

SOYBEAN WEED CONTROL

Eric P. Prostko, Extension Agronomist - Weed Science

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
PREPLANT INCORPORATED	pendimethalin (Prowl/Pendimax) 3.3 lb/gal	1.2 - 2.4 pts	0.5 - 1.0	Soil incorporate 2 inches deep within 7 days of application. Mechanical incorporation is not required if rain of 0.5" or more occurs within 7 days of application. MOA = 3.
	Prowl H ₂ O 3.8 ACS	1.5 - 2.1 pts	0.71 - 1.00	
	trifluralin (Treflan, Tri-4, Trilin, others) 4 lb/gal (Trific) 60DF	1 - 2 pts 0.88 - 1.67 lbs	0.5 - 1.0	Soil incorporate 2-3 inches deep within 24 hours of application. Treflan should be applied within 4 weeks of planting. Rates should be adjusted for soil type. Refer to specific herbicide label for use information. MOA = 3.
	metribuzin (Sencor) 4L (Sencor, Metri, Metribuzin) 75DF	8 - 12 fl. ozs 5.3 - 8.0 ozs	0.25 - 0.38	
			<p>Incorporation should be shallow (1-2") to prevent placement of herbicide in soybean seed zone. Do not use on coarse soils with less than 1% organic matter. Use the low rate on coarse soils. Do not apply to sensitive soybean varieties such as H7550RR. Refer to soybean seed label for information on sensitivity to metribuzin. Do not apply with soil applied organic phosphate pesticides such as Dasanit, Di-Syston, Thimet, Mocap, Lorsban, or Namacur, as soybean injury may occur regardless of soybean variety. Can be tank-mixed with Treflan or Prowl for broader spectrum weed control. A split treatment of 1/2-2/3 the normal rate of Sencor incorporated followed by the remaining 1/2-1/3 rate after planting may be used. This split treatment may lessen the injury potential compared to a full rate incorporated and may increase consistency of control over that of a preemergence treatment. Do not use increased rates when splitting the application. Refer to the end of this section for an up-to-date list of soybean varieties that have exhibited acceptable tolerance to metribuzin in preliminary UGA tests. MOA = 5.</p>	
	metribuzin + chlorimuron (Canopy) 75DG	6 - 10 ozs	0.24 - 0.40 + 0.04 - 0.07	<p>Canopy may be soil incorporated or applied preemergence for control of several broadleaf weeds. The rate of application varies with soil type. Not recommended for use on sands. Incorporation should be 1 to 2 inches deep. Canopy may be tank-mixed with a dinitroaniline herbicide for broader spectrum weed control. Follow label directions for the use rates. <u>Refer to Remarks and Precautions discussion of metribuzin for sensitive soybean varieties and potential herbicide-insecticide interactions. Soybean injury expressed as stunting has been observed.</u> Refer to the end of this section for an up-to-date list of soybean varieties that have exhibited acceptable tolerance to metribuzin in preliminary UGA tests. Canopy use rates for soils with 0.5-3% organic matter are as follows: loamy sand, sandy loam = 6 oz/A; loam, silt loam, silt, sandy clay loam = 8 oz/A; silty clay loam, clay loam, clay = 10 oz/A. Rotation restrictions: soybeans = 0 months; barley, wheat = 4 months; field corn 9-10 months; cotton = 10 months; peanuts = 8 months; sorghum = 10 months. MOA = 5 + 2.</p>

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
PREPLANT INCORPORATED (cont.)	metribuzin + S-metolachlor (Boundary) 6.5 lb/gal	1.2 - 2.1 pts	0.19 - 0.33 + 0.94 - 1.64	Incorporate uniformly within top 2" of soil . Not recommended for use on sands with < 1.0% OM. Follow rate restrictions for soil type, pH, varieties, etc. listed under remarks and precautions for metribuzin. Can be tank-mixed with Python, Scepter, Canopy, Canopy XL, Command, and Prowl. Refer to the end of this section for an up-to-date list of soybean varieties that have exhibited acceptable tolerance to metribuzin in preliminary UGA tests. MOA = 5 + 15.
	imazaquin + pendimethalin (Squadron) 2.33 lb/gal	3.0 pts	0.125 + 0.75	Apply Squadron and incorporate 1 to 2 inches deep within 7 days of application. <u>Do not plant cotton within 18 months of application.</u> This treatment associated with adverse weather conditions may sometimes cause soybean injury. (Refer to Remarks and Precautions for imazaquin.) MOA = 2 + 3.
	imazethapyr (Pursuit) 2 lb/gal 70DG	0.25 pt 1.44 oz	0.063	Controls several annual broadleaf weeds and suppresses nutsedge. May be tank-mixed with Prowl or trifluralin for improved annual grass control. Incorporate to a depth of 1 to 2 inches. Pursuit should only be applied one time per year to soybeans. Do not apply Classic, Canopy, Scepter, Scepter O.T., or use Pursuit either preemergence or postemergence on fields previously treated with Pursuit. Refer to the label for rotation restrictions. MOA = 2.
	imazaquin (Scepter) 70DG	2.1 - 2.8 oz	0.09- 0.122	Apply and incorporate 1 to 2 inches deep. Scepter may be tank-mixed with Prowl or trifluralin. On sands and loamy sands, 2.1 oz/A can be used for control of cocklebur and non-ALS-resistant pigweeds only. This treatment may be followed with Scepter applied postemergence at 2.8 oz/A for increased control of sicklepod. <u>Do not plant cotton within 18 months of the application of Scepter.</u> This treatment associated with adverse weather conditions may sometimes cause soybean injury. Do not graze or feed treated soybean forage, hay or straw to livestock. MOA = 2.
	imazethapyr + pendimethalin (Pursuit Plus) 2.9 lb/gal	2.5 pts	0.063 + 0.8	Incorporate 1 to 2 inches deep within 7 days of application. Do not plant cotton within 18 months of application. Refer to label for other rotation restrictions. Do not apply Classic, Canopy, Scepter, Scepter O. T., or Pursuit to fields previously treated with Pursuit Plus. Do not graze or feed treated soybean forage or hay to livestock. MOA = 2 + 3.
	flumetsulam (Python) 80WDG	0.9 - 1.0 oz	0.045 - 0.05	Controls a wide range of broadleaf weeds. Incorporate 2 to 3 inches deep. Tank-mix with herbicides such as Treflan or Prowl for the control of annual grasses. Crop rotational restrictions are: corn - 0 months; small grains - 4 months; tobacco - 9 months; cotton - 18 months; canola - 26 months. MOA = 2.

