

TABLE 2A – Chemical Weed Control in Soybeans

Soybeans — Preplant Incorporated Only

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses	trifluralin (<i>Treflan HFP</i>)	0.75	1.5 pt 4EC	<ul style="list-style-type: none"> Refer to Table 2F for weed control and crop tolerance ratings. Incorporate in top 2 or 3 inches of soil within 24 hr. after application. On sandy and sandy loam soils low in organic matter, use 0.5 lb a.i./A (1 pt/A). Most effective control if application is made 10 days to 2 weeks ahead of planting and field is reworked just prior to planting. Refer to label and Table 12 for crop rotation restrictions.
	ethalfluralin (<i>Sonalan HFP</i>)	0.9	2.5 pt 3EC	<ul style="list-style-type: none"> Refer to Table 2F for weed control and crop tolerance ratings. Incorporate in top 2 or 3 inches of soil within 2 days of application. Refer to label and Table 12 for crop rotation restrictions.

Soybeans — Soil Applied — All Tillage Systems

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses Yellow nutsedge	alachlor (<i>IntRRo</i>) OR (<i>Micro-Tech</i>)	2	2 qt 4EC	<ul style="list-style-type: none"> May be applied preplant incorporated or preemergence. Refer to Table 2F for weed control and crop tolerance ratings. Alachlor rate should be increased to 2.5 qt/A for effective nutsedge control and 3 qt/A for effective nightshade control. Nutsedge control is improved when alachlor is incorporated. Refer to label and Table 12 for crop rotation restrictions.
	2 qt 4ME			
	s-metolachlor (<i>Dual Magnum</i> , <i>Dual II Magnum</i>)	1.27	1.33 pt 7.64EC	<ul style="list-style-type: none"> May be applied preplant incorporated or preemergence. Refer to Table 2F for weed control and crop tolerance ratings. <i>Dual Magnum</i> or <i>Dual II Magnum</i> rate should be increased to 1.66 pt/A for effective nutsedge control. Nutsedge control is improved when s-metolachlor is incorporated. Refer to label and Table 12 for crop rotation restrictions.
	metolachlor (<i>Parallel</i> , <i>Parallel PCS</i>)	2.0	2.0 pt 7.8L 2.0 pt 8.0L	<ul style="list-style-type: none"> May be applied preplant incorporated or preemergence. Refer to Table 2F for weed control and crop tolerance ratings. Metolachlor at 2.0 lb a.i./A should provide similar control to s-metolachlor at 1.27 lb a.i. /A. Refer to label and Table 12 for crop rotation restrictions.

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Soybeans — Soil Applied — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual grasses Yellow nutsedge	dimethenamid-P (<i>Outlook</i>)	0.84	18 oz 6L	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • <i>Outlook</i> rate should be increased to 21 oz/A for effective nutsedge control. • Nutsedge control is improved when <i>Outlook</i> is incorporated. • <i>Outlook</i> rates vary with soil texture and organic matter. • <i>Outlook</i> may be applied early postemergence on soybeans from the first to third trifoliate, but this application will not control emerged weeds. • Refer to label and Table 12 for crop rotation restrictions.
Annual grasses	flufenacet + metribuzin (<i>Axiom</i>)	0.55	13 oz 68DF	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • See Table 2E for individual product rate equivalents for the premix. • <i>Axiom</i> rates labeled for use in soybeans are too low to provide season-long annual grass control. • DO NOT apply <i>Axiom</i> to coarse-textured soils where the water table is shallow or to sites that are vulnerable to surface water contamination. • Refer to label and Table 12 for crop rotation restrictions.
	flufenacet (<i>Define</i>) OR (<i>Define SC</i>)	0.45	12 oz 60DF OR 14.4 oz 4SC	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • <i>Define</i> rates labeled for use in soybeans are too low to provide season-long annual grass control. • DO NOT apply <i>Define</i> to coarse-textured soils where the water table is shallow or to sites that are vulnerable to surface water contamination. • Refer to label and Table 12 for crop rotation restrictions.
	pendimethalin (<i>Prowl/Pendimax</i>) OR (<i>Prowl H₂O</i>)	1 0.95	2.4 pt 3.3EC OR 2.0 pt 3.8ASC	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • Preemergence applications may be made up to 2 days after planting. • DO NOT apply after soybean cracking or emergence. • Applications close to or after planting may result in soybean injury, including stem swelling and brittleness. Early pre-plant or preplant incorporated applications reduce the risk of injury. • Refer to label and Table 12 for crop rotation restrictions.
Annual grasses, Velvetleaf, Lambsquarters	clomazone (<i>Command 3ME</i>)	0.75	2 pt 3ME	<ul style="list-style-type: none"> • DO NOT apply preplant incorporated. • Refer to Table 2F for weed control and crop tolerance ratings. • Poor weed control will result if <i>Command 3ME</i> is incorporated. • Several ornamental, horticultural and agronomic crops are sensitive to <i>Command</i> spray drift and volatilization. • Precautions should be taken to avoid spray drift. • DO NOT apply <i>Command</i> within 1,200 ft. of housing developments, commercial fruit and vegetable production, and greenhouses. • DO NOT apply in winds above 10 mph or at pressures above 30 PSI. • Special precaution: A special sprayer clean-out procedure is required for <i>Command 3ME</i>. See label for specific instructions. • Refer to label and Table 12 for crop rotation restrictions.

Soybeans — Soil Applied — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses Annual broadleaves (EXCEPT nightshade)	flufenacet + metribuzin <i>(Domain)</i>	0.375	10 oz 60DF	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • See Table 2E for individual product rate equivalents for the premix. • <i>Domain</i> may be applied at broadcast use rates of 9-16 oz/A. • DO NOT use if soil pH is greater than 7.5, or if soil organic matter is less than 0.5%, or on sands with less than 1.0% organic matter. • DO NOT apply <i>Domain</i> to coarse-textured soils where the water table is shallow or to sites that are vulnerable to surface water contamination. • Some soybean varieties have low tolerance to metribuzin and should not be planted. Consult product label, MSUE, or agribusiness for a listing of varieties. • <i>Domain</i> will provide 3-6 weeks of weed control. Increase application rate, use tank mixtures, or use in a sequential herbicide program to increase the length of control. • Refer to label and Table 12 for crop rotation restrictions.
Annual grasses, Annual broadleaves (EXCEPT cocklebur, jimsonweed)	imazethapyr + pendimethalin <i>(Pursuit Plus)</i>	0.9	2.5 pt 2.9EC	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • See Table 2E for individual product rate equivalents for the premix. • Common ragweed may only be suppressed. • Preemergence applications may be made up to 2 days after planting. • DO NOT apply after soybean cracking or emergence. • Applications close to or after planting may result in soybean injury, including stem swelling and brittleness. Early pre-plant or preplant incorporated applications reduce the risk of injury. • Refer to label and Table 12 for crop rotation restrictions.
Annual grasses, Annual broadleaves (EXCEPT jimsonweed)	s-metolachlor + metribuzin <i>(Boundary)</i> OR <i>(Boundary 6.5EC)</i>	1.22	1.25 pt 7.8EC OR 1.5 pt 6.5EC	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • See Table 2E for individual product rate equivalents for the premix. • The new formulation of <i>Boundary 6.5EC</i> is less viscous than the older <i>Boundary 7.8EC</i> formulation; 1.5 pt/A of the new <i>Boundary 6.5EC</i> is equivalent to 1.25 pt/A of <i>Boundary 7.8EC</i>. • <i>Boundary 6.5EC</i> may be applied at broadcast use rates of 1.25-2.4 pt/A. • Product rates depend on soil texture, organic matter, pH, and desired length of control. • Some soybean varieties have low tolerance to metribuzin and should not be planted. Consult product labels, MSUE, or agribusiness for a listing of varieties. • DO NOT use on sands or soils with less than 0.5% organic matter. DO NOT use on loamy sand soils with less than 2% organic matter. • On soils with pH above 7.0, use the 1.5 pt/A rate only of <i>Boundary 6.5EC</i>. • <i>Boundary</i> will provide 3-6 weeks of weed control. Increase application rate, use tank mixtures or use in a sequential herbicide program to increase the length of control. • Refer to label and Table 12 for crop rotation restrictions.

Soybeans — Soil Applied — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves (EXCEPT nightshade)	metribuzin (<i>Sencor</i>)	0.375	0.5 lb 75DF	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • Product rates depend on soil texture, organic matter and pH. • DO NOT use if soil pH is greater than 7.5, or if soil organic matter is less than 0.5%, or on coarse-textured soils with less than 2.0% organic matter. • Some soybean varieties have low tolerance to metribuzin and should not be planted. Consult product labels, MSUE or agribusiness for a listing of varieties. • Tank mixtures or prepackaged herbicide mixes are needed for eastern black nightshade and annual grass control (Table 2E and 2F). • <i>Sencor</i> will not control triazine-resistant weed species. • Refer to label and Table 12 for crop rotation restrictions.
	cloransulam-methyl (<i>FirstRate</i>)	0.031	0.6 oz 84DG	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • Excellent common and giant ragweed control. • Product rate depends on soil organic matter. If soil organic matter is greater than 3.0%, <i>FirstRate</i> can be applied at 0.75 oz/A. • The cumulative application rate may not exceed 1.05 oz/A per season. • Tank mixtures or prepackaged herbicide mixes are needed for eastern black nightshade and annual grass control (Table 2E and 2F). • <i>FirstRate</i> will not control ALS-resistant weed species. • Refer to label and Table 12 for crop rotation restrictions.
Annual broadleaves (FAIR on nightshade)	linuron (<i>Lorox DF</i>)	0.75	1.5 lb 50DF	<ul style="list-style-type: none"> • DO NOT apply preplant incorporated. • Refer to Table 2F for weed control and crop tolerance ratings. • If heavy rainfall occurs soon after application, injury to the crop may result. • DO NOT use on coarse-textured sandy or sandy loam soils or on soils with less than 1% organic matter. • Plant soybeans at least 1.75 inches deep. • Tank mixtures or sequential herbicide programs are needed to increase the spectrum of weed control (Table 2F). • Refer to label and Table 12 for crop rotation restrictions.
Annual broadleaves (including nightshade)	flumetsulam (<i>Python WDG</i>)	0.057	1.14 oz 80DG	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • Adjust application rate according to soil type and organic matter. • DO NOT apply to areas where soil pH is greater than 7.8 or to soils with greater than 5% organic matter and pH less than 5.9. • Tank mixtures or sequential herbicide programs are needed to improve control of ragweed, cocklebur and jimsonweed (Table 2F). • <i>Python</i> will not control ALS-resistant weed species. • Refer to label and Table 12 for crop rotation restrictions.

