

SOYBEAN WEED MANAGEMENT

Table 1. Weed response ratings for selected soybean herbicides applied preemergence.¹

	Barnyardgrass	Broadleaf signalgrass	Crabgrass	Hemp sesbania	Hophornbeam copperleaf	Johnsongrass – seedling	Jointvetch	Morningglory – entireleaf	Morningglory – pitted	Pigweed species	Prickly sida	Red rice	Redweed	Sicklepod	Smellmelon
Anthem Flexx/Anthem Maxx	9	9	9	8	8	8	8	7	7	9	8	-	9	8	8
Authority Edge	9	9	9	-	9	8	-	9	9	9	8	-	-	9	8
Authority Elite/BroadAxe	9	9	9	8	8	7	8	9	9	9	9	-	8	8	8
Authority First/Sonic	7	7	7	8	9	7	-	9	9	8	8	-	-	8	8
Authority MTZ	5	5	5	9	9	5	8	9	9	9	9	-	9	8	9
Authority Supreme	9	9	9	-	9	8	-	9	9	9	8	-	-	9	8
Authority XL	7	7	7	9	9	6	8	9	9	9	9	-	9	9	9
Boundary	9	9	9	9	9	8	7	5	8	9	8	-	9	9	8
Canopy DF	8	8	8	8	9	6	5	8	8	9	9	6	9	8	7
Canopy EX	5	5	5	7	9	4	8	8	8	9	8	4	8	6	7
Clomazone	9	9	9	1	6	9	2	4	7	4	9	7	8	1	-
Envive/Enlite	7	7	7	7	8	6	8	8	9	8	7	7	8	8	8
Fierce	7	7	7	8	9	7	8	9	9	9	8	7	9	8	9
Fierce XLT	7	7	7	9	9	7	-	9	9	9	9	7	-	9	9
FirstRate	3	3	3	3	5	2	-	8	8	7	5	1	-	6	5
metribuzin	8	8	8	8	9	6	6	5	8	8	8	6	9	4	6
Outlook	9	9	9	2	5	7	1	1	1	8	5	8	7	2	7
Pendimethalin	9	9	9	1	0	9	1	3	3	8	1	6	2	2	6
Prefix	8	8	8	9	9	7	8	6	6	9	7	8	9	6	9
Python	0	0	0	0	7	0	-	6	6	6	9	0	-	7	5
Scepter	7	7	7	0	8	-	-	5	7	7	9	7	-	5	7

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	Barnyardgrass	Broadleaf signalgrass	Crabgrass	Hemp sesbania	Hophornbeam copperleaf	Johnsongrass – seedling	Jointvetch	Morningglory – entireleaf	Morningglory – pitted	Pigweed species	Prickly sida	Red rice	Redweed	Sicklepod	Smellmelon
S-metolachlor/metolachlor (various formulations)	9	9	9	2	5	7	1	1	1	9	5	8	7	2	7
Tendovo	9	9	-	7	9	-	-	8	8	9	8	-	-	8	8
Trivence	8	8	8	8	9	-	-	8		8	8	-	-	8	8
Valor	6	6	6	8	8	2	5	8		9	8	0	8	8	7
Valor XLT	6	6	6	9	9	4	9	9		9	9	0	9	8	9
Verdict	9	9	9	8	9	7	-	9		9	8	-	-	8	9
Warrant	8	8	8	2	5	7	1	1	1	8	5	8	7	2	7
Zidua WG/Zidua SC	9	9	9	8	8	8	8	7		9	8	9	9	8	8

Rating scale: 0-3 = none to slight; 4-6 = fair; 7-8 = good; 9-10 = excellent.

¹ Control expected under optimum conditions. LSU AgCenter does not guarantee these estimates since many factors influence herbicide performance. Resistance to recommended use rates of some herbicides has been identified in certain weed species in Louisiana.

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Table 2. Weed response ratings for selected corn herbicides applied postemergence.¹

