

# Soybean

## Postemergence Weed Control



*Use postemergence herbicides along with other methods of weed control such as preplant and preemergence herbicides and cultivation. Postemergence treatments often are the keys to weed control throughout the season. For best control with the least effect on soybean yield, make postemergence applications on small weeds before they begin to compete with soybeans.*

Consult labels for approved adjuvants.

Weed resistance to recommended use rates of certain herbicides has been documented in Mississippi. For more information, get a copy of Extension Publication 1907 *Herbicide Resistance-Prevention and Detection*.

## Herbicides, Rate, and Spray Volume Selection

There are many choices of herbicides for postemergence application. More than one application may be necessary for longer lasting control. The most critical period of the season occurs about 4 to 6 weeks after emergence. During this period, annual weeds are easiest to control. Research has shown that weeds that emerge after 6 weeks do not cause competitive yield losses. These weeds do, however, interfere with harvest efficiency and add seed to the soil for later years.

The following sections group chemical treatments according to application method and stage of soybean size, weed size, growing conditions, kind of weed, herbicide-application equipment, and relative cost per acre.

Broadcast rates per acre are given; you may want to reduce them to a band. To reduce a broadcast rate for a specific band width, make the following calculation:

$$\frac{\text{Band width}}{\text{Row width}} \times \text{Broadcast rate} = \text{Amount on band}$$

Example:

$$\frac{15\text{-inch band width}}{30\text{-inch row width}} \times 1 \text{ lb/acre} = 0.5 \text{ lb on band}$$

In general, use 20 gallons of water per acre for broadcast treatments with ground equipment or 1/2 gallon per inch of band width; for example, 8 gallons on a 16-inch band. With aerial equipment, use 5 to 10 gallons per acre as prescribed by the label.

## Over-The-Top Sprays

You can apply the following herbicides over-the-top to cover the soybean plants and the weeds. Application may be broadcast or banded at proportionately lower rates. Weed coverage is important. Some soybean injury may occur.

## Considerations for Using Reduced Rates

Research shows rates of several herbicides applied early postemergence may be reduced to as much as one-half the suggested use rate with satisfactory results for

some weed species. **You must understand that using rates below labeled rates is at your sole risk, and the results may be unsatisfactory unless conditions are ideal at time of application.** Ideal conditions include good soil moisture, air temperature between 85-90 °F, relative humidity above 60 percent, and susceptible weeds (weed ratings of 9 or 10) at the first true-leaf stage. **Do not use reduced rates unless all of these conditions are met.** Accurate sprayer calibration and precise application are important at reduced rates. Begin treating 4 to 5 days after weeds emerge, using a spray volume of approximately 20 gpa. After 7 days, use the suggested label rates. Later applications and/or cultivation usually will be required. However, cultivation within 7 days before or after a postemergence herbicide application may reduce control.

## Putting It All Together

Although postemergence treatments are discussed individually, the successful weed-control program involves several steps during the growing season. Don't overlook cultivation as an effective and economical means of removing weeds outside the soybean drill area. You can use herbicides to add to the value of cultivation by controlling weeds cultivators cannot reach. Often the combination of shallow, flat cultivation with directed herbicide sprays on a band is the least expensive and most effective treatment.

The keys to postemergence weed control are timeliness and follow-up. Remove the first flush of weeds within 4 to 6 weeks, and follow with additional treatments for escapes or later-emerging weeds. Select herbicides to fit the method of application, kind and size of weed, and size of soybean.

**Remember:** Most soybean herbicide labels prohibit feeding treated foliage or forage to livestock.

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

**Early Postemergence**

**Reduced Rate Considerations.** Research has shown that rates of several herbicides applied early postemergence may be reduced to as much as one-half the suggested use rates with satisfactory results **for some weedy species**. User must understand: (1) using rates below labeled rates are at the **user's sole risk**, and (2) results may be unsatisfactory unless ideal conditions exist at the time of application. These ideal conditions are (1) good soil moisture, (2) air temperature between 85-90 °F, (3) relative humidity above 60%, and (4) susceptible weeds in the first true leaf stage. **DO NOT** use the reduced rates unless all of these conditions are met. Accurate sprayer calibration and precise application are very important at reduced rates. Begin treating 4 to 5 days after weeds emerge using a spray volume of approximately 20 gpa. After 7 days, use the label rates. Later applications and/or cultivation will usually be required.

**Early Postemergence**

acifluorfen at 0.25 to 0.375 to 0.50 lb, or at 0.375 to 0.50 + 0.03 lb 2,4-DB.

**Blazer 2L** — 1 to 1.5 to 2 pt in 5 to 10 gal water by air or in 20 to 40 gal water by ground. **See table below.** Add 2 oz of a 2 lb/gal formulation of 2,4-DB + 1 pt surfactant when cocklebur or morningglory exceed the growth stages listed in the table up to 12 inches and apply with ground equipment.

According to weed growth stage. **See table below.**

**See table below.**

**Do not apply** to soybeans and weeds under stress conditions, within 50 days of harvest (60 days for the 2,4-DB tank mix), or more than 4 pt/A per growing season. Rainfall within 6 hours of application may reduce control. Avoid drift to other crops. The 2,4-DB tank mixture will cause soybean foliage damage and may reduce yields. **Blazer causes eye damage** — Rinse eyes immediately with water. **SHAKE WELL** before using. **Do not** use (1) the 5-gal aerial spray volume except for late season control of hemp sesbania; (2) crop oil concentrate with the 2,4-DB mix.