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
PREPLANT INCORPORATED (cont.)	S-metolachlor + fomesafen (Prefix) 5.29EC	2 pt	1.09 + 0.24	Useful for the control of both glyphosate and ALS-resistant Palmer amaranth. Can also be applied PRE. Incorporate uniformly into top 2" of soil within 7 days of application. Can also be tank-mixed with burndown herbicides such as 2,4-D, paraquat, or glyphosate for use in reduced tillage systems. Crop rotation restrictions are as follows: soybean, dry bean, snap bean = 0 months; cotton = 1 month; barley, wheat, oat, rye = 4.5 months; field corn, peanut, pea, rice = 10 months; alfalfa, sorghum, sunflower, other crops = 18 months. MOA = 15 + 14.
PREEMERGENCE	linuron (Lorox) 50DF (Linex) 4L	1.0 - 2.0 lbs 1.0 - 2.0 pts	0.50 - 1.0	Provides good control of Florida beggarweed, common ragweed, and pigweed. Do not use on sands or loamy sands and/or soils with less than 1% OM. <u>Sicklepod will not be controlled effectively with Lorox or Linex.</u> Linuron may be tank-mixed with Lasso, Dual, or Prowl. Plant soybeans at least 1.5 inches deep to reduce injury. MOA = 7.
	alachlor (Intrro/Micro-Tech) 4 lb/gal	2.0 - 2.75 qts	2.0 - 2.75	Apply these herbicides to the soil surface prior to soybean emergence. Prowl application just prior to soybean emergence may result in slight soybean growth suppression, stand reduction, or breaking of the plants. Do not apply Prowl after the soybeans crack the soil surface since severe injury may occur. Tank-mixes of Dual, Intrro/Micro-Tech, or Prowl with metribuzin or linuron may improve control of certain annual weeds. Refer to manufacturer's label for specific rates.
	pendimethalin (Prowl/Pendimax) 3.3 lb/gal	1.2 - 2.4 pts	0.5 - 1.0	
	Prowl H ₂ O 3.8ACS	1.5 - 2.0 pts	0.71 - 0.95	
	metolachlor (Stalwart, Parallel PCS, Me-Too-Lachlor)	1.0 - 1.33 pts	1.0 - 1.33 0.95 - 1.27	*The generic formulations of metolachlor (Parallel PCS, Stalwart, Me-Too-Lachlor) have not provided the same length of residual control of certain weeds as similar rates of Dual Magnum formulations in some UGA field trials.
	S-metolachlor (Dual Magnum 7.62E)	1.0-1.33 pts		
	flufenacet + metribuzin (Axiom) 68DF	7-13 ozs	0.238-0.442 + 0.06-0.11	Axiom is a mixture of flufenacet plus metribuzin (Sencor) (4:1 ratio). Controls annual grass weeds similar to other products such as Dual, Intrro, or Outlook. Also provides some control of broadleaf weeds such as carpetweed, purslane, and spotted spurge. Should be tank-mixed with other herbicides such as Canopy, Pursuit, and Scepter to broaden the spectrum of weed control. Do not make more than one Axiom application per season. Do not graze or feed forage to livestock. Domain 60DF is similar to Axiom but contains a 1:1.5 ratio of flufenacet to metribuzin. MOA = 15 + 5.

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
PREEMERGENCE (cont.)	clomazone (Command 3ME) 3.0 lb/gal	2.67 - 3.33 pts	1.0 - 1.25	Controls annual grasses and certain annual broadleaf weeds. Particularly effective for velvetleaf control. The spectrum of weed control is increased when Sencor is tank-mixed. Care should be taken to minimize spray drift when applying Command. See label for specific directions. Do not rotate to small grains or alfalfa within 12 months of application. Do not apply by air or within 1,200 feet of towns and housing developments, commercial fruit, nut or vegetable production areas, or commercial greenhouse or nurseries. Especially weak on carpetweed and pigweed. MOA = 13.
	imazethapyr (Pursuit) 2.0 lb/gal 70DG	0.25 pt 1.44 oz	0.063	Controls several annual broadleaf weeds and suppresses nutsedge. May be tank-mixed with Prowl, Lasso or Dual. Pursuit should be applied only one time per year to soybeans. Do not apply Classic, Canopy, Scepter, Scepter O. T., or use Pursuit either preplant incorporated or postemergence, on fields previously treated with Pursuit. Refer to label for rotation restrictions. MOA = 2.
	flumioxazin (Valor) 51WG	2 - 2.5 oz	0.064 - 0.080	Provides good to excellent control of many annual broadleaf weeds. Valor will not control grass weeds, nutsedges, cocklebur, and sicklepod. Apply as a preemergence treatment only. Do not apply to emerged soybeans. Should be tank-mixed with Command or Prowl/Pendimax. Do not use Valor in the same field with Axiom, Domain, Intro/Micro-Tech, Dual, or Frontier/Outlook or severe injury can occur. Valor can also be tank-mixed with glyphosate in reduced tillage production systems. Refer to label for specific rotation restrictions. MOA = 14.
	flumioxazin + chlorimuron (Valor XLT) 40.3WDG	3 - 4 ozs	0.056 - 0.075 + 0.019 - 0.026	Will provided better cocklebur and sicklepod control than Valor. Plant soybeans at least 1.5" deep and make sure soybean seed is completely covered by soil. Do not apply later than 3 days after planting. Do not tank-mix with Axiom, Dual, Outlook, or Intro. Can be tank-mixed with Command, Sencor, Lorox, or Prowl. Crop rotations: wheat, barley, ryegrass = 4 months; field corn = 10 months; cotton = 10 months; peanuts = 18 months; soybeans = 0 months, tobacco (transplant) = 10 months; sorghum = 10 months. MOA = 14 + 2.
	imazaquin + pendimethalin (Squadron) 2.33 lb/gal	3 pts	0.125 + 0.75	Squadron may be applied preemergence for control of grasses and broadleaves. Apply during or up to 2 days after planting. Do not apply to emerged soybeans. If rainfall or irrigation is not received within 7 days, shallow incorporation may increase effectiveness. Refer to Remarks and Precautions for Scepter. MOA = 2 + 3.
dimethenamid (Outlook/Propel) 6.0 lb/gal	10-18 fl oz	0.46 - 0.84	Use rates vary according the cation exchange capacity (CEC) of the soil. If CEC is not known, select the use rate based on soil texture and organic matter. Controls many annual grasses, pigweeds, and spotted spurge. Outlook may be tank-mixed with Canopy, Sencor, Lorox, Pursuit or Scepter. Fall-seeded small grains may be planted 4 months after an application of Frontier/Outlook. Can also be applied PPI. MOA = 15.	

