broadleaf weeds in established alfalfa. DuPont.

Solicam (norflurazon)--Used preemergence in fruit trees. Sandoz.



Sonalan (ethalfluralin)--Used preplant incorporated for annual grasses and certain broadleaf weeds in soybeans. Elanco.

Spike (tebuthiuron)--Used for total vegetation and selective brush control in grassland and noncrop areas. Elanco.

Squadron--Package mix of Prowl and Scepter. American Cyanamid.

Stall--Generic Alachlor.

Stinger (chlopyralid)--New herbicide for postemergence broadleaf control in sugar beets. Dow.

SULV (2,4-D amine)--A 4 lb per gallon 2,4-D amine for aerial application undiluted or by ground equipment in 3 to 5 gallons of water. Uniroyal, Gordon.

Surflan (oryzalin)--Used preemergence for annual grasses in soybeans. Often used in combination. Elanco.

Sutan + (butylate + R-25788)--A preplant incorporated herbicide for annual grasses in corn. ICI.

Sutazine + (Sutan+ + atrazine)--A combination of 4 parts Sutan+ and 1 part atrazine for preplant incorporated weed control in corn. ICI.

2,4-D--A growth regulating phenoxy herbicide for broadleaf weed control in grass crops. Many trade names.

Tackle (acifluorfen)--A postemergence herbicide for broadleaf weed control in soybeans. Rhone-Poulenc.

Tandem (tridiphane)--A postemergence herbicide for weed control in corn. Use in combination with atrazine or Bladex. Dow.

TCA--Used postemergence for annual and perennial grasses on noncropland; also preemergence in sugar beets. Vertac.

Telar (chlorsulfuron)--An industrial formulation of the active ingredient in Glean. DuPont.

Telone (dichlorophene)--A fumigant used preplant for quackgrass in potatoes. Dow.

Tillam (pebulate)--Registered preplant incorporated for annual grass control in sugar beets. ICI.

Tordon (picloram)--A postemergence herbicide for annual and perennial broadleaf weeds. Residues may last for several years in the soil. Dow.

Touchdown (sulphosate)--A nonselective, non-residual translocated postemergence herbicide. ICI.

Tough (pyridate)--Used in combination with Bladex or atrazine for postemergence weed control in corn. Label pending. Terra.

Treflan (trifluralin)--Used preplant incorporated in soybeans and nursery stock for annual grass control. Elanco.

Tri-Scept--A prepack of trifluralin + Scepter. Registration expected for 1988. American Cyanamid.

Trifluralin--The active ingredient in Treflan.

Trimec--A three way combination of 2,4-D, micoprop and dicamba for lawn weed and woody plant control. PBI-Gordon.

Turbo SEC--A package mix of 6.55 lbs Dual and 1.45 lb Sencor for use in soybeans. Mobay.

Tycor--Sister compound to Sencor for control of annual brome and other weed species in winter wheat. EUP. Mobay.

Velpar (hexazinone)--Used for nonselective postemergence weed control on noncropland, Christmas tree plantings and alfalfa. DuPont.

Velpar R.P.--A liquid formulation used undiluted for spot spraying woody plants in range and pasture. DuPont.

Vernam (vernolate)--Used preplant incorporated in soybeans for annual grass and some broadleaf weeds. ICI.

Weedazole--Trade name for amitrole. Rhone-Poulenc.