	Barnyardgrass	Broadleaf signalgrass	Crabgrass	Hemp sesbania	Hophornbeam copperleaf	Johnsongrass - seedling	Jointvetch	Morningglory – entireleaf	Morningglory - pitted	Pigweed species	Prickly sida	Red rice	Redweed	Sicklepod	Smellmelon
Assure II	9	9	9	0	0	9	0	0	0	0	0	9	0	0	0
Basagran	0	0	0	6	4	0	3	4	4	5	8	0	7	1	5
Classic	0	0	0	8	6	0	7	8	8	9	2	0	8	8	4
Clethodim	9	9	9	0	0	9	0	0	0	0	0	8	0	0	0
Cobra	3	3	3	9	9	0	6	9	9	9	8	1	8	6	9
dicamba (XtendiMax, Engenia,)	0	0	0	8	1	0	-	8	8	6	2	0	-	8	7
Enlist Duo	9	9	9	8	9	9	-	9	9	8	8	9	-	8	9
Enlist One + Liberty 280SL	5	5	5	9	9	8	-	9	9	9	9	-	-	9	9
Enlist One	0	0	0	7	8	0	-	8	8	7	7	0	-	7	8
FirstRate	3	3	3	7	7	0	-	9	9	7	8	0	8	4	6
Flexstar GT 3.5	9	9	9	9	9	9	7	9	9	9	8	9	9	9	9
Fomesafen	4	4	4	9	9	0	7	9	9	9	3	0	5	6	9
Fusilade DX	9	9	9	0	0	9	0	0	0	0	0	7	0	0	0
glufosinate	7	7	7	9	7	8	-	9	9	7	8	-	-	9	8
Poast Plus	9	9	9	0	0	9	0	0	0	0	0	7	0	0	0
Pursuit	8	8	8	2	4	7	2	7	7	9	4	8	6	3	5
Sequence	9	9	9	7	9	9	7	8	8	9	8	9	8	9	9
Storm	3	3	3	9	9	0	5	9	9	9	8	1	8	4	9
Tavium	8	8	8	7	9	0	-	8	8	9	6	-	-	8	8
Ultra Blazer	3	3	3	9	8	0	5	9	9	8	3	0	3	3	8

Rating scale: 0-3 = none to slight; 4-6 = fair; 7-8 = good; 9-10 = excellent.

¹ Control expected under optimum conditions. LSU AgCenter does not guarantee these estimates since many factors influence herbicide performance. Resistance to recommended use rates of some herbicides has been identified in certain weed species in Louisiana.

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Table 3. Preplant incorporated herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
pendimethalin - 0.5-1.5 lb/A	Various formulations See product label for specific rates	Most annual grasses, seedling johnsongrass; fair control of some broadleaf weeds	Before planting, incorporate 2-3 inches deep within 7 days of application if sufficient rainfall has not been received. Highest rates for high organic matter soils. Prowl can be applied at rates higher than listed to control certain annuals and to suppress rhizome johnsongrass; consult label.
trifluralin - 0.5-1.5 lb/A	Various formulations See product label for specific rates	Most annual grasses, seedling johnsongrass; fair control of some broadleaf weeds	Apply before planting and incorporate 2-3 inches deep. Trifluralin can be applied at rates higher than listed to control certain annuals and to suppress rhizome johnsongrass; consult label.

Table 4. Preemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
chlorimuron – 0.005-0.02 lb/A+ thifensulfuron – 0.006-0.015 lb/A + flumioxazin – 0.02-0.06 lb/A	Envive – 3.5 oz/A or Enlite – 2.8 oz/A	Broadleaf and grass weeds	Apply before planting. Consult label for pH, organic matter and recrop restrictions to determine whether to use Envive or Enlite.
Chlorimuron – 0.04-0.07 lb/A +metribuzin – 0.24-0.43 lb/A	Canopy 75 DF – 6 oz/A on light soil 8 oz/A on medium soil 10.7 oz/A on heavy soil Exact rate is dependent on soil organic matter %; consult label	Annual grasses, broadleaf weeds	Apply at preplant incorporated or surface- applied at planting. Do not use postemergence. Follow labeled rotational crop restrictions. Follow sprayer cleanup instructions before spraying subsequent crops. Do not apply to soils with a pH greater than 7.5. Soils with pH of 7.0-7.4, use 4 oz./A of Canopy 75 DF to reduce potential injury. Do not apply to metribuzin sensitive varieties.
chlorimuron - 0.06-0.1 lb/A + flumioxazin 0.09-0.16 lb/A + metribuzin 0.22-0.37	Trivence – 6-10 oz/A	Annual grass, broadleaf weeds	Do not apply soils with soil pH greater than 7 or history of nutrient deficiency such as iron chlorosis. Use rate dependent based upon soil pH and soil type. Please consult label.
clomazone – 1-1.25 lb/A	clomazone (3 lb/gal formulation) - 2.6-3.3 pt/A	Annual grasses, prickly sida purslane, spotted spurge, velvetleaf	Do not apply within 1,500 feet of towns, subdivisions, commercial vegetables, greenhouses, or nurseries. Do not graze or feed forage, hay, or straw from treated fields to livestock. Do not apply with aerial equipment.
dimethenamid-P - 0.76-1.3 lb/A	Outlook 6EC - 12-14 oz/A on light soil 14-18 oz/A on med-heavy soil	Most annual grasses, red rice, johnsongrass from seed; fair control of some broadleaf weeds	Apply after planting before weeds emerge.
flumetsulam - 0.05-0.067 lb/A	Python 80 WDG – 1-1.33 oz/A	Annual broadleaf weeds	Do not apply more than 1.4 oz of Python per year. Do not apply to soils with pH of 7.8 or higher. Do not apply with aerial equipment. Consult label for more information on rates and re-crop intervals.
flumioxazin - 0.063 lb/A	Various formulations See product label for specific rates	Broadleaves, some suppression of annual grasses	Apply after planting before weeds emerge. Consult label for tank-mixes to improve grass control. Soybean injury is possible under cool and wet conditions following planting or when incorporating rainfall occurs as seedlings are cracking. Do not tank-mix with metolachlor/S-metolachlor or dimethenamid-P
metribuzin - 0.25-0.75 lb/A	Various formulations See product label for specific rates	Annual grasses, most broadleaf weeds such as cocklebur, prickly sida, hemp sesbania, wild poinsettia	Injury may occur on soils with calcareous surface or pH 7.5 or greater, soils with less than 0.5% organic matter, when soybean planted less than 1.5 inches deep, and when heavy rains follow application and field are poorly drained. Differential sensitivity among soybean varieties have been documented. See label for list.

