

Control of Volunteer Glyphosate Resistant Crops

	Rate	Canola - Pre ¹	Canola - 3-leaf	Canola - 6-leaf	Canola - begin bolt	Canola - begin flower	Corn - 10-18 inches	Corn - 18-24 inches	Corn - 24-40 inches	Soybean - V2-V3	Soybean - V4-V6
POST Grass Herbicides*											
Assure II* / Fusilade DX	4 - 5 fl oz	N	N	N	N	N	E	E	G-E	N	N
Select*	3 - 6 fl oz	N	N	N	N	N	G-E	P-G	P-F	N	N
Select Max	4 - 8 fl oz	N	N	N	N	N	F-G	P-F	N-P	N	N
Broadleaf Herbicides											
Aim / Cadet	0.5 / 0.9 fl oz	-	P	N	N	N	N	N	N	P	P
atrazine* + oil adjuvant	0.38 lb ai	G	G	P	N	N	N	N	N	E	P
	0.5 lb ai	E	G-E	G	P	P	N	N	N	E	F
Banvel*	4 - 6 fl oz	-	P	P	P	P	N	N	N	E	E
Basagran*	0.5 - 1 pt	-	G-E	F-G	P	P	N	N	N	N	N
Bronate*	0.8 pt	-	E	F-G	-	-	N	N	N	E	E
Callisto + atrazine (3/8 lb ai)	3 fl oz	E	E	E	E	E	N	N	N	P	P
Capreno + atrazine (3/8 lb ai)	3 fl oz	-	E	G-E	-	-	N	N	N	G	G
Cobra	6 fl oz	-	F-G	P	N	N	-	-	-	N-P	N-P
Curtail*	0.25 - 0.5 pt	-	G-E	F-G	-	-	N	N	N	F-G	P-F
Express*	0.167 oz DF/0.25 oz SG	-	E	G-E	G-E	P	P	P	P	P	P
Extreme*	1.5 pt	E	E	G-E	P	P	F-G	F	P	N	N
FirstRate/Sonic	0.2 - 0.3 oz	E	E	F-E	P-F	F	-	-	-	N	N
Flexstar + MSO	0.38 - 0.75 pt	-	E	E	E	E	N	N	N	N	N
Harmony*	1/12 oz DF / 1/8 oz SG	-	P-F	P	N	N	N	N	N	N	N
	0.33 oz DF / 0.5 oz SG	-	E	G-E	P	P	N	N	N	N	N
Hornet	1 - 2 oz	P-F	G-E	F-E	-	-	N	N	N	E	F
Huskie	11 fl oz	-	E	E	E	E	N	N	N	G	G
Ignite + AMS	22 fl oz	-	E	G-E	P-F	P	N	N	N	G	G
Laudis + atrazine (3/8 lb ai)	3 fl oz	-	E	E	E	F	N	N	N	G	G
MCPA*	1 pt	P	E	E	G-E	G	N	N	N	G	F
Option	1.5 oz	-	E	E	-	-	N	N	N	P	P
Permit	1.5 oz	E	E	E	-	-	N	N	N	E	G
B-mix*+Nortron*+UpBeet+ MSO**	1.4 pt+0.23 pt+0.25 oz	-	P-F	N-P	N	N	P-F	N-P	N-P	F	N-P
Pursuit* + MSO	2 fl oz	G-E	E	G-E	P	P	G	F	P	N	N
Raptor + MSO	1 - 2 fl oz	-	E	G-E	P-F	P	P-F	P	N-P	N	N
	4 fl oz	-	E	E	G	F	G-E	F	P	N	N
Sencor*	0.25 lb	E	G-E	F	-	-	N	N	N	P-F	P-F
Sharpen + MSO + UAN	1 fl oz	E	E	E	F	G	N	N	N	P-F	P-F
Spartan	4 oz	P-F	-	-	-	-	-	-	-	-	-
Status	1 - 2 oz	-	F-G	P-F	N	N	N	N	N	E	G-E
	4 oz	-	G	F	P	P	N	N	N	E	E
Steadfast*	0.75 oz	-	E	E	-	-	N	N	N	P	P
Stinger* + oil adjuvant	1 - 2 fl oz	N	N	N	N	N	N	N	N	F-G	F
	3 - 4 fl oz	N	N	N	N	N	N	N	N	E	G-E
Ultra Blazer	1 pt	-	E	G	F	F	-	-	-	N	N
UpBeet + MSO**	0.5 to 1 oz	-	F	N-P	N	N	P-F	N-P	N-P	F	N-P
WideMatch*	0.13 - 0.25 pt	-	P	P	N	N	N	N	N	F-E	P-G
Wolverine	1.7 pt	-	E	E	E	E	E	E	E	G	G
2,4-D*	0.5 pt	-	G	P	N	N	N	P	P	P	P
	1 pt	-	E	E	G-E	P	N	P	P	-	-

¹ PRE control of volunteer glyphosate resistant canola = Anthem, Balance Flexx, Fierce, FirstRate/Sonic, SureStart, Valor, Zidua.
*Or generic equivalent.

