

SOYBEAN WEED MANAGEMENT

	itchgrass	seedling johnsongrass	annual grasses	red rice	Palmer amaranth	prickly sida	hemp sesbania	morningglory	cocklebur	sicklepod	Texasweed	redweed	jointvetch	wild poinsettia	hophornbeam copperleaf	smellmelon
glyphosate ^{2,3,4,6}	9	9	9	9	9	8	7	8	9	8	9	8	7	9	9	9
glyphosate ^{2,3,4,6} + Classic	9	9	9	9	9	9	9	9	9	9	9	9	8	9	9	9
glyphosate ^{2,3,4,6} + Ultra Blazer	9	9	9	9	9	8	9	9	9	9	9	8	7	9	9	9
glyphosate ^{2,3,4,6} + ET	9	9	9	9	9	9	9	9	9	9	-	-	-	-	9	9
glyphosate ^{2,3,4,6} + Prefix	9	9	9	9	9	8	9	9	9	9	9	9	7	9	9	9
glyphosate ^{2,3,4,6} + FirstRate	9	9	9	9	9	9	7	9	9	9	9	8	7	9	9	9
glyphosate ^{2,3,4,6} + Marvel SC	9	9	9	9	9	8	9	9	-	9	-	-	-	-	9	9
glyphosate ^{2,3,4,6} + Reflex/Flexstar	9	9	9	9	9	8	9	9	9	9	9	9	8	9	9	9
glyphosate ^{2,3,4,6} + Resource	9	9	9	9	9	8	7	9	9	9	9	8	7	9	9	9
glyphosate ^{2,3,4,6} + Warrant	-	7	9	-	9	8	7	7	-	9	9	8	7	9	-	-7
glyphosate ^{2,3,4,6} + Zidua	-	9	9	9	9	9	8	8	-	9	9	9	8	9	9	9
Liberty 280SL ^{3,5,6}	3	7	7	-	7	8	9	9	-	9	-	-	-	-	7	8
Liberty 280SL ^{3,5,6} + Classic	3	7	7	-	9	9	9	9	-	9	-	-	-	-	9	8
Liberty 280SL ^{3,5,6} + Ultra Blazer	3	7	7	-	9	9	9	9	-	9	-	-	-	-	9	8
Liberty 280SL ^{3,5,6} + FirstRate	3	7	7	-	9	9	9	9	-	9	-	-	-	-	9	8
Liberty 280SL ^{3,5,6} + Reflex/Flexstar	3	7	7	-	9	9	9	9	-	9	-	-	-	-	9	8
Liberty 280SL ^{3,5,6} + Prefix	3	7	7	-	9	9	9	9	-	9	-	-	-	-	9	8
Liberty 280SL ^{3,5,6} + Resource	3	7	7	-	9	8	9	9	-	9	-	-	-	-	9	8
Poast Plus	9	8	9	7	0	0	0	0	0	0	0	0	0	0	0	0
Pursuit	8	8	8	8	9	4	2	7	9	3	7	6	2	6	4	5
Select Max/others	9	9	9	8	0	0	0	0	0	0	0	0	0	0	0	0
Sequence	9	9	9	9	9	8	7	8	9	9	9	8	7	9	9	9
Storm	1	4	3	1	9	8	9	9	9	4	6	8	5	8	9	9
Ultra Blazer	0	2	3	0	8	3	9	9	6	3	5	3	5	8	8	8
LAYBY HERBICIDES																
2,4-DB	0	0	0	0	8	4	6	9	9	4	4	4	6	5	5	6
paraquat	4	5	9	7	9	6	5	6	4	6	3	5	7	9	8	8
linuron	2	2	4	2	9	7	9	8	6	5	7	4	9	7	8	8
linuron or metribuzin + 2,4-DB	2	5	6	2	9	8	9	9	9	7	7	4	9	8	9	9
metribuzin	2	5	8	2	8	7	8	7	7	6	7	4	8	7	9	9

¹ Preemergence herbicides must be activated by rainfall or overhead irrigation.

² For use in Xtend varieties.

³ For use in Enlist varieties.

⁴ For use in Roundup Ready/Roundup Ready 2, Xtend, and Enlist varieties.

⁵ For use in Liberty Link varieties.

⁶ For use in Liberty Link GT27 varieties.