**Growth stage**

Weed to be controlled	No. leaves (maximum)	80% ai Surfactant pt/100 gal	Blazer 2L rate-pt
Hemp sesbania	up to 12 inches	2	1.0 <sup>1</sup>
Showy crotalaria	Before bloom	2	1.0
Purple moonflower	4	1	1.5
Pitted morningglory	4	1	1.5
Redroot pigweed	4	1	1.5
Smooth pigweed	4	1	1.5
Other morningglory	3	1	2.0
Common purslane	Multi (6-in. diam.)	1	1.5
Lanceleaf groundcherry	4	1	2.0
Cutleaf groundcherry	4	1	2.0
Common cocklebur	2	1	2.0 <sup>2</sup>

<sup>1</sup>See above for reduced rates.

<sup>2</sup>Basagran at 1 pt may be added to control 6-leaf cocklebur.

**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**

acifluorfen + bentazon at 0.75 lb

**Storm 4S** (1.33 lb ai acifluorfen + 2.67 lb ai bentazon) — 1.5 pt in 20 gal or more water by ground or 5 gal or more water by aerial equipment with either 0.25% (v/v) nonionic surfactant or 1 qt crop oil concentrate for ground applications or 1 pt crop oil concentrate for aerial applications.

To small, actively growing weeds. **See table below.**

Annual broadleaf weeds. **See table below.**

**Do not** (1) apply more than 1.5 pt per application; (2) exceed 3 pt per season; (3) apply by air if sensitive crops, such as cotton or ornamentals are less than 200 feet down wind; (4) apply sequential treatments of Storm or Blazer less than 15 days after the initial treatments; (5) use treated plants for food or forage; (6) apply within 50 days before harvest.

Weeds Controlled by Storm		
Weeds controlled	Weed height (in.)	Leaf stage (no.)
carpetweed	2	3-in diam.
cocklebur, crotalaria, jimsonweed, Pennsylvania smartweed	6	6
giant ragweed	6	4
pigweeds, common ragweed	3	6
annual morningglories	2	4
prickly sida	2	4

acifluorfen + bentazon + Sethoxydim at 0.25 + 0.5 + 0.38 lb

**Conclude Xact B** at 1.5 pt + **Conclude Xact G** — 1.5 pt in 10 gal water or more, or 5 gal by air with 1 pt crop oil concentrate.

Early postemergence.

Annual grasses and broadleaf weeds.

**Do not:** (1) make more than one application; (2) cultivate within 5 days of application; (3) apply within 60 days of harvest; (4) use treated plants for feed or forage; (5) apply near sensitive crops by air. See Conclude Xact label for specific restrictions on tank-mix and sequential applications.

bentazon at 0.75 to 1.0 lb, or at 0.75 to 1.0 lb + 0.03 lb 2,4-DB

**Basagran** — 1.5 to 2 pt in 5 to 10 gal of water by air or in 20 gal of water by ground. Add 2 oz of a 2 lb/gal formulation of 2,4-DB + 1.5 to 2 pt **Basagran** in 20 gal water and apply with ground equipment.

Early post-emergence<sup>1</sup>.

Cocklebur<sup>2</sup> and 2- to 3-inch prickly sida and smartweed. 2,4-DB mix will improve morningglory control.

May be applied as over-the-top sprays using at least two nozzles/row semidirected on a band wide enough to obtain maximum cocklebur plant coverage. **Do not apply more than a total of 4 pt per acre in one season**, within 65 days of harvest (60 days for the 2,4-DB mix), under drought stress conditions or if soybean fields are flooded. Injury may result when applying Basagran and surfactant to soybeans less than 6 inches tall. The 2,4-DB mix will cause soybean foliage injury and may reduce yields. **Do not** add surfactant to the 2,4-DB mix.

<sup>1</sup>For added control of pigweeds and morningglory, 1 pt **Blazer** + surfactant may be added to **Basagran** or 0.5 to 1 pt + surfactant for hemp sesbania.

<sup>2</sup>See page 4 for reduced rates.

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

chlorimuron at 0.0078 to 0.0104 to 0.0117 lb

**Classic 25DF** — 0.5 to 0.67 to 0.75 oz. **See table below.** Add 0.25% (v/v) of a **nonionic surfactant** in 10 to 20 gal water by ground equipment or in 3 or more gal water by aerial equipment.

To actively growing weeds (**See table below**) after soybeans have one trifoliate leaf until 60 days before maturity. A second application may be applied 14 to 21 days later if needed, but **do not exceed a total of 1.5 oz Classic per season.**

**See table below.** For entireleaf and ivyleaf morningglory, giant ragweed, and sicklepod, make two applications 14 days apart for optimum control.

**Do not use** on soybeans grown on Black Belt soils having a pH greater than 7.0 or a history of iron chlorosis. Soybeans may be stunted, particularly from the two sequential applications. Very susceptible weeds such as cocklebur and pigweeds will turn yellow in 3 to 5 days, growth stops and they die within 7 to 21 days. Other weeds will remain green but stunted. Cultivation 7 to 14 days **after treatment** will improve control. **Do not** (1) apply if rainfall is expected within 4 hours; (2) graze treated fields or harvest for forage or hay. **Avoid drift** to nontarget species or areas. **Clean sprayer** according to label directions before using to spray other crops.

Target Weeds	Classic		
	1/2 oz	2/3 oz	3/4 oz
	(maximum height, inches at application)		
Cocklebur <sup>1</sup>	6	8	12
Hemp sesbania	4	5	6
Morningglories <sup>2</sup>	2	3	4
Sicklepod	2	3	4
Smartweeds			
ladysthumb	2	3	4
Pennsylvania	2	3	4
Ragweeds			
common	2	3	4
giant	-	-	6
Pigweeds	3	3	4
Wild poinsettia	-	2	4

<sup>1</sup>See page 37 for reduced rates.