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Soybeans — Soil Applied — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual broadleaves (including nightshade)	imazaquin <i>(Scepter)</i>	0.125	2.8 oz 70DG	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • DO NOT plant CORN (unless it is a Clearfield hybrid) following <i>Scepter</i> application except in the southern two tiers of counties in Michigan and if 15 inches of rainfall occurs. • Rainfall is critical for rotational crops (see label); the recropping count should start at soybean planting. Refer to label and Table 12 for crop rotation restrictions. • Soybean stunting (shortening of internodes) may occur on sandy soils. • Common ragweed control is best when <i>Scepter</i> is applied preemergence. However, eastern black nightshade and velvetleaf control are better when <i>Scepter</i> is preplant incorporated. • <i>Scepter</i> will not control ALS-resistant weed species. • Tank mixtures or sequential herbicide programs can be used to improve the weed control spectrum (Table 2F).
	imazethapyr <i>(Pursuit)</i>	0.063	1.4 oz 70DG	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • Common ragweed may only be suppressed; tank mixtures or a sequential herbicide program is needed to improve ragweed control (Table 2F). • <i>Pursuit</i> will not control ALS-resistant weed species. • <i>Pursuit</i> is very persistent and can limit rotational crops. Refer to label and Table 12 for crop rotation restrictions.
	sulfentrazone + chlorimuron-ethyl <i>(Canopy XL)</i>	0.13	3.8 oz 56DG	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • See Table 2E for individual product rate equivalents for the premix. • DO NOT apply after soybean cracking or emergence — severe injury will occur. • DO NOT apply <i>Canopy XL</i> at rates greater than 2.5 oz/A to soils with a composite pH greater than 6.8; use of higher rates may result in unacceptable injury to the following crop. • Application rates of <i>Canopy XL</i> greater than 4.2 oz/A may cause unacceptable soybean injury. • Tank mixtures or sequential herbicide programs can be used to improve control of cocklebur, jimsonweed and late-emerging giant ragweed (Table 2F). • Soil pH and <i>Canopy XL</i> use rates are critical for rotational crops (see label); the recropping count should start at soybean planting. • Refer to label and Table 12 for crop rotation restrictions.
	flumioxazin + cloransulam-methyl <i>(Gangster)</i>	0.08 0.031	2.5 oz 51DG 0.6 oz 84DG	<ul style="list-style-type: none"> • DO NOT apply preplant incorporated. • Refer to Table 2F for weed control and crop tolerance ratings. • Co-pack of <i>Gangster V (Valor)</i> + <i>Gangster FR (FirstRate)</i> (Table 2E). • Apply within 3 days of planting. DO NOT apply after soybean cracking or emergence — severe injury or death may occur. • Crop injury may occur when <i>Gangster</i> is applied to poorly drained soils and/or under cool, wet conditions. • DO NOT tank mix or apply with <i>Axiom</i>, <i>Define</i>, <i>Domain</i>, <i>IntRRo</i>, <i>Micro-Tech</i>, <i>Dual</i> products, <i>Boundary</i>, or <i>Outlook</i> — crop injury will occur. • <i>Gangster</i> can be tank mixed with pendimethalin (<i>Prowl</i> or <i>Pendimax</i>) for annual grass control. • Refer to label and Table 12 for crop rotation restrictions.

Soybeans — Soil Applied — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Black nightshade, Redroot pigweed, Lambsquarters	sulfentrazone (<i>Authority/Blanket/ Spartan</i>)	0.188	4 oz 75DG	<ul style="list-style-type: none"> • May be applied preplant incorporated or preemergence. • Refer to Table 2F for weed control and crop tolerance ratings. • Apply within 3 days of planting. DO NOT apply after soybean cracking or emergence — severe injury or death may occur. • Soybean stunting may occur if excessive rainfall occurs after application but before soybeans emerge. • Some soybean varieties are sensitive to sulfentrazone. Consult your local seed dealer for information. • Reduce <i>Authority/Blanket/Spartan</i> rate to 3 oz/A if a glyphosate postemergence application is planned in glyphosate-resistant soybeans. • Tank mixtures or sequential herbicide programs can be used to improve the weed control spectrum (Table 2F). • Refer to label and Table 12 for crop rotation restrictions.
Black nightshade, Redroot pigweed, Lambsquarters, Common ragweed	flumioxazin (<i>Valor</i>)	0.08	2.5 oz 51DG	<ul style="list-style-type: none"> • DO NOT apply preplant incorporated. • Refer to Table 2F for weed control and crop tolerance ratings. • Apply within 3 days of planting. DO NOT apply after soybean cracking or emergence — severe injury or death may occur. • Crop injury may occur when <i>Valor</i> is applied to poorly drained soils and/or under cool, wet conditions. • Soils with high organic matter and/or high clay content may require 3 oz/A. • DO NOT tank mix or apply with <i>Axiom, Define, Domain, IntRRo, Micro-Tech, Dual</i> products, <i>Boundary</i> or <i>Outlook</i> — crop injury will occur. • <i>Valor</i> can be tank-mixed with pendimethalin (<i>Prowl</i> or <i>Pendimax</i>) for annual grass control. • Refer to label and Table 12 for crop rotation restrictions.

Soybeans — Postemergence for Broadleaf Weeds

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves (EXCEPT pigweed and nightshade) Yellow nutsedge	bentazon (<i>Basagran</i>) + crop oil concentrate + /OR 28% liquid nitrogen OR ammonium sulfate	1	2 pt 4L + 1 qt + /OR 2 qt OR 2.5 lb	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Most effective on small weeds. Rate can be reduced to 1.5 pt/A if weeds are smaller than maximum growth stage (Table 2G). • <i>Basagran</i> at 3 pt/A can suppress cocklebur up to 24 inches and velvetleaf up to 12 inches. • Use a minimum of 20 gal. water/A for adequate coverage. • DO NOT apply if soybeans are under stress from herbicide injury, cold or dry weather, or hail damage. • For improved velvetleaf control, 28% liquid nitrogen (2-4 qt/A) or ammonium sulfate (2.5 lb/A) can be used INSTEAD OF crop oil concentrate. However, if common ragweed and common lambsquarters are present, a crop oil concentrate must also be included (Table 2H). • Split applications of <i>Basagran</i> (1.5 pt + 1.5 pt) plus crop oil concentrate (1 qt + 1 qt) can be used to control yellow nutsedge and Canada thistle. Applications should be made approximately 10 days apart. For improved Canada thistle control, increase <i>Basagran</i> rate to 1 qt for each application. • Allow 30 days between <i>Basagran</i> application and soybean harvest. • <i>Basagran</i> can be tank mixed with many postemergence soybean herbicides for additional broadleaf weed control (Tables 2F and 2I). • <i>Basagran</i> can be tank mixed for postemergence grass control (Table 2K). • Refer to label and Table 12 for crop rotation restrictions.

Soybeans — Postemergence for Broadleaf Weeds (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves (EXCEPT velvetleaf and lambsquarters)	acifluorfen (<i>Ultra Blazer</i>)	0.38	1.5 pt 2SC	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Most effective on small weeds (Table 2G). • Use a minimum of 20 gal. water/A for adequate coverage. • DO NOT apply if soybeans are under stress from herbicide injury, cold or dry weather, or hail damage. • 28% liquid nitrogen (2-4 qt/A) or ammonium sulfate (2.5 lb/A) may be added INSTEAD OF surfactant for improved weed control. • Allow 50 days between <i>Ultra Blazer</i> application and soybean harvest. • <i>Ultra Blazer</i> can be tank mixed with most postemergence soybean herbicides for additional broadleaf weed control (Tables 2F and 2I). • <i>Ultra Blazer</i> can be tank mixed for postemergence grass control (Table 2K). • Refer to label and Table 12 for crop rotation restrictions.
	+		+	
	surfactant		0.25%	
	OR		OR	
	28% liquid nitrogen		2-4 qt	
OR		OR		
ammonium sulfate		2.5 lb		
Annual broadleaves (EXCEPT black nightshade and lambsquarters) Yellow nutsedge, Jerusalem artichoke	chlorimuron-ethyl (<i>Classic</i>)	0.0106	0.67 oz 25DF	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Labeled rates of 0.5-0.75 oz/A are most effective on small weeds (Table 2G). • DO NOT apply <i>Classic</i> at rates of 0.5 oz/A or greater to soils with pH greater than 7.0. • <i>Classic</i> can be applied at 0.25 or 0.33 oz/A when tank mixed with <i>Harmony GT</i> (see <i>Classic</i> + <i>Harmony GT</i> tank mix) without being limited by soil pH. However, CROP ROTATION is still limited. • Apply after the first trifoliolate leaf of soybeans has fully expanded. • Apply with non-ionic surfactant (0.125-0.25% v/v) or crop oil concentrate (1% v/v) plus 28% liquid nitrogen (2-4 qt/A) or ammonium sulfate (2-4 lb/A). • Crop oil concentrate provides better control under hot conditions. However, increased injury may result (Table 2H). • DO NOT apply to soybeans or weeds under stress from herbicide injury or cold or dry weather — crop injury or poor weed control may result. Delay application until the stress passes. • 0.75 oz/A is required for Jerusalem artichoke control. • Allow 60 days between <i>Classic</i> application and soybean harvest. • <i>Classic</i> will not control ALS-resistant weed species. • <i>Classic</i> can be tank mixed with many postemergence soybean herbicides for additional broadleaf weed control (Tables 2F and 2I). • <i>Classic</i> can be tank mixed for postemergence grass control (Table 2K). • Soil pH and <i>Classic</i> use rates are critical for rotational crops (see label). • Refer to label and Table 12 for crop rotation restrictions.
	+		+	
	surfactant		0.25%	
	OR		OR	
	crop oil concentrate		1%	
	+			
	28% liquid nitrogen		2-4 qt	
OR		OR		
ammonium sulfate		2-4 lb		

Soybeans — Postemergence for Broadleaf Weeds (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves (ONLY lambsquarters, smartweed, pigweed, wild mustard and velvetleaf)	thifensulfuron-methyl <i>(Harmony GT)</i> + surfactant + 28% liquid nitrogen OR ammonium sulfate	0.004	0.08 oz 75DF + 0.125-0.25% + 2-4 qt OR 2-4 lb	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • <i>Harmony GT</i> is most effective on small weeds (Table 2G). • Apply after the first trifoliate leaf of soybeans has fully expanded. • Applications of <i>Harmony GT</i> may cause temporary wilting, leaf yellowing, and stunting. • DO NOT apply to soybeans or weeds under stress from weed control may result. Delay application until the stress passes. • Allow 60 days between <i>Harmony GT</i> application and soybean harvest. • Under dry conditions, <i>Harmony GT</i> can be applied with crop oil concentrate, but soybean injury is likely to be more severe. • Add 28% liquid nitrogen in addition to non-ionic surfactant for velvetleaf control. • Use a minimum of 10 gal. water/A. For heavy weed pressure, increase volume to 15 gal/A. • <i>Harmony GT</i> will not control ALS-resistant weed species. • <i>Harmony GT</i> can be tank mixed with many postemergence soybean herbicides for additional broadleaf weed control. Follow label directions closely regarding spray additives (Tables 2F and 2I). • <i>Harmony GT</i> can be tank mixed with <i>Assure II</i> and <i>Fusion</i> for grass control (Table 2K). • Special precaution: A special sprayer clean-out procedure is required (see label). • Refer to label and Table 12 for crop rotation restrictions.

Soybeans — Postemergence for Broadleaf Weeds (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves (EXCEPT black nightshade and common ragweed)	chlorimuron-ethyl (<i>Classic</i>)	0.004	0.25 oz 25DF	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Refer to Table 2G for maximum weed sizes. • DO NOT apply <i>Classic</i> at rates of 0.5 oz/A or greater to soils with pH greater than 7.0. • <i>Classic</i> can be applied at 0.25 or 0.33 oz/A with <i>Harmony GT</i> without being limited by soil pH. • Apply after the first trifoliate leaf of soybeans has fully expanded. • Under dry conditions, <i>Classic</i> + <i>Harmony GT</i> can be applied with crop oil concentrate, but soybean injury is likely to be more severe. • For eastern black nightshade control, add <i>Cobra</i> (4-6 oz/A) or <i>Reflex</i> or <i>Flexstar</i> (1 pt/A) or <i>Ultra Blazer</i> (1 pt/A) or <i>Pursuit DG</i> (0.7 oz/A). DO NOT use crop oil concentrate if <i>Pursuit</i> is tank mixed for nightshade control (Tables 2F and 2I). • <i>Classic</i> rate needs to be at 0.33 oz/A for common ragweed control. • <i>Classic</i> rate needs to be at 0.5 oz/A for yellow nutsedge control. DO NOT apply to soils with pH greater than 7.0. • <i>Classic</i> rate needs to be at 0.75 oz/A for Jerusalem artichoke control. DO NOT apply to soils with pH greater than 7.0. • DO NOT apply to soybeans or weeds under stress from herbicide injury or cold or dry weather — crop injury or poor weed control may result. Delay application until the stress passes. • <i>Classic</i> + <i>Harmony GT</i> can be tank mixed for grass control. Additive should be a non-ionic surfactant; DO NOT use crop oil concentrate (Table 2K). • Allow 60 days between application and soybean harvest. • These herbicides will not control ALS-resistant weed species. • Soil pH and <i>Classic</i> use rates are critical for rotational crops (see label). • Refer to label and Table 12 for crop rotation restrictions.
	+	+	+	
	thifensulfuron methyl (<i>Harmony GT</i>)	0.08 oz 75DF	0.125-0.25%	
	+	+	+	
	surfactant	2-4 qt	OR	
28% liquid nitrogen OR ammonium sulfate	2-4 lb			
Annual broadleaves (EXCEPT black nightshade) Yellow nutsedge, Jerusalem artichoke, Common milkweed	chlorimuron-ethyl + thifensulfuron methyl (<i>Synchrony STS</i>)	0.0136	0.5 oz 42DF	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Refer to Table 2G for maximum weed sizes. • ONLY apply 0.5 oz/A of <i>Synchrony STS</i> to STS SOYBEANS. • <i>Synchrony STS</i> at 0.25 oz/A can be applied to NON-STs soybeans. DO NOT use crop oil concentrate. Instead, use a non-ionic surfactant at 0.25% v/v. • See Table 2E for individual product rate equivalents for the premix. • DO NOT apply to soils with a pH greater than 7.0 if field is north of I-96. • Apply after the first trifoliate leaf of soybeans has fully expanded. • For eastern black nightshade control, add <i>Cobra</i> (4-6 oz/A) or <i>Reflex</i> or <i>Flexstar</i> (1 pt/A) or <i>Ultra Blazer</i> (1 pt/A) or <i>Pursuit DG</i> (0.7 oz/A). Reduce the rate of crop oil concentrate to 0.5% if tank mixed with <i>Cobra</i>. DO NOT use crop oil concentrate if <i>Pursuit</i> or <i>Ultra Blazer</i> is tank mixed for nightshade control (Table 2I). • Allow 60 days between <i>Synchrony STS</i> application and soybean harvest. • <i>Synchrony STS</i> will not control ALS-resistant weed species. • <i>Synchrony STS</i> will suppress pokeweed, perennial sow-thistle, and dandelion. • <i>Synchrony STS</i> can be tank mixed for control of some grasses (Table 2K). • Soil pH and <i>Classic</i> use rates are critical for rotational crops (see label). • Refer to label and Table 12 for crop rotation restrictions.
	+	+	+	
	crop oil concentrate	1%	+	
	+	+	+	
	28% liquid nitrogen OR ammonium sulfate	2 qt	OR	
	2 lb			