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Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
PREPLANT¹:			
trifluralin @ 0.5 - 1.5 lb/A	Treflan, Trifluralin, Trific, Trilin, Tri-4 – 4 EC @ 1.0-1.5 pt/A on light soil 1.5-2.25 pt/A on medium soil 2.0-3.0 pt/A on heavy soil	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.
pendimethalin @ 0.5 - 1.5 lb/A	Prowl 3.3 EC @ 1.2-1.8 pt/A on light soil 1.8-2.4 pt/A on medium soil 2.4-3.6 pt/A on heavy soil Prowl H ₂ O @ 1-2 pt/A on light soil 2 pt/A on medium soil 3 pt/A on heavy soil	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.
PREEMERGENCE:			
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 @ 0.005 - 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 @ 0.06-0.1 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

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			apply with aerial equipment. Consult label for more information on rates and recrop intervals.
PREEMERGENCE continued:			
flumioxazin @ 0.063 lb/A	Valor SX @ 2 oz/A	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	75% formulation @ 5.33-13.4 oz/A OR 4 lb/gal formulation @ 8 to 20 oz/A	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.
pendimethalin @ 0.5 - 1.5 lb/A	Prowl 3.3 or Pendimax @ 1.2-3.6 pt/A Prowl H ₂ O @ 1-3 pt/A Rate depends upon soil type. See label.	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 @ 0.08 – 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.
pyroxasulfone @ 0.07 – 0.163 lb/A + fluthiacet-methyl @ 0.002 – 0.005 lb/A	Anthem @ 4-10 oz/A Anthem Maxx @ 2-5 oz/A Rate depends upon soil type. See label.	Most annual grasses	Apply to the bare soil surface after planting but before weeds emerge. Organic matter influences use rate, consult label.
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.

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PREEMERGENCE continued:			
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.
sulfentrazone @ 0.19 - 0.37 lb/A + chlorimuron @ 0.025 – 0.05 lb/A	Authority XL @ 5-9.6 oz/A Rate depends upon soil type. See label.	Annual grass, broadleaf weeds	Before, during or after planting, but before crop emergence. Consult label for pH, organic matter and recrop restrictions to determine whether to use Authority XL.
sulfentrazone @ 0.25-0.31 lb/A + cloransulam @ 0.03-0.04 lb/A	Authority First OR Sonic @ 6.45-8 oz/A Rate depends upon soil type. See label.	Broadleaf weeds with grass suppression	Before, during or after planting but before crop emergence. Consult label for recropping intervals.
sulfentrazone @ 0.1 – 0.2 lb/A + S-metolachlor 0.94 – 1.6 lb/A	Authority Elite OR BroadAxe @ 19-32 oz/A Rate depends upon soil type. See label.	Annual grasses, annual sedges, broadleaf weeds	Before, during or after planting, but before crop emergence. Consult label for recropping intervals.
sulfentrazone @ 0.14 – 0.2 lb/A + metribuzin @ 0.2 – 0.3 lb/A	Authority MTZ @ 12-18 oz/A Rate depends upon soil type. See label.	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.
S-metolachlor ² @ 0.96 - 1.91 lb/A	Various Trade Names 7.62 lb/gal formulation @ 1-1.67 pt/A Rate depends upon soil type. See label.	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.
metolachlor ² @ 1.5 - 2.5 lb/A	Various Trade Names 8 lb/gal formulation @ 1.5-2.5 pt/A Rate depends upon soil type. See label.	See comments above.	See comments above for S-metolachlor.
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 @ 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.

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PREEMERGENCE continued:			
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.
POSTEMERGENCE:			
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-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, prickly sida, cocklebur, other broadleaf weeds	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 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 recrop intervals. Don't apply to soils with a pH higher than 7.5.
clethodim @ 0.09 - 0.25 lb/A	Select Max @ 12-32 oz/A. 2 lb/gal formulation @ 6-16 oz/A Add 0.25% v/v NIS or 1% v/v COC ; see label	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/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.
fomesafen @ 0.25 - 0.35 lb/A	Reflex 2L, Dawn @ 1-1.5 pt/A Flexstar, Rhythm 1.88L @ 1-1.5 pt/A	Morningglories, cocklebur, pigweed, hemp sesbania, suppression of grasses	Apply before weeds exceed height limitations. Soybeans are very tolerant to fomesafen. May be mixed with

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	Add 0.25% v/v NIS or 1% v/v COC; see label		grass herbicides. Injury may be observed under hot, humid conditions.
POSTEMERGENCE continued:			
fomesafen @ 0.12-0.18 lb/A + fluthiacet-methyl @ 0.007-0.01 lb/A	Marvel SC @ 5-7.25 oz/A Add 0.25% v/v NIS; see label	Broadleaf weeds	Apply when weeds are 2 inches. Add non-selective herbicide to improve broadleaf control and to provide grass control.
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 to 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.
fluazifop-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 4-6 inches long. Application to larger grasses or grasses under stress may result in reduced control.
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 recrop intervals.
lactofen @ 0.15 - 0.19 lb/A	Cobra 2L @ 10.0-12.5 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.
pyraflufen ethyl @ 0.0008 - 0.0012 lb/A	ET @ 0.5 to 0.75 oz/A Apply 0.25% v/v NIS; see label	Morningglories, pigweeds, hemp sesbania	Apply when weeds are 2-4 inches. Add non-selective herbicide to improve broadleaf control and to provide grass control. Add 0.25% v/v of NIS if applied alone. Expect burning of soybean leaves for seven to 10 days after application.
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.
pyroxasulfone @ 0.07 – 0.186 lb/A + fluthiacet-methyl @ 0.002 – 0.006 lb/A	Anthem @ 4-11 oz/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.
sethoxydim @ 0.19 - 0.47 lb/A	Poast Plus @ 1.5-2.25 pt/A	Annual and perennial grasses	Apply before grasses exceed height recommended for treatment. In general use 0.5 pt./A for annual grasses up