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pendimethalin - 0.5-1.5 lb/A	Various formulations See product label for specific rates	Most annual grasses, johnsongrass from seed; fair control of some broadleaf weeds	Apply at planting. Highest rates for high organic matter soils.
pyroxasulfone - 0.08-0.18 lb/A	Zidua WG - 1.5-3.5 oz/A Zidua SC - 2.5-5.75 oz/A Rate depends upon soil type. See label.	Annual grass, broadleaf weeds	May be applied preplant or preemergence. Must have rainfall for activation. Do not apply if soybeans have begun to emerge.
pyroxasulfone - 0.058-0.102 lb/A + flumioxazin - 0.046-0.081 lb/A + chlorimuron - 0.013-0.022 lb/A	Fierce XLT – 3-3.75 oz/A	Annual grass, broadleaf weeds	Do not apply more than 3.75 oz/A on soils with pH greater than 6.8. See Remarks and Precautions for flumioxazin.
pyroxasulfone - 0.07-0.163 lb/A + fluthiacet-methyl - 0.002-0.005 lb/A	Anthem Maxx – 2-5 oz/A Rate depends upon soil type. See label.	Many small seeded annual broadleaf weeds and most annual grasses	Apply preplant or preemergence, but before soybean cracking or emergence.
pyroxasulfone - 0.08-0.13 + carfentrazone-ethyl - 0.006-0.009	Anthem Flex - 2.75-4.5 oz/A Rate depends upon soil type. See label.	Many small seeded annual broadleaf weeds and most annual grasses	Apply preplant or preemergence, but before soybean cracking or emergence.
pyroxasulfone - 0.08-0.11 lb/A + flumioxazin - 0.06-0.08 lb/A	Fierce 76 WDG – 3-3.75 oz/A	Annual grass, broadleaf weeds	May be applied preplant or preemergence. Must have rainfall for activation. See Remarks and Precautions for flumioxazin.
saflufenacil - 0.02-0.04 lb/A + dimethenamid-P - 0.2-0.39 lb/A	Verdict – 5-10 oz/A	Annual grass, broadleaf weeds	Preplant interval depends upon rate. Soybean can be planted immediately following 5 oz/A, 14 days after 7.5 oz/A and 30 days after 10 oz/A. Do not apply to emerged soybean because severe injury will occur.
S-metolachlor - 0.85-1.9 lb/A + metribuzin - 0.19-0.42 lb/A + fomesafen - 0.17-0.38 lb/A	Intimidator 4.8 EC – 32-72 oz/A 32 oz/A = 0.19 lb/A of metribuzin 40 oz/A = 0.23 lb/A of metribuzin 60 oz/A = 0.35 lb/A of metribuzin 72 oz/A = 0.42 lb/A of metribuzin	Annual grasses, broadleaf weeds	Do not exceed 72 oz/A per season. Do not exceed 0.38 lb/A of fomesafen per acre per season. When selecting product rate, ensure amount of metribuzin applied is safe for soil type and pH. See Remarks and Precautions for metribuzin.
S-metolachlor/metolachlor - 0.96-1.91 lb/A	Various formulations See product label for specific rates	Most annual grasses, red rice, johnsongrass from seed; fair control of some broadleaf weeds	Apply at preplant incorporated, surface applied or preplant. Apply after planting and before weeds emerge. May be incorporated.
S-metolachlor - 0.98-1.31 lb/A + metribuzin - 0.23-0.31 lb/A	Boundary 6.5 EC - 1.5-2 pt/A	Most annual grasses, selected broadleaf weeds	Apply before planting. Ensure soybean variety is tolerant of metribuzin prior to use.
S-metolachlor - 1.09 lb/A + fomesafen - 0.25 lb/A	Prefix 5.3 EC - 2.0 pt/A	Annual grasses, broadleaf weeds	Before, during or after crop emergence. Must have rainfall for activation. Excellent choice for pigweed control. Postemergence applications must be applied no later than 90 days before harvest.
S-metolachlor – 1.04-2.04 lb/A + metribuzin – 0.195-0.382 lb/A + cloransulam – 0.193-0.377 lb/A	Tendovo – 1.2-2.35 qt/A See product label for specific rates	Annual grasses, broadleaf weeds	Preplant to preemergence. Use rate depends upon soil type. Soybean injury may occur if soil pH is 7.5 or above.
sulfentrazone - 0.1-0.13 + pyroxasulfone - 0.1-0.13	Authority Supreme - 6.4-8 oz/A	Annual grass, broadleaf weeds. Yellow nutsedge suppression.	Before, during or after planting, but before crop emergence. Consult label for re-cropping intervals.
sulfentrazone - 0.1-0.2 lb/A + S-metolachlor 0.94-1.6 lb/A	Authority Elite OR BroadAxe – 19-32 oz/A	Annual grasses, annual sedges, broadleaf weeds	Before, during or after planting, but before crop emergence. Consult label for re-cropping intervals.