Herbicide	Price	Herbicide	Price	Herbicide	Price
Ally	\$25.00/oz	2,4-D amine	\$ 8.00/gal	Option	\$85.00/gal
AAtrex 4L	\$ 9.60/gal	2,4-D ester	\$10.00/gal	Oust	\$ 7.50/oz
AAtrex 80W	\$ 1.60/lb	Dacthal 75W	\$ 4.50/lb	Poast	\$80.00/gal
Alanap L	\$12.40/gal	Diquat	\$63.20/gal	Pramitol 5P	\$ 1.10/lb
Amiben DS	\$ 6.30/lb	Dowpon M	\$ 2.00/lb	Pramitol 25E	\$19.10/gal
Amitrol-T	\$20.00/gal	Dual 8E	\$50.00/gal	Prefar	\$32.80/gal
Antor	\$37.30/gal	Eptam 7E	\$24.30/gal	Preview	\$26.50/lb
Aquaclean	\$ 1.00/lb	Eptam 10G	\$ .40/lb	Princep 80W	\$ 3.30/gal
Aquathal	\$ 1.00/lb	Eradicane	\$19.50/gal	Princep 4L	\$15.60/gal
Aquathal 1.6E	\$57.60/gal	Eradicane Extra	\$24.80/gal	Prowl	\$18.40/gal
Aquazine	\$ 5.20/gal	Extrazine II	\$14.00/gal	Ramrod-Atrazine	\$13.50/gal
Assure	\$100.00/gal	Fallow Master	\$23.50/gal	Ramrod Flowable	\$15.00/gal
Arsenal	\$130.00/gal	Far Go 10G	\$ .90/lb	Rescue	\$12.80/gal
Balan	\$14.80/gal	Fusilade 2000	\$80.00/gal	Reward	\$17.60/gal
Banvel	\$50.80/gal	Garlon 4	\$71.50/gal	Ro-Neet 7E	\$47.90/gal
Basagran	\$56.00/gal	Genate Plus	\$16.00/gal	Ro-Neet 10G	\$ 1.50/lb
Betanex	\$65.00/gal	Genep	\$24.30/gal	Roundup	\$65.00/gal
Betamix	\$65.00/gal	Glean	\$17.00/oz	Salute	\$46.80/gal
Bicep	\$21.60/gal	Goal 2E	\$72.00/gal	Scepter	\$160.00/gal
Bladex 4L	\$17.50/gal	Gramoxone	\$36.80/gal	Sencor/Lexone4L	\$95.00/gal
Bladex 80W	\$ 3.50/lb	Herbicide 273	\$35.60/gal	Sencor/LexoneDF	\$18.00/gal
Blazer 2L	\$49.15/gal	Hyvar X	\$10.80/gal	Sinbar	\$21.00/lb
Brominal 3+3	\$72.00/gal	Hyvar XL	\$34.40/gal	Solicam	\$10.00/lb
Bronate	\$72.00/gal	Igran 80W	\$ 4.70/lb	Sonalan	\$22.00/gal
Bronco	\$31.00/gal	Karmex 80W	\$ 4.00/lb	Spike 5G	\$ 2.80/lb
Buctril	\$42.00/gal	Kerb 50W	\$14.70/lb	Spike 80W	\$20.00/lb
Bullet	\$15.00/gal	Krenite	\$40.40/gal	Spike 20P	\$ 8.00/lb
Butoxone	\$14.00/gal	Krovar I	\$ 8.60/lb	Squadron	\$45.00/gal
Butyrac	\$14.00/gal	Landmaster II	\$18.70/gal	Stinger	\$465.00/gal
Casoron 10G	\$ 3.20/lb	Landmaster BW	\$19.80/gal	Surflan	\$56.00/gal
Casoron 50W	\$14.00/lb	Lasso	\$20.00/gal	Sutan+	\$16.00/gal
Casoron 4G	\$ 1.20/lb	Lasso II	\$ 1.00/lb	Sutazine	\$15.50/gal
Classic	\$15.00/oz	Lariat	\$15.00/gal	Tandem	\$89.00/gal
Cobra	\$100.00/gal	Leafex 3	\$ 3.20/gal	Treflan	\$24.00/gal
Commence	\$50.00/gal	Lorox 4L	\$54.00/gal	Tordon 22K	\$92.00/gal
Command 4EC	\$60.00/gal	Lorox Plus	\$13.20/lb	Turbo	\$75.00/gal
Crop Oil Conc.	\$ 6.00/gal	Marksman	\$19.00/gal	Velpar L	\$105.00/gal
Crossbow	\$40.00/gal	MCPA	\$12.00/gal	Vernam	\$26.00/gal
Curtail	\$21.60/gal	Norosac 4G	\$ 1.20/lb	X-77	\$14.80/gal

## WEED SCIENCE PUBLICATIONS

Banvel and 2,4-D Damage to Fieldbeans and Soybeans - G86-802  
 Blue Mustard Control - G74-92  
 Broadcast or Band Herbicides - G76-294  
 Broadleaf Weed Control in Wheat - G74-137  
 Brush and Woody Plant Control - G84-704  
 Calibrating a Sprayer - G82-566  
 Canada Thistle Control - G80-509  
 Close Drilled Soybeans - G77-329  
 Common Milkweed - G77-384  
 Constructing a Pipewick Applicator - G81-555  
 Disposal of Excess Pesticides - G79-473  
 Downy Brome Control in Alfalfa - G79-436  
 Ecofarming-Fallow Aids in Winter Wheat Fallow Rotations - G81-546  
 Ecofarming-Floaters for Herbicide Application - G81-550  
 Ecofarming-Management of Atrazine Carryover in Ecofallow - G81-570  
 Ecofarming-Selection of Sprayers - G80-500  
 Ecofarming-Spring Row Crop Planting and Weed Control in Winter Wheat Stubble - G81-551  
 Factors Affecting Foliar-Applied Herbicides - G84-700  
 Factors That Make Herbicides Work - G76-272  
 Field Sandbur Control in Corn - G74-121  
 Hay Fever Plants - EC77-199  
 Hemp Dogbane - G83-665  
 Herbicide Carryover - G83-637  
 Herbicide-Fertilizer Combinations - G74-164  
 Herbicides and Soils - G83-653  
 Jointed Goatgrass - G75-210  
 Know and Control Downy Brome - G78-422  
 Lawn Weeds - NC Regional Pub. No. 26  
 Leafy Spurge - G87-834  
 Musk Thistle - EC76-160  
 No-Till Corn in Alfalfa Sod - G74-131  
 Right Crop Stage for Herbicide Use--Alfalfa, Sugarbeets, Soybeans and Fieldbeans - G78-390  
 Right Crop Stage for Herbicide Use--Corn, Sorghum, Small Grains - G77-382  
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 Shattercane--What To Do About It - G74-122  
 Surfactants and Herbicides - G88-872  
 Test for Atrazine Carryover - G74-113  
 Using Pipewick and Other Selective Applicators - G81-555  
 Velvetleaf - G83-681  
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 Weed Control in Gardens - G79-444  
 Weed Control in Grain Sorghum - G74-137  
 Weed Control in Reduced Tillage Corn - G74-123  
 Weed Control in Soybeans - G83-647