<sup>2</sup>1 to 2 oz 2,4-DB may be added per label for improved control.

clethodim at 0.0938 to 0.125 lb

**Select 2EC** — 6 to 8 oz. **See table below.** Apply in 10 to 30 gal water by ground equipment or a minimum of 3 gal water by air. Always add 1 qt crop oil concentrate.

Apply to actively growing grasses. **See table below.**

Most annual grasses, johnsongrass, and bermudagrass.

Apply over-the-top or as a semi-directed spray to cover grasses. **Do not apply** (1) more than 32 oz/A per season, (2) if rainfall is expected within 1 hour, or (3) to stressed plants. See Select label for sequential and tank mix instructions with broadleaf herbicides.

Grass	Grass height (inches)	Select rate (oz)
Seedling johnsongrass	4-10	6
Volunteer corn	4-18	8
Red rice	1-3	6
Other annual grasses	2-6	6
Rhizome johnsongrass	12-24	8
Repeat treatment	6-10	6
Bermudagrass	3	8
Repeat treatment	3	8

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
cloransulam at 0.25 oz	<b>FirstRate</b> — 0.3 oz in 10 to 20 gal water with 1.2% crop oil concentrate or 0.25% nonionic surfactant.	To actively growing weeds with no more than 2 to 8 leaves, depending on species.	Common cocklebur, morningglory species, ragweed, sicklepod	<b>Do not</b> (1) apply through irrigation system; (2) make more than two applications per season.
cloransulam + flumetsulam at 0.25 oz + 0.10 oz	<b>Frontrow</b> — 0.42 oz in 10 to 20 gal water with 1.2% crop oil concentrate or 0.25% nonionic surfactant.	To actively growing weeds with no more than 2 to 8 leaves, depending on species.	Common cocklebur, prickly sida, morningglory species, ragweed, sicklepod.	<b>Do not</b> (1) apply through irrigation system; (2) make more than two applications per season.
fomesafen at 0.25 to 0.375/0.24 to 0.35 lb	<b>Reflex 2LC/Flexstar 1.88LC</b> — 1 to 1.5 pt. <b>See table below.</b> Add 0.25% (v/v) 80% active nonionic surfactant in 10 to 20 gal water by ground equipment.	To actively growing weeds before soybeans bloom.	<b>See table below.</b>	May cause temporary soybean leaf bronzing, crinkling, and/or spotting. Apply in front of cultivator plows if applying in conjunction with cultivation. Rainfall received within 4 hours of application may reduce control. <b>Do not</b> (1) apply more than 1.5 pt per acre per growing season; (2) apply to drought-stressed weeds or soybeans under stress from drought, hail damage or other types of injury; or (3) graze treated areas (to include rotational crops) or harvest for forage or hay. <b>Avoid</b> conditions conducive to drift to non-target species or areas.

**Reflex 2LC/Flexstar 1.88LC**

Target weed <sup>1</sup>	1.0 pt 1.5 pt	
	(maximum no. leaves)	
Cocklebur, eclipta, giant ragweed, smallflower and palmleaf morningglory, hophornbeam copperleaf	-	4
Showy crotalaria, cypressvine morningglory, pigweeds, common ragweed, Palmer amaranth	4	6
Mexicanweed, smellmelon, spiny amaranth	-	2
Entireleaf and ivyleaf morningglory, wild poinsettia	-	3
Purple and pitted morningglory, ladysthumb	2	4
Pennsylvania smartweed	4	4
Hemp sesbania	6	12

<sup>1</sup>Cocklebur not controlled if treated at cotyledonary stage.

fluazifop-P at 0.0938 to 0.25 lb	<b>Fusilade DX 2E</b> — 6 to 8 to 12 to 16 oz. <b>See table below.</b> Apply in a minimum of 5 gal water. Always add a crop oil concentrate at 1% or a nonionic surfactant at 0.25% (v/v). Oil concentrates should contain 15 to 20% surfactant. Surfactants should be nonionic and contain at least 75% surface active agent.	Apply to actively growing grasses. <b>See table below.</b>	Most annual grasses, seedling and rhizome johnsongrass, bermudagrass, volunteer grain sorghum, and red rice.	Apply over-the-top or as a semi-directed spray to cover the grasses. <b>Do not apply</b> (1) more than 32 oz/A per season, (2) after first bloom, or (3) if rainfall is expected within 1 hour after application. See Fusilade DX label for sequential and tank mix applications.
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Grass	Growth stage (inches)	Fusilade DX (oz)
Volunteer grain sorghum	6 to 12	6
Goosegrass and volunteer cereals	2 to 4	8
Johnsongrass (seedling)	2 to 8	6
Other annual grasses	1 to 4	12
Red rice	0.5 to 1	16
Rhizome johnsongrass	8 to 18	12
regrowth	6 to 12	8
Bermudagrass	4 to 8 stolons	12
regrowth	4 to 8 stolons	8

**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**

fluazifop-P + fenoxaprop-ethyl at 0.12 to 0.24 lb

**Fusion 2.56EC** – 6 to 12 oz. See table below. Apply in a minimum of 5 gal water. Always add a crop oil concentrate at 1% or a nonionic surfactant at 0.25% (v/v). Oil concentrates should contain 15 to 20% surfactant. Surfactants should be nonionic and contain at least 75% surface active agent.

Apply to actively growing grasses. **See table below.**

Most annual grasses, seedling johnsongrass, and red rice.