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	Rate depends upon soil type. See label.		
sulfentrazone - 0.14-0.2 lb/A + metribuzin - 0.2-0.3 lb/A	Authority MTZ – 12-18 oz/A	Annual grasses, broadleaf weeds	Before, during or after planting but before crop emergence. Soybean cultivars may differ in tolerance to Authority MTZ; check label for specific cultivars.
	Rate depends upon soil type. See label.		
sulfentrazone - 0.15-0.19 lb/A + pyroxasulfone - 0.083-0.11 lb/A	Authority Edge – 7-9 oz/A	Annual grass, broadleaf weeds. Yellow nutsedge suppression.	Before, during or after planting, but before crop emergence. Consult label for re-cropping intervals.
	Rate depends upon soil type. See label.		
sulfentrazone - 0.19-0.37 lb/A + chlorimuron - 0.025-0.05 lb/A	Authority XL – 5-9.6 oz/A	Annual grass, broadleaf weeds	Before, during or after planting, but before crop emergence. Consult label for pH, organic matter and re-crop restrictions to determine whether to use Authority XL.
	Rate depends upon soil type. See label.		
sulfentrazone - 0.25-0.31 lb/A + cloransulam - 0.03-0.04 lb/A	Authority First OR Sonic - 6.45-8 oz/A	Broadleaf weeds with grass suppression	Before, during or after planting but before crop emergence. Consult label for re-cropping intervals.
	Rate depends upon soil type. See label.		

Table 5. Postemergence herbicides.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
2,4-D choline - 0.7-0.95 lb/A	Enlist One - 1.5-2 pt/A	Broadleaf weeds	FOR USE IN ENLIST VARIETIES ONLY. Only Enlist One and Enlist Duo are labeled for use in Enlist soybean. DO NOT apply past the R2 (full flower) soybean growth stage. A minimum of 12 days between sequential applications is required. Federal label contains additional rules and restrictions. See label for further detail. Please see company websites for list of products that can be legally tank-mixed. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
2,4-D choline - 0.7-0.95 lb/A + glyphosate - 0.74-1 lb/A	Enlist Duo - 3.5-4.75 pt/A	Annual grass and broadleaf weeds	FOR USE IN ENLIST VARIETIES ONLY. Only Enlist One and Enlist Duo are labeled for use in Enlist soybean. DO NOT apply past the R2 (full flower) soybean growth stage. A minimum of 12 days between sequential applications is required. Federal label contains additional rules and restrictions. See label for further detail. Please see company websites for list of products that can be legally tank-mixed. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
2,4-D choline - 0.95 lb/A + glufosinate 0.59 lb/A	Enlist One - 2 pt/A + Liberty 280SL, Cheetah, or Interline - 32 oz/A	Broadleaf weeds; good control of small grasses; good option for glyphosate-resistant pigweed control	FOR USE IN ENLIST VARIETIES ONLY. When tank-mixed with Liberty, Cheetah, or Interline, only Enlist One is labeled for use in Enlist soybean. See additional information in Enlist One and glufosinate sections. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
acetochlor - 0.94-1.5 lb/A	Warrant - 1.25-2 qt/A Rate depends upon soil type and organic matter. See label.	Annual grasses, small-seeded broadleaves	Postemergence surface applied from emergence to R2. Optimum timing of application is V2 to V3. Emerged weeds are not controlled and require addition of a labeled postemergence herbicide.
acifluorfen - 0.25-0.5 lb/A	Ultra Blazer 2L - 0.5-1.5 pt/A Add 0.25% v/v NIS or 1% v/v COC; see label	Hemp sesbania, most morningglories, smellmelon, pigweed, other broadleaf weeds	Apply when seedling weeds are in 2- to 4-leaf stage and actively growing. Use 1.0 pt./A for hemp sesbania that is actively growing but before flowering. Rate is dependent on weed spectrum and size. Consult label. Maximum rate 0.5 pt./A/application and 2 pt./A/season.
acifluorfen - 0.25-0.5 lb/A + bentazon - 0.75-1.5 lb/A	Storm – 1-1.5 pt/A Add 0.25% v/v NIS or 1% v/v COC; see label	Hemp sesbania, morningglories, smellmelon, pigweed,	Application same as above. Choose most serious weed pest and use the full rate of whichever herbicide is considered most effective plus 1 pt. of the