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
PREEMERGENCE (cont.)	imazaquin (Scepter) 70DG	2.1 - 2.8 oz	0.09 - 0.122	Scepter may be applied preemergence for control of several broadleaf weeds. <u>Scepter should not be applied preemergence if previously applied preplant incorporated.</u> On sands and loamy sands, 2.1 oz./A can be used to control cocklebur and pigweeds only. If rainfall is not received within 7 days after application, a thorough shallow tillage or cultivation is recommended (preferably with a rotary hoe). Scepter may be applied preemergence as a tank-mix with either Prowl, Intro or Dual. Scepter may also be applied as a sequential preemergence treatment following application of a grass herbicide. There are rotational crop restrictions that are found on the Scepter label. <u>Do not plant cotton within 18 months of a Scepter treatment.</u> Scepter should not be used preemergence if Canopy has been applied preplant incorporated or preemergence. Soybean injury expressed as stunting has been observed. Do not graze or feed treated soybean forage, hay or straw to livestock. MOA = 2.
	imazethapyr + pendimethalin (Pursuit Plus) 2.9 lb/gal	2.5 pts	0.063 + 0.8	Apply to soil surface prior to soybean emergence. Refer to label for rotation restrictions. Do not apply Classic, Canopy, Scepter, Scepter O. T. or Pursuit to fields previously treated with Pursuit Plus. Do not graze or feed treated soybean forage to livestock. MOA = 2 + 3.
	flumetsulam (Python) 80WDG	0.9 - 1.0 oz	0.045 - 0.05	Controls a wide range of broadleaf weeds. Tank-mix with preemergence herbicides such as Lasso, Dual, Prowl, etc. for the control of annual grasses. DO NOT apply to emerged soybeans (cracking stage or later). Crop rotational restrictions are: small grains - 4 months; tobacco - 9 months; cotton - 18 months; canola - 26 months. MOA = 2.
	metribuzin (Sencor) 4L (Sencor, Metri, Metribuzin) 75DF	8 - 12 fl. ozs 5.3 - 8.0 ozs	0.25 - 0.38	If rainfall or irrigation occurs within 3 to 5 days after application, control will be as good as obtained with PPI treatments. Do not use on coarse soils with less than 1% organic matter. Use the low rate on coarse soils. Do not apply to sensitive soybean varieties such as H7550RR. Refer to soybean seed label for information on variety sensitivity to metribuzin. Do not apply metribuzin with soil-applied organic phosphate pesticides such as Dasanit, Di-Syston, Mocap, Namacur, or Thimet as soybean injury may occur irrespective of soybean variety. A split treatment of 1/2 - 2/3 the normal use rate of Sencor incorporated followed by the remaining 1/2 - 1/3 rate after planting may be used. This split treatment may lessen the injury potential compared to a full rate incorporated and may increase consistency of control over that of a preemergence treatment. Do not use increased rates when splitting the application. Refer to the end of this section for an up-to-date list of soybean varieties that have exhibited acceptable tolerance to metribuzin in preliminary UGA tests. MOA = 5.