Apply over the top or as a semi-directed spray to cover the grasses. **Do not apply** (1) more than 24 oz/A per season, (2) after first bloom, or (3) if rainfall is expected within 1 hour after application. See Fusion label for sequential and tank-mix applications.

Grass	Growth Stage (in.)	Fusion (oz)
Volunteer grain sorghum	6 to 12	6 to 10
Goosegrass	2 to 4	8 to 12
Johnsongrass (seedling)	2 to 8	6 to 10
Johnsongrass (Rhizome)	4 to 12	10 to 12
Johnsongrass (Rhizome) (2nd application)	4 to 12	10 to 12
Other annual grasses	2 to 4	8 to 12
Red rice	1/2 to 1	10 to 12

fluazifop-P + fomesafen at 0.56 lb

**Typhoon 1.41EC** (0.47 lb ai fluazifop-P + 0.94 lb ai fomesafen) — 1.6 qt with 1% (v/v) crop oil concentrate or 0.25% (v.v) nonionic surfactant in 15 gal or more water by ground or 5 gal or more water by aerial equipment.

To actively growing weeds, but before soybean bloom.

Annual and perennial grasses and broadleaf weeds, such as cocklebur, eclipta, annual morningglory, pigweed, and hemp sesbania.

Make one application per season. **Do not** (1) exceed 1.6 qt per acre per year; (2) graze treated areas or harvest treated crops for forage or hay; (3) graze rotated small grain crops or harvest for livestock forage.

glyphosate at 0.75 to 1.0 to 1.5 lb

**FOR USE ONLY IN ROUNDUP READY® SOYBEAN CULTIVARS**

**Glyphosate 4/5 lb/gal** — 24 to 48 oz in 5 to 20 gal water by ground or 3 to 15 gal or more water by aerial equipment. **See table below.**

During the period soybeans are in the cracking to the full bloom stage.

Most annual grasses and broadleaf weeds. **See table below.** Tank-mixing with Blazer, Reflex, or Classic can enhance hemp sesbania and morningglory species control.

Total of single or multiple in-crop applications should not exceed 3 qt/A/year. Avoid drift to nontarget areas. **Do not** exceed 32 oz/A with aerial applications. **Do not** apply during inversion conditions, gusty winds or any conditions favoring drift. Drift or direct application to a crop without the Roundup Ready® gene will result in severe damage or crop death.

Weed height inches	Initial <sup>1</sup>			Sequential		
	lb ai/A	oz 4 lb/gal	oz 5 lb/gal	lb ai/A	oz 4 lb/gal	oz 5 lb/gal
0 to 3	0.75	24	19.2	0.50	16	12.8
3 to 6	1.00 <sup>2</sup>	32 <sup>2</sup>	25.6	0.75	24	19.2
6 to 12	1.50	48	38.4	1.00	32	25.6

<sup>1</sup>For optimum control under most conditions, make initial application within 10-15 days after weed emergence and make a sequential application within 10-14 days after initial application.

<sup>2</sup>Maximum rate labeled for aerial application.

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 at 0.0625 or 0.125 lb	<b>Scepter 70DG</b> — 1.43 to 2.86 oz in at least 20 gal water by ground equipment and add 0.25% (v/v) nonionic surfactant or crop oil concentrate according to label.	To actively growing weeds up to 12 inches in height, depending on target species.	The lower rate is recommended for cocklebur up to 9 leaves <sup>1</sup> . Use the higher rate on cocklebur and pigweeds up to 12 inches tall, wild poinsettia, and sicklepod.	For effective <b>sicklepod</b> control with Scepter, first apply Scepter as a PPI or PRE treatment, then apply the POST treatment before weeds exceed the 1 to 2 true leaf growth stage. Apply the POST treatment at least 90 days before soybean harvest. <b>Do not</b> (1) apply more than 0.25 lb ai/A Scepter per growing season, (2) tank mix Scepter with postemergence grass herbicides, (3) 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.
<sup>1</sup> See page 37 for reduced rates.				
imazethapyr at 0.0625 lb	<b>Pursuit 2S or 70DG</b> — 4 oz or 1.44 oz in 10 or more gal water by ground equipment. Add 0.25% (v/v) nonionic surfactant to spray mixture.	To actively growing weeds up to 8 inches in height, depending on target species.	Several broadleaf weeds and many annual grasses when applied to young (1-3 leaves) weeds. Pigweeds and cocklebur may be controlled up to 8 leaves. Seedling johnsongrass controlled up to 6 leaves.	Apply over-the-top, avoiding conditions conducive to drift to nontarget species. <b>Do not apply:</b> (1) within 85 days of soybean harvest (2) more than once during the season. <b>Do not</b> graze or feed treated soybean forage, hay, or straw to livestock.
lactofen at 0.2 lb	<b>Cobra 2E</b> — 12.5 oz plus 0.125% (v/v) nonionic surfactant (at least an 80% ai), or 0.5 to 1 pt petroleum-based crop oil concentrate (COC) in 20 to 30 gal water by ground equipment. Aircraft: Apply in a minimum of 5 gal water plus 1 qt COC.	After weeds emerge but preferably before soybeans exceed three trifoliolate leaves. One trifoliolate leaf in narrow-row (less than 20 inches) plantings.	<b>See table below.</b>	Apply over-the-top or as a directed spray to cover the weeds at the sizes listed in the table below. Temporary leaf speckling, burn, and/or crinkling of soybean leaves present at time of application will occur. <b>Do not</b> (1) cultivate 5 days prior to application or while spraying; (2) apply more than once per growing season not later than 90 days before harvest; (3) apply when conditions do not promote active growth of weeds and soybeans; or (4) graze or feed forage, hay, or straw from treated fields. <b>Avoid drift to nontarget areas.</b>

