

# Soybean Preemergence Weed Control

Apply preemergence herbicides in 10 to 20 gallons of water to the soil surface at or immediately following planting. Apply **before the emergence of soybeans and weeds. Expect little or no weed control if you apply the pre-emergence herbicide to a dry soil and if less than ½ inch of rainfall occurs within 2 weeks.** When weed seedlings begin to emerge before receiving adequate rainfall, use a rotary hoe or similar rolling cultivator to remove these weeds and shallowly incorporate the herbicide.

To compare the effectiveness of herbicides on various weeds, refer to Table 1. Rating estimates assume correct rates and favorable weather. **Always read labels for precautions and restrictions.**

## Overlay and Tank-Mix Combinations

When using preemergence and preplant incorporated herbicides, select combinations of herbicides that control a variety of weeds. Another way to increase the spectrum of weeds controlled is to tank mix certain of the surface-applied preemergence herbicides. Consult labels for specific mixtures that are permissible.

## No-Till Soybeans

For no-till planting, use a burndown herbicide to kill existing weeds. You may apply a preemergence herbicide as a tank mixture with the burndown foliar treatment or following the burndown treatment, but before soybeans emerge. Refer to Extension Information Sheet 962 for additional burndown herbicide information. Also, consult

each label to see which herbicides can be tank-mixed. In addition, Prowl is labeled for preemergence application in no-till soybeans; however, consult the Prowl label for rates and weeds controlled.

## Rate, Volume, and Method of Application

Rates in this publication are given on a broadcast basis. However, it is often desirable to treat only a band directly over the row. To figure the rate for a band, make the following calculation:

$$\frac{\text{Desired band width (inches)}}{\text{Row width (inches)}} \times \text{Broadcast rate per acre} = \text{Band rate required per acre}$$

Example:

$$\frac{16\text{-inch band}}{40\text{-inch row}} \times 1 \text{ lb per acre Broadcast} = 0.4 \text{ lb per acre required on 16-inch band}$$

The volume for ground applications should be 10 to 20 gallons per acre for broadcast treatments, but if you are applying in crop stubble or weed vegetation, use 20 to 40 gallons per acre. On bands, use 1/2 gallon of mixture per inch of band width; for example, 8 gallons per acre on a 16-inch band. For aerial application, use 5 to 10 gallons per acre.

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast	Time of application	Weeds controlled	Special instructions and remarks
<b>Preemergence</b>				
alachlor at 2 to 2.5 to 3 lb	<b>Lasso</b> — 2 to 2.5 to 3 qt in 10 to 20 gal of water by ground. Granular formulations may also be used.	At planting.	Most annual grasses and pigweeds.	Intermediate rates should be used on silt loam and clay loam. Rainfall is required, and optimum control is obtained when rainfall occurs within 10 days after application. See label for restrictions and user precautions.
clomazone at 1.0 to 1.25 lb	<b>Command 3ME</b> — 2.6 to 3.3 pt in 10 to 20 gal water by ground. Select rates according to soil type and anticipated weed pressure. Add a drift-reducing agent according to manufacturer's label.	At planting.	Most annual grasses, seedling johnsongrass, prickly sida, Pennsylvania smartweed, purslane, spotted spurge, velvetleaf, and wild poinsettia.	<b>Do not</b> (1) apply within 1,500 ft of towns or subdivisions, or commercial vegetables, greenhouses, or nurseries; (2) graze or feed forage, hay, or straw from treated fields to livestock; (3) apply with aerial equipment. Use caution to minimize spray drift as off-site movement can cause foliar whitening or yellowing of plants.
dimethenamid at 0.75 to 1.50 lb	<b>Frontier 6.0E</b> — 16 to 32 oz in 2 or more gal water to obtain ground coverage.	At or after planting but before soybean emergence.	Most annual grasses including broadleaf signalgrass and red rice, and small-seeded broadleaf weeds.	Poor control of most large-seeded broadleaf weeds. See label for tank mixtures. May cause temporary growth suppression of soybeans with high rainfall and water-saturated soil.
dimethenamid + imazaquin at 0.9 + 0.125 lb	<b>Detail 4.1EC</b> at 1.0 qt in 10 to 40 gal by ground equipment or 5 or more gal by aerial equipment	After planting but before weed emergence. May be applied postemergence to soybeans up to the 3 trifoliate stage.	Annual grasses and seedling johnsongrass, cocklebur, morningglory species, pigweed species, prickly sida, smartweed, and common ragweed.	Use of additional ALS-inhibiting herbicides may cause injury to rotational crops, except when specified on the label. Adequate moisture is required for activation.
flumetsulam at 0.80 to 1.06 oz	<b>Python 80WDG</b> — 1.0 to 1.33 oz in 10 to 40 gal by ground equipment.	After planting but before emergence.	Broadleaf weeds.	<b>Do not</b> (1) apply more than 1.4 oz Python WDG in a year; (2) exceed 0.07 lb flumetsulam per year; (3) apply to soils with a pH of 7.8 or higher; (4) aerially apply.
imazaquin at 0.125 lb	<b>Scepter 70DG</b> — 2.86 oz in 10 to 20 gal water by ground equipment. <b>In no-till or doublecrop behind wheat</b> , use at least 20 gal water plus 0.25% (v/v) nonionic surfactant and apply with ground equipment.	At planting or before soybeans emerge.	Cocklebur, pitted, palmleaf and small-flower morningglory, pigweeds, prickly sida, smartweed, and common ragweed, sicklepod — followed by Scepter or other effective herbicide (see postemergence guidelines).	If sufficient rainfall is not received within 7 days after application, use a rotary hoe to control emerged weeds. Susceptible weeds will emerge, stop growing, and either die or remain stunted. Internode shortening of soybean plants may occur, but this has not affected yields. Scepter may be applied in combination with a grass or broadleaf herbicide registered for preemergence application or following a grass herbicide registered for PPI application in soybeans. <b>Do not</b> (1) apply more than 0.25 lb ai/A Scepter per growing season; (2) graze or feed treated soybean forage, hay, or straw to livestock. Only rotational crops harvested at maturity may be used for feed or food. <b>Avoid drift</b> to nontarget species or areas.