**Two applications at 10 to 14 days interval.

Weed control ratings in this section are based on the following scale:

E = Excellent = 90 to 99% control

G = Good = 80 to 90% control

F = Fair = 65 to 80% control

P = Poor = 40 to 65% control

N = None = No control

"-" = insufficient information

RELATIVE HERBICIDE EFFECTIVENESS ON WEEDS AND PERSISTENCE IN SOIL

The following ratings show relative herbicide effectiveness at labeled rates. Under favorable conditions control may be greater than indicated and under unfavorable conditions herbicides may give erratic results. Dry and cool weather increases herbicide persistence while wet and/or warm weather reduces herbicide persistence.

SOIL- APPLIED HERBICIDES*	Mode of Action**	Barnyardgrass	Brome, Downy	Foxtail, Green	Foxtail, Yellow	Quackgrass	Volunteer Cereals	Wild Oat	Buckwheat, Wild	Cocklebur, Common	Horseweed (Marestail)	Kochia	Lambsquarters
Atrazine* (0.38 lb ai/A)	5	P	G	P	P	N	F-G	F-G	G-E	F	P-F	G-E	G-E
Atrazine* (0.5 - 0.75 lb ai/A)	5	F	G-E	P	P-F	P	G-E	G-E	E	G	F	E	E
Authority Assist (PRE)	2,14	P	F-G	P	P	N	N	N	F-G	P	P	E	E
Authority First / Sonic (PRE)	2,14	N	F-G	P	P	N	N	N	P-F	E	G-E	E	E
Authority MTZ (PRE)	5,14	P-F	F-G	P-F	P-F	N	P	P	F-G	P-F	G	E	G-E
Balance Flexx (PRE)	27	E	-	E	F-G	P	N	N	N	P	F-E	E	E
Boundary (PRE)	5,15	F-G	-	F-E	F-E	N	P	P	P	P	F-G	P	E
BroadAxe (PRE)	14,15	P-E	P-F	F-E	F-E	N	P-F	P-F	P-F	P	F-G	E	E
Callisto (PRE)	27	N	-	N	N	N	N	N	N	P	G-E	P	E
Camix (PRE)	15,27	P-G	PG	F-G	F-G	N	P-F	P	P-F	P-F	G-E	F	E
Dual* (PPI/PRE)	15	P-E	P-F	F-E	F-E	N	P-G	P-F	N-P	N	N	N-P	P-F
Eptam (PPI)	8	E	-	E	E	F-G	G-E	G-E	F	P	N	P	F
Fierce (PRE)	14,15	G	G-E	E	G-E	N	N	P	G-E	P	G-E	E	E
Gangster (PRE)	2,14	N	F-G	P	P	N	N	N	P-F	E	G-E	G	E
Harness/Surpass* (PPI/PRE)	15	E	P-F	G-E	G-E	N	G	P-F	P	P	N-P	F	G-E
Lumax (PRE)	5,15,27	G	G	G-E	G-E	N	P	P	G-E	F-G	E	G-E	G-E
Matrix/Resolve* (PRE)	2	G	-	G	F-G	N	G	F	P	F	P ¹	G ¹	F
Metribuzin* (PPI/PRE)	5	P-F	F-G	P-F	P-F	N-P	P-G	N	F-G	P-F	F	F-G	P-F
Nortron/Ethotron (PPI/PRE)	16	P	-	F-G	F-G	P	E	G	F-G	P	-	F-G	P-F
Olympus (PRE)	2	F	F-G	P	P	P	N	F-G	P	-	N	P ¹	P
Outlook* (PPI/PRE)	15	G-E	P-G	G-E	G-E	N	F-G	P	N	N	N	N	F-G
Paramount	4	G-E	-	E	G	N	N	N	N	N	-	F	F
Permit (PPI/PRE)	2	N	-	N	N	N	N	N	N	E	P ¹	N ¹	G-E
PrePare (PRE)	2	P-F	N-P	G-E	P-F	N	N	F-G	-	P	N	F-G ¹	F
Prequel (PRE)	2,27	E	-	G-E	G-E	N	G-E	G-E	N	G-E	G-E	G-E	G-E
Prowl* (PPI)	3	E	F-G	G-E ¹	E	N	N	P-F	N-P	N	N	P	G-E
Pursuit (PRE - 2 fl oz)	2	P	-	P	P	N	N	N	F-G	N	P ¹	E ¹	P-F
Python (PPI/PRE)	2	N	-	N	N	N	N	N	F-G	P	F-E ¹	E ¹	E
Ro-Neet (PPI)	8	E	-	E	E	P	G-E	G	P-F	P	-	P	F-G
Sharpen (PRE) (1 fl oz/A)	14	N	N	N	N	N	N	N	P-G	P	P-G	P-F	P-F
Sharpen (PRE) (2-3 fl oz)	14	N	N	N	N	N	N	N	G-E	G	G-E	G-E	G-E
Sonalan (PPI)	3	E	F	E ¹	E	N	P	P	P	P	N	P-F	E
Spartan (PRE)	14	N	F-G	P	P	N	N	N	P-F	P	F-G	E	E
SureStart/TripleFlex (PRE)	2,4,15	E	-	E	E	N	G	P	E	E	G-E	F-G	E
Treflan* (PPI)	3	E	F-G	E ¹	E	N	N	P-F	P	N	N	P	G-E
Valor/Chateau (PRE)	14	N	F-G	P	P	N	N	N	P-F	N	F-E	G-E	G-E
Verdict (PRE - 10-18 fl oz)	14,15	F-G	P-G	G-E	G-E	N	F	P	G-E	G	G-E	E	E
Warrant (PRE to weeds)	15	E	-	G-E	G-E	N	N	P	N	N	P	F	G-E

PPI = Preplant Incorporated, PRE = Preemergence, POPI = Post plant incorporated.