<b>Cobra 2E</b>	
<b>Target weed(s)</b>	<b>0.78 pt (12.5 oz)</b>
	(max. no. leaves at application)
Common purslane	8-inch (diameter)
Hemp sesbania, common ragweed, pigweeds, cocklebur	6
Showy croton, giant ragweed	4
Morningglories	
palmleaf*	4
pitted*, smallflower, purple*	4
entireleaf*	2
ivyleaf*	2
Prickly sida	4
Spurge, spotted, wild poinsettia	4
Spurge, prostrate	1-inch (diameter)

\* Use 1 pt/A crop oil concentrate with ground application

**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**

sethoxydim at 0.1875 to 0.2813 to 0.375 lb **Poast Plus 1.0E** — 24 to 36 to 48 oz. Apply in 5 to 10 gal water by air or 5 to 20 gal water by ground. add 1 qt crop oil concentrate for aerial and ground applications. **See table below.**

Apply to actively growing grasses.

Most annual grasses, seedling and rhizome johnsongrass, bermudagrass, and red rice.

Soybeans at all stages of growth are tolerant to sethoxydim. Apply over-the-top of soybeans or as a semi-directed spray to the grasses. **Do not apply** (1) to grasses under drought stress or herbicide injury; (2) if rainfall is expected within one hour after application; (3) within 90 days of harvest; (4) more than a total of 7.5 pt/A Poast Plus in one season. Basagran at the labeled use rate according to weed growth stage may be applied as a tank mix with Poast Plus but the above Poast Plus rates must be increased 50%. **Do not** (1) tank mix with Basagran when applying Poast Plus to control johnsongrass, bermudagrass, and red rice; (2) tank mix with pesticides, additives or fertilizer except as specified on the label.

Grass	Growth Stage (inches)	Poast Plus (oz)
Goosegrass and Crabgrass	up to 6	24
Other annual grasses and seedling johnsongrass	up to 8	24
Rhizome johnsongrass	15 to 20	24
regrowth	6 to 10	24
Bermudagrass	stolons up to 6	36
regrowth	stolons 1 to 4	24
Red rice	up to 4	48

quizalofop-P at 0.0344 to 0.0688 lb **Assure II 0.88EC** — 5,7,8,9, or 10 oz. Add 0.25% (v/v) of an 80% active nonionic surfactant or 1% (v/v) of a petroleum oil base crop oil concentrate containing at least 15% emulsifier/surfactant in 10 to 20 gal water by ground or 0.5% (v/v) crop oil concentrate in 3 to 5 gal water by aerial equipment. **See table below.**

To actively growing before soybean pod set, and/or 80 days before soybean harvest.

**See table below.**

Apply over-the-top or as a semi-directed spray to cover the grasses. **Do not apply** (1) with crop origin crop oil concentrates; (2) more than 1.25 pt (20 oz) per season; (3) to drought-stressed grasses; or (4) if rain is expected within 1 hour after application. **Do not** (1) graze treated fields or harvest for forage or hay; (2) cultivate 7 days before or after application or control may be unsatisfactory; or (3) use tank-mixes with Basagran or Classic for grass control except as specified on the label. **AVOID** conditions conducive to drift to nontarget species or areas.

Target Grasses	Growth Stage (inches)	Assure II or Matador (oz)
Volunteer grain sorghum	6-12	5
Johnsongrass (seedling)	2-8	
Fall panicum, field sandbur, goosegrass, volunteer wheat	2-6	7
Red rice	1-4	9
Other annual grasses	2-6	8
Johnsongrass (rhizome)	10-24	5*
regrowth	6-10	5*
Bermudagrass	6 (runners)	10
regrowth	6 (runners)	7

\* Apply in sequence for effective control. Otherwise apply 10 oz to 10-in. rhizome johnsongrass and follow with 7-oz/A to 6-in. regrowth if needed.