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS	
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT		
PREEMERGENCE (cont.)	metribuzin + chlorimuron (Canopy) 75DG	6 - 10 ozs	0.24 - 0.40 + 0.04 - 0.07	Canopy may be applied preemergence for control of broadleaf weeds. The rate of application varies with soil type. Do not exceed 6 ozs/A of 75 WDG on sand or loamy sand Coastal Plain soils. <u>Canopy should not be applied preemergence if previously applied preplant incorporated.</u> Canopy should not be used if Scepter has been applied preplant incorporated or preemergence. If 1 inch of rainfall is not received after application, a rotary hoeing or shallow cultivation should be made after emergence of the crop while weeds are small enough to be controlled by mechanical means. Canopy may be applied preemergence as a tank-mix with either Intro, Dual or Prowl or following the use of a preplant incorporated grass material such as Treflan. Refer to <u>Remarks and Precautions for Prowl</u> when applying Prowl preemergence and refer to <u>Remarks and Precautions for metribuzin</u> for sensitive soybean varieties and potential herbicide-insecticide interactions. <u>Soybean injury expressed as stunting has been observed.</u> There are specific rotational crop restrictions based on soil pH that may be found on the Canopy label. Do not apply Canopy to soils having a pH greater than 7.5. Refer to DuPont's specific recommendations on sprayer cleanup following use of Canopy. Refer to the end of this section for an up-to-date list of soybean varieties that have exhibited acceptable tolerance to metribuzin in preliminary UGA tests. MOA = 5 + 2.	
	metribuzin + S-metolachlor (Boundary) 6.5 lb/gal		1.2 - 2.1 pts	0.19 - 0.33 + 0.94 - 1.64	Not recommended for use on sands with < 1.0% OM. Follow rate restrictions for soil type, pH, varieties, etc. listed under remarks and precautions for metribuzin. Can be tank-mixed with Python, Scepter, Canopy, Canopy XL, Command, and Prowl. Refer to the end of this section for an up-to-date list of soybean varieties that have exhibited acceptable tolerance to metribuzin in preliminary UGA tests. MOA = 5 + 15.
	fomesafen (Reflex) 2L		1 pt	0.25	For the residual control of yellow nutsedge, bristly starbur, and various pigweed species. Can also be used in minimum-till situations and tank-mixed with a burndown herbicide. MOA = 14.
	S-metolachlor + fomesafen (Prefix) 5.29EC		2 pt	1.09 + 0.24 1.32	Refer to comments in PPI section. MOA = 15 + 14.
	flumioxazin + chlorimuron + thifensulfuron (Envive 41.3DG)		3 - 4 ozs	0.055-0.073 + 0.017 -0.023+ 0.005-0.007	A three-way mixture of Valor + Classic + Harmony GT. Do not use in combination with Axiom, Micro-Tech, Intro, Dual, Outlook. Do not use on soil types with less than 0.5% organic matter. Rotation restrictions: soybeans = anytime; small grains = 4 months; field corn = 10 months; cotton = 10 months; sorghum = 10 months. MOA = 14 + 2 + 2.

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
MINIMUM TILL and/or NO-TILL	glyphosate (various trade names)		0.38 - 3.0	Controls most emerged annual grass and broadleaf weeds. Glyphosate rates vary according to weed species, weed size and spray volume. Refer to the individual product labels for additional information. The addition of dry ammonium sulfate at 1 to 2% by weight (8.5 to 17.0 lbs. per 100 gallons of water) when tank-mixing with residual herbicides may improve control of environmentally stressed weeds. Use of tank-mixes with glyphosate for bermudagrass or johnsongrass control in minimum tillage systems is not recommended. The higher rates are suggested for johnsongrass and bermudagrass control. MOA = 9.
	3.00 lb ae/gal	16 - 128 ozs		
	3.73 lb ae/gal	13 - 103 ozs		
	4.00 lb ae/gal	12 - 96 ozs		
	4.17 lb ae/gal	11.7 - 92 ozs		
	4.50 lb ae/gal	11 - 85 ozs		
	5.00 lb ae/gal	10 - 77 ozs		
	paraquat (Gramoxone Inteon) 2.0 lb/gal	1.88- 3.76 pts	0.47 - 0.94	Apply during or after planting, but before crop emerges to kill emerged annual grasses and weeds. Add a nonionic surfactant at 0.25% (1 qt. per 100 gal. spray) on a volume basis. Apply 20-60 gallons spray volume per acre. Refer to label for specific cautions and restrictions. Several tank-mixes are allowed (see below). MOA = 22.
	(Gramoxone Max/ Firestorm/Parazone) 3.0 lb/gal	1.25 - 2.5 pts		
	glufosinate (Ignite 280 SL) 2.34 lb/gal	22-29 ozs	0.40 - 0.53	Apply during or after planting, but before crop emerges to kill emerged annual grasses and weeds. Ignite will not provided adequate burndown control of small grains. Very effective for burndown control of volunteer peanuts. Can be tank-mixed with glyphosate or 2,4-D. MOA = 10.
carfentrazone (Aim) 2.0 lb/gal	0.5 - 1.0 ozs	0.008 - 0.016	Tank-mix with glyphosate or glufosinate for the improved control of large morningglories. Can be applied up to 24 hours after soybean planting. MOA = 14.	
pyraflufen (ET) 0.208 lb/gal	0.5 - 2.0 oz	0.0008 - 0.003	Tank-mix with glyphosate or glufosinate for the improved control of large morningglories.. Soybeans can be planted immediately. MOA = 14.	
2,4-D (various trade names) 3.8 lb/gal	1 pt	0.475	Very effective for cutleaf eveningprimrose control. Can be tank-mixed with glyphosate or paraquat to provide broad-spectrum burndown control. Soybeans can be planted in 7 (ester) or 15 days (amine) after application depending upon the formulation used. MOA = 4.	
alachlor (Intro/Micro-Tech) 4 lb/gal	2 - 2.75 qts	2.0 - 2.75	For preemergence control of annual grasses and some annual weeds. Any of the herbicides in this group can be tank-mixed with paraquat or glyphosate.	
metolachlor (Stalwart, Parallel PCS, Me- Too-Lachlor)	1.0 - 1.33 pts	1.0 - 1.33	Either metribuzin or linuron can be tank-mixed with Intro, Dual, Prowl, Outlook. See precaution remarks concerning Sencor in the preemergence section.	
S-metolachlor (Dual Magnum 7.62E)	1.0 - 1.33 pts	0.95 - 1.27		
metribuzin (Sencor) 4L (Sencor) 75DF	8 - 12 ozs 5.3 - 8.0 ozs	0.25 - 0.38		
			The generic formulations of metolachlor (Parallel PCS, Stalwart, Me-Too-Lachlor) have not provided the same length of residual control of certain weeds as similar rates of Dual Magnum formulations in some UGA field trials.	