Soybeans — Postemergence for Broadleaf Weeds (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves (EXCEPT lambsquarters and common ragweed) Jerusalem artichoke	imazethapyr <i>(Pursuit)</i> + surfactant + 28% liquid nitrogen OR ammonium sulfate	0.063	1.4 oz 70DG + 0.25% + 1 qt OR 2.5 lb	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Refer to Table 2G for maximum weed sizes. • Apply with non-ionic surfactant (0.25% v/v) or crop oil concentrate (1.5-2 pt/A) plus 28% liquid nitrogen (1-2 pt/A) or ammonium sulfate (2.5 lb/A) (Table 2H). • Will control yellow and green foxtails, barnyardgrass and crabgrass up to 3 inches tall, and giant foxtail up to 6 inches tall. • Apply after the first trifoliate leaf of soybeans has fully expanded. • Allow 85 days between <i>Pursuit</i> application and soybean harvest. • <i>Pursuit</i> will not control ALS-resistant weed species. • <i>Pursuit</i> can be tank mixed with many postemergence soybean herbicides for additional broadleaf weed control. Follow label directions closely regarding spray additives (Tables 2F and 2I). • <i>Pursuit</i> can be tank mixed with postemergence grass herbicides for volunteer corn control only (Table 2K). • <i>Pursuit</i> is very persistent and can limit rotational crops. Refer to label and Table 12 for crop rotation restrictions.
Annual broadleaves (EXCEPT common ragweed) Annual grasses	imazamox <i>(Raptor)</i> + surfactant + 28% liquid nitrogen OR ammonium sulfate	0.04	5 oz 1L + 0.25% + 1 qt OR 2.5 lb	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Refer to Table 2G for maximum weed sizes. • Apply with non-ionic surfactant (0.25% v/v) or crop oil concentrate (1.5-2 pt/A) plus 28% liquid nitrogen (1-2 pt/A) or ammonium sulfate (2.5 lb/A) (Table 2H). • Apply after the first trifoliate leaf of soybeans has fully expanded but before soybean bloom. • Will control barnyardgrass, foxtails and panicum but ONLY SUPPRESS crabgrass. • Application rate must be 5 oz/A for annual grass and common lambsquarters control OR apply <i>Prowl/Pendimax</i> pre-emergence for control of these weeds. • Common ragweed less than 3 inches will be suppressed. • Increase common ragweed control by tank mixing with <i>Cobra</i> (2-3 oz/A), <i>Ultra Blazer</i> (8-16 oz/A), or <i>Flexstar</i> (6-8 oz/A). Higher rates can cause grass antagonism (Tables 2F and 2I). • <i>Raptor</i> will not control ALS-resistant weed species. • DO NOT tank mix with postemergence grass herbicides unless for volunteer corn — antagonism will occur and grass control will equal that of <i>Raptor</i> alone. • Refer to label and Table 12 for crop rotation restrictions.

Soybeans — Postemergence for Broadleaf Weeds (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves (EXCEPT velvetleaf, smartweed, lambs- quarters and cocklebur)	fomesafen <i>(Reflex)</i> + surfactant OR crop oil concentrate	0.25	1 pt 2L + 0.25% OR 1%	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings • <i>Reflex</i> can be applied ONLY in counties south of HWY 55. • DO NOT apply <i>Reflex</i> to the same field in CONSECUTIVE years. • <i>Reflex</i> is most effective when weed are small (Table 2G). • <i>Reflex</i> can be reduced to 0.75 pt/A to control certain smaller weeds (Table 2G). • Apply before soybeans bloom. • Apply with crop oil concentrate (0.5-1.0% v/v) or non-ionic surfactant (0.25-0.5% v/v). 28% liquid nitrogen (2.5% v/v) or ammonium sulfate (10 lb/100 gal) can be added to either crop oil concentrate or surfactant for improved weed control (Table 2H). • Apply at 10-20 gal. water/A at 30-60 psi. • <i>Reflex</i> can be tank mixed with many postemergence soybean herbicides for additional broadleaf weed control. Follow label directions closely regarding spray additives (Tables 2F and 2I). • <i>Reflex</i> can be tank mixed for postemergence grass control (Table 2K). • Refer to label and Table 12 for crop rotation restrictions.
	Annual broadleaves (EXCEPT velvetleaf, lambsquarters and cocklebur)	fomesafen <i>(Flexstar)</i> + surfactant OR crop oil concentrate + 28% liquid nitrogen OR ammonium sulfate	0.25	1 pt 1.88L + 0.25% OR 0.5-1.0% + 2.5% OR 8.5 lb/100 gal

Soybeans — Postemergence for Broadleaf Weeds (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves (EXCEPT velvetleaf, smartweed, and lambsquarters)	lactofen (<i>Cobra</i>) + crop oil concentrate OR surfactant	0.195	8 oz 2EC + 1 pt OR 0.25%	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • <i>Cobra</i> can be applied at 6-10 oz/A when tank mixed with other herbicides or when applied alone. Refer to Table 2G for maximum weed sizes. • DO NOT apply to soybeans in the cotyledon stage. • DO NOT apply to soybeans or weeds under stress from herbicide injury, cold or dry weather, or hail damage — crop injury or poor weed control may result. Delay application until the stress passes. • <i>Cobra</i> causes more soybean leaf burn than other post-emergence herbicides. • For best results, apply with crop oil concentrate (0.25-1.0% v/v), depending on environmental conditions (see label). Surfactant (0.25% v/v), 28% liquid nitrogen or ammonium sulfate may be substituted for crop oil concentrate when weeds are actively growing under high temperature, high humidity and high soil moisture conditions (Table 2H). • Apply at a minimum of 20 gal. water/A at 40 psi. • Allow 45 days between <i>Cobra</i> application and soybean harvest. • <i>Cobra</i> can be tank mixed with many postemergence soybean herbicides for additional broadleaf weed control. Follow label directions closely regarding spray additives (Tables 2F and 2I). • <i>Cobra</i> can be tank mixed for postemergence grass control (Table 2K). • Refer to label and Table 12 for crop rotation restrictions.
	lactofen (<i>Phoenix</i>) + surfactant	0.195	12.5 oz 2EC + 0.125%	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • <i>Phoenix</i> can be applied at 8-12.5 oz/A when tank mixed with other herbicides or when applied alone. Refer to Table 2G for maximum weed sizes. • <i>Phoenix</i> is <i>Cobra</i> formulated with additional surfactants. • DO NOT apply to soybeans or weeds under stress from herbicide injury, cold or dry weather, or hail damage — crop injury or poor weed control may result. Delay application until the stress passes. • Apply with non-ionic surfactant (0.125-0.25% v/v). Crop oil concentrate (1 pt/A) is recommended when weeds are stressed by hot and dry conditions, though soybean injury will be more severe (Table 2H). • Apply early when the soybean canopy doesn't interfere with coverage. • Allow 45 days between <i>Phoenix</i> application and soybean harvest. • <i>Phoenix</i> can be tank mixed with many postemergence soybean herbicides for additional broadleaf weed control. Follow label directions closely regarding spray additives (Tables 2F and 2I). • <i>Phoenix</i> can be tank mixed for postemergence grass control (Table 2K). • Refer to label and Table 12 for crop rotation restrictions.

Soybeans — Postemergence for Broadleaf Weeds (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves (EXCEPT lambquarters, pigweed, nightshade)	cloransulam-methyl (<i>FirstRate</i>)	0.016	0.3 oz 84WDG	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Refer to Table 2G for maximum weed sizes. • Applications prior to first trifoliate stage may cause temporary yellowing. • Apply prior to 50% soybean flowering. • Apply with non-ionic surfactant (0.125-0.25% v/v) plus 28% nitrogen liquid (2.5% v/v) or ammonium sulfate (2 lb/A). Apply with crop oil concentrate (1.2% v/v) when weeds are stressed by hot and dry conditions; soybean injury will be more severe (Table 2H). • 28% liquid nitrogen or ammonium sulfate must be added for velvetleaf control. • <i>FirstRate</i> will not control ALS-resistant weed species. • <i>FirstRate</i> can be tank mixed with many postemergence soybean herbicides for additional broadleaf weed control. Follow label directions closely regarding spray additives (Tables 2F and 2I). • <i>FirstRate</i> can be tank mixed for postemergence grass control (Table 2K). • Refer to label and Table 12 for crop rotation restrictions.
	+		+	
	surfactant		0.25%	
	OR		OR	
	crop oil concentrate		1.2%	
	+		+	
	28% liquid nitrogen		2.5%	
OR		OR		
ammonium sulfate		2 lb		
ONLY Redroot Pigweed and Cocklebur	imazaquin (<i>Scepter</i>)	0.063	1.4 oz 70DG	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Refer to Table 2G for maximum weed sizes. • Apply with non-ionic surfactant (0.25% v/v) or with crop oil concentrate (1 qt/A). • Allow 90 days between <i>Scepter</i> application and soybean harvest. • <i>Scepter</i> will not control ALS-resistant weed species. • <i>Scepter</i> can be tank mixed with many postemergence soybean herbicides for additional broadleaf weed control. Follow label directions closely regarding spray additives (Tables 2F and 2I). • <i>Scepter</i> can be with tank mixed with <i>Fusion</i> for post-emergence grass control, unless the grass population is predominantly yellow foxtail and barnyardgrass (sequential applications recommended) (Table 2K). • DO NOT plant CORN (unless it is a Clearfield hybrid) following <i>Scepter</i> application, except in the southern two tiers of counties in Michigan and if 15 inches of rainfall occurs. • Rainfall is critical for rotational crops (see label); the recropping count should start at soybean planting. • Refer to label and Table 12 for crop rotation restrictions.
	+		+	
	crop oil concentrate		1 qt	
	OR		OR	
surfactant		0.25%		
ONLY Velvetleaf	flumiclorac (<i>Resource</i>)	0.041	6 oz 0.86L	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Refer to Table 2G for maximum weed sizes. • <i>Resource</i> can be applied at 4 oz/A when tank mixed with other herbicides for additional broadleaf weed control (Tables 2F and 2I). • Allow 60 days between <i>Resource</i> application and soybean harvest. • <i>Resource</i> can be tank mixed for postemergence grass control (Table 2K). • Refer to label and Table 12 for crop rotation restrictions.
	+		+	
	crop oil concentrate		1 qt	