**Crop, weed, or situation and active chemical per treated land acre**

**Formulation needed to treat 1 acre broadcast**

**Time of application**

**Weeds controlled**

**Special instructions and remarks**

imazaquin + pendimethalin at 0.87 lb **Squadron 2.33 EC** (0.33 lb ai imazaquin + 2.0 lb ai pedimethalin) — 3.0 pt in 10 or more gal water or 20 or more gal fertilizer by ground equipment or 5 or more gal by aerial equipment. From 45 days before planting to after planting, but before soybean emergence. Annual grasses and seedling johnsongrass, cocklebur, annual morningglories, pigweeds, and prickly sida. **Do not** graze or feed treated soybean hay, forage, or straw to livestock. Allow 90 days between application and harvest.

metolachlor at 1.5 to 2.5 lb/0.95 to 1.90 lb **Dual 8E/Dual Magnum** — Apply in 10 to 20 gal water. **See table below.** At planting. Most annual grasses and pigweed. If stand failure occurs, **do not** re-treat unless replanting is in the middles. Rainfall is required for optimum control.

Soil Texture	Pt with Organic Matter Up to 3%*	
	Dual	Dual Magnum
Coarse — sandy to sandy loam	1.5 to 2.0	1.00 to 1.33
Medium — loam to silt loam	2.0 to 2.5	1.33 to 1.67
Fine — sandy clay loam to clay	2.0 to 2.5	1.67 to 2.00

\*Use the lower rate for soils with organic matter less than 1% and the higher rate for soils with organic matter greater than 1%.

metolachlor + metribuzin at 1.5 to 2 to 2.75 lb **Turbo 8EC** (6.55 lb ai metolachlor + 1.45 lb ai metribuzin) — 1.5 to 2 to 2.75 pt in 10 or more gal water by ground or 2 or more gal water by aerial equipment. At planting. Annual grasses, pigweeds, prickly sida, hemp, sesbania, sicklepod, smartweed, spurge, velvetleaf. Injury may occur (1) on soils with calcareous surface or pH 7.5 or above; (2) to certain soybean varieties, see label for list; (3) on soils with less than 0.5% organic matter; (4) when soybeans are planted less than 1.5 inches deep; (5) when heavy rains follow application, especially in poorly drained areas where water may stand for several days. Treated forage and vines may be fed to livestock 40 days after application. If replanting is necessary, **do not** make a second Turbo application.

metribuzin at 0.25 to 0.625 lb **Sencor** — apply in 10 to 40 gal water. **See table below.** At planting. Hemp sesbania, prickly sida, early sicklepod, and most annual grasses and small-seeded broad-leaf weeds. **Crop injury may occur on soils having a calcareous surface area or pH 7.5 or above.** Soybean stand reductions may occur when heavy rainfall immediately follows application. **Do not apply to fields subject to water standing following heavy rainfall or to fields planted to sensitive varieties.** Plant soybean seed at least 1.5 inches deep. For sicklepod, use the high side of the soil type rate range given in the table.