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>Directed Sprays</b>				
2,4-DB at 0.20 lb	<b>2,4-DB</b> — 0.9 pt of a 1.75 lb/gal formulation or 0.8 pt of a 2 lb/gal formulation in 10 to 20 gal water.	Apply to cocklebur plants no more than 3 inches tall. <b>Do not apply</b> before soybeans are 8 inches tall.	Cocklebur. Partial control or stunting of small pigweed and morningglory.	Apply once or twice as a semi-directed spray when soybeans are 8 to 12 inches tall with sprays directed to contact no more than the lower one-third of the soybean stems. Precise application is essential to prevent soybean injury. <b>Do not</b> apply if soybeans are under drought stress. Avoid spray pressures in excess of 40 psi. <b>Do not add surfactant to spray mixtures.</b>
linuron at 0.5 to 1.0 lb	1 to 2 lb 50DG or 1 to 2 pt 4L in 20 gal of water. Add 2 qt non-ionic surfactant to each 100 gal spray mix.	Before weeds are 2 inches tall. <b>Do not</b> apply before soybeans are 12 inches tall.	Most annual grasses and broadleaf weeds if young and actively growing. Best control if weeds are no taller than 2 inches.	Apply only single application as directed spray at base of crop plants striking the soybean plants no higher than 2-3 inches above the ground. <b>Do not</b> exceed 25 psi nozzle pressure or apply under windy conditions. <b>Do not graze</b> or feed straw or forage to livestock.
linuron + 2,4-DB at 0.5 + 0.20 lb	1 lb 50DG or 1 pt 4L + 0.8 pt of a 2 lb/gal or 0.9 pt of a 1.75 lb/gal 2,4-DB formulation in 20 gal water. Nonionic surfactant at 1 to 2 qt per 100 gal of spray mix may be added but crop injury may be increased.	When soybeans are at least 8 inches tall and before weeds are 2 inches tall.	Most annual grasses, cocklebur, morningglory, hemp sesbania, sicklepod and prickly sida. Spray to wet weed foliage.	Apply as directed spray to contact no more than the lower one-third of the soybean stem. <b>Do not</b> exceed 25 psi nozzle pressure or apply under windy conditions. <b>Do not</b> apply when soybeans are under drought stress or on soils with less than 1/2% organic matter. A second application may be used if needed but must be made before 60 days of harvest.
metribuzin at 0.25 to 0.50 lb	<b>Sencor 4L</b> — 0.5 to 1 pt or 75% DF — 0.33 to 0.67 lb in 10 to 20 gal water. Add 1 qt nonionic surfactant/100 gal spray mix.	After soybeans are at least 8 inches tall (12 inches for Lexone) and before broadleaf weeds are 3 inches tall; before grasses are 1 inch tall. A 2nd application may be applied after 7 days if needed.	Most broadleaf weeds less than 3 inches tall except morningglory. Most annual grasses less than 1 inch tall. For hemp sesbania and prickly sida, use 0.375 to 0.5 lb ai/A.	Apply as a directed spray at the base of the soybean plants spraying no more than the lower 1/4 to 1/3 of the soybean plants. Soybean leaves contacted by the spray will be killed. <b>Do not</b> (1) exceed 30 psi nozzle pressure or apply under conditions that favor drift; (2) graze or feed forage; (3) apply to sensitive varieties. Injury may occur if two applications of 0.50 lb ai/A are applied in soybean fields subject to flooding.
metribuzin + 2,4-DB at 0.25 to 0.5 + 0.2 lb	<b>Sencor 4L</b> — 0.5 to 1 pt or 75% DF — 0.33 to 0.67 lb + 0.8 pt of a 2 lb/gal or 0.9 pt of a 1.75 lb/gal 2,4-DB formulation. Nonionic surfactant may be added to the mix, but crop injury may increase.	When soybeans are at least 8 inches tall and before broadleaf weeds are 3 inches tall; before grasses are 1 inch tall. A 2nd application may be applied after 7 days if needed.	Same as above for metribuzin plus redroot pigweed, cocklebur, sicklepod, and morningglory up to 3 inches.	Apply as a directed spray at the base of the soybean plants spraying no more than the lower 1/4 to 1/3 of the soybean plants. Soybean leaves contacted by the spray will be killed. Keep spray pressure below 30 psi to prevent “fogging” of spray solution. <b>Do not apply</b> under conditions that favor drift or to sensitive varieties. <b>Do not</b> graze or feed forage. Injury may occur if two applications of 0.50 lb ai/A are made to soybean fields subject to flooding.

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
paraquat at 0.059 to 0.117 lb	<b>Gramoxone Max 3.0E</b> — 2.5 to 5 oz in 20 gal water. Add non-ionic surfactant according to label directions.	When soybeans are at least 8 inches tall and before grasses are 4 inches tall and pigweed is 3 inches tall.	Most grasses from seed, pigweeds, purslane.	Use low rate for weeds less than 2 inches in height and the higher rate for weeds greater than 2 inches. Soybeans less than 8 inches will be injured or killed. Adjust nozzles to spray the lower 3 inches of the soybean plants. <b>Do not</b> exceed 30 psi to avoid drift and minimize foliage burn (spotting). <b>Do not</b> apply more than twice. The second application should follow the first by 7 to 14 days.

### Midseason Cocklebur Control

2,4-DB at 0.20 lb	<b>2,4-DB</b> — 0.8 pt of a 2 lb/gal formulation or 0.9 pt of a 1.75 lb/gal formulation in 10 to 20 gal water.	7 to 10 days before soybean bloom until mid-bloom.	Cocklebur.	Apply as broadcast overhead spray after cocklebur plants have elongated and are as tall as soybean plants. 2,4-DB usually causes soybean injury but injury symptoms (pronounced stem curvature, drooping leaves) generally disappear within one week after treatment. Injury is usually more severe if 2,4-DB is applied to soybeans thinly infested with cockleburs. <b>Do not apply</b> to drought-stressed soybeans. <b>Do not add surfactant to spray mixtures.</b>
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### Spot Spraying

