

SOYBEANS

Canopy closure. Adapted cultivars that rapidly develop a full canopy can be an effective weed control practice. As a general rule of thumb, later-maturing and later-planted soybeans tend to develop fuller canopies. Additionally, determinate varieties (generally MG V and later) tend to canopy better than indeterminate varieties (generally MG IV and earlier) that are often used in conjunction with the Early Soybean Production System (ESPS). Soybeans planted extremely early during cool and wet growing conditions tend to be short, and canopy closure is difficult to achieve. Narrowing row spacings can aid in canopy closure and weed control, especially with early-planted indeterminate varieties. In situations where 38- to 40-inch row spacings are utilized, planting two rows on top of a bed (twin rows) rather than a single row will improve canopy closure and often improve yields.

Weed resurgence. Weed resurgence is a major problem in early-maturing soybeans. Soybeans planted using the ESPS are generally harvested in August and early September. As soybeans senesce and light reaches the soil, weeds begin to emerge and can greatly reduce harvest efficiency at harvest, often resulting in yield loss. Strategies to manage weed resurgence include (1) using preemergence herbicides or adding residual herbicides to postemergence glyphosate applications, (2) using layby applications in wide-row soybeans and in wheel tracks, and (3) using harvest aids prior to harvest. Postharvest herbicide applications also may be useful in no-till fields to prevent weeds from going to seed after harvest.

No-till or reduced-till systems. It is often desirable to kill existing vegetation with herbicides and not till the soil prior to plant-

ing soybeans. The nonselective herbicides glyphosate, glufosinate, and paraquat are generally very effective for this. The PRE herbicides Canopy, Scepter, Sencor, Valor, Firstrate, Python, and others have POE and PRE activity and can be a useful component in “burndown” programs to expand the weed control spectrum and provide soil residual activity up to planting and sometimes beyond. Early burndown programs that include residual herbicides have proven efficacious and economical when used in conjunction with the ESPS. It is often beneficial to combine two or more herbicides for control of a wide variety of emerged weeds. Dicamba and 2,4-D are often added to nonselective herbicides to improve control of weeds like cutleaf eveningprimrose and glyphosate-resistant horseweed.

Select rates and tank mix partners carefully. In some cases, paraquat rates can be slightly reduced and still provide control. In other cases, PRE/POE herbicides are often slightly antagonistic with glyphosate; increased glyphosate rates should be used in this situation. This is especially true with difficult-to-control weed species and in situations where contact/burning-type herbicides are mixed with the systemic herbicide glyphosate. Large weeds and heavy pressure may make it necessary to apply two treatments. In some cases, this can be achieved by applying glyphosate or paraquat prior to planting and follow at or after planting with a second PRE/POE herbicide. The objective is to achieve burndown prior to crop emergence. Herbicide labels provide additional information and should be consulted prior to any application. For more information, see Extension Information Sheet 1129 *No-tillage and Minimum Tillage Guideline*, and Extension Publication 1380 *Soybeans — Double Cropping Systems After Wheat in Mississippi*.

ESTIMATED LEVELS OF PREPLANT FOLIAR WEED CONTROL NORMALLY EXPECTED

Herbicides	Annual bluegrass	Bittercress	Buttercup	Carolina geranium	Chickweed	Eveningprimrose	Henbit	Prostrate knotweed	Shepherdspurse	Wildlettuce	Virginia pepperweed	Vetch	Little barley	Horseweed	Curly dock (mature)	Ryegrass	Barnyardgrass	Broadleaf signalgrass	Crabgrass	Goosegrass	Seedling Johnsongrass	Cocklebur	Entireleaf morning.	Pitted morning.	Smallflower morning.	P. Smartweed	Hemp sesbania	Prickly sida	Spurred anoda	Pigweed	Sicklepod	Cutleaf groundcherry	Common ragweed	Red rice	Upright spurge	Soil activity	
Sencor	9	10	9	7	10	6	8	6	9	8	6	6	10	5	-	6	7	8	7	7	8	7	7	7	8	9	8	8	8	7	7	8	4	4	yes		
Scepter	3	8	9	5	9	5	7	5	9	7	-	4	3	4	-	2	2	3	3	3	6	10	5	6	7	7	0	3	2	10	5	3	8	2	2	yes	
Goal 2XL/Delta Goal	9	10	9	8	8	4	9	9	9	9	8	7	-	6	-	5	-	-	-	-	-	8	8	9	9	8	9	9	8	9	-	-	-	-	9	yes	
2,4-D	0	8	9	7	8	10	5	8	8	9	9	9	0	8	7	0	0	0	0	0	0	8	10	10	9	8	8	8	9	9	8	9	-	0	-	no	
Harmony Extra	0	9	9	8	8	8	7	-	9	9	9	0	6	9	0	0	0	0	0	0	0	8	7	8	8	-	6	4	-	8	4	-	-	0	-	no	
Paraquat	10	10	10	7	10	7	9	6	9	7	7	8	8	8	4	8	9	9	9	8	9	6	5	5	7	6	6	6	8	9	9	7	8	7	8	no	
Paraquat + Sencor	10	10	10	8	10	8	9	6	9	8	8	8	10	8	-	9	9	9	9	8	9	7	7	7	7	8	9	8	8	9	9	7	8	7	8	yes	
Paraquat + Harmony Extra	9	10	10	10	10	8	9	-	10	-	5	9	10	7	7	5	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-	-	no
Paraquat + Delta Goal/ Goal 2XL	10	10	10	10	10	7	9	-	10	-	5	9	10	8	5	6	-	-	-	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	9	yes	
Paraquat + 2,4-D	10	10	10	9	10	10	9	-	9	-	8	10	9	9	8	6	-	-	-	-	-	-	-	-	-	10	-	8	-	-	-	-	-	-	-	no	
Glufosinate	6	-	-	8	10	7	10	-	-	-	9	8	7	9	-	6	8	8	8	8	8	9	10	10	9	8	8	7	-	8	7	-	-	-	-	no	
Glyphosate	10	10	9	7	10	6	7	7	10	8	8	5	10	8	6	6	10	10	10	9	10	8	7	8	8	7	6	7	6	10	8	9	9	8	10	no	
Glyphosate + 2,4-D	10	10	10	9	10	10	8	-	10	10	9	10	10	9	8	7	-	-	-	-	-	9	9	9	9	8	8	8	8	10	8	9	-	-	10	no	
Glyphosate + Goal 2XL/ Delta Goal	10	10	10	8	10	7	9	-	10	-	10	7	10	8	7	8	9	9	9	8	9	8	9	9	9	8	10	9	9	10	8	9	9	-	10	yes	
Glyphosate + Canopy XL	10	10	10	8	10	9	9	-	9	-	-	-	10	8	9	8	10	10	10	9	10	9	9	9	9	9	7	8	-	10	8	-	-	9	-	yes	
Glyphosate + Harmony Extra	10	10	10	8	10	7	9	-	10	9	10	9	10	8	9	7	10	10	10	9	10	8	8	9	9	10	7	-	-	10	8	-	-	-	-	no	
Glyphosate + Harmony GT	10	10	10	8	10	7	9	-	9	8	8	-	10	8	9	8	10	10	10	9	10	8	8	8	8	8	6	7	-	10	8	9	9	9	9	no	
Glyphosate + Valor	10	10	10	8	10	8	9	-	9	-	-	-	10	8	-	9	10	10	10	9	10	8	8	8	8	9	-	-	-	10	8	9	9	9	10	yes	