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		prickly sida, cocklebur, other broadleaf weeds	herbicide. Read and follow label instructions. Storm at 1.5 pt./A is equivalent to 1 pt of each herbicide in a tank-mix.
bentazon - 0.75-1.5 lb/A	Basagran 5L - 1.2-2.4 pt/A Add 1% v/v COC; see label	Cocklebur and prickly sida; fair on other broadleaf weeds	Apply after soybean plants have first trifoliolate leaves.
chlorimuron - 0.008-0.012 lb/A	Classic 25DG - 0.5-0.75 oz/A Add 0.25% v/v NIS; see label	Morningglories, pigweed, sicklepod, hemp sesbania	Apply after soybeans have first trifoliolate leaves and when weeds have two to six leaves. See label for re-crop intervals. Don't apply to soils with a pH higher than 7.5.
chlorimuron - 0.013-0.02 lb/A + thifensulfuron - 0.013-0.02 lb/A	Synchrony XP - 0.75-1.125 oz/A	Broadleaf and grass weed control	FOR USE IN STS/RR OR BOLT SOYBEAN VARIETIES ONLY. Apply after first trifoliolate leaf. Mix with glyphosate to broaden the weed control spectrum. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
clethodim - 0.09-0.25 lb/A	Various formulations See product label for specific rates	Annual and perennial grasses	Application same as above. Refer to label for rate for specific grass species. Addition of a spray-grade nitrogen fertilizer or ammonium sulfate may further improve weed control. See label.
cloransulam-methyl - 0.016 lb/A	FirstRate - 0.30 oz/A Add 0.25% v/v NIS; see label	Horseweed (mare's-tail), cocklebur, and morningglories, specifically palmleaf morningglory	Apply before weeds exceed height limitations (generally 2-4 inches tall) and prior to soybeans reaching 50% flowering stage. Application prior to full emergence of first soybean trifoliolate may cause temporary chlorosis. May tank-mix with other soybean herbicides, including glyphosate in Roundup Ready soybeans. May reduce grass control when mixed with some grass herbicides.
dicamba - 0.5 lb/A	Engenia - 12.8 oz/A OR XtendiMax - 22 oz/A	Broadleaf weeds. Poor control of hophornbeam copperleaf and prickly sida	FOR USE IN XTEND OR XTENDFLEX VARIETIES ONLY. Only Engenia, and XtendiMax are labeled for use in Xtend and XtendFlex soybean. Federal and state labels contain numerous restrictions. See label for further information. Cannot apply after June 30. Please see company websites for list of products that can be legally tank mixed. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
dicamba - 0.5 lb/A + S-metolachlor - 1 lb/A)	Tavium - 3.5 pt/A	See dicamba and S-metolachlor sections above.	FOR USE IN XTEND OR XTENDFLEX VARIETIES ONLY. Federal and state labels contain numerous restrictions for use. See labels/websites for further information including training requirements prior to purchase and use. Please see company websites for list of products that can be legally tank-mixed and corresponding comments above. Apply up to the V4 growth stage or up to June 30, whichever comes first. Do not tank-mix crop oil concentrate or methylated seed oil with Tavium. A limited amount of residual activity on broadleaves can be achieved with adequate rainfall or irrigation after application.
fluzifop-P-butyl - 0.125-0.50 lb/A	Fusilade DX - 0.37-0.75 pt/A Add 0.25% v/v NIS or 1% v/v COC ; see label	Annual and perennial grasses	Apply before grasses exceed height recommended for treatment. Use the highest rate for bermudagrass with runners 4 to 6 inches long. Application to larger grasses or grasses under stress may result in reduced control.
flumetsulam - 0.0063 lb/A	Python - 0.125 oz/A Add 0.25% v/v NIS or 1% v/v COC; see label	Prickly sida	Prickly sida less than 2 inches tall. Do not apply to soybean with more than 5 trifoliates. Do not apply more than two postemergence applications and applications must be separated by at least 14 days. If Python is applied preemergence and postemergence, the cumulative rate cannot exceed 0.138 ounces per season.