Soybeans — Postemergence Grass Control

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Grasses Volunteer corn	sethoxydim <i>(Poast)</i> OR <i>(Poast Plus)</i> + crop oil concentrate	0.19	16 oz 1.5SC OR 24 oz 1SC + 1 qt	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Treat actively growing grasses. Refer to Table 2J for <i>Poast/Poast Plus</i> rates and maximum weed and volunteer corn sizes. • Reduced rates of <i>Poast</i> (12 oz/A) and <i>Poast Plus</i> (16 oz/A) may be used when barnyardgrass, green and giant foxtail, and fall panicum are less than 4 inches and the target species. • Apply with 1 qt of crop oil concentrate per acre. Include 28% liquid nitrogen (0.5-1 gal/A) or ammonium sulfate (2.5 lb/A) for crabgrass, volunteer corn and volunteer wheat. • <i>Poast</i> and <i>Poast Plus</i> are not as effective on volunteer corn as <i>Select/Arrow</i>, <i>Assure II</i>, or <i>Fusion</i>. • Allow 75 days between <i>Poast</i> and <i>Poast Plus</i> application and soybean harvest. • <i>Poast</i> and <i>Poast Plus</i> are generally less effective than other postemergence grass herbicides for perennial grass control. Two applications 14-21 days apart are most effective for controlling these weeds (Table 2J). • <i>Poast</i> and <i>Poast Plus</i> can be tank mixed for postemergence broadleaf control (Table 2K). Rates and additive recommendations vary when tank mixing with various products, depending on target grass species. See label for more information. • Tank mixes with <i>Pursuit</i> and <i>Raptor</i> are not recommended — grass antagonism will occur. • Grass control is generally better if sequential applications are made with the postemergence grass and broadleaf herbicide. The postemergence grass herbicide should be applied 1 day prior to the postemergence broadleaf herbicide(s) application. If the broadleaf herbicide is applied first, delay application of the <i>Poast</i> or <i>Poast Plus</i> until the grasses are actively growing, which may be 7 days or more. • Refer to label and Table 12 for crop rotation restrictions.

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Soybeans — Postemergence Grass Control (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Grasses Volunteer corn	fluazifop-P-butyl + fenoxaprop (<i>Fusion</i>) +	0.166	8 oz 2.56EC	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Treat actively growing grasses. Refer to Table 2J for <i>Fusion</i> rates and maximum weed and volunteer corn sizes. • Apply with crop oil concentrate (0.5-1% v/v) for best results. A non-ionic surfactant (0.25-0.5% v/v) may be used to replace crop oil concentrate with certain tank mixes; 28% liquid nitrogen or ammonium sulfate may also be added to improve control. • Apply before soybeans bloom. • For perennial grass control, two applications 14-21 days apart may be needed, depending on target weed (Table 2J). • <i>Fusion</i> can be tank mixed with glyphosate products (Table 10) for control of volunteer <i>Roundup Ready</i> corn in <i>Roundup Ready</i> soybeans. Include ammonium sulfate (17 lb/100 gal) in all tank mixes with glyphosate. DO NOT add crop oil concentrate. • <i>Fusion</i> can be tank mixed for postemergence broadleaf control (Table 2K). Rates and additive recommendations vary when tank mixing with various products, depending on target grass species. See label for more information. • DO NOT tank mix with <i>Classic</i>, <i>Harmony GT</i>, or <i>Synchrony STS</i> if conditions are dry and the target grasses are yellow foxtail, barnyardgrass, or crabgrass. Sequential applications are recommended. • Tank mixes with <i>Pursuit</i> and <i>Raptor</i> are not recommended — grass antagonism will occur. • Grass control is generally better if sequential applications are made with the postemergence grass and broadleaf herbicide. The postemergence grass herbicide should be applied 1 day prior to the postemergence broadleaf herbicide(s) application. If the broadleaf herbicide is applied first, delay application of the <i>Fusion</i> until the grasses are actively growing, which may be 7 days or more. • Refer to label and Table 12 for crop rotation restrictions.
	crop oil concentrate OR surfactant		+ 0.5–1% OR 0.25–0.5%	
	clethodim (<i>Select/Arrow</i>) +	0.094	6 oz 2EC	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Treat actively growing grasses. Refer to Table 2J for <i>Select/Arrow</i> rates and maximum weed sizes. • Apply with crop oil concentrate (1% v/v). • Allow 60 days between <i>Select/Arrow</i> application and soybean harvest. • For perennial grass control, higher rates and sequential applications may be needed (Table 2J). • <i>Select/Arrow</i> can be tank mixed with glyphosate products (Table 10) for control of volunteer <i>Roundup Ready</i> corn in <i>Roundup Ready</i> soybeans. Include ammonium sulfate (17 lb/100 gal) in all tank mixes with glyphosate. DO NOT add crop oil concentrate. • <i>Select/Arrow</i> can be tank mixed for postemergence broadleaf control (Table 2K). Rates and additive recommendations vary when tank mixing with various products, depending on target grass species. See label for more information. • Tank mixes with <i>Pursuit</i> and <i>Raptor</i> are not recommended — grass antagonism will occur. • Grass control is generally better if sequential applications are made with the postemergence grass and broadleaf herbicide. The postemergence grass herbicide should be applied 1 day prior to the postemergence broadleaf herbicide(s) application. If the broadleaf herbicide is applied first, delay application of the <i>Select/Arrow</i> until the grasses are actively growing, which may be 7 days or more. • Refer to label and Table 12 for crop rotation restrictions.
	crop oil concentrate		+ 1%	

(Continued on next page)

Soybeans — Postemergence Grass Control (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(Continued)</i>				
Grasses Volunteer corn	quizalofop-P-ethyl (<i>Assure II</i>) + crop oil concentrate OR surfactant	0.044	7 oz 0.88L + 1% OR 0.25%	<ul style="list-style-type: none"> • Refer to Table 2F for weed control and crop tolerance ratings. • Treat actively growing grasses. Refer to Table 2J for <i>Assure II</i> rates and maximum weed sizes. • Apply with crop oil concentrate (1% v/v) for best results. • A non-ionic surfactant (2 pt/100 gal) may be used to replace crop oil concentrate with certain tank mixes. • Allow 80 days between <i>Assure II</i> application and soybean harvest. • For perennial grass control, higher rates and sequential applications may be needed (Table 2J). • <i>Assure II</i> can be tank mixed for postemergence broadleaf control (Table 2K). Rates and additive recommendations vary when tank mixing with various products, depending on target grass species. See label for more information. • <i>Assure II</i> can be tank mixed with glyphosate (Table 10) to control volunteer <i>Roundup Ready</i> corn in <i>Roundup Ready</i> soybeans. DO NOT add crop oil concentrate — use a non-ionic surfactant at 0.25% v/v. With “loaded” glyphosate products, the surfactant rate can be reduced to 0.125% v/v. Include ammonium sulfate (17 lb/100 gal) in all tank mixes with glyphosate. • Tank mixes with <i>Pursuit</i> and <i>Raptor</i> are not recommended — grass antagonism will occur. • A reduction in control of certain grasses may occur when <i>Assure II</i> is applied to moisture-stressed plants or tank mixed with <i>Classic</i>, <i>Harmony GT</i>, or <i>Basagran</i>. A reduction in control is not usually observed for volunteer corn, giant foxtail or johnsongrass control in these tank mixtures. However, to maintain control of other grasses, increase the <i>Assure II</i> rate by 2 oz/A in tank mixes. DO NOT tank mix with <i>Classic</i>, <i>Harmony GT</i>, or <i>Basagran</i> if the target grass is barnyardgrass, quackgrass, crabgrass or yellow foxtail. • Grass control is generally better if sequential applications are made with the postemergence grass and broadleaf herbicide. The postemergence grass herbicide should be applied 1 day prior to the postemergence broadleaf herbicide(s) application. If the broadleaf herbicide is applied first, delay application of the <i>Assure II</i> until the grasses are actively growing, which may be 7 days or more. • Refer to label and Table 12 for crop rotation restrictions.

TABLE 2B – Weed Control in Glyphosate-Resistant Soybeans

Soybeans that are resistant to glyphosate are designated *Roundup Ready* soybeans. Glyphosate products labeled for postemergence use on *Roundup Ready* soybeans can be broadcast applied postemergence on *Roundup Ready* soybeans only. Read carefully all remarks and limitations written below and on the labels for each of the glyphosate products registered for use in *Roundup Ready* soybeans. See Table 10 for a list of glyphosate products registered for use in *Roundup Ready* soybeans.

Weed Control in Roundup Ready Soybeans

Weed Controlled	Herbicide	Rate lb/A	Formulation/A	Remarks and Limitations
Annual grasses, Annual broadleaves, Suppression of: Yellow nutsedge, Other perennials	glyphosate (See Table 10) + ammonium sulfate	0.75 a.e.	See Table 10 + 17 lb/100 gal	<ul style="list-style-type: none"> • APPLY TO ROUNDUP READY SOYBEANS ONLY. • Refer to Table 2F for weed control and crop tolerance ratings. • Many glyphosate products are registered for application to <i>Roundup Ready</i> soybeans. Read the label and see Table 10 to determine application rates and additives needed for different products. • Glyphosate should be applied at a minimum rate of 0.75 lb a.e./A in <i>Roundup Ready</i> soybeans. • Addition of ammonium sulfate (17 lb/100 gal) will minimize antagonism from hard water and improve weed control if weeds are under stress or large. • INCONSISTENT control will occur if glyphosate rates are reduced. • Apply before annual weeds are 4 inches tall in narrow-row soybeans and 6 inches tall in 30-inch-row soybean. DO NOT let weeds compete for longer than 6 weeks after soybean planting, or soybean yield may be reduced. • A second glyphosate application may be made if needed to control late-emerging weeds. Narrow-row soybeans reduce the chances of late weed emergence. • Sequential programs of either a preemergence herbicide followed by glyphosate or two timely applications of glyphosate will improve the consistency of weed control, particularly common lambsquarters and giant ragweed control. • Glyphosate application rate can be increased to control weeds that are under stress or large (10-12 inches tall) (see label). Large weeds may be competitive with soybeans and reduce yield. • Use extreme caution to avoid spray drift to sensitive crops. • Apply from soybean cracking through full flower. • DO NOT apply more than 2.25 lb a.e./A in-crop per season. • For VOLUNTEER <i>ROUNDUP READY</i> CORN control, tank mix glyphosate (Table 10) with <i>Assure II</i>, <i>Fusion</i> or <i>Select</i> (Table 2K). Consult product remarks and limitations in E-434 and labels for additive choices and rates. • Control of PERENNIAL BROADLEAVES will be improved with a second application of glyphosate prior to soybean full flower. • For QUACKGRASS control, treat when quackgrass is 6-8 inches tall. • For YELLOW NUTSEDGE suppression, apply glyphosate when nutsedge is 3-4 inches tall. Adding Classic at 0.75 oz/A OR making a second glyphosate application 2-3 weeks later will improve suppression.