*Plus adjuvant if required according to label instructions.

ROTATIONAL CROP RESTRICTIONS¹

Soybean Herbicides	Rotation Interval					
	CORN	COTTON	GRAIN SORGHUM	RICE	WHEAT	OTHER GRAINS
Assure II	120 d	none	120 d	120 d	120 d	120 d
Backdraft	9.5 m ²	18 m	11 m	spring	4 m	11 to 18 m
Basagran	none	none	none	none	none	none
Ultra Blazer	none	none	none	none	none	none
Boundary	8 m	8 m	12 m	8 m	4.5 m	8 to 12 m
Canopy XL — soil pH > 7	18 m ³	30 m	18 m	18 m	4 m	4 m
Canopy XL — soil pH ≤ 7	10 m	18 m	12 m	10/12 m	4 m	4 m ⁴
Canopy pH<7.0	9 m ⁶	10 m	10 m	10 m	4 m	4 m
Canopy pH>7.0 (>3 oz/A)	18 m	18 m	18 m	18 m	4 m	4 m
Classic	9 m ⁵	9 m	9 m	9 m	3 m	3 m
Cobra	none	none	none	none	none	none
Command	9 m	none	9 m	9 m	12 m	12 m
Dual/Dual Magnum	none	none	spring	spring	4.5 m	spring
Fusilade DX	60 d	none	60 d	60 d	60 d	60 d
First Rate	9 m	9 m	9 m	9 m	3 m	
Frontrow	9 m	9 m	9 m	9 m	3 m	
Glyphosate	none	none	none	none	none	none
Outlook	none	next y	next y	none	4 m	4 m
Gramoxone Inteon	none	none	none	none	none	none
Harmony Extra	45 d	45 d	45 d	45 d	none	none ⁷
Harmony GT	none	45 d	45 d	45 d	none	none
Ignite 280 SL	none	7 d	70 d	120 d	70 d	70 d
Lasso	none	none	none	none	none	none
Lorox	none	4 m	none	4 m	4 m	4 m
Poast Plus	none	none	none	none	none	none
Prowl/Pendimax	ns	ns	ns	ns	4 m	4 m
Pursuit	8.5 m ⁸	18 m	18 m	40 m	4 m	18 m ⁹
Python	0	18 m	12 m	6 m	4 m	
Reflex	10 m	10 m	10 m	10 m	4 m	4 m ⁹
Scepter	9.5 m ¹¹	18 m	11 m	spring	4 m	18 m
Select	none	none	none	none	none	none
Sencor	4 m	8 m	12 m	8 m	4 m	8 m ¹²
Sequence	none	none	none	spring	4 m	4 m
Spartan	10 m	18 m	10 m ¹³	10 m	4 m	4 m
Storm	none	none	none	none	none	none
Treflan	none	none	none	none	none	none
Valor	30 d	30 d	30 d	30 d	2 m	4 to 12 m
Weedar 64	none	3 m	none	none	none	none
Zorial	16 m	none	16 m	16 m	16 m	16 m

¹d, m, y, spring, fall, and ns indicate days after application, months after application, years after application, spring following application, fall following application, and next season, respectively. PRE and POE indicate preemergence and postemergence applications, respectively.

²Field corn may be planted in the spring of the year following a single application unless extreme drought conditions develop (less than 15 inches of rain-fall or irrigation is received within 6 months following the date of application).

³IR — corn may be planted 10 months after Canopy XL, regardless of soil pH.

⁴Oats can be planted 18 months after Canopy XL application on soils with pH ≤ 7 or 30 months after treatment on soils with pH < 7.

⁵Rotation interval is only 8 months if soil pH < 6.8.

