

Control of Volunteer Glyphosate Resistant (GR) Crops

PRE Control of volunteer GR canola:

>90% PRE = Acuron/Flexxi, Authority Assist (7-9 fl oz), Authority First/MTZ, Elite, BroadAxe XC (20-26 fl oz = 75-85%) Balance Flexx, Fierce, FirstRate, Instigate, Realm Q (POST), Resolve Q, Sharpen (2-3 fl oz), Sonic, SureStart (2 pt), Surveil, Verdict.

<70% PRE = Anthem, Authority Assist (6 fl oz), Authority MTZ, Boundary, Metribuzin, Sharpen (1 fl oz), SureStart II (1.5-2 pt), Spartan, Valor, Zidua.

POST Control of volunteer GR canola:

>90% POST = Most ALS herbicides. SureStart II (1.5-2 pt), Teammate (3-leaf).

<70% POST = Aim, Cadet, Basagran >6-leaf, Cobra, Harmony*, Realm Q, Resolve Q, Sharpen >bolting, Ultra Blazer >3-leaf.

		Canola - Pre	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
**See section below table for more herbicides											
POST Grass Herbicides*											
Assure II* / Fusilade DX	3 - 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	6 - 9 fl oz	N	N	N	N	N	G-E	P-F	P	N	N
Broadleaf Herbicides											
Armezon/Impact + atrazine	0.5 fl oz+0.38 lb ai	E	E	E	F	P	N	N	N	P	P
atrazine* + oil adjuvant	0.38 lb ai	E	EG	P	N	N	N	N	N	E	P
	0.5 lb ai	E	G-E	G	P	P	N	N	N	E	F
Bromoxynil & MCPA*	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
Curtail*	0.25 - 0.5 pt	-	G-E	F-G	-	-	N	N	N	F-G	P-F
Dicamba	4 - 12 fl oz	N-P	P	P	P	P	N	N	N	E	E
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	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/Complete	11 fl oz	-	E	E	E	E	N	N	N	G	G
Laudis + atrazine (3/8 lb ai)	3 fl oz	-	E	E	E	F	N	N	N	G	G
Liberty + AMS	22 fl oz	N	E	G-E	P-F	P	N	N	N	G	G
MCPA*	1 pt	P	E	E	G-E	G	N	N	N	G	F
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
Status	2.5 oz	N	F	P	N	N	N	N	N	E	G-E
	4 oz	N	G	F	P	P	N	N	N	E	E
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
Varisto + MSO	11 -16 fl oz	-	E	E	G	F	P-F	P	N-P	N	N
	21 fl oz	-	E	E	E	E	G-E	F	P	N	N
UpBeet + MSO**	0.5 to 1 oz	-	G	N-P	N	N	P-F	N-P	N-P	F	N-P
WideMatch*	0.13 - 0.25 pt	N	P	P	N	N	N	N	N	F-E	P-G
Wolverine Advanced	1.7 pt	-	E	E	E	E	E	E	E	G	G
2,4-D*	0.5 pt	N	G	P	N	N	N	P	P	P	P
	1 pt	N	E	E	G-E	P	N	P	P	-	-

*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

Herbicide Effectiveness, Residual Activity in Soil (soil-applied), and Persistence in Soil (POST applied)

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.