PPI gives greater and more consistent weed control compared to PRE.

*Or generic equivalent.

**Numbers represent herbicide mode of action from a numerical classification system found on page 104-105.

¹Except where resistant populations have developed.

Weed control ratings in this section are based on the following scale:

E = Excellent = 90 to 99% control P = Poor = 40 to 65% control
 G = Good = 80 to 90% control N = None = No control
 F = Fair = 65 to 80% control "-" = insufficient information

Herbicide persistence ratings are for residues present 12 months after application:

O = Often S = Seldom N = None

SOIL- APPLIED HERBICIDES*	Lanceleaf Sage	Mallow, Common	Marshelder	Mustard, Wild	Mustard, W. Annual	Nightshade, E/Black	Nightshade, Hairy	Pigweed, Redroot	Waterhemp (ALS- Res)	Prickly Lettuce	Ragweed, Common	Smartweed, Annual	Sunflower	Thistle, Russian	Wormwood, Biennial	Thistle, Canada	Herb. Persistence
Atrazine* (0.38 lb ai/A)	G	-	F	G	G	G	G	G	F	G	F	F	F	G	G	N	N
Atrazine*(0.5 - 0.75 lb ai)	E	-	E	E	E	E	E	E	G	E	E	E	G	E	E	N	S
Authority Assist (PRE)	-	F	P-G	E	E	E	E	E	F-E	P	P	E	P	G-E	G-E	N	O
Auth First / Sonic (PRE)	E	-	E	E	E	E	E	E	F-E	-	G-E	E	E	G-E	G	N	O
Authority MTZ (PRE)	F-G	F-G	E	G-E	G-E	E	F-G	E	F-E	E	G-E	E	P-F	G-E	G-E	N	S
Balance Flexx (PRE)	-	N	G	E	G-E	G-E	G-E	E	G-E	G-E	G-E	G	P	G	G-E	N	S
Boundary (PRE)	F	F	G-E	G-E	G-E	P	P	G-E	G-E	G-E	G-E	G	P	G-E	G-E	N	S
BroadAxe (PRE)	N	-	P-G	P	P	E	F-G	F-G	F-G	P	P	E	N	G-E	F-G	N	S
Callisto (PRE)	-	-	E	E	E	E	E	E	G-E	-	G	E	E	-	-	N	S
Camix (PRE)	-	-	E	E	E	E	E	E	E	-	G	G-E	G	-	-	N	S
Dual* (PPI/PRE)	N	-	N	N	-	N	N	F-G	F-G	N	N	N	N	P	N	N	N
Eptam* (PPI)	N	F-G	P	P	P	F	F	G	F-G	P	F	P	N	P	N	N	N
Fierce (PRE)	-	E	P	E	E	E	E	E	E	G-E	G	G	P	G-E	G-E	N	N
Gangster (PRE)	E	-	E	E	E	E	E	E	G-E	-	E	E	E	G-E	G	N	O
Harness/Surpass*	N	N	P	F	-	G-E	G-E	G-E	G-E	-	P	P	N-P	F	N	N	N
Lumax (PRE)	G	-	E	E	G-E	E	E	E	E	G-E	G-E	G-E	G-E	G-E	G-E	N	O
Matrix/Resolve* (PRE)	N	-	N	F	-	P	P	E	N	-	F	P	F	P	N	N	S
Metribuzin* (PPI/PRE)	F	-	E	G-E	G-E	P	P	G-E	F-G	G-E	F-G	G	P-F	G-E	G-E	N	S
Nortron/Ethotron	-	P	P	P-F	-	F-G	F-G	G-E	F-G	-	P	G-E	P	F-G	-	N	O
Olympus (PRE)	-	-	-	G	G	P	P	P	N	P	P	P	P	P	-	N	O
Outlook* (PPI/PRE)	N	N	N	P-F	-	F-G	F-G	G-E	G	-	N	N	N	P-F	N	N	N
Paramount	N	-	N	N	N	N	N	F	P	E	F	N	F	F	-	P	S
Permit (PPI/PRE)	-	-	-	E	E	N	N	F-E	N	-	E	E	-	N	N	N	O
PrePare (PRE)	N	F	-	-	G	G	G	G	N	P	N	F-G	N	F	P	N	S
Prequel (PRE)	-	-	F-G	E	E	G-E	G-E	E	G-E	G-E	G-E	F-G	P-F	P-F	G-E	N	S
Prowl* (PPI)	N	-	N	N	P	N	N	G	F-G	N	N-P	P	N	F-G	N	N	S
Pursuit (PRE - 0.72 oz)	-	F	P	E	E	E	E	E	N	-	N	F	P	P	N	N	O
Python (PPI/PRE)	G-E	-	P-F	E	E	G-E	G-E	E	N	-	P	G-E	P	E	G-E	N	S
Ro-Neet (PPI)	N	F-G	P	P	P	F-G	F-G	G	F-G	P	P	P	N	P	-	N	N
Sharpen (1 fl oz/A)	-	P-G	-	P-G	P-G	P-G	-	P-G	N-F	P-G	P-F	P-G	P-G	P-G	P-G	N	N
Sharpen (2-3 fl oz/A)	-	G-E	-	E	E	G-E	-	E	G-E	G-E	G-E	E	G-E	E	E	N	S
Sonalan (PPI)	N	-	N	N	P	P	P	E	G-E	P	N	P	N	G-E	N	N	S
Spartan (PRE)	N	-	P-G	P	P	E	F-G	F-E	F-E	P	P	E	N	G-E	F-G	N	S
SureStart/TripleFlex	G	-	E	E	E	E	E	E	G	G-E	E	E	E	F-G	E	F	O
Treflan* (PPI)	N	-	N	N	P	N	N	E	G-E	N	P	P	N	G	N	N	S
Valor/Chateau (PRE)	N	E	P	G	G	E	E	E	G-E	F-E	N-P	F	P	F-G	G	N	N
Verdict (PRE - 10-18 fl oz)	-	G-E	-	E	E	E	-	E	E	G-E	G-E	E	G-E	E	E	P	S
Warrant (PRE to weeds)	N	-	N	P	-	F-G	F-G	G-E	F	-	N	N	N	N	N	N	N