clethodim	<b>Select 2EC</b> — 0.25% in water by volume plus 1% crop oil concentrate. (Example — 1 pt Select + 4 pt crop oil concentrate per 50 gal water.)	To actively growing foliage.	Johnsongrass, bermudagrass, and annual grasses.	Spray to wet foliage but not to point of runoff.
fluazifop-P	<b>Fusilade DX 2E</b> — 0.5% + 0.25% surfactant or 1% crop oil concentrate by volume. (Example — 1 qt Fusilade + 1 pt surfactant or 4 pt paraffinic/vegetable crop oil concentrate per 50 gal water).	Apply to all actively growing foliage of 12- to 18-inch johnsongrass.	Johnsongrass, bermudagrass, and emerged annual grasses.	Wet foliage thoroughly, but not to point of runoff. Make the last application before soybean bloom. Use paraffinic/vegetable crop oil concentrates that contain 15 to 20% surfactant. If a surfactant is used in lieu of the crop oil concentrate, use only nonionic surfactants that contain at least 75% surface active agent.
quizalofop-P	<b>Assure II 0.88EC</b> — 0.375% plus 0.25% nonionic surfactant or 1% petroleum oil base crop oil concentrate in water by volume (Example — 1.5 pt Assure II + 1 pt surfactant or 4 pt crop oil concentrate in 50 gal water).	To actively growing foliage of 10-16-inch johnsongrass or 6-inch bermudagrass runners, but before soybean pod set and/or within 80 days of soybean harvest.	Johnsongrass, bermudagrass, and other emerged annual grass species.	Spray to cover and wet foliage, but not to point of runoff. Use 80% active nonionic surfactants or paraffinic oil base crop oil concentrate with at least 15% emulsifier/surfactant.
sethoxydim	<b>Poast Plus 1.0E</b> — 1.5% + 1.0% crop oil concentrate by volume (Example — Use 6 pt Poast Plus + 4 pt crop oil concentrate per 50 gal of water).	Apply to all actively growing foliage of 15-inch johnsongrass.	Johnsongrass, bermudagrass, and emerged annual grasses	Spray to wet foliage thoroughly, but not to point of runoff. <b>Do not</b> apply within 90 days of harvest.

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
glyphosate	<b>Glyphosate 4/5 lb/gal</b> — 1% (Example - 4 pt in 50 gal water).	Anytime after johnsongrass reaches 12 inches in height but before soybean pods set.	Johnsongrass, bermudagrass, and most other emerged annual and perennial weeds.	Use high rate mix for bermudagrass. Spray to wet foliage of johnsongrass stems or other undesirable vegetation. Non-Roundup Ready soybeans in the treated area will be killed. Keep drift to a minimum. <b>Do not</b> apply if soybeans are setting pods.
<b>Rope Wick</b>				
glyphosate at 25%	<b>Glyphosate — 1 gal plus 3 gal water.</b> Actual quantity used per acre will vary depending on density of weeds.	Apply when johnsongrass is at least 18 inches tall and 8 inches taller than crop plants.	Johnsongrass from rhizomes and seed.	Position wick bar equipped with polyester-over-acrylic rope 2 to 4 inches above crop plants to contact weed foliage with the herbicide-laden rope. Repeat application as needed to control johnsongrass that later grows above crop canopy. Treatments may be applied in conjunction with tillage of crop. Use speed of 5 mph. Crop will be injured if the herbicide comes in contact with the foliage. <b>Do not</b> add crop oil concentrate.
<b>Preharvest</b>				
glyphosate at 1.0 to 6.0 lb	<b>Glyphosate 4/5 lb/gal—Ground equipment</b> — 1 to 6 qt/0.8 to 4.8 qt in 10 gal water. <b>Air</b> — 1 qt/0.3 qt in 3 to 10 gal water.	Preharvest but after all pods have lost all green color.	Most annual grasses, johnsongrass, cocklebur, and pigweeds. Use rates above 2 lb would be beneficial for perennial weeds only.	Wait at least 7 days after application before harvesting. <b>Do not</b> (1) treat soybeans grown for seed; (2) feed or graze treated areas within 25 days after preharvest application; or (3) apply more than 6 qt Roundup Ultra by ground or 1 qt Roundup Ultra by air. Exercise care with ground sprayers to minimize seed loss due to shattering.
paraquat at 0.125 to 0.25 lb	<b>Gramoxone Max 3.0E</b> — 5.5 to 11 oz in at least 20 gal water by ground or in at least 5 gal water by air. Add 1 qt nonionic surfactant per 100 gal spray.	As a harvest aid when soybeans are mature — beans are fully developed with at least ½ of leaves dropped and remaining leaves turning yellow.	Foliage of most weeds that receive good spray coverage will be desiccated.	Drought-stressed weeds will not be desiccated. Immature soybeans will be injured and yields reduced. <b>Do not</b> apply within 15 days of harvest. <b>Do not</b> pasture livestock within 15 days of treatment and remove livestock from treated fields within 30 days before slaughter.
paraquat at 0.25 lb + sodium chlorate at 3 lb	<b>Gramoxone Max 3.0E</b> — 11 oz plus 2 qt sodium chlorate (6 lb/gal) or 1 gal (3 lb/gal) in at least 20 gal water or in 7-10 gal water by air. Add 1 qt nonionic surfactant per 100 gal spray.	As a harvest aid when soybeans are mature – beans are fully developed with at least one-half of leaves dropped and remaining leaves turning yellow.	Foliage of most weeds that receive good spray coverage will be desiccated.	Drought-stressed weeds will not be desiccated. Immature soybeans will be injured and yields reduced. <b>Do not</b> apply within 15 days of harvest. <b>Do not</b> graze treated fields or feed treated bean foliage and fodder.
sodium chlorate at 6 lb	1 gal of a 6 lb/gal or 2 gal of a 3 lb/gal formulation in 20 to 40 gal water by ground or in 7 to 10 gal water by air.	Apply as a harvest aid to soybeans ready to harvest; but 7 to 10 days before harvest.	Foliage of most weeds that receive good spray coverage will be desiccated.	Drought-stressed weeds will not be desiccated. Immature soybeans will be injured and yields reduced. <b>Do not</b> graze treated fields or feed treated bean foliage and fodder.