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Weed Control in Roundup Ready Soybeans

Weed Controlled	Herbicide	Rate lb/A	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual grasses, Annual broadleaves, Suppression of: Yellow nutsedge, Other perennials	glyphosate + imazaquin <i>(Backdraft SL)</i> + surfactant + ammonium sulfate	0.84	5 pt 1.35SL + 0.25% + 2.5 lb	<ul style="list-style-type: none"> • Tank mixes of glyphosate with other broadleaf herbicides can reduce control of certain annual weed species. CAUTION should be taken when tank mixing herbicides with glyphosate not to reduce overall control. However, certain tank mixes may improve control of individual weed species. • The addition of micronutrient fertilizers (e.g., manganese) can antagonize glyphosate, resulting in a reduction in weed control. Avoid antagonisms by making separate herbicide and fertilizer applications or using a full-chelated form of the fertilizer and including ammonium sulfate to minimize the antagonism. <hr/> <ul style="list-style-type: none"> • APPLY TO ROUNDUP READY SOYBEANS ONLY. • Refer to Table 2F for weed control and crop tolerance ratings. • <i>Backdraft SL</i> is a premix of <i>Scepter</i> + glyphosate. See Table 2E for individual product rate equivalents for the premix. • Apply to weeds up to 4 inches tall. • Addition of ammonium sulfate will minimize antagonism from hard water and improve weed control if weeds are under stress or large. • Use extreme caution to avoid spray drift to sensitive crops. • Rainfall is critical for rotational crops (see label); the recropping count should start at soybean planting. • Refer to label and Table 12 for crop rotation restrictions.
	glyphosate + imazethapyr <i>(Extreme)</i> + surfactant + ammonium sulfate	0.81	3 pt 2.17L + 0.125% + 2.5 lb	<ul style="list-style-type: none"> • APPLY TO ROUNDUP READY SOYBEANS ONLY. • Refer to Table 2F for weed control and crop tolerance ratings. • <i>Extreme</i> is a premix of <i>Pursuit</i> + glyphosate. See Table 2E for individual product rate equivalents for the premix. • Apply to weeds up to 4 inches tall. • Addition of ammonium sulfate will minimize antagonism from hard water and improve weed control if weeds are under stress or large. • Use extreme caution to avoid spray drift to sensitive crops. • <i>Pursuit</i> is very persistent and can limit rotational crops. Refer to label and Table 12 for crop rotation restrictions.

TABLE 2C – Weed Management in No-Till Soybeans

Effective weed control in no-tillage soybeans requires control of **all weeds and cover crops** prior to soybean emergence. This can be accomplished by:

1. Late fall applications prior to planting soybeans the following spring (FALL).
2. Early spring applications — up to 30 days prior to soybean planting (EPP).
3. Applications at or very close to the time of planting (PRE).

Regardless of the time of herbicide application, burndown herbicide(s) must be applied to control **all** of the existing vegetation. If some plant species are not controlled prior to soybean emergence, they will be very competitive with the soybean crop.

Burndown herbicide options include: glyphosate, *Gramoxone Max* and 2,4-D ester. Consult the following table to determine the effectiveness of these herbicides to burn down the existing vegetation in the field. *Gramoxone Max* will provide faster control than glyphosate. However, glyphosate will provide better control of dense weeds or cover crops. Glyphosate is preferred for control of perennial weeds or grasses prior to the completion of tillering. Each of these herbicides has one or more weed species that it does not control (ex., 2,4-D ester does not control chickweed). Therefore, these herbicides are often tank mixed for broad spectrum burndown. Sometimes application rates of burndown herbicides need to be increased to control large weeds or dense weed infestations. Please consult the herbicide labels for information. None of these burndown herbicides have soil activity to stop new weeds from emerging. Herbicides that persist in the soil to stop new weeds from emerging may be included in the burndown application.

Residual herbicides have burndown activity on some weed species. **Table 2C** gives the maximum weed height for **burndown** control of summer annual broadleaves and grasses. These herbicides are not as broad spectrum as glyphosate, *Gramoxone Max* or 2,4-D ester for burndown of existing vegetation. Therefore, the residual herbicides are always tank mixed with glyphosate, 2,4-D ester, *Gramoxone Max*, or combinations of glyphosate + 2,4-D ester. These residual herbicides will control germinating summer annual grasses and broadleaf weeds. The **effectiveness** of these residual herbicides on summer annual grass and broadleaf weed control is not the same. **Table 2F** gives the effectiveness ratings of these residual herbicides on annual weeds. The **length of weed control** from these residual herbicides is not the same. Some herbicides persist longer in the soil and are, therefore, more effective than other herbicides when applied in the fall. There are fewer noticeable differences in the length of summer annual weed control when these herbicides are applied in the spring (EPP) or at planting (PRE). **Table 2C** gives the **length of summer weed control** (0 = no residual weed control; 1 = short residual control; 2 = moderate residual control; 3 = long residual control). When applying residual herbicides in the FALL for summer annual weed control, choose a herbicide with a “3” rating. When applying residual herbicides in the spring EPP choose a herbicide with a “3” or “2” rating. When applying residual herbicides at or very close to the time of planting (PRE), choose a herbicide with a “3”, “2” or “1” rating.

A few important comments for each herbicide in **Table 2C** are listed below.

Glyphosate: There are many formulations of glyphosate. Consult **Table 10** for a list of glyphosate products, use rates and need for additional surfactant. Addition of ammonium sulfate (AMS) may improve control, regardless of formulation.

Gramoxone Max: Always add surfactant (1/2 pt/A) with *Gramoxone Max*. Regrowth of rye or wheat may occur if plants are not fully tillered when treated. Burndown effectiveness is highly dependent on the environment, with better burndown in warm, sunny conditions.

2,4-D ester: 1 qt/A of 2,4-D ester can be applied in the fall and up to 30 days prior to soybean planting. 1 pt/A of 2,4-D ester can be applied up to 7 days prior to soybean planting. Refer to 2,4-D ester labels.

Backdraft SL: *Backdraft* contains glyphosate + *Scepter*. Check crop rotation restrictions and preferred time of burndown application.

Canopy EX: See label for *Canopy EX* use rate restrictions based on soil pH. *Canopy EX* rates range from 1.1 to 3.3 oz/A, depending on soil pH. *Canopy EX* may be applied in the fall and in the spring 45 days prior to planting. For purposes of recropping, start counting months for recropping at normal soybean planting time in the spring. *Canopy EX* must include a crop oil concentrate (1% v/v) or non-ionic surfactant (0.25% v/v); crop oil concentrate is preferred. *Canopy EX* will not control ALS-resistant weeds. For best burndown results, the addition of 2,4-D ester is recommended. See Table 2E for individual product rate equivalents for the premix.

Canopy XL: See label for *Canopy XL* use rate restrictions based on soil pH. *Canopy XL* application rates vary, depending on the length of weed control desired. Always add crop oil concentrate at 1 qt/A to maximize foliar activity. To improve chickweed control, add *Express* at 0.1 - 0.2 oz/A or glyphosate. *Express* may be applied only in the fall and in the spring 45 days prior to planting. To improve marestalk control, add 2,4-D ester or glyphosate.

Extreme: *Extreme* contains glyphosate + *Pursuit*. Check crop rotation restrictions and preferred time of burndown application.

FirstRate: More effective burndown when conditions are warm and sunny.

Lorox: Always add crop oil concentrate at 1 qt/A to maximize foliar activity.

Python: More effective burndown when conditions are warm and sunny.

Sencor: Always add crop oil concentrate at 1 qt/A to maximize foliar activity.

Valor: More effective burndown when conditions are warm and sunny. *Valor* has poor postemergence activity on marestalk but good preemergence activity on marestalk.

Effectiveness of Herbicides for No-Till Soybeans

Fall or Spring Burndown	LENGTH OF CONTROL	ANNUAL BROADLEAVES										ANNUAL GRASSES							WINTER ANNUALS/PERENNIALS					COVER CROPS						
		Cocklebur	Jimsonweed	Lambsquarters	Nightshade (E. Black)	Pigweed	Ragweed (Common)	Ragweed (Giant)	Smartweed	Velvetleaf	Wild Mustard	Barnyardgrass	Crabgrass	Giant Foxtail	Green Foxtail	Yellow Foxtail	Fall Panicum	Witchgrass	Wild Proso Millet/Sandbur	Chickweed (common)	Yellow Rocket	Shepard's purse	Pennycress	Marestail (Horseweed)	Dandelion [®]	Quackgrass	Rye	Wheat	Clover	Hairy Vetch
		Maximum Weed Height (inches)																	Herbicide Effectiveness											
Glyphosate (0.37 lb a.e./A) ^a	0	5	2	2	2	5	2	NR	NR	NR	5	NR	-	5	5	5	-	-	-	E	G	E	G	G	P	F	G	G	P	P
Glyphosate (0.75 lb a.e./A) ^a	0	16	10	10	10	16	10	5	5	5	16	5	-	16	16	16	-	-	-	E	E	E	E	E	F	G	E	E	F	F
Gramoxone Max (1.25 pt/A)	0	3	3	3	3	3	3	NR	3	3	3	3	3	3	3	3	3	3	E	G	G	G	P	P	P	F	F	P	P	
Gramoxone Max (2.1 pt/A)	0	6	6	6	6	6	6	NR	6	6	6	6	6	6	6	6	6	6	E	E	E	E	P	P	P	G	G	F	F	
2,4-D Ester (1 pt/A)	0	3	NR	3	3	3	3	NR	2	3	NR	NR	NR	NR	NR	NR	NR	NR	P	F	G	F	E	P	N	N	N	F	F	
2,4-D Ester (1 qt/A)	1	6	3	6	6	6	6	3	5	6	NR	NR	NR	NR	NR	NR	NR	F	G	E	G	E	F	N	N	N	G	G		
Backdraft SL (5 pt/A)	3	8	2	2	2	5	2	2	3	3	12	3	3	8	8	8	2	-	-	E	G	E	G	G	F	G	G	G	P	P
Canopy EX (1.65 oz)	3	NR	NR	NR	NR	3	3	3	3	3	3	-	-	-	-	-	-	-	E	G	G	G	F	G	P	P	P	P	P	
Canopy XL (3.8 oz/A)	3	NR	NR	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1	F	G	G	G	F	G	P	P	P	P	P	
Extreme (3 pt/A)	2	8	5	2	2	5	2	2	3	2	5	3	3	8	8	8	2	-	-	E	G	E	G	G	F	G	G	G	P	P
FirstRate (0.3-0.6 oz/A)	2	10	4	NR	NR	NR	10	10	6	6	-	NR	NR	NR	NR	NR	NR	NR	P	-	F	G	E	P	N	N	N	-	-	
Lorox (0.75 qt/A)	2	NR	NR	2	-	2	2	NR	2	2	2	-	-	-	-	-	-	-	G	-	-	-	P	P	P	P	P	P	P	
Python (1.14 oz/A)	2	-	-	-	-	-	-	-	-	-	-	NR	NR	NR	NR	NR	NR	NR	G	-	F	G	E	P	N	N	N	-	-	
Sencor (0.75 pt/A)	1	2	2	2	NR	2	2	NR	2	2	2	-	-	-	-	-	-	-	G	-	-	-	F	P	P	P	P	P	P	
Valor 2 oz/A	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	-	-	-	-	-	-	-	P	G	E	G	P	F	P	P	P	P	P	

P = Poor; F = Fair; **G** = Good; **E** = Excellent; N = None; NR = Not Recommended; - = Not enough information to rank

^aSee Table 10 for glyphosate products, formulations, and rates.

TABLE 2D – Soybeans — Preharvest Application

Soybeans — Preharvest Application

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses, Annual broadleaves, Perennial weeds	glyphosate + ammonium sulfate	0.75–3 lb a.e. + 17 lb/100 gal	See Table 10 + 17 lb/100 gal	<ul style="list-style-type: none"> • See Table 10 for a list of glyphosate products, formulations and rates. • DO NOT apply to soybeans grown for seed. • Apply up until 7 days before harvest. • DO NOT graze or harvest the treated crop for livestock feed within 25 days of application. • Apply in 10-40 gal of water. • Apply 0.75 lb a.e./A for annual weeds. • Consult glyphosate product label for specific rate needed for perennial weeds.
Annual grasses, Annual broadleaves	paraquat (<i>Gramoxone Max</i>) + surfactant	0.25 + 0.125%	7.7 oz 3SL + 0.125%	<ul style="list-style-type: none"> • <i>Gramoxone Max</i> is a restricted-use pesticide. • Indeterminate varieties: Apply when at least 65% of pods are mature brown (seed moisture less than 30%). • Immature soybeans will be injured. • Do not pasture for 15 days. • Apply <i>Gramoxone Max</i> in 20 gal. water (ground) or 5 gal. water (air).