PPI = Preplant Incorporated, PRE = Preemergence, PoPI = Post plant incorporated.

*Or generic equivalent.

¹Except where resistant populations have developed.

POST- APPLIED HERBICIDES*	Mode of Action	Barnyardgrass	Brome, Downy	Foxtail, Green	Foxtail, Yellow	Quackgrass	Volunteer Cereals	Wild Oat	Buckwheat, Wild	Cocklebur, Common	Horseweed (Marestail)	Kochia	Lambsquarters
		E	-	E	F-G	G-E	G-E	E	P	P	N	F ¹	P
Accent*	2	E	-	E	F-G	G-E	G-E	E	P	P	N	F ¹	P
Affinity BS* (1:1) + 2,4-D	2,2,4	N	N	N	N	N	N	N	G-E	G	F ¹	F ¹	E
Thifen&Triben* (2:1) + 2,4-D	2,2,4	N	N	P	P	N	N	N	G-E	E	F ¹	F ¹	E
Audit* (3:1) + 2,4-D	2,2,4	N	N	P	P	N	N	N	G-E	E	F ¹	F ¹	E
Affinity TM* (4:1) + 2,4-D	2,2,4	N	N	P	P	N	N	N	G-E	E	F ¹	F ¹	E
Aim	14	N	N	N	N	N	N	N	P	P	N	F-E	F-G
Ally*/Extra + 2,4-D	2/2,2,4	N	N	N/P	N/P	N	N	N	F-G	F	G ¹	F ¹	E
Amber + 2,4-D	2,4	N	N	N	N	N	N	N	F-G	F-G	F ¹	F ¹	F-G
Assert	2	P	N	P	P	N	N	F-G ¹	F-G	P	N	N	P
Assure II / Targa	1	E	P-E	E	F-G	E	E	G-E ¹	N	N	N	N	N
Atrazine (0.38 lb ai/A)	5	F	F-G	F	F	N	F	F	G-E	F	G	E	E
Atrazine (0.5 - 0.75 lb ai/A)	5	F-G	G	F	F-G	P	F-G	F-G	E	G	E	E	E
Axial Star	1,4	G-E	N	E	G-E	N	N	E ¹	P	E	-	E	N
Axial TBC	1,2	G-E	N	E	G-E	N	N	E ¹	N	N	-	N	N
Axial XL	1	G-E	N	E	G-E	N	N	E ¹	P	P	N	P ¹	P-F
Banvel*	4	N	N	N	N	N	N	N	E	E	F-E	E	G
Banvel* + MCPA	4,4	N	N	N	N	N	N	N	G-E	E	G-E	E	E
Basagran*	6	N	N	N	N	N	N	N	P	G-E	P	P-F	F-G
Betamix / Phen-Des 8+8	5,5	P	N	F	F	N	N	N	F	P-F	-	F-G	G
Betamix + Nortron	5,16	P	N	F-G	F-G	N	N	N	F-G	F	-	F-G	G-E
Beyond	2	E	G-E	E	G-E	F	G-E	E ¹	P	G-E	P ¹	E ¹	F
Bronate*	4,6	N	N	N	N	N	N	N	G-E	E	F-G	G-E	E
Buctril*	6	N	N	N	N	N	N	N	G-E	E	F	G-E	G
Cadet	14	N	N	N	N	N	N	N	P-F	-	N-P	P-F	F-G
Callisto	27	N	-	N	F	N	N	N	F	E	G	P-F	E
Callisto Xtra (+ atrazine)	5,27	N	F-G	N	F	N	N	N	G-E	E	E	E	E
Capreno	2,27	G	G	G	G	N	F-G	G-E	F-G	G-E	G	G-E	E
ClearMax	2,4	E	F-E	E	G-E	F	G-E	E ¹	P	E	G	E ¹	E
Cobra/Phoenix	14	N	N	P-F	P-F	N	N	N	P	G	N-P	P-F	F
Colt + MCPA/Salvo*	4,4	N	N	N	N	N	N	N	F-G	G-E	G-E	E	E
Curtail* / M*	4,4	N	N	N	N	N	N	N	G	E	G	P	G
Discover NG	1	E	N	E	G-E	P	N	E ¹	N	N	N	N	N
ET	14	N	N	N	N	N	N	N	P	P	N-P	P-G	F-G
Everest 2.0	2	P	P-F	E	P-G	P	N	G-E ¹	F	N	N	N	P
Express*	2	N	N	N	N	N	N	N	P-F	F	P ¹	E ¹	F-G
Express* + 2,4-D	2,4	N	N	N	N	N	N	N	F	G	G ¹	E ¹	E
Extreme*	2,9	E	G-E	E	E	E	E	E	G-E	E	G-E ¹	E	G-E
Fenoxaprop*	1	E	N	E	E	N	N	E ¹	N	N	N	N	N
FirstRate	2	N	-	N	N	N	N	N	P-F	E	G-E ¹	P ¹	P
FirstStep	9	E	G	E	E	-	E	G-E	G-E	E	G ¹	G-E ¹	F ¹
Flexstar	14	N	N	P-F	P-F	N	N	N	P	G-E	N-P	G-E	P-F
Flexstar GT	14	E	G-E	E	E	E	E	E	P-G	E	E	E	F-E
Fusilade DX	1	E	F-G	G-E	G-E	G	E	E ¹	N	N	N	N	N
Glean*/Finesse + 2,4-D	2,4	N	N	P-F	N	N	N	N	E	G	G ¹	E ¹	E
Goal	14	P	N	P	P	P	P	F-G	G-E	E	-	G-E	G
GoldSky	2,4	F-G	F-E	F	G	-	-	G-E	G-E	-	-	E	G-E
Halex GT	9,15,27	E	G	E	E	E	E	E	P-G	E	G-E ¹	E	E
Harmony* (1/12 oz)	2	N	N	N	N	N	N	N	P	N	N	N	G
Harmony* (0.3 to 0.6 oz)	2	N	N	N	N	N	N	N	E	P	N	N	E
Hornet	2,4	N	-	N	N	N	N	N	F-G	E	E	F-G ¹	P-F
Huskie	6,27	N	N	N	N	N	N	N	E	E	G-E	G-E	E
Huskie Complete	2,6,27	G-E	-	G-E	G-E	-	N	G-E	E	E	G-E	G-E	E