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flumiclorac - 0.023-0.054 lb/A	Resource – 4-8 oz/A Add 1% v/v COC; see label	Common ragweed, prickly sida, and velvetleaf	Apply when weeds are 2 inches. Add non-selective herbicide to improve broadleaf control and to provide grass control.
fluthiacet - 0.0035-0.006 lb/A	Cadet 91 EC - 0.5-0.9 oz/A Apply 0.25% v/v NIS; see label	Morningglories, pigweeds, hemp sesbania	Apply when weeds are 2 inches. Add non-selective herbicide to improve broadleaf control and to provide grass control.
fomesafen - 0.25-0.35 lb/A	Various formulations See product label for specific rates	Morningglories, cocklebur, pigweed, hemp sesbania, suppression of grasses	Apply before weeds exceed height limitations. Soybeans are very tolerant to fomesafen. May be mixed with grass herbicides. Injury may be observed under hot, humid conditions.
glufosinate - 0.59-0.79 lb/A	glufosinate 2.34 lb/gal formulation – 32-43 oz/A	Most broadleaf weeds; good control of small grasses and pigweed if not taller than 3-inches.	FOR USE IN LIBERTY LINK, ENLIST, AND XTENDFLEX VARIETIES ONLY. Two to three applications and/or the use of residual herbicides are recommended. Make first application 7-10 days after emergence on 2- to 3-inch weeds. Make the second application 10-14 days later. Make the third application as needed on 2- to 3-inch weeds. Do not exceed 87 oz./A/year. Multiple residual herbicides can be tank-mixed with glufosinate to broaden weed spectrum. Use residual in burndown or at planting. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
glyphosate - 0.7-1.5 lb/A	Various formulations. See product label for specific rates.	Most broadleaf weeds and grasses	FOR USE IN ROUNDUP READY/ROUNDUP READY 2 VARIETIES, ENLIST, XTEND, and XTENDFLEX VARIETIES ONLY. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information. If glyphosate-resistant weed species is present, do not expect control. Multiple residual herbicides can be tank-mixed with glyphosate to broaden weed spectrum.
glyphosate - 0.7-1.3 lb/A + S-metolachlor - 0.94-1.5 lb/A	Sequence 5.25 L - 2.5-4.0 pt/A	Most broadleaf weeds and grasses	FOR USE IN ROUNDUP READY/ROUNDUP READY 2, ENLIST, XTEND, and XTENDFLEX VARIETIES ONLY. Apply from soybean cracking to 90 days before soybean harvest. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
glyphosate – 1-1.5 lb/A + fomesafen - 0.25-0.38 lb/A	Flexstar GT 3.5 - 3.5-5.3 pt/A	Most broadleaf weeds and grasses; good option for increased control of morningglory, hemp sesbania, smellmelon	FOR USE IN ROUNDUP READY/ROUNDUP READY 2 VARIETIES, ENLIST, XTEND, and XTENDFLEX VARIETIES ONLY. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
imazethapyr - 0.06 lb/A	Pursuit DG - 1.44 oz/A Add 0.25% v/v NIS; see label	Annual grasses and certain broadleaf weeds	Apply before weeds are 3 inches tall. See comments in preemergence section. See label for re-crop intervals.
lactofen - 0.15 to 0.19 lb/A	Cobra 2L - 10.0 to 12.5 oz/A. Add 0.25% v/v NIS; see label	Morningglories, cocklebur, pigweeds, prickly sida, ballonvine, smellmelon, copperleaf	Apply before weeds exceed height limitations. Application may cause moderate burn; however, soybeans normally recover in 10 days without loss of yield.
metribuzin – 0.25-0.5 lb/A	Various formulations. See product label for specific rates.	Annual grasses and broadleaf weeds	DIRECTED OR HOODED SPRAYER ONLY. Apply as a directed spray at the base of soybean plants contacting only the lower 1/4 to 1/3 of the soybean.
pyroxasulfone - 0.053-0.189 lb/A	Zidua WG – 1-3.5 oz/A Zidua SC - 1.75-5.75 oz/A Rate depends upon soil type. See label.	Annual grass, some broadleaf weeds	Apply between emergence and V6 soybean growth stages. Optimum timing is V2-V3. Emerged weeds are not controlled and require addition of a labeled postemergence herbicide.