TABLE 2E – Herbicide Premixes in Soybeans

TRADE NAME	COMPANY	FORMULATION	TYPICAL USE RATE	=	EQUIVALENT RATES
Axiom	Bayer	68DF	13 oz/A	=	9.6 oz Define 2.3 oz Sencor DF
Backdraft SL	BASF	1.35SL	5 pt/A	=	1.5 pt glyphosate 3L a.e.+ 2.14 oz Scepter
Boundary	Syngenta	7.8EC	1.25 pt/A	=	1 pt of Dual Magnum 5 oz of Sencor DF
Boundary 6.5EC	Syngenta	6.5EC	1.5 pt/A	=	1 pt of Dual Magnum 5 oz of Sencor DF
Canopy EX	DuPont	29.5DG	1.65 oz/A	=	1.5 oz Classic + 0.15 oz Express
Canopy XL	DuPont	56.3DG	3.8 oz/A	=	1.4 oz Classic + 2.5 oz Authority
Domain	Bayer	60DF	10 oz/A	=	4 oz Define + 4.8 oz Sencor DF
Extreme	BASF	2.17L	3 pt/A	=	1.5 pt glyphosate 3L a.e. + 1.4 oz Pursuit DG
Fusion	Syngenta	2.56EC	0.5 pt/A	=	8 fl oz Fusilade DX + 4.8 fl oz Puma
Gangster	Valent	co-pack	2.5 oz 0.6 oz	of of	Valor (Gangster V) + FirstRate (Gangster FR)
Pursuit Plus	BASF	2.9EC	2.5 pt/A	=	2.1 pt Prowl 3.3EC + 1.4 oz Pursuit DG
Synchrony STS	DuPont	42DF	0.5 oz/A	=	0.64 oz Classic + 0.07 oz Harmony GT

TABLE 2F – Weed Response to Herbicides in Soybeans*

Soil Applied	SITE OF ACTION	CROP RESPONSE	ANNUAL BROADLEAVES										ANNUAL GRASSES					PERENNIALS									
			COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. BLACK)	PIGWEEED (REDROOT)	RAGWEEED (COMMON)	RAGWEEED (GIANT)	SMARTWEEED	VELVETLEAF	WILD MUSTARD	HORSEWEEED (MARESTAIL)	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	BINDWEEED (FIELD)	BINDWEEED (HEDGE)	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEEDGE	
ALS-Inhibitors																											
FIRSTRATE	B	2	G	G	G	P	E	E	G	E	G	E	G	F	F	F	F	F	F	P	P	N	N	N	N	P	
PURSUIT	B	1	F	F	G	E	E	F	F	G	G	E	P	F	F	G	G	G	P	P	P	P	P	N	N	F	
PYTHON	B	1	F	F	E	G	E	F	F	G	G	E	-	P	P	F	P	P	P	P	P	N	N	N	N	N	
SCEPTER	B	1	E	G	G	G	E	F	G	G	G	G	-	F	P	G	G	G	P	P	P	N	N	N	N	F	
Triazines																											
LOROX (PRE only)	C	2	P	P	G	F	G	G	F	G	F	G	P	F	F	F	F	F	F	F	P	N	N	N	N	N	
SENCOR	C	2	F	F	E	N	E	G	F	E	G	E	G	P	F	G	G	G	F	F	P	N	N	N	N	N	
Other Sites of Action																											
AUTHORITY/BLANKET/SPARTAN	O	3	P	P	E	E	E	F	P	F	F	P	F	F	F	F	F	F	F	P	P	N	N	N	N	F	
COMMAND 3ME (PRE only)	O	1	F	F	G	P	P	G	P	G	E	P	-	G	E	E	E	G	G	G	F	N	N	N	N	N	
DEFINE	O	1	N	N	P	P	F	N	N	N	N	N	N	F	F	G	G	G	F	F	P	N	N	N	N	P	
DUAL MAGNUM/DUAL II MAGNUM/PARALLEL	O	1	N	N	P	F	G	P	N	P	N	P	P	E	E	E	E	E	G	G	P	N	N	N	N	F ^a	
INTRRO/MICROTECH	O	1	N	N	P	G	G	P	N	P	N	P	P	E	E	E	E	E	G	G	P	N	N	N	N	P ^a	
OUTLOOK	O	1	N	N	P	G	G	P	N	P	N	P	N	E	E	E	E	E	G	G	P	N	N	N	N	F ^a	
PROWL H ₂ O/PROWL/PENDIMAX	O	2	N	N	G	P	F	P	N	P	F	P	P	G	G	G	G	G	G	G	G	N	N	N	N	N	
SONALAN (PPI only)	O	1	N	N	G	F	G	P	N	P	N	P	-	E	E	E	E	E	E	E	G	N	N	N	N	N	
TREFLAN (PPI only)	O	1	N	N	G	F	G	P	N	P	N	P	-	E	E	E	E	E	E	E	G	N	N	N	N	N	
VALOR (PRE only)	O	2	P	F	G	G	G	G	F	F	F	G	G	P	P	F	F	F	P	P	P	N	N	N	N	P	
Premixes and Tankmixes																											
AXIOM	O/C	1	P	P	F	P	F	P	P	P	P	P	P	F	F	G	G	G	F	F	P	N	N	N	N	P	
AXIOM+CANOPY XL	O/C/B/O	3	G	G	E	G	E	E	G	E	G	E	F	F	F	G	G	G	F	P	P	P	P	N	N	F	
AXIOM+FIRSTRATE	O/C/B	2	G	G	G	P	E	E	G	E	G	E	G	F	F	G	G	G	F	F	P	N	N	N	N	P	
AXIOM+LOROX	O/C/C	2	P	P	G	F	G	G	F	G	F	G	P	F	F	G	G	G	F	F	P	N	N	N	N	P	
AXIOM+PURSUIT	O/C/B	1	F	F	F	E	E	F	F	G	F	G	P	F	F	G	G	G	P	P	P	N	N	N	N	F	
AXIOM+PYTHON ^c	O/C/B	1	F	F	E	E	E	F	F	G	G	E	-	F	F	G	G	G	F	F	P	N	N	N	N	F	
AXIOM+SCEPTER	O/C/B	1	G	G	G	F	E	G	G	G	F	G	P	F	P	G	G	G	P	P	P	N	N	N	N	P	
AXIOM+SENCOR ^b	O/C/C	2	F	F	E	N	E	G	F	E	G	E	G	P	F	G	G	G	F	F	P	N	N	N	N	P	
BOUNDARY	C/O	2	F	F	G	F	E	G	F	E	G	E	G	E	E	E	E	E	G	G	P	N	N	N	N	F ^a	
CANOPY XL	B/O	3	G	G	E	G	E	E	G	E	G	E	F	F	F	G	F	F	F	-	-	P	P	N	N	F	
CANOPY XL+AUTHORITY	B/O/O	3	G	G	E	E	E	E	G	E	G	E	-	F	F	G	F	F	F	-	-	P	P	N	N	F	
COMMAND 3ME+CANOPY XL	O/B/O	3	G	G	E	G	E	E	G	E	E	E	-	G	E	E	E	G	G	G	F	P	P	N	N	F	
COMMAND 3ME+DUAL	O/O	1	F	F	G	F	G	G	P	G	E	P	P	E	E	E	E	E	G	G	F	N	N	N	N	F	
COMMAND 3ME+INTRRO	O/O	1	F	F	G	G	G	G	P	G	E	P	P	E	E	E	E	E	G	G	F	N	N	N	N	P	
COMMAND 3ME+LOROX	O/C	2	F	F	G	F	G	G	F	G	E	G	P	G	E	E	E	G	G	G	F	N	N	N	N	N	
COMMAND 3ME+SCEPTER	O/B	1	G	G	G	F	E	G	G	G	E	G	P	G	E	E	E	G	G	G	F	N	N	N	N	P	
COMMAND 3ME+SENCOR	O/C	2	F	F	E	P	E	G	F	E	E	E	G	G	E	E	E	G	G	G	F	N	N	N	N	N	
DOMAIN	O/C	2	F	F	G	P	E	G	F	E	G	E	G	F	F	G	G	G	F	F	P	N	N	N	N	N	
DUAL MAG+CANOPY XL	O/B/O	3	G	G	E	G	E	E	G	E	G	E	-	E	E	E	E	E	G	G	P	P	P	N	N	G	
DUAL MAG+FIRSTRATE	O/B	2	G	G	G	F	E	E	G	E	G	E	G	E	E	E	E	E	G	G	P	N	N	N	N	F ^a	
DUAL MAG+LOROX	O/C	2	P	P	G	G	G	G	F	G	F	G	P	E	E	E	E	E	G	G	P	N	N	N	N	F ^a	

(continued on next page)

TABLE 2F – Weed Response to Herbicides in Soybeans* (continued)

Soil Applied	SITE OF ACTION	CROP RESPONSE	ANNUAL BROADLEAVES													ANNUAL GRASSES					PERENNIALS						
			COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. BLACK)	PIGWEEED (REDROOT)	RAGWEEED (COMMON)	RAGWEEED (GIANT)	SMARTWEEED	VELVETLEAF	WILD MUSTARD	HORSEWEEED (MARESTAIL)	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	BINDWEEED (FIELD)	BINDWEEED (HEDGE)	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEEDGE	
Premixes and Tankmixes (continued)																											
DUAL MAG+PURSUIT	O/B	1	F	F	F	E	E	F	F	G	F	G	P	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
DUAL MAG+SCEPTER	O/B	1	G	G	G	G	E	G	G	G	F	G	P	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
DUAL MAG+SENCOR ^b	O/C	2	F	F	E	F	E	G	F	E	G	E	G	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
OUTLOOK+CANOPY XL	O/B/O	3	G	G	E	G	E	E	G	E	G	E	-	F	F	F	F	F	G	G	P	P	P	N	N	G	
OUTLOOK+FIRSTRATE	O/B	2	G	G	G	G	E	E	G	E	G	E	G	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
OUTLOOK+LOROX	O/C	2	P	P	G	G	G	G	F	G	F	G	P	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
OUTLOOK+PURSUIT	O/B	1	F	F	F	E	E	F	F	G	F	G	P	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
OUTLOOK+PYTHON ^c	O/B	1	F	F	E	E	E	F	F	G	G	E	-	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
OUTLOOK+SCEPTER	O/B	1	G	G	G	G	E	G	G	G	F	G	P	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
OUTLOOK+SENCOR ^b	O/C	2	F	F	E	G	E	G	F	E	G	E	G	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
GANGSTER (PRE only)	B/O	2	G	G	G	G	E	E	G	E	G	E	G	F	F	F	F	F	P	P	P	N	N	N	N	P	
INTRRO+CANOPY XL	O/B/O	3	G	G	E	G	E	E	G	E	G	E	-	F	F	F	F	F	G	G	P	P	P	N	N	F ^a	
INTRRO+FIRSTRATE	O/B	2	G	G	G	G	E	E	G	E	G	E	G	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
INTRRO+LOROX	O/C	2	P	P	G	G	G	G	F	G	F	G	P	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
INTRRO+PURSUIT	O/B	1	F	F	F	E	E	F	F	G	F	G	P	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
INTRRO+PYTHON ^b	O/B	1	F	F	E	E	E	F	F	G	G	E	-	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
INTRRO+SCEPTER	O/B	1	G	G	G	G	E	G	G	G	F	G	P	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
INTRRO+SENCOR ^b	O/C	2	F	F	E	G	E	G	F	E	G	E	G	F	F	F	F	F	G	G	P	N	N	N	N	F ^a	
PROWL+CANOPY XL	O/B/O	3	G	G	E	G	E	E	G	E	E	E	-	G	G	G	G	G	G	G	P	P	P	N	N	F	
PROWL+LOROX	O/C	3	P	P	G	F	G	G	F	G	F	G	P	G	G	G	G	G	G	G	F	N	N	N	N	N	
PROWL+SENCOR ^b	O/C	3	F	F	E	P	E	G	F	E	G	E	G	G	G	G	G	G	G	G	F	N	N	N	N	N	
PROWL+SCEPTER	O/B	2	G	G	G	F	E	G	G	G	F	G	P	G	G	G	G	G	G	G	F	N	N	N	N	P	
PURSUIT PLUS	O/B	2	F	F	G	E	E	F	F	G	G	G	P	G	G	E	G	G	G	G	P	N	N	N	N	F	

P = Poor; F = Fair; **G** = Good; **E** = Excellent; N = None; - = Not enough information to rank

Herbicide Site of Action: A = ACCase inhibitor; B = ALS inhibitor; C = Photosynthesis inhibitor; O = Other.

