

**Table 2.4-5. Characteristics of “burndown” and postemergence soybean herbicides.**

Herbicide <sup>1</sup>	Family	Mode of Action	Site of Action	Systemic <sup>2</sup>	Injury	Weeds	Residual <sup>3</sup>	Potential Problems
					Symptoms	Controlled		
Aim (carfentrazone)	Triazolinone	Cell membrane disruptor (contact)	PPO	No	Foliar burning	Annual broad-leaves	N	Poor spray coverage, use without a surfactant
Assure II (quizalofop)	Aryloxyphenoxy-propionates	Fatty-acid biosynthesis inhibitor	ACCCase	Yes	Kills growing point, leaves turn purple	Annual and perennial grasses	S	Poor coverage; improper stage of growth; droughty weather
Basagran (bentazon)	Benzothiadiazoles	Photosynthesis inhibitor (contact)	D-1 quinone protein	No	Foliar burning	Annual broad-leaves, yellow nutsedge	N	Weeds too large; poor coverage; tolerant species; droughty weather
Blazer (acifluorfen)	Diphenyl ethers	Cell membrane disruptor (contact)	PPO	No	Foliar burning	Annual broad-leaves	N	Temporary crop injury; weeds too large; tolerant weeds
Classic (chlorimuron)	Sulfonylurea	Amino acid biosynthesis inhibitor (protein)	ALS synthase	Yes	Stunting, purple leaves, twisting of petioles	Annual broad-leaves	M	Weeds too large; tolerant species; droughty weather
Cobra (lactofen)	Diphenyl ether	Cell membrane disruptor (contact)	PPO	No	Foliar burning, stunting	Annual broad-leaves	S	Temporary crop injury; weeds too large; tolerant species
Fusilade DX (fluzifop)	Aryloxyphenoxy-propionates	Fatty-acid biosynthesis inhibitor	ACCCase	Yes	Kills growing point, leaves turn purple	Annual and perennial grasses	S	Poor coverage; improper stage of growth; droughty weather
Glyphosate	Amino acid derivative	Amino acid biosynthesis inhibitor (protein)	EPSP synthase	Yes	Quickly stops weed growth, gradually turn yellow and die	Annual and perennial grasses and broadleaves	N	Perennial weed too young, poor spray pattern, high spray volume or application with contact or photo-synthetic inhibitor herbicide
Harmony SG (thifensulfuron)	Sulfonylurea	Amino acid biosynthesis inhibitor (protein)	ALS synthase	Yes	Stunting, purple leaves, twisting of petioles	Annual broad-leaves	S	Weeds too large; tolerant species; droughty weather; temporary crop injury
Liberty/Ignite (glufosinate)	Amino acid derivative	Amino acid biosynthesis inhibitor	GS enzyme	Somewhat	Foliar burning and yellowing	Annual broad-leaves and grasses, some perennials	N	Poor coverage; large weeds, new weed flushes
Poast (sethoxydim)	Cyclohexanedione	Fatty-acid biosynthesis inhibitor	ACCCase	Yes	Kills growing point, leaves turn purple	Annual and perennial grasses	N	Poor coverage; improper stage of growth; droughty weather; antagonism with tank-mixes
Raptor (imazamox)	Imidazolinone	Amino acid biosynthesis inhibitor (protein)	ALS synthase	Yes	Stunting, purpling, yellowing of new growth	Annual broad-leaves, some grasses	M	Weeds too large; tolerant species, droughty weather
Reflex/Flexstar (fomesafen)	Diphenyl ether	Cell membrane disruptor (contact)	PPO	No	Foliar burning	Annual broad-leaves	S–M	Weeds too large; poor coverage; droughty weather
Resource (flumiclorac) or Valor (flumioxazin)	N-phenylphthalimide derivative	Cell membrane disruptor(contact)	PPO	No	Foliar burning	Annual broad-leaves	N	Temporary crop injury, poor coverage, droughty weather, weeds too large
Select (clethodim)	Cyclohexanedione	Fatty-acid biosynthesis	ACCCase	Yes	Kills growing point, leaves turn purple	Annual and perennial grasses	N	Poor coverage; improper stage of growth; droughty weather

1. See Table 2.4-1 for additional formulations or trade names containing these same active ingredients.

2. Movement of herbicide from foliage to roots. Important for perennial weed activity.

3. N = no soil activity; S = one or two weeks soil activity; M = one or two months; L = full season, may carry over under certain conditions or if misapplied. Residual activity is dependent upon rate.