SOYBEAN WEED MANAGEMENT

pyroxasulfone - 0.07-0.186 lb/A + fluthiacet-methyl - 0.002-0.006 lb/A	Anthem Maxx – 2-5.7 oz/A Rate depends upon soil type. See label.	Annual grasses, some broadleaf weeds	Apply between V1 and V3 soybean growth stages. Optimum timing is V2-V3. Control of emerged weeds is minimal, thus addition of a labeled postemergence herbicide is required. Organic matter influences use rate on coarse textured soil, consult label.
quizalofop - 0.10-0.20 lb/A	Assure II – 5-10 oz/A Add 0.25% v/v NIS or 1% v/v COC; see label	Annual and perennial grasses	Apply before grasses exceed height recommended for treatment. Application to larger grasses or grasses growing under stress may result in reduced control.
sethoxydim - 0.19-0.47 lb/A	Poast Plus - 1.5-2.25 pt/A Add 0.25% v/v NIS or 1% v/v COC; see label	Annual and perennial grasses	Apply before grasses exceed height recommended for treatment. In general use 0.5 pt./A for annual grasses up to 4 inches tall, 1.5 pt./A for johnsongrass 1-2 feet tall and 2.25 pt./A for bermudagrass with 4- to 6-inch runners. Application to larger grasses or grasses under stress may result in reduced control. Activity may be reduced if mixed with other herbicides. Consult labels for retreatment rates.
S-metolachlor/metolachlor - 0.96-1.25 lb/A	Various formulations. See product label for specific rates.	Most annual grasses, red rice, seedling johnsongrass; fair control of some broadleaf weeds	Postemergence applications must be applied no later than 90 days before harvest. Optimum timing is V2-V3. Emerged weeds are not controlled and require addition of a labeled postemergence herbicide.
S-metolachlor - 1.09 lb/A + fomesafen - 0.25 lb/A	Prefix 5.3 EC - 2.0 pt/A	Annual grasses, broadleaf weeds	Before, during or after crop emergence. Must have rainfall for activation. Excellent choice for pigweed control. Postemergence applications must be applied no later than 90 days before harvest.

Table 6. Preharvest or Harvest Aid.

Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
carfentrazone - 0.016-0.023 lb/A	Aim 2EC – 1-1.5 oz/A Add 1% v/v COC	Better on morningglories than pigweed, sicklepod, etc	Apply after crop has matured and grain has begun to dry down. More effective on annual vines. Do not apply within 3 days of harvest. Apply in 10 gal. by ground, 5 gal. by air.
saflufenacil - 0.022-0.045 lb/A	Sharpen – 1-2 oz/A Add 1% MSO + 8.5 lb/100 gal AMS	Morningglories and other broadleaf weeds. Good for ragweed parthenium control.	Apply once soybean has reached physiological maturity (all pods and seeds have no green color). Indeterminate varieties: 65% brown pods, more than 70% leaf drop, 30% or less seed moisture. Determinate varieties: more than 50% leaf drop and remaining leaves are yellowing. Preharvest interval is 3 days.
paraquat - 0.13-0.25 lb/A	paraquat (2 lb/gal formulation) – 8-16 oz/A; paraquat (3 lb/gal formulation) - 5.4-10.7 oz/A Add 0.25% v/v NIS; see label	Desiccation of weeds and soybeans only	Indeterminate varieties: 65% of pods are mature or moisture content is 30% or less. Determinate varieties: 50% leaf drop and remaining leaves are yellow. Some drought stressed weeds will not be desiccated. Do not graze or harvest for hay. Apply in 20 gal. by ground or 5 gal. by air. Preharvest interval is 15 days. Immature soybeans will be injured.
sodium chlorate - 6 lb/A	Various formulations. See product label for specific rates.	Desiccation only. Level of weed control is affected by environmental conditions.	Apply 7-10 days before harvest. Apply in 20 gal. by ground, 5 gal. by air. Check label for environmental conditions most favorable for desiccation. Apply under high temperatures and humidity.