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	Add 0.25% v/v NIS or 1% v/v COC; see label		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.
POSTEMERGENCE continued:			
S-metolachlor ² @ 0.96 - 1.25 lb/A	Various Trade Names 7.62 lb/gal formulation @ 1-1.33 pt/A	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.
metolachlor ² @ 1.5 - 2 lb/A	Various Trade Names 8 lb/gal formulation @ 1.5-2 pt/A Rate depends upon soil type. See label.	See comments above.	See comments above for S-metolachlor.
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.
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.
glyphosate ³ @ 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, XTEND, ENLIST, and LIBERTY LINK GT27 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 ³ @ 1-1.5 lb/A + fomesafen @ 0.25-0.38 lb/A	Flexstar GT 3.5 @ 3.5 - 5.3 pt/A OR Glyphosate (4 lb/gal formulations) @ 1-1.5 qt/A + Reflex @ 1-1.6 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, XTEND, ENLIST, and LIBERTY LINK GT27 ONLY. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
glyphosate ³ @ 0.7-1.3 lb/A + S-metolachlor ² @ 0.94-1.5 lb/A	Sequence 5.25 L @ 2.5-4.0 pt/A OR Glyphosate (4 lb/gal formulations) @ 23-36 oz/A + Dual Magnum @ 1 -1.6 pt/A	Most broadleaf weeds and grasses	FOR USE IN ROUNDUP READY/ROUNDUP READY 2 VARIETIES, XTEND, ENLIST, and LIBERTY LINK GT27 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.

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POSTEMERGENCE continued:			
chlorimuron @ 0.013-0.02 lb/A + thifensulfuron @ 0.013-0.02 lb/A + glyphosate ³ @ 0.7-1.0 lb/A	Synchrony XP @ 0.75-1.125 oz/A + Roundup PowerMax @ 22 oz/A 4 lb/gal formulations @ 32 oz/A	Broadleaf and grass weed control	FOR USE IN STS/RR OR BOLT SOYBEAN VARIETIES ONLY. Apply after first trifoliolate leaf. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
glufosinate @ 0.4 lb/A	Liberty 280SL @ 29-36 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 LIBERTY LINK GT27 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 65 oz./A/year. Multiple residual herbicides can be tank-mixed with glyphosate 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.
glufosinate @ 0.4 lb/A + S-metolachlor @ 0.9 lb/A	Liberty 280SL @ 29-36 oz/A + Dual Magnum @ 1.0 pt/A	Broadleaf and grass weed herbicide; good option where residual was not used preplant or at planting.	FOR USE IN LIBERTY LINK, ENLIST, AND LIBERTY LINK GT27 VARIETIES ONLY. Good option when a residual was not used at burndown or at planting. See comments above for Liberty and Dual II Magnum. See Herbicide-Tolerant Soybean Varieties on last page of this section for further information.
dicamba @ 0.5 lb/A	Engenia @ 12.5 oz/A OR FeXapan @ 22 oz/A OR XtendiMax @ 22 oz/A	Broadleaf weeds. Poor control of hophornbeam copperleaf and prickly sida	FOR USE IN XTEND VARIETIES ONLY. Only Engenia, FeXapan, and XtendiMax are labeled for use in Xtend soybean. Federal and state labels contain numerous restrictions. See label for further information. All labeled dicamba formulation can be tank-mixed with glyphosate or other herbicides to broaden the weed spectrum. 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	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-