POST- APPLIED HERBICIDES*	Lanceleaf Sage	Mallow, Common	Marshelder	Mustard, Wild	Mustard, W. Annual	Nightshade, E/Black	Nightshade, Hairy	Pigweed, Redroot	Waterhemp (ALS-Res)	Prickly Lettuce	Ragweed, Common	Smartweed, Annual	Sunflower	Thistle, Russian	Wormwood, Biennial	Thistle, Canada	Herbicide Persistence
Accent*	P	-	P	E	E	N	N	E	N	-	P	G-E	P	P	P	N	O
Affinity BS*(1:1) + 2,4-D*	F-G	F	E	E	E	F-G	F-G	G	F-G	G-E ¹	G	G	G	E ¹	F-G	G-E	N
Thif & Trib*(2:1) + 2,4-D*	G-E	F	E	E	E	F-G	F-G	E	F-G	E ¹	E	E	G-E	E ¹	F-G	G	N
Audit* (3:1) + 2,4-D*	G-E	F	E	E	E	F-G	F-G	E	F-G	E ¹	E	E	G-E	E ¹	F-G	G	N
AffinityTM*(4:1) + 2,4-D*	G-E	F	E	E	E	F-G	F-G	E	F-G	E ¹	E	E	G-E	E ¹	F-G	G	N
Aim	-	-	P	P	P	N-P	N-P	G-E	F-E	P	N	N	P	F	-	N	N
Ally*/Extra + 2,4-D	F-G	F	G-E	E	E	F	F	E	F-G	E	E	F	G-E	E	F-G	G	O
Amber + 2,4-D	F-G	F	E	E	E	F	F	E	F-G	E	E	F	E	E	F-G	F-G	O
Assert	N	N	N	E	G-E	N	N	P	N	N	N	P	N	P-F	N	N	S
Assure II / Targa	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Atrazine (0.38 lb ai)	E	-	G-E	P-G	P-G	G-E	G-E	E	F	E	P	G	F-E	E	-	N	S
Atrazine (0.5 - 0.75 lb ai)	E	-	E	G-E	G-E	E	E	E	G	E	F-G	E	G	E	-	P	S
Axial Star	-	F-G	P	P	P	P	P	N	N	E	E	N	E	P	N	N	N
Axial TBC	N	P	-	F-G	-	-	-	F-G	-	-	F	F	P	-	-	P	S
Axial XL	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Banvel*	P-F	P	E	P	P	E	E	G	F-G	G-E	E	E	G-E	G	G-E	F-G	S
Banvel* + MCPA	G-E	P	G-E	E	F-G	E	E	G	F-G	E	E	E	E	G	G-E	F	S
Basagran*	P	P	G-E	E	E	N	F-G	F	N-P	G	P-F	E	E	G	G-E	F-G	N
Betamix / Phen-Des 8+8	P	P	G	G-E	-	F-G	F-G	G	F	-	F	F	P	P	P	N	N
Betamix + Nortron	P-F	N	G	G-E	-	G	G	G	F	-	F-G	F-G	P	P	P	N	S
Beyond	E	P	G-E	E	E	E	E	E	N	E ¹	P	G-E	E	G-E ¹	P	N-P	S
Bronate*	E	P	E	E	G-E	E	E	G	F-G	F-G	E	G	E	E	F	P-F	N
Buctril*	E	P	E	F-G	F-G	E	E	F	P-F	F-G	E	G-E	G-E	E	P-F	P	N