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
MINIMUM TILL and/or NO TILL (cont.)	pendimethalin (Prowl/Pendimax) 3.3 lb/gal	1.2 - 2.4 pts	0.5 - 1.0	
	Prowl H ₂ O 3.8ACS	1.5 - 2.0 pts	0.71 - 0.95	
	metribuzin + chlorimuron (Canopy) 75WDG	6 - 10 ozs	0.24 - 0.40 + 0.04 - 0.07	Canopy may be tank-mixed with paraquat or, glyphosate for use in minimum or no-till systems. Canopy may also be tank-mixed with either paraquat or glyphosate plus Intro or Dual for broad spectrum weed control. Use rate is dependant upon soil type. Do not use more than 6 ozs/A of 75WDG or 7.7 ozs/A of 58WDG on sand or loamy sand soils of the Coastal Plain. Refer to Remarks and Precautions discussion of metribuzin for sensitive soybean varieties and potential herbicide-insecticide interactions. <u>Soybean injury expressed as stunting has been observed.</u> Do not apply Canopy to soils having a soil pH greater than 7.5. There are specific rotational crop restrictions based upon soil pH that may be found on the Canopy label. Refer to DuPont's suggested recommendations on sprayer cleanout following use of Canopy. Refer to the end of this chapter for an up-to-date list of soybean varieties that have exhibited acceptable tolerance to metribuzin in preliminary UGA tests. MOA = 5 + 2.
	dimethenamid (Outlook,Propel) 6.0 lbs/gal	10-18 oz	0.46 - 0.84	See remarks and precautions from previous page. MOA = 15.
	linuron (Lorox) 50DF (Linex) 4L	1 - 2 lbs 1 - 2 pts	0.5 - 1.0	Sicklepod will not be controlled effectively by Lorox or Linex. MOA = 7.
	imazaquin (Scepter) 70DG	2.1 - 2.8 oz	0.09 - 0.122	Scepter may be tank-mixed with paraquat, Bronco or glyphosate for use in minimum or no-till systems. Prowl, Intro, or Dual may be tank-mixed for broader spectrum weed control. <u>Soybean injury expressed as stunting has been observed.</u> There are rotational crop restrictions that may be found on the Scepter label. <u>Do not plant cotton within 18 months of a Scepter treatment.</u> Do not graze or feed treated soybean forage, hay or straw to livestock. MOA = 2.
	imazaquin + pendimethalin (Squadron) 2.33 lb/gal	3 pts	0.125 + 0.75	Squadron may be tank-mixed with glyphosate or paraquat. Apply during or up to 2 days after planting. Do not apply to emerged soybeans. Refer to Remarks and Precautions for Scepter. MOA = 2 + 3.
	imazethapyr (Pursuit) 2.0 lb/gal 70DG	0.25 pts 1.4 oz	0.063	Pursuit may be tank-mixed with Prowl, Intro, or Dual for improved grass control. Tank-mix with glyphosate or paraquat for control of existing weeds. Pursuit should be applied only one time per year to soybeans. Do not apply Classic, Canopy, Scepter, Scepter O. T., or use Pursuit postemergence, on fields previously treated with Pursuit. Refer to label for rotation restrictions. MOA = 2.

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
MINIMUM TILL and/or NO TILL (cont.)	flumetsulam (Python) 80WDG	0.9 - 1.0 oz	0.045 - 0.05	Controls a wide range of broadleaf weeds. Tank-mix with preemergence herbicides such as Intrro, Dual, Prowl, etc. for the control of annual grasses. May also be tank-mixed with paraquat or glyphosate. DO NOT apply to emerged soybeans (cracking stage or later). Crop rotational restrictions are: small grains - 4 months; tobacco - 9 months; cotton - 18 months; canola - 26 months. MOA = 2.
	imazethapyr + pendimethalin (Pursuit Plus) 2.9 lb/gal	2.5 pts	0.063 + 0.8	Pursuit Plus may be tank-mixed with glyphosate or paraquat for control of existing weeds. Do not apply Classic, Canopy, Scepter, Scepter O. T. or Pursuit to fields previously treated with Pursuit Plus. Do not graze or feed treated soybean forage or hay to livestock. MOA = 2 + 3.
POSTEMERGENCE	<u>Application of postemergence herbicide treatments to moisture stressed weeds will usually result in poor control.</u>			
	bentazon (Basagran, Depend, Leader) 4 lb/gal	1.5 - 2 pts	0.75 - 1.0	Apply to soybeans at the second or third trifoliolate (V2 or V3) leaf stage, but before weeds exceed 2-4 inches in height (14 to 21 days after planting). A non-phytotoxic oil concentrate (1 qt/A) should be added depending on the weed species as specified on the label. Basagran can be tank-mixed with Blazer. Rain-free period is 4 hours. Soybeans are tolerant of Basagran at all stages of growth. MOA = 6.
	acifluorfen (Ultra Blazer) 2 lb/gal	1.5 pts	0.38	Blazer requires a nonionic surfactant (1 qt/100 gals.) to be added to the spray tank when used alone and when tank-mixed with Basagran. Apply to soybeans at the second or third trifoliolate (V2 or V3) leaf-stage, but before weeds have more than 4 to 6 true leaves (14-21 days after planting). Control of larger weeds may be poor. Ultra Blazer can be tank-mixed with Classic, Scepter, or Basagran. Rain-free period is 4 hours. Apply at least 50 days before harvest. MOA = 14.
	lactofen (Cobra) 2 lb/gal	12.5 fl. ozs	0.20	Apply to soybeans in the first or second trifoliolate leaf stage if weeds are in the 2 to 6 leaf stage. Add a surfactant or a crop oil concentrate according to the relative humidity specified on the label. With aerial applications, the use of 1.0 qt/A of crop oil concentrate is required. Do not apply Cobra when crop or weeds are under stress of drought. Crop injury expressed as leaf burn and/or suppression may occur. This injury is usually temporary but may cause lasting effects to late planted (after July 1) soybeans especially if the application is followed by a period of drought stress. Cobra can be tank-mixed with Basagran and Classic. Rain-free period is 30 minutes. Do not apply Cobra later than 45 days before harvest or after growth stage R6 (full seed). MOA = 14.
	fomesafen (Reflex) 2 lb/gal	1.5 pts	0.38	Apply Reflex when weeds are small and not stressed from dry weather. Application should be made when weeds have 1 to 4 true leaves (14 to 21 days after planting). Add a nonionic surfactant (0.25 - 0.5% v/v) or crop oil concentrate (0.5 - 1.0% v/v) to the spray mixture. Can be tank-mixed with glyphosate. Rain-free period is 1 hour. Do not apply within 45 days of harvest. MOA = 14.