⁶May be recropped to field corn after 9 months if Canopy rate does not exceed 6 oz/A.

⁷Rye may be planted 60 days following application.

⁸IR — Corn has no rotation restriction.

⁹Oats may be planted 18 months following application.

¹⁰Rye may be planted 4 months following application. Barley may be planted 9.5 months after application.

¹¹Field corn may be planted in the spring of the year following a single application unless extreme drought conditions develop (less than 10 inches of rain-fall or irrigation is received within 6 months following the date of application).

¹²Barley may be planted 4 months following application.

¹³18 months for rates above 8 oz/A.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
Fallow cultivation	Use several fallow cultivations over a 4- to 6-week period.	Preplant.	Johnsongrass and emerged annual weeds.	Disk-harrow appears more effective than field cultivator when used alone for johnsongrass control. Alternate use of the two implements is equally effective as disking alone and will be more economical. More effective in dry weather than during wet periods. For annual weeds, less frequent and shallow cultivations should be made to conserve fuel and soil moisture.

2,4-D acid equivalent at 0.47 to 0.95 lb **2,4-D—See table below.** Apply in 10 to 20 gal water by ground equipment. 7 to 30 days before planting. **See table below.** Several winter and summer annual, biennial, and perennial broadleaf weeds. Ester formulations are usually more effective than the amine formulation in controlling dock and wild garlic. Apply the esters when air temperatures are 60 to 80 degrees. Make only one application prior to planting soybeans per growing season. Avoid drift to nontarget species. Adhere to Bureau of Plant Industry regulations for phenoxy herbicides.

Product	Formulation	Use rate (oz)	Preplant interval (days)
Weedar 64	dimethylamine	16	15
		32	30
Weedone LV4	butoxyethyl ester	16	7
		32	30
Weedone 638	acid and butoxy ethyl ester	21	7
		43	30
Weedone LV6	butoxyethyl ester	11	7
		21	30

glyphosate at 0.375 to 1.5 lb ae **See glyphosate table on pages 6-7 for rates.** 3 to 7 days before planting. **See below** and label for complete list of weeds controlled. Use of flood-jet nozzles is not suggested. If tillage is intended after treatment, wait at least 3 days (7 days for rhizome johnsongrass) after application. Cultivation before johnsongrass emergence will result in better control after glyphosate application. **Apply a preplant or preemergence herbicide to control late emerging johnsongrass from seed. See label for tank mixes with soil active herbicides.** Rainfall within 6 hours after application may reduce control. Heavy rainfall within 2 hours after application may require repeat treatment to obtain control. **Avoid drift to nontarget species or areas. Do not** use with galvanized (zinc-coated) spray equipment.

Weed and height	lb ae/A
Barnyardgrass up to 4 in; morningglory sp. and sicklepod up to 2 in; annual bluegrass, chickweed, corn, horseweed, London rocket, and shepherdspurse up to 6 in; barley, buttercup, cocklebur, crabgrass, Carolina foxtail, seedling johnsongrass, fall panicum, redroot and smooth pigweed, rye, and grain sorghum up to 12 in; and wheat up to 18 in.	0.375
Same as above plus sicklepod and broadleaf signalgrass up to 4 in; barnyardgrass up to 6 in; and horseweed up to 12 in.	0.56
Same as above plus prickly sida up to 4 in; red rice up to 6 in; goosegrass and Carolina geranium up to 12 in; sowthistle (wild lettuce), common and giant ragweed, P. smartweed, <i>Bromus</i> sp., <i>Panicum</i> sp., sunflower up to 6 in; and rhizome johnsongrass in the boot-to-head stage.	0.75
Same as above plus sowthistle (wild lettuce), common and giant ragweed, P. smartweed, <i>Bromus</i> sp., <i>Panicum</i> sp., and sunflower more than 6 in.	1.125
Same as above plus ryegrass.	1.5