Cadet	-	-	-	-	-	-	-	G-E	F-G	-	-	-	-	-	-	N	N
Callisto	-	-	E	E	E	E	E	E	G-E	-	P-F	E	E	-	-	N	S
Callisto Xtra (+ atrazine)	E	G-E	E	E	E	E	E	E	E	E	E	E	E	E	E	P	S
Capreno	-	-	-	E	E	E	G-E	E	E	-	G-E	E	G-E	E	G-E	F	O
ClearMax	E	P	E	E	E	E	E	E	F-G	E ¹	G	G-E	E	G-E	F-G	P-F	S
Cobra/Phoenix	E	G-E	G	E	-	G	G	E	G-E	-	F-G	G	P-F	P	P	N	N
Colt + MCPA/Salvo*	P-E	F-G	G-E	E	G	F-G	F-G	F-E	F-G	E	G-E	F-G	G-E	P-G	F-G	F	N
Curtail* / M*	F-G	F-E	E	E	E	E	E	P	P-G	E	E	E	E	G	E	G-E	S
Discover NG	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
ET	-	-	P	P	-	P	P	G	F-G	P	N	N	P	P	-	N	N
Everest 2.0	N	N	N	E	E	E	-	G-E	N	P	N	E	P-F	N	-	N	S
Express*	N	P-F	E	E	E	F-G	-	F-G	N	E ¹	P	F-G	F	E ¹	P-F	G	N
Express* + 2,4-D	F-G	F-E	E	E	E	F-G	F-G	G	F-G	G-E	G	G	F-G	E	F-G	G-E	N
Extreme*	E	G-E	E	E	E	E	E	E	P-E ¹	E	G ¹	E	E	E	G-E	G	O
Fenoxaprop*	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
FirstRate	P	-	E	G-E	P	N	N	P	N	-	E ¹	E	E	-	P	N	O
FirstStep	E	P-G	G-E	E	E	F	F	G-E	P-E ¹	G	G-E ¹	P-E	E	F-G	F-E	G	N
Flexstar	E	G-E	G-E	E	E	G-E	F-G	E	E	-	G-E	G-E	F	-	P	N	O
Flexstar GT	E	F-E	E	E	E	G-E	G	E	E	P-G	G-E	G-E	G-E	G	F-E	F-G	O
Fusilade DX	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Glean*/Finesse + 2,4-D	F-G	F	E	E	E	F	F	E	F-G ¹	E	E	E	E	E	F-G	G	O
Goal	E	-	-	F	F	G-E	G-E	E	G-E	G-E	G	F	F-E	G-E	G	N	N
GoldSky	-	F-G	-	E	E	G	G	E	G-E	G	F-G	G	E	G-E	-	P-F	N
Halex GT	E	P-G	E	E	E	E	E	E	G-E ¹	F-G	E	E	E	G	E	G-E	S
Harmony* (1/12 oz)	N	N	N	E	P	N	N	E	N	P ¹	N	G-E	P	P ¹	N	N	N
Harmony* (0.3 - 0.6 oz)	N	F	G-E	E	G-E	N	N	E	N	G-E ¹	N	E	G-E	G-E ¹	N	N	N
Hornet	E	-	E	E	E	G-E	G-E	P-F	N	E	E	F-G	E	F-G	E	G-E	O
Huskie	E	G	E	E	G-E	E	E	E	G-E	F-G	E	G-E	E	E	G	F-G	S
Huskie Complete	E	G	E	E	G-E	E	E	E	G-E	F-G	E	G-E	E	E	G	F-G	S