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
POSTEMERGENCE (cont.)	imazethapyr (Pursuit) 2 lb/gal 70 DG	0.25 pt 1.4 oz	0.063	Pursuit may be applied anytime after soybean emergence but before weeds exceed 3 inches. Add 0.25% of a nonionic surfactant (2 pts/100 gals. of spray mixture). After application wait at least 10 days before cultivation. Do not apply Pursuit if Canopy, Scepter or Pursuit was used as a preplant incorporated or preemergence treatment. Refer to the label for rotational restrictions. Rain-free period is 1 hour. MOA = 2.
	bentazon + acifluorfen (Storm) 4 lb/gal	1.5 pts	0.5 + 0.25	Apply to soybeans at the first or second trifoliolate leaf but before weeds exceed the 4 true-leaf stage. A crop oil concentrate or surfactant should be used at the rate of 1-2 pts/A. Any crop injury should be temporary. Rain-free period is 4 hours. Do not apply Storm within 50 days of harvest. MOA = 6 + 14.
	imazaquin (Scepter) 70DG	1.4 - 2.8 oz	0.06 - 0.122	Scepter may be applied as a postemergence treatment after crop emergence when weeds are small. The addition of 2 pts of nonionic surfactant per 100 gals. of spray mixture is required. Control of cocklebur and pigweeds can be expected with a single application. Sickledod will be suppressed only when Scepter is used at the 1-2 true-leaf stage following a preplant incorporated or preemergence application of Scepter. There are rotational crop restrictions that are found on the herbicide label. <u>Do not plant cotton within 18 months of a Scepter treatment.</u> Do not apply Scepter if Canopy or Pursuit has been used preplant incorporated or preemergence. Do not apply Scepter postemergence when soybeans and weeds are under temperature and moisture stress. Do not graze or feed treated soybean forage, hay or straw to livestock. Do not apply Scepter within 90 days of harvest. MOA = 2.
	cloransulam (FirstRate, Amplify) 84WDG	0.3 oz	0.016	Controls a wide range of annual broadleaf weeds (except prickly and arrowleaf sida, common lambsquarters, black nightshade, and pigweeds). May be applied from soybean emergence up to 50% flowering. Add either 0.25% v/v nonionic surfactant or 1.2% v/v crop oil concentrate to the spray mix. May be tank-mixed with Blazer, Basagran, Cobra, Reflex, Pursuit, Roundup Ultra/UltraMax, Touchdown or postemergence grass herbicides. Refer to rotational crop restrictions shown on the label. Rain-free period is 2 hours. FirstRate can be applied from 1 st trifoliolate stage up until 50% flowering. MOA = 2.
	cloransulam (84%) + flumetsulam (80%) (FrontRow)	0.3 oz + 0.12 oz	0.016 + 0.006	FrontRow is a co-packed product of FirstRate and Python. Controls a wide range of broadleaf weeds, but not annual grasses. Add either a nonionic surfactant at 0.25% v/v or crop oil concentrate at 1.2% v/v to the spray mix. Front Row may be tank-mixed with Basagran, Blazer, Cobra, Reflex, Pursuit, Roundup Ultra/UltraMax or various postemergence grass herbicides. Rotational crop restrictions are: small grains - 3 months; cotton, peanuts, corn - 9 months; tobacco and canola - 30 months. Rain-free period is 2 hours. FrontRow can be applied from 1 st trifoliolate stage up until 50% flowering. MOA = 2 + 2.

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
POSTEMERGENCE (cont.)	chlorimuron (Classic) 25DF	0.5 - 0.66 oz	0.008 - 0.01	Apply over-the-top after soybeans have their first trifoliolate leaf. The addition of a nonionic surfactant at 0.25% by volume is required. Crop oil concentrate may be substituted for nonionic surfactant, but may increase soybean injury. Control of sicklepod is consistently better if chlorimuron is used following a preplant incorporated or preemergence treatment of Sencor. Do not apply when soybeans or weeds are under temperature or drought stress. Refer to rotational crop restrictions shown on the label. Refer to label for information on sprayer cleanout procedures following use. Classic can be tank-mixed with glyphosate for improved control of morningglories and other broadleaf weeds in Roundup Ready soybeans only . When tank-mixed with glyphosate, apply Classic at 0.25-0.33 oz/A. Rain-free period is 1 hour . Do not apply Classic within 60 days of harvest. MOA = 2.
	thifensulfuron (Harmony GT XP) 75DF (Harmony SG) 50SG	1/12 oz 1/8 oz	0.004	Salvage treatment for the control of Palmer amaranth (pigweed) that is NOT ALS-resistant. Can be applied any time after the first trifoliolate leaf has expanded but no later than 60 days before harvest. Use in combination with NIS (0.25% v/v) or COC (1% v/v) and nitrogen (32-0-0/28-0-0 @ 1 qt/A or AMS @ 3 lb/A) . Can be tank-mixed with glyphosate for use in RR soybeans. Rotational crop restrictions: wheat, barley, oats, triticale, soybeans, field corn = anytime; all other crops = 45 days. Rain-free period =3 hours; MOA = 2. Do not tank-mix with Classic. Harmony GT will cause soybean injury in the form of leaf and terminal burn.
	flumiclorac (Resource) 0.86 EC	4 oz	0.027	Tank-mix with glyphosate for improved control of tall, ivyleaf, and entireleaf morningglory in Roundup Ready soybeans only. Must be applied with a NIS (0.25% v/v) or COC (1 pt/A) and spray grade ammonium sulfate (2.5 lbs/A). Rain-free period is 2 hours . Do not apply Resource within 60 days of harvest. MOA = 14.
	glyphosate (various trade names)	24 - 64 ozs 3.00 lb ae/gal 3.73 lb ae/gal 4.00 lb ae/gal 4.17 lb ae/gal 4.50 lb ae/gal 5.00 lb ae/gal		0.56 - 1.50 ae