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
flumioxazin at 0.032 to 0.08	Valor — 1 to 2.5 oz in 15 gal of water by ground. Always add crop oil concentrate or methylated seed oil at 1qt/A or an 80% active nonionic surfactant at 0.25% (v/v). Additional adjuvant may not be required when tank mixing with products that have been formulated with a suitable adjuvant.	Before, during, or after planting, but before crop emerges.	Several summer and winter annual weeds. Improved control of cutleaf eveningprimrose when tank mixed with glyphosate.	Use with herbicides like glyphosate, paraquat, or 2,4-D to broaden weed control spectrum. Do not apply more than 3 oz of Valor per season. Do not use Valor in soybeans in the same field flufenacet (Axiom/Domain), alachlor (Lasso/Micro-tech), metolachlor (Dual/ Dual Magnum) or dimethenamid (Frontier/Outlook) will be used as injury may occur. Valor at 2 oz/A or more will provide residual control of several weeds.
imazaquin + glyphosate at 0.56 to 0.75 lb	Backdraft — 1.5 to 2 qt with 0.125% v/v nonionic surfactant AND 2.5 lb/A spray grade ammonium sulfate or a nitrogen-based liquid fertilizer at a rate of 1 to 2 qt/A in 10 or more gallons of water by ground and 5 or more gallons by air.	Within 30 days before planting.	Several summer and winter annual weeds.	Must include recommended surfactants. Do not apply by ground when wind speeds are above 10 mph. Read label for special instructions for aerial applications.
oxyfluorfen at 0.1 to 0.5 lb	Delta Goal/Goal 2XL — 6.4 oz to 2 pt/A in a minimum of 20 gal/A by ground or 5 to 10 gal/A by air. Always include 0.25 to 0.5 % v/v 80% active nonionic surfactant.	See special instructions.	Several winter annual and summer annual weeds including henbit.	Use with herbicides like glyphosate, paraquat, or 2,4-D to broaden weed control spectrum. Do not apply Delta Goal within 7 days prior to planting. Must be incorporated into soil to a depth of at least 2 inches prior to planting unless applied 30 days or more prior to planting and at least three significant (0.25 inches or more) rainfall events have occurred following application. At least 12.8 oz/A are generally needed to achieve residual control. Lower rates will improve the post-emergence control of some weeds but will not offer significant residual weed control.
paraquat at 0.28 to 1.01 lb	Gramoxone Max 3.0E — 0.75 to 2.7 pt in 5 to 10 gal water by air or 20 to 40 gal water by ground. Add 1 to 2 pt/100 gal spray nonionic surfactant.	Before soybeans emerge.	Most small emerged annual weeds.	Apply as broadcast spray to wet weed growth. Use 1.5 pt when applying to 1-3-in. weeds or with Sencor/Lexone, 2 pt to 3-6-in. weeds and 3.0 pt to 6-in. or larger weeds. May be tank mixed with most preemergence herbicides. Do not (1) apply under windy conditions; or (2) graze or feed treated forage to livestock.
sulfentrazone + chlorimuron at 0.113 to 0.14 lb	Canopy XL — 3.2 to 4 oz with 0.25% nonionic surfactant or 1 % v/v crop oil concentrate. Higher rates can be used to control larger weeds or to provide extended residual control.	Within 30 days prior to planting.	Several summer and winter annual weeds. Improved control of cutleaf eveningprimrose and curly dock when mixed with glyphosate.	Use with herbicides like glyphosate, paraquat, or 2,4-D to broaden weed control spectrum. Do not incorporate to a depth deeper than 1 to 2 inches. Do not apply to Black Belt soil with pH >7 or history of nutrient deficiency.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
thifensulfuron at 0.23 to 0.42 oz	Harmony GT — 0.3 to 0.6 oz with 0.25 to 0.5% v/v 80% nonionic surfactant in at least 5 gallons of water by ground or 2 to 5 gallons by air.	Preplant.	Several winter and summer weeds including curly dock and smartweeds.	Use with herbicides like glyphosate, paraquat, or 2,4-D to broaden weed control spectrum.
thifensulfuron + tribenuron at 0.375 to 0.45 oz	Harmony Extra 75DF — 0.5 to 0.6 oz in 10 to 20 gal water by ground or in 3 gal water by aerial equipment. Always add 1% (v/v) petroleum-based crop oil concentrate or 0.25% (v/v) 80% active nonionic surfactant.	Late fall through early spring, but at least 45 days prior to planting.	Several winter and some summer annual broadleaf weeds past the cotyledon stage, but less than 4 in. tall or across. Wild garlic; curly dock.	Use the 0.6-oz rate when weed numbers are high. Thorough coverage of target weeds is essential. Warm temperatures and good soil moisture before, during, and after application are needed for optimum control. Visible symptoms of dying weeds may not appear for 1 to 5 weeks. Do not apply more than 1 oz/A during the fallow cropland season.