POST- APPLIED HERBICIDES* (cont.)	Mode of Action	Barnyardgrass	Brome, Downy	Foxtail, Green	Foxtail, Yellow	Quackgrass	Volunteer Cereals	Wild Oat	Buckwheat, Wild	Cocklebur, Common	Horseweed (Marestail)	Kochia	Lambsquarters
Ignite 280	10	E	-	E	G	P	F-G	G-E	E	E	F	E	F-G
Impact + atrazine (3/8 lb ai)	5,27	E	F-G	G-E	G-E	-	-	-	E	E	G	E	E
Laudis + atrazine (3/8 lb ai)	5,27	E	F-G	F	G-E	-	-	P-F	E	E	G	E	E
Lightning	2,2	E	-	E	E	F	G-E	G-E	E	G	P ¹	E ¹	E
Lumax (3 pt)	5,15,27	N	F-G	N	F	N	N	N	E	G	G	E	E
Maverick	2	-	F-G	P-F	P-F	G	N	E	N	-	F	P ¹	P
MCPA	4	N	N	N	N	N	N	N	N	G	F-G	P	E
Olympus	2	P	F-E	P-F	P-F	F-G	N	G-E ¹	-	-	P	-	-
Option	2	E	-	E	F-E	G-E	E	E	N	G	P	E ¹	G
Orion	2,4	N	N	N	N	N	N	N	G	F-G	-	G ¹	E
Osprey	2	G	F-G	P-F	P-F	N-P	N	G-E ¹	N	N	N	N	N
Paramount	4	G-E	-	E	G	N	N	N	N	N	-	F	F
Paraquat	22	G	-	G	G	P	F-G	G	F	F-G	F-G	G-E	E
Peak + 2,4-D	2,4	N	N	N	N	N	N	N	F-G	G-E	G	G-E ¹	G
Permit	2	N	N	N	N	N	N	N	P	E	-	P ¹	N
Poast	1	E	P-G	E	E	F	G-E	G-E ¹	N	N	N	N	N
PowerFlex	2	F-G	F-E	F	G	-	-	G-E	F-G	-	-	F ¹	G-E
Pulsar	4	N	N	N	N	N	N	N	G-E	E	G-E	E	G-E
Pursuit*	2	G	-	G	F-G	N	G	F ¹	P	G-E	N	E ¹	P-F
Raptor	2	E	F-E	E	G-E	F	G-E	E ¹	P	G-E	N	E ¹	P-F
Rave	2,4	N	N	N	N	N	N	N	E	E	G	E	G-E
Raze	2,4	G	F-G	E	G	N-P	N	E ¹	F-G	E	N	E	P
Realm Q	2,27	G-E	-	G-E	G-E	G-E	G-E	G-E	F	E	G	E ¹	E
Reflex*	14	N	N	N	N	N	N	N	P	G	N-P	F-G	P
Require Q	2,4	G-E	-	G-E	G-E	G-E	G-E	G-E	G-E	E	F-G	G-E ¹	F-G
Resolve*/ Matrix*	2	G-E	-	G-E	G-E	G-E	G-E	G-E	N	N	N	E ¹	F
Resolve Q	2,2	G-E	-	G-E	G-E	G-E	G-E	G-E	P-G	N	-	E ¹	F-G
Resource	14	N	-	N	N	N	N	N	-	F	N-P	-	F-G
Rezult	1,6	E	P-F	E	E	F-G	E	G-E ¹	P	G-E	P	P	F-G
Rimfire Max	2,2	G	P-F	P-F	P-F	F	N	G-E ¹	N	-	P	N	-
Roundup*/glyphosate ²	9	E	G-E	E	E	E	E	G-E	P-G	E	G-E ¹	F-E ¹	P-E ¹
Select* / Select Max	1	E	P-E	E	E	G-E	E	E	N	N	N	N	N
Sencor*	5	F	N	F	F	P	P	-	G	P	F-G	F-G	E
Starane*	4	N	N	N	N	N	N	N	P	E	-	E	N
Starane Flex	4	N	N	N	N	N	N	N	G	E	-	E	P-G
Starane NXT*	4,6	N	N	N	N	N	N	N	E	E	G-E	E	E
Status	2,19	P-F	N	P-F	P-F	N	P	P	E	E	G-E	E	E
Steadfast	2,2	E	-	E	G-E	G-E	E	E	P	P	-	P ¹	P
Stinger* (<0.061 lb ai/A)	4	N	N	N	N	N	N	N	F	G-E	G	N	P
Stinger* (>0.061 lb ai/A)	4	N	N	N	N	N	N	N	F-G	E	G-E	N	P-F
Supremacy	2,2,4	N	N	P	P	N	N	N	E	E	F ¹	E	E
Ultra Blazer	14	N	N	P-F	P-F	N	N	N	P	F-G	N-P	P-F	G
UpBeet (0.125 to 0.25 oz/A)	2	N	N	F-G	F-G	N	N-P	N	F	N	-	P-E ¹	P
UpBeet + Betamix	2,5	P	N	F-G	F-G	N	P	N	F-G	F-G	-	E ¹	G-E
WideMatch*	4,4	N	N	N	N	N	N	N	E	E	G-E	E	N
Wolverine	1,6,27	E	N	E	E	N	N	E ¹	E	E	G-E	G-E	E
2,4-D	4	N	N	N	N	N	N	N	P	G-E	G-E	P	E
2,4-DB/Butyrac	4	N	N	N	N	N	N	N	P	E	-	P	G-E