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
POSTEMERGENCE (cont.)	imazethapyr + glyphosate (Extreme) 2.17 lb/gal	3 pts	0.063 + 0.75	Apply Extreme only to Roundup Ready soybeans. Add a nonionic surfactant at a rate of 1 pt/100 gallons and spray grade ammonium sulfate (2.5 lb/A) or liquid N (1-2 qts/A). Apply before weeds exceed 8". Applications should be made before bloom. Only 1 application/year is permitted. Cotton rotation is 18 months. Refer to label for additional rotation intervals. MOA = 2 + 9.
	S-metolachlor + glyphosate (Sequence) 5.25 lb/gal	3.0 - 3.5 pts/A	1.13 -1.31 +	Apply Sequence only to Roundup Ready soybeans. Most effective when applied from cracking up through the 3 rd trifoliate leaf stage. Applications can be applied no later than 90 days before harvest. Very effective for the control of tropical spiderwort. MOA = 15 + 9.
	quizalofop (Assure II, Targa) 0.88 lb/gal	7.0 - 8.0 fl. oz	0.05 - 0.06	Apply to annual grasses at recommended stage of growth. A crop oil concentrate (1% v/v) or nonionic surfactant (0.25% v/v) should be used. Many tank-mixes will reduce the activity of Assure. Rain-free period is 1 hour. MOA = 1.
	quizalofop (Assure II, Targa) 0.88 lb/gal	5.0 fl. ozs	0.03	Apply with crop oil concentrate or nonionic surfactant for control of rhizome johnsongrass when 10 to 24 inches tall. Apply an additional 5 fl. ozs/A when johnsongrass regrowth is 6-10 inches tall. Do not apply in a tank-mix with a broadleaf herbicide when using this reduced rate program. Do not apply more than 18 ozs/A/year. MOA = 1.
	sethoxydim (Poast) 1.5 lb/gal	1.0 -1.5 pts	0.19 - 0.28	Apply with a crop oil concentrate (1 qt/A) over the top of annual grasses and crop. Refer to label for suggested stage of application. Many tank-mixes will reduce the activity of Poast. Apply with a crop oil concentrate for control of rhizome johnsongrass when 15-20 inches tall. If regrowth occurs or new plants emerge, a second application of 1.5 pts. may be used at the 6-10 inch stage. Do not apply more than 7.5 pts/A/year. Rain-free period is 1 hour. MOA = 1.
	(Poast Plus) 1.0 lb/gal	1.5 - 2.25 pts		
	fluazifop - P (Fusilade DX) 2.0 lb/gal	12 fl. oz	0.19	Apply with a crop oil concentrate (0.5-1.0% v/v) or nonionic surfactant (0.25-0.5% on a volume basis) over the top of annual grasses and crop prior to soybean bloom stage. Refer to label for suggested stage of application and specific rates. Many tank-mixes will reduce the activity of Fusilade. Apply to johnsongrass before the boot stage of growth at 8-18 inches in height. If regrowth occurs or new plants emerge, apply a second application of 8 fl. ozs. when the johnsongrass is 6-12 inches tall. Do not apply more than 32 ozs/A/year. Rain-free period is 1 hour. MOA = 1.
	clethodim (Select, Arrow, others) 2EC	6 - 8 fl. oz	0.09 -0.125	Apply to annual grasses at recommended stage of growth. A crop oil concentrate at 1.0% v/v should be added to the spray mix (Select/Arrow). A NIS (0.25% v/v) can be used with Select Max to reduce crop injury. Do not graze or feed treated soybean forage or hay to livestock. Higher rates and split applications may be needed for optimum perennial grass control (rhizome johnsongrass and bermudagrass). Do not exceed 32 oz/A/year for Select or 64 oz/acre/year for Select Max. Rain-free period is 1 hour. MOA = 1.
(Select Max) 0.97EC	12 -16 fl oz			