Preplant — Incorporated

dimethenamid-P at 0.47 to 0.98 lb	Outlook — 10 to 21 oz in 2 or more gallons of water to obtain ground coverage.	Up to 2 weeks before planting.	Most annual grasses including broadleaf signalgrass and red rice, and small seeded broadleaf weeds.	Uniformly incorporate to a depth of 1 to 2 inches. 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. Do not use more than 21 oz of Outlook per season.
flumetsulam at 0.80 to 1.06 oz	Python 80WDG — 1.0 to 1.33 oz in 10 to 40 gal water by ground equipment.	From 0 to 30 days before planting.	Broadleaf weeds.	Uniformly incorporate herbicide in top 2-3 inches of soil. Do not (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	Scepter 70DG — 2.86 oz in 10 to 20 gal water by ground equipment. For cocklebur and pigweed control only on sands or loamy sands, apply 2.14 oz.	Within 45 days of planting during seedbed preparation. If planting on beds, apply and incorporate after bed formation (See label).	Cocklebur, pitted, palmleaf and small-flower morningglory, pigweeds, prickly sida, smartweed, and common ragweed.	Set implements (see label) to incorporate Scepter into the top 1 to 2 inches of soil. 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. Do not (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. Avoid drift to non-target species or areas.
imazaquin + pendimethalin at 0.87 lb	Squadron 2.33 EC (0.33 lb ai imazaquin + 2.0 lb ai pendimethalin) — 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.	Within 30 days before planting or after bed formation.	Annual grasses and seedling johnsongrass, cocklebur, annual morningglories, pigweeds, and prickly sida.	Incorporate in the top 2 inches of soil. Do not graze or feed treated soybean hay, forage, or straw to livestock. Allow 90 days between application and harvest.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
pendimethalin or trifluralin at 0.5 to 0.75 to 1.0 lb	Prowl 3.3EC/Pendimax 3.3 — 1.2 to 1.8 to 2.4 pt or Trifluralin 4L — 1 to 1.5 to 2 pt or Treflan 5 — 0.8 to 1.2 to 1.6 pt in 10 to 20 gal water.	Prowl - 60 days; Treflan - several weeks to immediately before planting in spring.	Most annual grasses and some small-seeded annual broadleaf weeds such as pigweeds and purslane.	Incorporate 1 to 2 inches deep. Immediate incorporation is strongly recommended. The following losses can occur if incorporation is delayed 24 hours: Prowl - 15% and Treflan - 30%. When making band applications, avoid removal of treated soil from the seedbed during planting. If stand failure occurs, replant soybeans, but do not re-treat. Prowl — increase rate by 0.5 pt on medium-textured soils and 1 pt on fine-textured soils if heavy weed populations are anticipated.
pendimethalin or trifluralin tank mix with metribuzin at 0.5 + 0.25 to 0.75 + 0.37 to 1.0 + 0.5 lb	Prowl 3.3EC/Pendimax 3.3 — 1.2 to 1.8 to 2.4 pt or Trifluralin 4L — 1 to 1.5 to 2 pt or Treflan 5 — 0.8 to 1.2 to 1.6 pt plus Sencor 4L — 0.5 to 0.75 to 1 pt or 75% DF — 0.33 to 0.5 to 0.67 lb in 10 to 20 gal water. For improved sicklepod control — Apply to the above, an additional 0.25 pt 4L or 0.17 lb 75% Sencor DF surface preemergence.	Treflan mixture — within 14 days of planting. Prowl mixture — within 7 days of planting.	Most grasses from seed, pigweeds, purslane, hemp sesbania, prickly sida, smartweed, and sicklepod.	Do not use Sencor on coarse soils with less than 1% OM, on soils with a calcareous surface area or pH 7.5 or higher. Sencor/Lexone are not suggested for use on fields subject to water standing following heavy rainfall, or on fields planted to sensitive varieties. Incorporate the mix within 24 hours of application. Immediate incorporation is suggested. Losses of 15 and 30% of Prowl and Treflan, respectively, can occur if incorporation is delayed 24 hours. Set incorporation equipment to mix the herbicides into the top 2 to 3 inches of soil. Plant soybeans 1.5 to 2 inches deep. If stand failure occurs, replant but do not re-treat.
sulfentrazone + chlorimuron at 0.18 to 0.22 to 0.24 lb	Canopy XL — 5.1 to 6.4 to 6.8 oz.	Within 30 days before planting.	Cocklebur, morningglories, nutsedges, pigweeds, common ragweed, velvetleaf.	Do not incorporate deeper than 1-2 inches. Incorporate with equipment designed for uniform incorporation to this depth. Do not apply to Black Belt soils with a soil pH greater than 7.0 or history of nutrient deficiency.
S-metolachlor + metribuzin at 0.98 to 2.4 lb	Boundary — 1 to 2.5 pt in a minimum of 10 gal water by ground and 2 gal water by air.	From 0 to 30 days before 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 soil 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 several days. Do not use Boundary rates above 1.25 pt/A on soils above pH 7.0. Don't use on sands with less than 0.5% organic matter. Treated forage and vines may be fed to livestock 40 days after application.
Red rice control				
alachlor 3 qt	Lasso Micro-tech — 3 qt	From 7 days to immediately before planting as final seedbed preparation.	Red rice, annual grasses, and pigweeds.	Use no more than 3 qt. Make two passes to incorporate into upper 1 to 2 inches of soil with equipment set to work the soil no deeper than 4 inches. Make second pass at an angle to the first. See label for restrictions and user precautions.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
dimethenamid-P at 0.47 to 0.98 lb	Outlook — 10 to 21 oz in 2 or more gallons of water to obtain ground coverage.	Up to 2 weeks before planting.	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. Do not use more than 21 oz of Outlook per season.
metolachlor at 1.5 to 2.5 lb/0.95 to 1.90 lb.	Dual 8E/Dual Magnum — 1.5 to 2.5 pt/1.0 to 2.0 pt in 10 to 20 gal water.	Within 14 days of planting.	Red rice, annual grasses, and pigweeds.	Incorporate into the top 2 inches of the soil using a finishing (pulverizing) disk harrow, or rolling cultivator. If soybeans are planted on a bed, apply and incorporate after bed formation. If stand failure occurs, do not retreat unless replanting is in the middles following band application.
S-metolachlor + metribuzin at 0.98 to 2.4 lb	Boundary — 1 to 2.5 pt in a minimum of 10 gal water by ground and 2 gal water by air.	From 0 to 30 days before 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 soil 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 several days. Do not use Boundary rates above 1.25 pt/A on soils above pH 7.0. Don't use on sands with less than 0.5% organic matter. Treated forage and vines may be fed to livestock 40 days after application.
pendimethalin or trifluralin at 1.0 to 1.5 to 2.0 lb	Prowl 3.3EC/Pendimax — 2.4 to 3.6 to 4.8 pt or Trifluralin 4L — 1st year 2 to 3 to 4 pt or Treflan 5 — 1.6 to 2.4 to 3.2 pt 2nd year Trifluralin 4L 1 to 1.5 to 2 pt or Treflan 5 — 0.8 to 1.2 to 1.6 pt	Prowl/Pendimax — up to 60 days to immediately before planting. Treflan — in spring before planting soybeans.	Red rice.	Thoroughly incorporate 2 to 3 inches deep. Rice may be planted the third year. Prowl — do not use on soils with more than 3% O.M. 3 pt/A may be used on coarse-textured soils if heavy red rice populations are anticipated. Treflan — treatment may cause injury on soils with less than 2% organic matter. Do not plant winter wheat behind soybeans the same year.