Crop Response: 1=Minimal risk of crop injury; 2=Crop injury can occur under certain conditions (soil applied—cold, wet; foliar applied—hot, humid); 3=Severe crop injury can occur. Follow precautions under Remarks and Limitations and on the label; 4=Risk of severe crop injury is high. Recommended only in rescue situations.

^a Control of yellow nutsedge will be increased if this treatment is incorporated in the top 2-3 inches of soil.

^b Add 0.7 oz/A of Pursuit DG to improve eastern black nightshade control.

^c Add 0.3 oz/A of FirstRate to improve cocklebur, jimsonweed and ragweed control.

* The above ratings are a relative comparison of herbicide effectiveness. Weather conditions greatly influence the herbicide's effectiveness, and weed control may be better under favorable conditions or poorer under unfavorable conditions.

TABLE 2F – Weed Response to Herbicides in Soybeans* (continued)

Postemergence	SITE OF ACTION	CROP RESPONSE	ANNUAL BROADLEAVES										ANNUAL GRASSES							PERENNIALS											
			COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. BLACK)	PIGWEEED (REDROOT)	RAGWEEED (COMMON)	RAGWEEED (GIANT)	SMARTWEEED	VELVETLEAF	WILD MUSTARD	HORSEWEEED (MARESTAIL)	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	BINDWEEED (FIELD)	BINDWEEED (HEDGE)	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEDGE					
Premixes and Tankmixes** (continued)																															
FIRSTRATE+COBRA	B/O	3	E	E	P	G	E	E	E	G	G	E	G	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	F	N	F
FIRSTRATE+FLEXSTAR	B/O	3	E	E	F	G	E	E	E	E	E	E	E	G	N	N	P	P	P	P	N	N	N	N	N	N	P	P	P	N	P
FIRSTRATE+HARMONY GT	B/B	3	E	E	G	N	E	E	E	E	E	E	E	G	N	N	N	N	N	N	N	N	N	N	N	N	N	N	P	N	P
FIRSTRATE+PURSUIT	B/B	2	E	E	P	E	E	E	E	E	E	E	E	G	G	F	F	F	F	F	F	F	F	F	P	P	P	P	F	N	F
FIRSTRATE+REFLEX	B/O	1	E	E	P	F	E	E	E	E	E	E	E	G	P	P	P	P	P	P	N	N	N	N	N	N	P	P	F	N	F
FIRSTRATE+ULTRA BLAZER	B/O	3	E	E	F	G	E	E	E	E	E	E	E	G	N	N	P	P	P	P	N	N	N	N	N	N	P	P	P	N	P
HARMONY GT+COBRA	B/O	3	F	F	G	G	E	G	G	E	G	E	P	N	N	N	N	N	N	N	N	N	N	N	N	N	P	P	P	N	N
HARMONY GT+FLEXSTAR	B/O	3	G	G	G	G	E	E	E	E	E	G	E	P	P	P	F	F	F	P	P	N	N	N	N	N	P	P	P	N	N
HARMONY GT+REFLEX	B/O	3	F	F	G	F	E	G	G	E	G	E	N	P	P	F	F	F	P	P	N	N	N	N	N	N	P	P	P	N	N
HARMONY GT+ULTRA BLAZER	B/O	3	F	G	G	G	E	G	F	E	G	E	P	N	N	P	P	P	P	N	N	N	N	N	N	N	P	P	P	N	N
PURSUIT+COBRA	B/O	3	E	F	P	E	E	G	G	G	G	G	P	F	F	F	F	F	F	F	F	P	P	P	P	P	P	P	P	N	P
PURSUIT+FLEXSTAR	B/O	3	E	F	P	E	E	E	G	G	G	G	P	F	F	F	F	F	F	F	F	P	P	P	P	P	P	P	P	N	P
PURSUIT+HARMONY GT	B/B	3	E	F	G	E	E	F	F	E	G	E	P	F	F	G	G	G	F	F	P	P	N	N	N	P	P	P	N	F	
PURSUIT+REFLEX	B/O	2	E	F	P	E	E	G	G	G	G	G	P	F	F	F	F	F	F	F	F	P	P	P	P	P	P	P	P	N	P
PURSUIT+RESOURCE	B/O	2	E	F	F	E	E	F	G	G	E	G	P	F	F	F	F	F	F	F	F	P	P	P	P	P	P	P	P	N	P
PURSUIT+ULTRA BLAZER	B/O	3	E	G	P	E	E	G	F	G	G	E	P	F	F	F	F	F	F	F	F	P	P	P	P	P	P	P	P	N	P
RAPTOR+FIRSTRATE	B/B	2	E	E	G	E	E	E	E	E	E	G	E	G	F	F	E	G	G	F	F	-	-	-	-	-	P	P	F	P	P
RAPTOR+REFLEX	B/O	2	G	G	F	E	E	G	G	G	G	E	P	P	P	F	F	F	P	P	P	P	P	P	P	P	P	P	P	P	P
RAPTOR+ULTRA BLAZER	B/O	3	G	G	F	E	E	E	G	G	G	E	-	P	P	F	F	F	P	P	P	P	P	P	P	P	P	P	P	P	P
SCEPTER+COBRA	B/O	3	E	G	P	G	E	E	E	P	F	E	P	N	N	F	F	F	N	N	N	N	N	N	N	N	P	P	P	N	N
SCEPTER+FLEXSTAR	B/O	3	E	G	F	G	E	E	E	G	F	E	P	P	P	F	F	F	P	P	N	N	N	N	N	N	P	P	P	N	N
SCEPTER+REFLEX	B/O	2	E	F	P	F	E	G	G	P	P	E	P	P	P	F	F	F	P	P	N	N	N	N	N	N	P	P	P	N	N
SCEPTER+RESOURCE	B/O	2	E	P	F	P	E	F	F	P	E	P	P	N	N	P	P	P	N	N	N	N	N	N	N	N	N	N	N	N	N
SCEPTER+ULTRA BLAZER	B/O	3	E	G	P	G	E	E	F	G	P	E	P	P	P	F	F	F	P	P	N	N	N	N	N	N	P	P	P	N	N
SYNCHRONY STS	B/B	1	E	G	G	N	E	G	G	E	E	E	G	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	F	N	E

P = Poor; F = Fair; **G** = Good; **E** = Excellent; N = None; - = Not enough information to rank
 Herbicide Site of Action: A = ACCase inhibitor; B = ALS inhibitor; C = Photosynthesis inhibitor; O = Other.
 Crop Response: 1=Minimal risk of crop injury; 2=Crop injury can occur under certain conditions (soil applied—cold, wet; foliar applied—hot, humid); 3=Severe crop injury can occur. Follow precautions under Remarks and Limitations and on the label; 4=Risk of severe crop injury is high. Recommended only in rescue situations.

^a See Table 10 for glyphosate products, formulations, and rates.
^b Must add ammonium sulfate for velvetleaf control.

* The above ratings are a relative comparison of herbicide effectiveness. Weather conditions greatly influence the herbicide's effectiveness, and weed control may be better under favorable conditions or poorer under unfavorable conditions.

**Weed response to postemergence broadleaf herbicide combinations may vary because of a change in application rate, a change in spray additive or herbicide antagonism. See Table 2I for the proper additive(s) and see labels for proper herbicide rates. Rates may vary, depending on weed species, weed size and tank mix.

TABLE 2G – Maximum Broadleaf Weed Heights for Postemergence Control in Soybeans*

Herbicide	RATE/A	COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. BLACK)	PIGWEEED (REDROOT)	RAGWEEED (COMMON)	RAGWEEED (GIANT)	SMARTWEEED	VELVETLEAF	WILD MUSTARD (DIAMETER OF ROSETTE)	HORSEWEEED (MARESTAIL)
		WEED HEIGHT^a (inches)										
Backdraft SL (RR)	5 pt	18	3	8	10	6	6	4	6	5	16	10
Basagran	1.5 pt	6	6	1.5 ^c	-	-	-	-	6	2	4	-
	2 pt	10	10	2 ^c	-	-	3	6	10	6	8	-
Classic	0.5 oz	6	4	-	-	2	-	-	2	-	4	3
	0.75	12	6	-	-	4	4	6	4	6	6	6
Cobra ^b	6 oz	-	-	-	3L	4L	6L	-	-	-	-	-
	8oz	4L	4L	-	4L	6L	6L	4L	-	-	4L	-
Extreme (RR)	3 pt	18	6	8	12	18	9	9	6	5	18	12
FirstRate/Amplify	0.3 oz	10	4	-	-	-	8	10	6	6	4	6
Flexstar ^b	0.75 pt	2L	4L	-	2L	2L	-	-	-	-	4L	-
	1 pt	4L	6L	-	4L	4L	4L	4L	4L	-	6L	-
Glyphosate (RR)	0.75 lb a.e.	24	12	12	6	18	12	12	6	6	6	12
Harmony GT	0.08 oz	-	-	4	-	12	-	-	6	6	4	-
Phoenix	10 oz	-	2	-	2	4	4	5	-	-	2	-
	12.5 oz	2	4	-	3	4	6	4	-	-	4	-
Pursuit 70DG	1.44 oz	8	3	<1 ^c	2	6	2 ^c	3 ^c	3	2	3	-
Raptor	5 oz	8	6	3	3	6	3	4	4	4	3	-
Reflex ^b	0.75 pt	-	2L	-	2L	2L	2L	-	2L	-	2L	-
	1 pt	-	4L	-	2L	2L	4L	-	4L	-	4L	-
Resource	6 oz	-	-	3L ^c	-	3L ^c	4L ^c	-	-	6L	-	-
Scepter	1.4 oz	8	-	-	-	4	-	-	-	-	-	-
Synchrony STS	0.5 oz	8	5	4	-	8	4	4	8	8	5	5
Ultra Blazer	1 pt	-	4	-	<2	<4	2	<2	4	-	<4	-
	1.5 pt	2	6	2 ^c	2	4	3	3	6	-	4	-

^a (-) No control or weed height not listed on label.

^b Weed stages are based on maximum leaf numbers.

^c Suppression only.

* The weed heights listed on this table are estimates of the maximum size where consistent control is expected. The maximum height for effective control in any specific situation is dependent on environmental conditions, including soil moisture, temperature, and relative humidity.

TABLE 2H – Suggested Additives for Postemergence Herbicide Applications in Soybeans^a

Herbicide	Crop Oil Concentrate (COC)	OR	Nonionic Surfactant (NIS)	AND/OR	28% liquid nitrogen (28%N) or ammonium sulfate (AMS)
Assure II	1% (2% if drought stress)		0.25%		NO
Backdraft SL (Roundup Ready)	NO		0.25%		AMS (2.5 lb/A)
Basagran ^b	1 qt/A		NO		28% N (1 gal/A) or AMS (2.5 lb/A) optional
Classic ^b	1% if hot, dry only		0.25%		28% N (1 gal/A) or AMS (2 lb/A)
Cobra	0.125–0.25%		0.25% if high RH		28% N (2 pt/A) or AMS (2.5 lb/A)
Extreme (RoundupReady)	NO		0.125%		AMS (2.5lb/A)
FirstRate ^b	1.2% if dry only		0.125–0.25%		Always add 28% N (2.5%) or AMS (2 lb/A)
Flexstar	0.5%		0.25%		28% N (2.5%) or AMS (8.5 lb/100 gal) optional
Fusion	0.5 – 1%		0.25– 0.5%		28% N (2.5%) or AMS (2 lb/A) optional
Glyphosate ^c (Roundup Ready)	NO				AMS (17 lb/100 gal)
Harmony GT	0.5% if hot, dry only		0.125%		28% N (2 qt/A) optional
Phoenix	1 pt/A if hot, dry		0.125–0.25%		NO
Poast ^d or Poast Plus	1 qt/A		NO		28% N (0.5-1 gal/A) or AMS (2.5 lb/A) optional
Pursuit	1.25%		0.25%		Always add 28% N (1 pt/A) or AMS (2.5 lb/A)
Raptor ^e	1%		0.25%		Always add 28% N (1-2 qt/A) or AMS (2.5 lb/A)
Reflex	0.5–1%		0.25–0.5%		28% N (2.5%) or AMS (8.5 lb/100 gal) optional
Resource	1 qt/A		NO		28% N (1 gal/A) or AMS (2.5 lb/A) optional
Scepter	1 qt/A		0.25%		NO
Select	1 qt/A		NO		28% N (1-2 qt/A) or AMS (2.5 lb/A) optional
Synchrony STS	1%		NO		Always add 28% N (2 qt) or AMS (2 lb/A)
Ultra Blazer	No		0.25%		28% N (2-4 qt/A) or AMS (2.5 lb/A) optional

^a 0.125% = 1 pt in 100 gal of spray solution; 0.25% = 1 qt in 100 gal; 1% = 1 gal in 100 gal; 4% = 4 gal in 100 gal.