SOYBEAN WEED MANAGEMENT

HERBICIDE-TOLERANT SOYBEAN VARIETIES

Enlist soybean. These varieties are tolerant to applications of 2,4-D choline, glyphosate, and glufosinate. The initial application of 2,4-D choline with or without glyphosate or glufosinate should be made when weeds are no more than 3-inches tall. LSU AgCenter data indicates that weed management programs in Enlist soybean should contain residual herbicides applied preemergence and early-postemergence to ensure season-long weed control. Corteva Agriscience provides a website listing which herbicides can be legally tank-mixed with their Enlist One or Enlist Duo. Implementation of a weed management program containing residual herbicides preemergence and postemergence is critical if 2,4-D choline will be applied for control of herbicide-resistant weeds (ex. glyphosate-resistant Palmer amaranth or waterhemp) as 2,4-D applied alone or when tank-mixed with glyphosate or glufosinate will not provide season-long control of herbicide-resistant weeds.

Liberty Link soybean. These varieties are tolerant to overtop applications of glufosinate. The initial application of glufosinate 2.34 lb/gal formulation should be made at 29 to 36 oz product/A, 7-10 days after soybean emergence. A sequential application of glufosinate should follow 10-14 days later or to 2- to 4-inch weeds. A maximum of 87 oz product/A/year can be applied. Do not apply past first bloom. Glufosinate should provide good control of most broadleaf weeds but is weak on grass weeds. For acceptable grass weed control, glufosinate should be applied to grasses less than 3 inches tall. The Liberty Link soybean weed control system works very well with a residual herbicide that provides grass control. If Liberty Link soybean is planted in an area with known large grassy weed populations, a graminicide such as clethodim, Assure II, etc. should be budgeted to control late-season grass problems.

Roundup Ready Soybean. These varieties are tolerant to overtop applications of glyphosate. The initial application of glyphosate should be made at 0.7 to 1 lb/A when weeds are less than 4 inches tall. If the first application is made to weeds 5-12 inches tall, increase the glyphosate rate to 1.5 lb/acre. Numerous formulations of glyphosate are available for use; therefore, rates may differ depending upon glyphosate formulation. Additionally, ensure that the formulation is labeled for use in Roundup Ready soybean. Do not apply past first bloom. Consult the product label for use requirements. Sequential treatments may be needed, depending upon weed pressure, growing conditions and other factors. If applying glyphosate by air, be extremely careful to prevent off-site target movement. In addition, weeds resistant to glyphosate have been identified in Louisiana; therefore, programs with multiple herbicidal modes of action applied as residual (preemergence and postemergence) in conjunction with glyphosate is a must.

Sulfonylurea tolerant soybean (STS) or BOLT. These varieties are tolerant to herbicides such as Classic, Canopy or Synchrony STS (members of the sulfonylurea herbicide family). These varieties allow utilization of the sulfonylurea herbicides in high pH soils in the current crop year and in following crops. Soybean varieties are available that are tolerant to both glyphosate and sulfonylurea herbicides (STS/RR or BOLT varieties).

Xtend soybean. These varieties are tolerant to applications of dicamba and glyphosate. The initial application of dicamba plus glyphosate should be made when weeds are no more than 3-inches tall. LSU AgCenter data indicates that weed management programs in Xtend soybean should contain residual herbicides applied preemergence and early-postemergence to ensure season-long weed control. BASF, Bayer, and Syngenta provide websites listing which herbicides can be legally tank-mixed with their dicamba product. Implementation of a weed management program containing residual herbicides preemergence and postemergence is critical if dicamba will be applied for control of herbicide-resistant weeds (ex. glyphosate-resistant Palmer amaranth or waterhemp) as dicamba applied alone or when tank-mixed with glyphosate will not provide season-long control of herbicide-resistant weeds. An alternative herbicide is required if hophornbeam copperleaf and/or prickly sida are present in fields as dicamba will not provide acceptable control. **Dicamba cannot be applied in Xtend soybean after June 30.**

XtendFlex soybean. These varieties are tolerant to applications of dicamba, glyphosate, and glufosinate. Dicamba cannot be tank-mixed with glufosinate. The initial application of dicamba plus glyphosate or glufosinate alone should be made when weeds are no more than 3-inches tall. LSU AgCenter data indicates that weed management programs in XtendFlex soybean should contain residual herbicides applied preemergence and early-postemergence to ensure season-long weed control. BASF, Bayer, and Syngenta provide websites listing which herbicides can be legally tank-mixed with their dicamba product. Implementation of a weed management program containing residual herbicide preemergence and postemergence is critical if dicamba or glufosinate are applied for control of herbicide-resistant weeds (ex. glyphosate-resistant Palmer amaranth or waterhemp) as dicamba applied alone or when tank-mixed with glyphosate will not provide season-long control of herbicide-resistant weeds. An alternative herbicide is required if hophornbeam copperleaf and/or prickly sida are present in fields as dicamba will not provide acceptable control. **Dicamba cannot be applied in XtendFlex soybean after June 30.**