**0.5% Organic Matter or Greater\***

Soil texture	Sencor			
	4L	75DF	4L	75DF
	(pt)	(lb)	(pt)	(lb)
Coarse Loamy sand, sandy loam	0.50	0.33	to 0.75	0.50
Medium Loam, silty loam, silt	0.75	0.50	to 1.00	0.67
Fine Silty clay loam, clay loam, clay	1.00	0.67	to 1.25	0.83

\*Do not use on sand or on any soil with less than 0.5% organic matter; use the higher rates on soils with higher organic matter.

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast	Time of application	Weeds controlled	Special instructions and remarks
norflurazon at 1.5 to 2 lb	<b>Zorial 80 DF</b> —1.9 to 2.5 lb in 10 to 20 gal water or 0.95 to 1.25 lb in 10 to 20 gal water preplant incorporated and surface preemergence.	At planting or <b>1/2 rate</b> preplant incorporated within 30 days of planting <b>plus</b> ½ rate at planting.	Most annual grasses, small-seeded broadleaf weeds and prickly sida. Inadequate control of morning-glory, cocklebur and hemp sesbania.	<b>Do not apply to sand, loamy sand or sandy loam soil.</b> If stand failure occurs, cotton, soybeans or peanuts may be planted through the treated band with minimum disturbance of the treated soil or the area may be reworked. Rebedding without disturbing the treated area should not be done. <b>At least 1/2-inch rainfall within 2 weeks after preemergence application is needed for control.</b>
pendimethalin at 0.5 to 0.75 to 1.0 lb	<b>Prowl 3.3EC/ Pendimax</b> at 1.2 to 1.8 to 2.4 pt	Within 2 days after planting	Most grasses from seed and some small-seeded broadleaf weeds such as pigweed and purslane.	Rainfall or overhead irrigation is needed within 7 days for activity. Seedling diseases, cold weather, excessive moisture, shallow or deep planting, low or high soil pH, high soil salt concentration or drought can weaken seedlings and increase the possibility of crop damage.
sulfentrazone + chlorimuron at 0.18 to 0.22 to 0.24 lb	<b>Canopy XL</b> at 5.1 to 6.4 to 6.8 oz	After planting but before soybean emergence.	Cocklebur, morning-glories, nutsedges, pigweeds, common ragweed, velvetleaf.	Best results obtained if applied to moist soil and followed by rainfall or irrigation. If moisture is insufficient to activate herbicide, rotary hoeing or shallow cultivation should be made after emergence of the crop. <b>Do not</b> apply to Black Belt soils with a soil pH greater than 7.0 or history of nutrient deficiency.
sulfentrazone at 0.25 to 0.3 to 0.375 + clomazone at 0.5 to 0.6 to 0.75	<b>Command Xtra B 4SC</b> - 8 to 10 to 12 oz + <b>Command Xtra G 3 ME - 21</b> to 26 to 32 oz in 10 to 40 gal of water by ground.	From 30 days prior to planting up to emergence.	Most annual grasses, seedling, johnsongrass, prickly sida, Pennsylvania smartweed, most annual morningglories, purslane, spurge, velvetleaf, nutsedge, pigweeds, wild poinsettia, and several other summer annual weeds.	<b>Do not:</b> (1) apply to soils with less than 1% organic matter; (2) apply more than once per season; (3) apply if soybeans are cracking; (4) apply aurally or through irrigation systems; (5) within 1,200 ft of towns, housing developments, commercial fruit/nut or vegetable production, commercial greenhouses or nurseries; (6) in winds above 10 mph; (7) to nonfield areas. Use caution to minimize spray drift as off-site movement can cause foliar whitening or yellowing of plants.



Consult labels for approved adjuvants.

Weed resistance to recommended use rates of certain herbicides has been documented in Mississippi.

Herbicide recommendations in this publication were approved by the Mississippi Weed Science Committee.

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