^b 28% N or AMS should be added for velvetleaf control.

^c Consult Table 10 for glyphosate formulations and NIS requirements.

^d 28% N or AMS improves control of large crabgrass, quackgrass, and volunteer corn and cereals.

^e Use methylated seed oil (MSO) for improved common ragweed control.

TABLE 2I – Additives for Postemergence Broadleaf Weed Control in Soybeans*

Additives are listed for each herbicide tank mixture based on the label of the herbicide in the Primary Herbicide column. Sometimes, a tank mixture may occur on only one label. For example, *Basagran + Classic* is listed as a tank mixture on the *Basagran* label but is not listed as a tank mixture on the *Classic* label. To find the correct additives for a tank mixture, find the first herbicide in the Primary Herbicide column and then move across the column to the box that corresponds with the tank mix partner.

PRIMARY HERBICIDE	TANK MIX PARTNER												
	BASAGRAN	CLASSIC	HARMONY GT	PURSUIT	ULTRA BLAZER	REFLEX	COBRA	SCEPTER	SYNCHRONY STS	FLEXSTAR	RESOURCE ^g	FIRSTRATE	RAPTOR
Basagran	-	.25% NIS + 1 qt UAN	.125% NIS ^{a,b}	.25% NIS + 1 qt UAN	.25% NIS or 1 pt COC ^c	1 qt COC	1 pt COC ^d	1 qt COC	NL	2 qt UAN + .50% COC	1 qt COC	1.2% COC + 2.5% UAN	NL
Classic	NL	-	.125% NIS ^b + 4 qt UAN	NL	.25% NIS	.25% NIS	.50% NIS ^e	NL	NL	.25% NIS	NL	1% COC + 2.5% UAN	NL
Harmony GT	.125% NIS ^{a,b}	NL	-	NL	NL	.125% NIS	NL	NL	NL	NL	NL	NL	NL
Pursuit	.25% NIS + 1 qt UAN	NL	.25% NIS + 2.5% UAN	-	.25% NIS ^f + 1 qt UAN	.25% NIS ^f + 1 qt UAN	.25% NIS ^f + 1 qt UAN	NL	NL	.25% NIS ^f + 1 qt UAN	1 qt COC + 1 qt UAN	.25% NIS + 1 qt UAN	NL
Ultra Blazer	.25% NIS or 1 pt COC ^c	.25% NIS	.125% NIS ^e	.25% NIS ^f + 1 qt UAN	-	NL	NL	.25% NIS	1 pt COC + 2 qt UAN	NL	1 pt COC	.125% NIS + 2.5% UAN	.25% NIS ^h + 1 qt UAN
Reflex	.25% NIS	.125% NIS	.125% NIS	.25% NIS ^f + 1 qt UAN	NL	-	NL	.25% NIS	.25% NIS + 2 qt UAN	.25% NIS	.25% NIS	.25% NIS	.25% NIS
Cobra	1 pt COC ^d	1 pt COC	.125% NIS ^e	.25% NIS ^f + 1% UAN	NL	NL	-	.125% NIS	.50% COC	NL	1 qt COC	1% COC + 2.5% UAN	NL
Scepter	NL	NL	NL	NL	NL	NL	NL	-	NL	NL	NL	NL	NL
Synchrony STS	NL	NL	NL	NL	NL	NL	.50% COC + 2 qt UAN	NL	-	NL	NL	NL	NL
Flexstar	.25% NIS	.25% NIS	.25% NIS	.25% NIS ^f	NL	NL	NL	.25% NIS	.25% NIS	-	.25% NIS	.25% NIS	.25% NIS
Resource ^g	1 qt COC + 1 qt UAN	1 qt COC + 1 qt UAN	.25% NIS + 2.5 lb AMS	1 qt COC + 1 qt UAN	NL	NL	1 qt COC + 2 qt UAN	1 qt COC	NL	1 pt COC + 2.5 lb AMS	-	1 pt COC + 2.5 lb AMS	NL + .25% NIS
FirstRate	.25% NIS + 2.5% UAN	.25% NIS + 2.5% UAN	.25% NIS + 2.5% UAN	.25% NIS + 2.5% UAN	.25% NIS + 2.5% UAN	.25% NIS + 2.5% UAN	.25% NIS + 2.5% UAN	NL	.25% NIS + 2.5 qt UAN	.25% NIS + 2.5% UAN	.25% NIS + 2.5% UAN	-	.25% NIS + 2.5% UAN
Raptor	NL	.25% NIS	NL	NL	NL	NL	NL	NL	NL	NL	NL	NL	-

* **Based on primary herbicide label. NL – not labeled;** NIS – nonionic surfactant; COC – crop oil concentrate; UAN – 28% urea ammonium nitrate; AMS – ammonium sulfate; .125% = 1 pt in 100 gal of spray solution; .25% = 1 qt in 100 gal.

^a Increase NIS to .25% OR use COC at .50% if dry conditions exist.

^b Add UAN at 2-4 qt/A, 10-34-0 at 1-2 qt/A, or 2-4 lb/A of AMS IN ADDITION TO NIS for velvetleaf control.

^c *Blazer* applied at 1 pt/A. Substitute UAN for COC only if velvetleaf is the target weed and lambsquarters and common ragweed are not.

^d *Cobra* applied at 6 to 8 oz/A.

^e Add 4 qt/A of UAN for velvetleaf control. Crop injury will increase.

^f Tank mix either *Blazer* at 1 pt/A, *Reflex* at 1 pt/A, *Flexstar* at 1 pt, or *Cobra* at 0.25 pt/A with *Pursuit* for common ragweed control.

^g Reduce *Resource* to 4 oz/A. Reduce *Basagran* to 1 to 1.5 pt/A; *Classic* to 0.5 oz/A. when tank-mixed with *Resource*.

^h *Blazer* added at 12 oz/A for common ragweed control. Grass antagonism will occur. See label.

TABLE 2J – Application Rates of Postemergence Grass Herbicides for Control of Grass Species at Various Heights

	Assure II	Fusion ^a	Poast	Poast Plus	Select/Arrow
	oz/A				
Barnyardgrass					
1-2"	–	–	12	18	4
2-3"	8	8	12	18	4
3-4"	8	8	12	18	4
4-6"	8	–	16	24	6
6-8"	–	–	16	24	6
Crabgrass					
<1"	–	–	–	–	–
1-2"	8	8	16	24	6
2-6"	8	–	16	24	6
Fall Panicum					
1-2"	–	–	12	18	4
2-4"	7	8	12	18	4
4-6"	7	8	16	24	6
6-8"	–	–	16	24	6
Giant Foxtail					
1-2"	–	–	12	18	4
2-4"	7	8	12	18	4
4-6"	7	8	16	24	6
6-8"	7	8	16	24	6
8-12"	–	–	–	–	6
Green Foxtail					
1-2"	–	–	12	18	–
2-4"	7	8	12	18	6
4-6"	–	–	16	24	6
6-8"	–	–	16	24	6
Quackgrass					
4-6"	–	–	–	–	8-16+8
6-8"	10+7	12+8	24+16	36+24	8-16+8
8-10"	10+7	12+8	–	–	–
V. Corn					
1-4"	–	–	12	18	–
4-6"	–	–	12	18	4
6-12"	5	–	12	18	4
12-18"	5	6	16	24	6
18-20"	8	6	16	24	6
20-24"	8	6	–	–	6
Witchgrass					
1-2"	–	–	16	24	–
2-4"	7	8	16	24	6
4-6"	7	8	16	24	6
6-8"	–	–	16	24	6
Yellow Foxtail					
1-2"	–	–	16	24	–
2-4"	7	8	16	24	6
4-6"	–	–	16	24	6
6-8"	–	–	16	24	6

^a If grasses are small and not drought stressed, the *Fusion* rate can be reduced to 6 oz/A on barnyardgrass and all foxtails and 4 oz on volunteer corn.

TABLE 2K – Labeled Tank Mixes With Postemergence Grass Herbicides in Soybeans*

BROADLEAF HERBICIDES ¹	GRASS HERBICIDES				
	Assure II	Fusion	Poast	Poast Plus	Select/Arrow
Basagran	Y ³	Y	Y ⁴	Y ⁴	Y ⁵
Classic	Y ³	Y ³	Y	Y	Y ⁵
Cobra	Y	-	Y	Y	Y
Extreme (RR)	-	-	-	-	-
FirstRate	Y ⁵	Y ⁵	Y ⁵	Y ⁵	Y ⁵
Flexstar	Y	Y	Y	Y	Y
Glyphosate ² (RR)	Y	Y	Y	Y	Y
Harmony GT	Y ³	Y ³	-	-	-
Phoenix	-	-	-	-	Y
Pursuit	-	Y ⁶	Y ⁶	Y ⁶	Y ⁶
Raptor	-	-	Y ⁶	Y ⁶	Y ⁶
Reflex	Y	Y	Y	Y	Y
Resource	Y	Y	Y	Y	Y
Scepter	-	Y ³	-	-	-
Synchrony STS	Y ³	Y	Y	Y	Y ⁵
Ultra Blazer	Y	Y	Y	Y	Y ⁵

* Y = the products may be tank mixed; - = tank mix is not legally labeled or recommended.

¹ Tank mixing saves time and application cost but is only labeled for some herbicides and for a limited number of grasses. Consult remarks and limitations for individual products in this guide and pesticide labels for further information.

² Volunteer Roundup Ready corn. Consult the POST grass herbicide and glyphosate label for correct additives.

³ DO NOT tank mix when the target grass is barnyardgrass, crabgrass, quackgrass, or yellow foxtail.

⁴ DO NOT tank mix if quackgrass is the target species.

⁵ Grass antagonism may occur.

⁶ Volunteer corn and shattercane only. Grass antagonism will occur. NOT RECOMMENDED.

TABLE 2L – Feed and Forage Restrictions for Soybean Herbicides^a

Herbicide	Site of Action ^b	For Use in Feed/Forage?	Preharvest Interval
Herbicides Applied PPI or PRE			
Authority/Spartan/Blanket	O	No	none listed
Canopy XL	B/O	No	none listed
Command 3ME	O	No	none listed
Define	O	No	none listed
Dual II Magnum	O	Yes	none listed
FirstRate	B	Yes	none listed
Gangster	B/O	No	none listed
IntRRo/Microtech	O	Yes	none listed
Lorox	C	No	none listed
Outlook	O	No	none listed
Prowl H ₂ O/Prowl/Pendimax	O	Yes	none listed
Pursuit	B	No	none listed
Python	B	No	none listed
Scepter	B	No	none listed
Sencor	C	Yes	none listed
Sonalan	O	No	none listed
Treflan	O	Yes	none listed
Valor	O	No	none listed
Herbicides Applied POST			
Assure II	A	No	80 days
Backdraft SL	B/O	No	90 days
Basagran	O	Yes	30 days
Classic	B	No	60 days
Cobra/Phoenix	O	No	45 days
Extreme	B/O	No	85 days
FirstRate	B	Yes	14 days
Fusion	A	No	Prebloom
Glyphosate ^c	O	Yes^c	
Harmony GT	B	No	60 days
Poast/Poast Plus	A	Yes	75 days
Pursuit	B	No	85 days
Raptor	B	No	85 days
Reflex/Flexstar	O	No	Prebloom
Resource	O	No	60 days
Scepter	B	No	90 days
Select/Arrow	A	No	60 days
Ultra Blazer	O	No	50 days

^aRestrictions based on herbicide labels. Always read and follow herbicide labels.

^bSite of Action: A = ACCase inhibitor; B = ALS inhibitor; C = Photosynthesis inhibitor; O = Other

^cConsult specific glyphosate labels for feed and forage restrictions.