Preemergence

alachlor at 2 - 3 qt	Lasso Micro-tech — 2 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	Command 3ME — 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 johnson- grass, prickly sida, Pennsylvania smartweed, purslane, spotted spurge, velvetleaf, and wild poinsettia.	Do not (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.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
cloransulam-methyl at 0.032 to 0.039 lb	Firstrate — 0.6 to 0.75 oz/A in 10 gal or more water.	For best results, apply within 2 weeks of planting for preplant applications and within 2 days after planting for PRE applications. Can be applied 15 to 30 days preplant.	Horseweed, morningglory, prickly sida, cocklebur, jimsonweed, pigweed, common ragweed, giant ragweed, smartweed, sunflower, velvetleaf.	At least 0.5 inches rainfall needed for incorporation. Apply with glyphosate or other nonselective herbicides to remove any existing vegetation. Can be applied with other PRE herbicides to broaden weed control spectrum. Available in a co-pack with Valor called Gangster .
dimethenamid-P at 0.47 to 0.98 lb	Outlook — 10 to 21 oz in 2 or more gallons of water to obtain ground coverage.	Up to 2 weeks before planting.	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. Do not use more than 21 oz of Outlook per season.
S-metolachlor + metribuzin at 0.98 to 2.4 lb	Boundary — 1 to 2.5 pt in a minimum of 10 gal water by ground and 2 gal water by air.	From 0 to 30 days before 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 soil 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 several days. Do not use Boundary rates above 1.25 pt/A on soils above pH 7.0. Don't use on sands with less than 0.5% organic matter. Treated forage and vines may be fed to livestock 40 days after application.
flumetsulam at 0.80 to 1.06 oz	Python 80WDG — 1.0 to 1.33 oz in 10 to 40 gal by ground equipment.	After planting but before emergence.	Broadleaf weeds.	Do not (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.
flumioxazin at 0.063 to 0.096 lb	Valor — 2 to 3 oz/A in 10 to 30 gal water by ground or 7 to 10 gal water by air. Add crop oil concentrate or methylated seed oil at 1 qt/A or an 80% active non-ionic surfactant at 0.25% v/v if emerged weeds are present at planting. Additional adjuvant may not be required when tank mixing with products that have been formulated with a suitable adjuvant.	Before or after planting, but before crop emerges.	Prickly sida, morningglory, pigweeds, horseweed, and several other small-seeded summer annual, winter annual, and biennial broadleaf weeds.	Can be mixed with glyphosate, paraquat, or glufosinate to kill weeds present at time of application. Limited annual grass control. Soybean injury has been observed under extended cool and wet growing conditions following planting. Injury may also occur if incorporating rainfall occurs as seedlings are cracking. To reduce the likelihood of injury, use Valor as a pre-plant herbicide and allow rainfall to occur before planting. Soybean plants injured with Valor usually recover with no yield loss, but some delay in maturity may occur. Do not apply more than 3 oz of Valor per season. Do not use Valor in soybeans in the same field where flufenacet (Axiom/Domain), alachlor (Lasso/Micro-tech), metolachlor (Dual/Dual Magnum), or dimethenamid (Frontier/Outlook) will be used, as injury will occur. Can be mixed with a variety of other herbicides to broaden weed control spectrum. Available in a co-pack with Firstrate called Gangster .
imazaquin at 0.125 lb	Scepter 70DG — 2.86 oz in 10 to 20 gal water by ground equipment. In no-till or double-crop behind wheat , 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 smallflower 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. Do not (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. Avoid drift to nontarget species or areas.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	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%.

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 broadleaf 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.
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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.

metribuzin + chlorimuron at 0.28 to 0.56 lb	Canopy — Apply in 15 gal water by ground. Add 0.25% v/v NIS or 1% v/v COC if vegetation is present at time of application. Use 0.25% v/v NIS when mixed with glyphosate.	Up to 45 days prior to planting.	Cocklebur, hemp sesbania, prickly sida, annual morningglory, early-emerging sicklepod, smartweed, ragweed, spotted spurge, and most small-seeded broadleaf weeds.	Do not apply more than 3 oz/A on soil with pH > 7.0. Do not apply to Black Belt soils with pH > 7.0 or history of nutrient deficiency. Do not apply to field planted to metribuzin-sensitive soybean cultivars (See Sencor label or consult Extension representatives or variety trial publications for sensitive varieties). Do not apply on soils with a calcareous surface layer or pH > 7.5. Canopy may be applied in combination with PRE grass herbicides or following a PPI grass herbicide application. Canopy can be used at reduced rates when followed by a planned postemergence application of conventional herbicides or glyphosate in glyphosate tolerant soybean.
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Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
norflurazon at 1.5 to 2 lb	Zorial 80 DF — 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 1/2 rate preplant incorporated within 30 days of planting plus 1/2 rate at planting.	Most annual grasses, small-seeded broadleaf weeds and prickly sida. Inadequate control of morningglory, cocklebur and hemp sesbania.	Do not apply to sand, loamy sand or sandy loam soil. 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. At least 1/2-inch rainfall within 2 weeks after preemergence application is needed for control.
pendimethalin at 0.5 to 0.75 to 1.0 lb	Prowl 3.3EC/ Pendimax — 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 at 0.14 to 0.31 lb	Spartan — 3 to 6.7 oz/A in 10 to 20 gal by ground.	45 days prior to 3 days after planting.	Pigweed, spurred anoda, curly dock, groundcherry, jimsonweed, morningglory, prickly sida, velvetleaf.	Do not apply more than 8 oz/A per season. Visible injury marked by chlorosis and stunting may occur at pH 7.5 and above and under cold and wet growing conditions. Using Spartan as part of preplant/burndown weed control programs can reduce potential for injury. May be tank mixed with other labeled soybean herbicide. Can be applied with glyphosate if weeds are present at time of application.
sulfentrazone + chlorimuron at 0.18 to 0.22 to 0.24 lb	Canopy XL — 5.1 to 6.4 to 6.8 oz	After planting but before soybean emergence.	Cocklebur, morningglories, 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. Do not 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	Command Xtra B 4SC - 8 to 10 to 12 oz + Command Xtra G 3 ME - 21 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.	Do not: (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.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
Postemergence				
Cultivation. Use so that the soil moved will not interfere with subsequent use of postemergence treatment. Cultivation will not normally detract from the control obtained from previously applied herbicides, but will frequently offer an economical means of extending or completing control established by chemicals when weeds emerge in the treated drill. However, cultivation within 7 days before or after a postemergence herbicide application may reduce control from that treatment. Deep cultivation (more than 2 inches) is usually not necessary and may damage the crop.				
Rotary hoeing	Broadcast or on a band.	As soon as soybeans are up to a stand. Afterward as needed, but no later than the third trifoliolate leaf stage.	Newly emerged annual grasses and small-seeded broadleaf weeds.	Most effective when weeds are breaking through slightly crusted soil; gives poor control on damp or wet soil. When soybeans are in first or second trifoliolate leaf stage, rotary hoe only after plants have lost some turgidity (slightly wilted).