SOYBEAN WEED MANAGEMENT

SOYBEAN			
Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
			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.
LAYBY:			
2,4-DB @ 0.2 lb/A	Various formulations @ 0.8-0.9 pt/A; consult product labels for correct rate and surfactant requirements,	Annual morningglory, cocklebur, pigweed, prickly sida	Apply after soybeans are 8 inches tall. Apply to lower 3 inches of soybean plants as a directed spray . Repeat once if necessary. Do not apply to soybeans showing root rot symptoms.
paraquat @ 0.07-0.12 lb/A	Paraquat (2 lb/gal formulation) @ 4.5-8 oz/A; paraquat (3 lb/gal formulation) @ 3-5.1 oz/A Add 0.25% v/v NIS or 1% v/v COC ; see label	Seedling grasses such as seedling johnsongrass, crabgrasses, signalgrass, barnyardgrass, goosegrass	Apply when grasses and pigweed are 2-4 inches tall and soybeans are at least 8 inches. Directed Spray Only. Good coverage necessary for control. Soybeans treated topically will be killed. Do not exceed 30 lb. pressure. Do not graze treated areas. Apply low rate to weeds 2 inches tall and higher rate to grasses 2-4 inches tall and pigweeds 2-3 inches tall. Consult the label.
linuron @ 0.5-1 lb/A	4 lb/gal formulation @ 1-2 pt/A 50% formulation @ 1-2 lb/A Add 0.25% v/v NIS or 1% v/v COC; see label	Annual grass and broadleaf weeds	Apply only single application as directed spray to base of soybean no higher than 2-3 inches above the ground.
metribuzin @ 0.25 - 0.50 lb/A	75% formulation @ 5.33-10.67 oz/A OR 4 lb/gal formulation @ 8 to 16 oz/A Add 0.25% v/v NIS or 1% v/v COC; see label	Grasses, broadleaf weeds such as cocklebur, dayflower, prickly sida, hemp sesbania and others	Apply after soybeans are 8 inches tall and before grasses are 1 inch tall and broadleaf weeds are 3 inches tall. Directed spray only. Spray only the lower quarter to third of soybean plants. Do not apply to sensitive varieties. Higher rate required to control sesbania and prickly sida and to suppress morningglory, spotted spurge and wild poinsettia. Consult the label.
metribuzin @ 0.25 - 0.50 lb/A + 2,4-DB @ 0.2 lb/A	Rates as above Add 0.25% v/v NIS or 1% v/v COC; see label	Grasses and small broadleaf weeds	Apply after soybeans are 8 inches tall. Directed spray only. Severe injury to soybeans may occur if spray strikes mid- to upper portions of soybean plants. Low rate for smaller weeds, higher rate for larger weeds.

SOYBEAN WEED MANAGEMENT

SOYBEAN			
Active Ingredient and Rate	Formulated Product and Rate	Weeds Controlled	Remarks and Precautions
PREHARVEST DESSICANTS:			
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	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	6 lb/gal formulation @ 1 gal/A 5 lb/gal formulation @ 1.2 gal/A 3 lb/gal formulation @ 2 gal/A	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.

¹ Refer to the burndown section of this guide for suggestions on managing cool-season weeds.

² When metolachlor is manufactured, it contains a 1:1 ratio of two metolachlor isomers; the -R and the -S isomer. The -S isomer has greater herbicidal activity than the -R isomer. Alternatively, according to the Syngenta Crop Protection labels, if the trade names include the word "Magnum," the -S isomer is an active ingredient. If the trade name does not include "Magnum", the metolachlor -R:-S isomer ratio is 1:1.

³ See "Appendix A" for glyphosate products and their surfactant requirements. Glyphosate-resistant Italian ryegrass, johnsongrass, Palmer amaranth and waterhemp have been documented in Louisiana.

SOYBEAN WEED MANAGEMENT

HERBICIDE-TOLERANT SOYBEAN VARIETIES

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 and are shown in Appendix A; therefore, rates may differ depending upon glyphosate formulation used. 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. Remember that the longer the weeds remain in the field, the larger they become and longer they compete with the soybean. Since some morningglories, hemp sesbania, yellow and purple nutsedge and dayflower are not controlled with one application, two applications of glyphosate often are needed. 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).

Liberty Link soybean. These varieties are tolerant to overtop applications of Liberty (glufosinate). The initial application of Liberty 280 should be made at 29 to 36 oz product/A, 7-10 days after soybean emergence. A sequential application of Liberty should follow 10-14 days later or to 2- to 4-inch weeds. A maximum of 65 oz product/A/year can be applied. Do not apply past first bloom. Liberty 280 should provide good control of most broadleaf weeds but is weak on grass weeds. For acceptable grass weed control, Liberty 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. Metolachlor or S-metolachlor containing products may be tank-mixed with Liberty to provide residual control of some small-seeded broadleaf and grass weeds. Liberty may also be tank-mixed with Classic, Flexstar, FirstRate, Ultra Blazer, etc. for increased broadleaf weed control in Liberty Link soybean. If Liberty Link soybean is planted in an area with known large grassy weed populations, a graminicide such Select Max, Fusilade, etc. should be budgeted to control late-season grass problems.

Xtend soybean. These varieties are resistant 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, DuPont, and Bayer 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.

Enlist soybean. These varieties are resistant 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.