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS										
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT											
POSTEMERGENCE (cont.)	S-metolachlor + fomesafen (Prefix 5.29EC)	2 - 2.33 pts	1.095 - 1.26 + 0.24 - 0.28	Can be applied from cracking through the third trifoliolate leaf stage of soybean. Can be tank-mixed with glyphosate for use on RR soybeans. Use a NIS @ 0.25% v/v (1 qt/100 gallons) when applying alone or in combination with glyphosate products that do not contain a built-in adjuvant. Do not exceed 3.0 pt/A of Prefix per acre per season. Do not use Prefix postemergence if a soil-applied application of S-metolachlor containing products was used. Rain-free period is 1 hour. MOA = 15 + 14.										
POSTEMERGENCE DIRECTED	metribuzin (Sencor) 4L (Sencor) 75DF	8 - 16 fl. ozs 5.3 - 10.7 ozs	0.25 - 0.50	Do not apply until soybeans have reached the following minimum heights: <table border="1"> <thead> <tr> <th>Herbicide</th> <th>Minimum Soybean Height Prior to Directed Spraying</th> </tr> </thead> <tbody> <tr> <td>metribuzin</td> <td>8-12"</td> </tr> <tr> <td>metribuzin + 2,4-DB</td> <td>8-12"</td> </tr> <tr> <td>paraquat</td> <td>8"</td> </tr> <tr> <td>2,4-DB</td> <td>8"</td> </tr> </tbody> </table>	Herbicide	Minimum Soybean Height Prior to Directed Spraying	metribuzin	8-12"	metribuzin + 2,4-DB	8-12"	paraquat	8"	2,4-DB	8"
Herbicide	Minimum Soybean Height Prior to Directed Spraying													
metribuzin	8-12"													
metribuzin + 2,4-DB	8-12"													
paraquat	8"													
2,4-DB	8"													
	paraquat (Gramoxone Inteon) 2.0 lb/gal (Gramoxone Max/Firestorm/Parazone) 3.0 lb/gal	8.0 fl ozs 5.3 fl. ozs	0.125											
	2,4-DB (Butyrac 200) 2L (Butyrac 175) 1.75L (Butoxone) 1.75L	0.7 - 0.9 pts 0.8 - 1.0 pts 1.0 pt	0.18 - 0.22 0.18 - 0.22 0.22	Rates should be adjusted to band width. At the early growth stages, do not spray unless the soybean stand is uniform in height as slow emerging soybeans will be killed. Crop oil concentrate or nonionic surfactant should also be added to spray. If weeds exceed 4 inches in height, the tank-mix of 2,4-DB with metribuzin will improve weed control. When using paraquat adjust equipment to spray no higher than 3" of the soybean plant.										
	carfentrazone (Aim 2EC)	0.5 - 1.5 ozs	0.008 - 0.025	For the control of tropical spiderwort, annual morningglory, and pigweed. Apply as post-directed treatment with spray directed toward base of plant and avoid contact with soybean foliage. Use a NIS at 0.25% v/v (1 qt/100 gal). Do not feed treated soybean forage or hay to livestock.										
ROPE WICK	glyphosate (various trade names)	1 gal/2 gals of water		Use in wiper applicators at a ratio of 1 gallon of glyphosate to 2 gallons of water (33% solution). For best results: <ol style="list-style-type: none"> 1. Mount equipment on front of tractor. 2. Maintain wick saturation. 3. Operate equipment at 2-3 mph, slower on dense weed clumps. 4. Avoid wiping weeds when wet or drought stressed. 5. Make a second application in the opposite direction. Not all formulations of glyphosate may be labeled for this use. Refer to specific product label. MOA = 9.										

SOYBEAN WEED CONTROL (continued)

STAGE OF APPLICATION	HERBICIDE FORMULATION	BROADCAST RATE/ACRE		REMARKS AND PRECAUTIONS
		AMOUNT OF FORMULATION	POUNDS ACTIVE INGREDIENT	
POSTEMERGENCE SHIELDED OR HOODED SPRAYERS	glyphosate (various trade names)		0.38 - 1.13 ae	Effective "chemical cultivation" treatment for emerged weeds in row middles. Hood or shield height must be adjusted so that glyphosate does not contact soybean green stems or foliage. Apply in a spray volume of 3 to 10 GPA. Not all formulations of glyphosate are labeled for this use. Refer to specific product label. MOA = 9.
	3.00 lb ae/gal	16 - 48 ozs		
	3.73 lb ae/gal	13 - 39 ozs		
	4.00 lb ae/gal	12 - 36 ozs		
	4.17 lb ae/gal	11.7 - 35 ozs		
	4.50 lb ae/gal	11 - 32 ozs		
HARVEST AID	glyphosate (various trade names)		0.75 - 1.5 ae	Apply after soybean pods have lost all green color. Application is usually timed 14 to 21 days before harvest. May be aerially applied. This treatment is not recommended for conventional soybeans grown for seed purposes. Not all formulations of glyphosate are labeled for this use. Refer to specific product label. MOA = 9.
	3.00 lb ae/gal	32 - 64 ozs		
	3.73 lb ae/gal	26 - 52 ozs		
	4.00 lb ae/gal	24 - 48 ozs		
	4.17 lb ae/gal	23 - 46 ozs		
	4.50 lb ae/gal	21 - 42 ozs		
	5.00 lb ae/gal	19 - 38 ozs		
	sodium chlorate		6.0	Apply 7 to 10 days prior to normal anticipated harvest of soybeans to desiccate soybeans and weeds. Apply in a minimum spray volume of 20 GPA for ground applications and 5 GPA for aerial applications. Do not feed treated foliage or graze treated fields. Apply on warm, sunny day with high temperatures and humidity. Do not apply if rainfall is expected within 24 hours. More effective on grass weeds than broadleaf weeds. Dessication of morningglory and other vines may be erratic. MOA = NC.
	3 lb/gal	2 gal		
	5 lb/gal	1.2 gal		
	6 lb/gal	1 gal		
	7.5lb/gal	0.8 gal		
	paraquat (Gramoxone Inteon)	16.0 oz	0.25	Apply paraquat at least 15 days before harvest when soybeans are fully mature, i.e. full pod development, 1/2 of leaves have dropped and the remaining leaves are yellow. Mature cocklebur and drought stressed weeds are not adequately controlled by this treatment. Do not apply to immature soybeans. Add a nonionic surfactant at 0.25% v/v. May be ground or aerially applied. MOA = 22.
	(Gramoxone Max/ Firestorm/Parazone)	10.7 oz		
	3.0 lb/gal			
carfentrazone (Aim 2EC)	1.5 ozs	0.023	For the pre-harvest dessication of of pigweeds and morningglories. Apply at least 3 days before harvest. Can be applied by ground or air. Use with a crop oil concentrate @ 1% v/v . Can be tank-mixed with glyphosate to improve the spectrum of control. MOA = 14.	
CENTER PIVOT IRRIGATION APPLICATION	alachlor (Micro-Tech/Intro)	3 qts.	3.0	Herbicides should be applied only through center pivot systems that water uniformly. Apply in 1/4-1/2 inch of irrigation water/A. Equipment must have appropriate check valves or other suitable devices in the system to insure that the herbicide solution cannot siphon back into water supply.
	metolachlor (Stalwart, Parallel PCS, Me- Too-Lachlor)	1.0 pts	1.0	
	S-metolachlor (Dual Magnum 7.62EC)	1.0 pts	0.97	