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.	Ultra 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. Ultra 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.
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Growth stage

Weed to be controlled	No. leaves (maximum)	80% ai Surfactant pt/100 gal	Ultra Blazer 2L rate-pt
Hemp sesbania	up to 12 inches	2	1.0 ¹
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 ²

¹See above for reduced rates.

²Basagran at 1 pt may be added to control 6-leaf cocklebur.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	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 Ultra 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.
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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 ¹ .	Cocklebur ² 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.
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¹For added control of pigweeds and morningglory, 1 pt **Ultra Blazer** + surfactant may be added to **Basagran** or 0.5 to 1 pt + surfactant for hemp sesbania.
²See page 38 for reduced rates.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	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 ¹	6	8	12
Hemp sesbania	4	5	6
Morningglories ²	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

¹See page 38 for reduced rates.

²1 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.
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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

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
cloransulam at 0.25 oz	FirstRate — 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	Do not (1) apply through irrigation system; (2) make more than two applications per season.
cloransulam + flumetsulam at 0.25 oz + 0.10 oz	Frontrow — 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.	Do not (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	Reflex 2LC/Flexstar 1.88LC — 1 to 1.5 pt. See table below. 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.	See table below.	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. Do not (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. Avoid conditions conducive to drift to non-target species or areas.

Reflex 2LC/Flexstar 1.88LC

Target weed ¹	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, ladythumb	2	4
Pennsylvania smartweed	4	4
Hemp sesbania	6	12

¹Cocklebur not controlled if treated at cotyledonary stage.

fluazifop-P at 0.0938 to 0.25 lb	Fusilade DX 2E — 6 to 8 to 12 to 16 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 and rhizome johnsongrass, bermudagrass, volunteer grain sorghum, and red rice.	Apply over-the-top or as a semi-directed spray to cover the grasses. Do not apply (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.																														
				<table border="1"> <thead> <tr> <th>Grass</th> <th>Growth stage (inches)</th> <th>Fusilade DX (oz)</th> </tr> </thead> <tbody> <tr> <td>Volunteer grain sorghum</td> <td>6 to 12</td> <td>6</td> </tr> <tr> <td>Goosegrass and volunteer cereals</td> <td>2 to 4</td> <td>8</td> </tr> <tr> <td>Johnsongrass (seedling)</td> <td>2 to 8</td> <td>6</td> </tr> <tr> <td>Other annual grasses</td> <td>1 to 4</td> <td>12</td> </tr> <tr> <td>Red rice</td> <td>0.5 to 1</td> <td>16</td> </tr> <tr> <td>Rhizome johnsongrass</td> <td>8 to 18</td> <td>12</td> </tr> <tr> <td>regrowth</td> <td>6 to 12</td> <td>8</td> </tr> <tr> <td>Bermudagrass</td> <td>4 to 8 stolons</td> <td>12</td> </tr> <tr> <td>regrowth</td> <td>4 to 8 stolons</td> <td>8</td> </tr> </tbody> </table>	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
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Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks																								
fluzifop-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. <table border="1"> <thead> <tr> <th>Grass</th> <th>Growth Stage (in.)</th> <th>Fusion (oz)</th> </tr> </thead> <tbody> <tr> <td>Volunteer grain sorghum</td> <td>6 to 12</td> <td>6 to 10</td> </tr> <tr> <td>Goosegrass</td> <td>2 to 4</td> <td>8 to 12</td> </tr> <tr> <td>Johnsongrass (seedling)</td> <td>2 to 8</td> <td>6 to 10</td> </tr> <tr> <td>Johnsongrass (Rhizome)</td> <td>4 to 12</td> <td>10 to 12</td> </tr> <tr> <td>Johnsongrass (Rhizome) (2nd application)</td> <td>4 to 12</td> <td>10 to 12</td> </tr> <tr> <td>Other annual grasses</td> <td>2 to 4</td> <td>8 to 12</td> </tr> <tr> <td>Red rice</td> <td>1/2 to 1</td> <td>10 to 12</td> </tr> </tbody> </table>	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	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																										
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Red rice	1/2 to 1	10 to 12																										
fluzifop-P + fomesafen at 0.56 lb	Typhoon 1.41EC (0.47 lb ai fluzifop-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 0.56 to 1.125 lb ae FOR USE ONLY IN ROUNDUP READY® SOYBEAN CULTIVARS	See glyphosate table on pages 6-7 for rates.	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 Ultra Blazer, Reflex, or Classic can enhance hemp sesbania and morningglory species control.	Total of single or multiple in-crop applications should not exceed 2.25 lb ae/A/year. Avoid drift to nontarget areas. Do not exceed 0.75 lb ae/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.																								
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Weed height inches	Initial ¹ lb ae/A	Sequential lb ae/A																										
0 to 3	0.56	0.375																										
3 to 6	0.75 ²	0.56																										
6 to 12	1.125	0.75																										
	¹ 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.																											
	² Maximum rate labeled for aerial application.																											
glyphosate + s-metolachlor at 1.6 to 2.3 lb FOR USE ONLY IN ROUNDUP READY SOYBEAN CULTIVARS	Sequence — 2.5 to 3.5 pt in 10 gal or more water by ground and 3 to 15 gal by air. AMS can be added at 8.5 to 15 lb/100 gal water.	From cracking through 3rd trifoliolate.	Postemergence control of weeds normally controlled by glyphosate. Residual control of small-seeded grasses and some small-seeded broadleaf weeds including pigweeds. Suppression of yellow nutsedge.	Rainfall is required for residual control. Do not apply Sequence postemergence if an s-metolachlor product like Dual Magnum has been applied preemergence. Do not exceed 3.5 pt/A per season or single application. Applications must be made 90 days prior to harvest. Expect poor residual control of some large-seeded grasses like browntop millet and broadleaf signalgrass.																								