**Estimated Levels of Weed Control Normally Expected with Soybean Herbicides <sup>a</sup>**

Herbicides	Weeds																																					
	Barnyardgrass	Broadleaf signalgrass	Crabgrass	Goosegrass	Seedling johnsongrass	Rhizome johnsongrass	Fall panicum	Cocklebur	Entireleaf morningglory	Pitted morningglory	Palmleaf morningglory	Smallflower morningglory	Purple moonflower	Purslane	P. smartweed	Hemp sesbania	Prickly sida	Spurred anoda	Pigweed, smooth, redroot	Palmer, spiny amaranth, tall waterhemp	Balloonvine	Texas gourd	Sicklepod	Cutleaf groundcherry	Common ragweed	Yellow nutsedge	Annual sedge	Velvetleaf	Jimsonweed	Red rice	Spurge	Hophornbeam copperleaf	Showy crotonaria	Wild poinsettia	Crop tolerance			
<b>Postemergence-OT</b>																																						
Assure II	9	9	9	8	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	G
Basagran	0	0	0	0	0	0	0	9	2	6	7	9	3	7	9	4	8	8	8	5	4	8	0	0	6	9	6	8	9	8	-	0	0	0	0	7	G	
Basagran + 2,4-DB	0	0	0	0	0	0	0	9	5	8	9	9	5	7	9	5	8	8	8	5	4	8	0	0	6	9	6	8	9	8	-	0	0	0	0	6	F	
Blazer	3	4	3	3	3	2	2	5	8	9	9	8	9	8	7	9	1	2	8	7	8	7	3	9	8	3	5	-	8	2	7	8	9	7	G			
Blazer + 2,4-DB	3	4	3	3	3	2	2	7	8	9	9	8	9	8	7	9	1	-	8	7	8	7	3	9	8	-	-	-	8	2	7	8	9	8	F			
Classic	0	0	0	0	0	0	0	10	9	8	9	8	9	5	9	8	2	4	10	6	5	6	7	-	8	6	8	8	9	0	0	4	-	8	G			
Cobra	4	4	4	4	3	2	3	8	8	9	8	8	9	6	9	8	6	9	8	8	9	8	5	9	8	3	6	8	9	0	8	8	9	8	F			
Conclude Xact B + G	8	8	9	9	9	9	9	9	8	9	9	9	7	8	8	9	7	7	9	9	8	7	2	9	9	6	8	8	8	8	6	7	9	6	G			
First Rate	0	0	0	0	0	0	0	9	8	9	8	9	-	-	-	3	2	-	2	2	-	-	7	-	8	6	8	7	-	0	4	4	-	-	G			
Frontrow	0	0	0	0	0	0	0	9	8	9	8	9	-	-	-	3	9	-	3	3	-	-	7	-	8	6	8	7	-	0	4	6	-	-	G			
Fusilade DX	8	8	8	9	9	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	G	
Fusion	8	8	8	9	9	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	G		
Glyphosate	9	9	9	8	10	9	9	10	7	8	8	9	8	8	8	7	7	7	9	9	8	9	8	9	9	7	9	7	8	8	8	8	8	8	9	G		
Poast Plus	8	9	9	9	9	7	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	G		
Pursuit	7	7	7	5	8	6	7	9	7	9	8	9	6	-	7	0	6	6	10	6	4	4	0	-	6	7	8	7	9	4	7	2	0	4	G			
Reflex/Flexstar	3	3	3	3	3	3	2	8	8	9	8	8	9	8	7	9	2	2	9	8	8	-	3	9	8	6	7	-	9	0	5	8	9	8	G			
Scepter	2	2	3	3	6	5	5	10	5	6	6	7	5	9	7	2	3	2	10	6	0	6	3	-	6	5	7	3	0	2	3	3	0	7	G			
Select	9	9	9	9	9	9	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	G		
Storm	3	4	3	3	3	0	2	9	8	9	9	9	7	8	8	9	7	8	8	7	8	7	2	9	9	6	8	8	8	0	6	7	9	6	G			
Typhoon	8	8	8	9	9	9	8	8	8	8	8	8	8	7	7	9	2	2	9	8	8	-	3	9	8	6	7	-	9	8	5	8	9	8	F			
<b>Postemergence-Directed</b>																																						
2,4-DB	0	0	0	0	0	0	0	9	9	9	9	9	3	0	3	3	2	2	2	1	2	0	0	1	0	-	3	4	0	0	2	-	3	G				
Gramoxone Max <sup>b</sup>	9	9	9	8	8	0	8	4	5	4	6	7	4	8	5	1	4	3	8	8	2	2	8	7	8	3	-	6	7	9	5	7	-	8	G			
Lorox	7	7	8	7	7	0	7	7	8	8	8	8	7	8	7	8	8	8	8	8	8	-	7	8	8	-	-	6	7	6	7	7	-	7	G			
Lorox+ 2,4-DB	7	7	8	7	7	0	7	9	10	9	9	10	9	9	7	8	8	8	9	9	9	5	9	10	9	2	-	7	8	6	7	9	-	8	G			
Sencor	7	7	8	7	7	0	-	8	7	7	7	7	7	-	7	7	8	8	8	8	8	8	8	7	7	0	-	8	-	8	4	-	-	5	G			
Sencor + 2,4-DB	7	7	8	7	7	0	-	9	9	9	9	9	8	3	7	7	8	8	8	8	9	8	9	8	8	0	-	8	7	8	4	8	-	7	G			

<sup>a</sup> Rating scale: 0 - 3 none to slight; 4 - 6 fair; 7 - 8 good; 9 - 10 excellent. Ratings assume the herbicides are applied in the manner suggested in the guidelines and according to the label under optimum growing conditions.

<sup>b</sup> Two applications.

(G = Good, F = Fair)

The information given in this publication is for educational purposes only. Reference to commercial products or trade names is made with the understanding that no discrimination is intended against other products that also may be suitable and have label clearance. Always read and follow current label restrictions on pesticide use.

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