¹Herbicides will not control resistant biotypes or provide minimal control in tank-mix/premixes with alternative modes of action.

POST- APPLIED HERBICIDES* (cont.)	Lanceleaf Sage	Mallow, Common	Marshelder	Mustard, Wild	Mustard, W. Annual	Nightshade, E/Black	Nightshade, Hairy	Pigweed, Redroot	Waterhemp (ALS-Res)	Prickly Lettuce	Ragweed, Common	Smartweed, Annual	Sunflower	Thistle, Russian	Wormwood, Biennial	Thistle, Canada	Herbicide Persistence
Ignite 280	E	G	E	E	G-E	G-E	G-E	E	F-E	G-E	G-E	E	E	G-E	E	P	N
Impact + atrazine	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	S
Laudis + atrazine	-	G	-	E	E	E	E	E	E	-	E	E	E	E	E	G	S
Lightning	E	G	E	E	E	E	E	E	N	E	G	E	G	E ¹	P	F	O
Lumax (3 pt)	E	-	E	E	E	E	E	E	E	E	E	E	E	E	E	P	S
Maverick	-	N	-	E	E	-	-	P	N	-	-	-	E	-	P	N	O
MCPA	G-E	P	G	E	G-E	P-F	P-F	P-F	P	G	G	F	G	P	F-G	P-F	N
Olympus	-	-	-	E	E	-	-	P-F	N	-	-	-	-	-	-	-	O
Option	N	-	G-E	E	E	E	E	E	N	-	G	P	G	-	-	P	N
Orion	F-G	P	F-G	E	E	F	F	E	P	E	E	G	E	F-G ¹	G	F-G	N
Osprey	N	N	N	E	E	N	N	F	N	N	N	N	N	N	N	N	S
Paramount	N	-	N	N	N	N	N	F	-	N	F	N	F	F	-	P	S
Paraquat	E	G	G	E	G	G-E	G-E	E	E	F-G	G-E	E	E	E	-	P	N
Peak + 2,4-D	F-G	F	-	E	E	-	-	E	F-G	E	E	-	E	E ¹	F-G	F-G	O
Permit	P	-	G-E	E	E	P	P	F-G	N	-	G-E ¹	F-G	E	-	P	N	O
Poast	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
PowerFlex	-	-	-	E	E	-	-	E	N	P-F	-	F	E	G	-	P-F	N
Pulsar	P-F	F-G	G-E	P-F	P	G-E	G-E	G	F-G	E	E	G	G-E	G	G-E	F-G	S
Pursuit*	E	P	E	E	E	E	E	E	N	E ¹	P	G	G-E	G-E ¹	P	N	O
Raptor	E	P	G-E	E	E	E	E	E	N	G ¹	P	G-E	E	G-E ¹	P	N-P	N
Rave	F-G	G	E	E	E	E	E	E	F-G	E	E	E	E	E	F-G	G	O
Raze	N	F-G	P	E	E	E	E	E	N	G-E	G-E	G	G-E	F	PG	N	S
Realm Q	-	-	E	E	E	E	E	E	G-E	-	P-F	E	E	-	-	N	S
Reflex*	E	-	G	E	E	G	P	G-E	G-E	-	G-E	G	P-F	-	P	N	O
Require Q	P-F	P-F	E	E	E	N	G-E	F-E	F-G	G-E	F	F-G	G-E	G	G-E	F-G	S
Resolve* / Matrix*	-	-	-	E	E	G/N	P-F	E	N	-	P	F	P	P ¹	N	N	S
Resolve Q	-	P-F	-	E	E	G/N	P-F	F-E	N	P-F	F	F-G	P	P ¹	N	N	S
Resource	-	-	-	-	-	-	-	F	P-F	-	F	-	-	-	-	N	N
Reztult	P	P	G-E	E	E	N	F-G	F	P	G	P-F	E	E	F-G	G-E	F-G	N
Rimfire Max	N	N	-	E	E	-	-	P-F	N	-	-	N	-	-	-	-	S
Roundup*/glyphosate ²	E	P-G	G-E	G-E	G-E	P-G	P-G	E	P-G ¹	P-G	G-E ¹	P-E	G-E	G	F-E	G-E	N
Select* / Select Max	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Sencor*	-	-	-	E	E	P	P	G	P-G	G-E	E	E	F	-	-	N	O
Starane*	-	F-G	P	P	P	P	P	N	N	E	E	N	E	P	N	N	N
Starane Flex	-	F-G	P	G	G	P	P	G-E	N	E	E	P	E	G ¹	N	N	N
Starane NXT*	E	F-G	E	E	E	E	G-E	P	P-F	G	E	E	E	G-E	P-F	P	N
Status	G	G	E	E	G	G	G	E	G	E	E	E	E	E	E	G	S
Steadfast	P	-	P	E	E	N	N	E	N	-	N	F	P	P ¹	P	N	O
Stinger* (<0.061 lb ai/A)	P	F	G-E	N	N	G-E	G-E	P	N	G-E	F-G	G	G	P	G-E	F-G	S
Stinger* (>0.061 lb ai/A)	F	F-G	E	N	N	E	E	P	N	E	G-E	G-E	G-E	P-F	E	E	S
Supremacy	G-E	F-E	E	E	E	F-G	F-G	E	N	E ¹	E	E	E	E ¹	F-G	G	N
Ultra Blazer	P-F	N	F	E	-	F-G	F-G	E	G-E	-	F-G	E	P-F	G	P	N	N
UpBeet (0.125-0.25 oz)	N-P	G	N	G-E	G	F	F	F	N	N	F	F	N	N-P	N	N	N
UpBeet + Betamix	P-F	G-E	G	E	-	G	G	G-E	F	-	F-G	G	G	P	P	N	N
WideMatch*	P-F	F-E	E	P	P	G-E	G-E	P	N	E	E	G	E	P	E	E	S
Wolverine	E	G	E	E	G-E	E	E	E	G-E	F-G	E	G-E	E	E	G	F	S
2,4-D	P-F	P	E	E	F-G	N-P	N-P	G	F-G	E	E	P-F	E	G	F-G	F	N
2,4-DB/Butyrac	-	-	-	P	P	-	-	P	N	-	P	P	-	P	-	N	N

* Or generic equivalent.

¹ Herbicides will not control resistant biotypes or provide minimal control in tank-mix/premixes with alternative modes of action.

² Weed control from Roundup* is dependant on rate, size of weeds, environmental conditions, and number of applications.