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
imazaquin at 0.0625 or 0.125 lb	Scepter 70DG — 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 ¹ . Use the higher rate on cocklebur and pigweeds up to 12 inches tall, wild poinsettia, and sicklepod.	For effective sicklepod 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. Do not (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. Avoid drift to nontarget species or areas.
¹ See page 38 for reduced rates.				
imazethapyr at 0.0625 lb	Pursuit 2S or 70DG — 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. Do not apply: (1) within 85 days of soybean harvest (2) more than once during the season. Do not graze or feed treated soybean forage, hay, or straw to livestock.
lactofen at 0.2 lb	Cobra 2E — 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.	See table below.	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. Do not (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. Avoid drift to nontarget areas.

Cobra 2E	
Target weed(s)	0.78 pt (12.5 oz)
	(max. no. leaves at application)
Common purslane	8-inch (diameter)
Hemp sesbania, common ragweed, pigweeds, cocklebur	6
Showy crotalaria, 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

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	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.
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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.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
Directed Sprays				
2,4-DB at 0.20 lb	2,4-DB — 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. Do not apply 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. Do not apply if soybeans are under drought stress. Avoid spray pressures in excess of 40 psi. Do not add surfactant to spray mixtures.
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. Do not 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. Do not exceed 25 psi nozzle pressure or apply under windy conditions. Do not graze 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. Do not exceed 25 psi nozzle pressure or apply under windy conditions. Do not 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	Sencor 4L — 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. Do not (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	Sencor 4L — 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. Do not apply under conditions that favor drift or to sensitive varieties. Do not graze or feed forage. Injury may occur if two applications of 0.50 lb ai/A are made to soybean fields subject to flooding.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
paraquat at 0.059 to 0.117 lb	Gramoxone Max 3.0E — 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. Do not exceed 30 psi to avoid drift and minimize foliage burn (spotting). Do not 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	2,4-DB — 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. Do not apply to drought-stressed soybeans. Do not add surfactant to spray mixtures.
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Spot Spraying

clethodim	Select 2EC — 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	Fusilade DX 2E — 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	Assure II 0.88EC — 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	Poast Plus 1.0E — 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. Do not apply within 90 days of harvest.

Soybeans, Continued

Crop, weed, or situation and active chemical per treated land acre	Formulation needed to treat 1 acre broadcast (See table on page 4 for band rates)	Time of application	Weeds controlled	Special instructions and remarks
glyphosate	glyphosate — 1% (4 pt of a 3 lb ae/gal formulation in 50 gal water) for annual weeds, or a 2% (8 pt of a 3 lb ae/gal formulation in 50 gal water) solution for perennial weeds.	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 undersirable vegetation. Non-Roundup Ready soybeans in the treated area will be killed. Keep drift to a minimum. Do not apply if soybeans are setting pods.
Rope Wick				
glyphosate at 25%	glyphosate — 1 gal of a 3 lb ae/gal formulation plus 3 gal water. Actual quantity used per acre will vary depending on density of weeds. See glyphosate table on pages 6-7 for rates.	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. Do not add crop oil concentrate.
Preharvest				
glyphosate at 0.75 to 4.5 lb ae	glyphosate (several) — with ground equipment use 0.75 to 4.5 lb ae/A in 3 to 10 gal water. With air equipment use 0.75 lb ae in 3 gal water. See glyphosate table on pages 6-7 for rates.	Preharvest but after all pods have lost all green color.	Most annual grasses, johnsongrass, cocklebur, and pigweeds. Use rates above 1.5 lb ae would be beneficial for perennial weeds only.	Wait at least 7 days after application before harvesting. Do not (1) treat soybeans grown for seed; (2) feed or graze treated areas within 25 days after preharvest application; or (3) apply more than 4.5 lb ae Roundup Ultra by ground or 0.75 lb ae Roundup Ultra by air. Exercise care with ground sprayers to minimize seed loss due to shattering.
paraquat at 0.125 to 0.25 lb	Gramoxone Max 3.0E — 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. Do not apply within 15 days of harvest. Do not 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	Gramoxone Max 3.0E — 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. Do not apply within 15 days of harvest. Do not graze treated fields or feed treated bean foliage and fodder.
sodium chlorate at 6 lb	2 qt of a 6 lb/gal or 1 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. Do not graze treated fields or feed treated bean foliage and fodder.