PRE HERBICIDES*	Mode of Action**	Barnyardgrass	Brome, Downy	Foxtail, Green	Foxtail, Yellow	Quackgrass	Volunteer Cereals	Wild Oat	Buckwheat, Wild	Cocklebur, Common	Horseweed (Marestail)	Kochia	Lambsquarters
Acetochlor	15	E	P-F	G-E	G-E	N	P	P-F	P	P	N-P	P-F	F-E
Acuron	5,15,27,27	E	G	E	E	N	P	P	G-E	E	G-E	E	E
Acuron Flexi	15,27,27	E	F	E	E	N	P	P	P	G	G-E	G-E	E
Afforia	2,2,14	N	F-G	P	P	N	N	N	P-F	N	F-E	F-G	G-E
Atrazine* (0.38 lb ai/A)	5	P	G	P	P	N	F-G	F-G	P	N	-	F	F
Atrazine* (0.5 - 0.75 lb ai/A)	5	F	G-E	P	P-F	P	G-E	G-E	G-E	F-G	-	G-E	E
Authority Assist	2,14	P	F-G	P	P	N	N	N	P	P	F	E	E
Auth. Elite/BroadAxe XC	14,15	P-E	P-F	F-E	F-E	N	P-F	P-F	P-G	P	F-G	E	E
Authority First / Sonic	2,14	N	F-G	P	P	N	N	N	P	E	P-E	E	E
Authority MTZ	5,14	P-F	F-G	P-F	P-F	N	P	P	F-G	P-F	F	E	G-E
Balance Flexx	27	E	-	E	F-G	P	N	N	N	P	G-E	G-E	E
Boundary	5,15	F-G	-	F-E	F-E	N	P	P	F-G	P	F	F-G	G
Callisto	27	N	-	N	N	N	N	N	N	P	G-E	P	E
Corvus	2,27	E	G	G-E	G	-	P	F-G	P	F	G	E	E
Dicamba	4	N	N	N	N	N	N	N	E	E	F-E	E	G
Dual/II/Magnum*	15	P-E	P-F	F-E	F-E	N	P	P-F	N-P	N	N	N-P	P-F
Eptam	8	E	-	E	E	F-G	G	G-E	F	P	N	P	F
Fierce	14,15	G	G-E	E	G-E	N	N	P	P-F	P	F-G	F-E	F-E
Instigate	2,27	N	-	N	N	N	N	N	P-F	G-E	F-G	P-F	E
Lumax EZ	5,15,27	G	G	G-E	G-E	N	P	P	G-E	F-G	E	E	E
Metribuzin*	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	8	P	-	F-G	F-G	P	E	G	F-G	P	-	F-G	F
Olympus	2	F	F-G	P	P	P	N	F-G	P	-	N	P ¹	P
Outlook*	15	G-E	P-G	G-E	G-E	N	F-G	P	N	N	N	N	F-G
Permit*	2	N	-	N	N	N	N	N	N	E	P ¹	N ¹	G-E
PrePare	2	P-F	N-P	G-E	P-F	N	N	F-G	-	P	N	F-G ¹	F
Prequel	2,27	E	-	G-E	G-E	N	G-E	G-E	N	G-E	G-E	G	G-E
Prowl*/Sonalan*/Treflan*	3	E	F-G	E ¹	E	N	N-P	P	P	N	N	P	F-G
Resicore	4,15,27	E	P-F	G-E	G-E	N	P	N	G-E	G-E	G-E	P-F	E
Rimsulfuron*	2	G	-	G	F-G	N	G	F	P	F	P ¹	G ¹	F
Ro-Neet	8	E	-	E	E	P	G-E	G	P-F	P	-	P	F-G
Sharpen (1 fl oz/A)	14	N	N	N	N	N	N	N	P-G	P	P-G	P-F	P-F
Sharpen (2-3 fl oz)	14	N	N	N	N	N	N	N	G-E	G	G-E	E	E
Spartan/Charge	14/14	N	F-G	P	P	N	N	N	P-F	P	F	F-E	G-E
SureStart II/TripleFlex II	2,4,15	E	-	E	E	N	G	P	E	E	G-E	G-E ¹	E
Surveil	2,14	N	F-G	P	P	N	N	N	P-F	E	F-E	F-E	F-E
Valor*	14	N	F-G	P	P	N	N	N	P-F	N	F-E	F-G	G-E
Verdict (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	P	P	N	N	P	P	F
Zidua/Anthem	15/14	E	F-G	G-E	G-E	N	N	F-E	P	P	N-P	F	P
Zidua Pro	15/14	E	F-G	E	E	N	P-F	F-E	G-E	G-E	F	F-E	E

PPI = Preplant Incorporated, Pre = Preemergence. Shallow PPI = greater and more consistent weed control compared to PRE.

*Or generic equivalent. **Numbers represent herbicide mode of action from a numerical classification system: 108-109.

¹Except where resistant populations have developed.

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Residual Weed Activity:

S = Short = 0 to 2 weeks

M = Medium = 2 to 6 weeks

L = Long = 6 to 12 weeks

VL = Very long = >12 weeks

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, Wntr. Annual	Nightshade, E/Black	Nightshade, Hairy	Pigweed, Redroot	Waterhemp (ALS- Res)	Prickly Lettuce	Ragweed, Common	Smartweed, Annual	Sunflower	Thistle, Russian	Wormwood, Biennial	Thistle, Canada	Residual weed activity
Acetochlor	N	N	P	F	-	F-G	F-G	G-E	F-E	-	N-P	P	N-P	F	N	N	S-M
Acuron	G	-	E	E	E	E	E	E	E	G-E	E	E	E	E	G-E	N	L
Acuron Flexi	G	-	E	E	E	E	E	E	E	G-E	E	E	E	E	G	N	M
Afforia	N	E	P	G-E	G-E	E	G-E	G-E	G-E	F-G	N-P	F	P	F-G	G	N	M
Atrazine* (0.38 lb ai/A)	G	-	F	G	G	F	F	F	P-F	-	P	F	F	G	G	N	M
Atrazine*(0.5 - 0.75 lb ai)	E	-	E	E	E	E	E	E	G	E	E	E	G	E	E	N	L
Authority Assist	-	F	P-G	E	E	E	E	E	F-E	P	N	G-E	P	G-E	G-E	N	L
Auth. Elite/BroadAxe XC	N	-	P-G	P	P	G-E	F-G	G-E	G-E	P	N	G-E	N	G-E	F-G	N	M-L
Authority First / Sonic	E	-	E	E	E	E	E	E	F-E	-	G-E	E	E	G-E	G	N	L
Authority MTZ	F-G	F-G	E	G-E	G-E	G-E	F-G	E	F-E	G-E	F-G	G-E	P-F	G-E	G-E	N	M-L
Balance Flexx	-	N	G	E	G-E	G-E	G-E	E	G	G-E	G-E	F-G	P	G	G-E	N	M
Boundary	F	F	G-E	G-E	G-E	P	P	G-E	G-E	G-E	P-F	G	P	G-E	G-E	N	M
Callisto	-	-	E	E	E	E	E	E	G-E	-	G	E	E	-	-	N	M
Corvus	-	-	G-E	E	G-E	G-E	G-E	E	E	G-E	G-E	G-E	F	F	G-E	N	M
Dicamba	P-F	P	E	P	P	E	E	G	F-G	G-E	E	E	G-E	G	G-E	F-G	S
Dual/II/Magnum*	N	-	N	N	-	N	N	F-G	F-G	N	N	N	N	P	N	N	S-M
Eptam	N	P-G	P	P	P	F	F	G	F-G	P	F	P	N	P	N	N	S
Fierce	-	E	P	E	E	G-E	F-E	G-E	G-E	F-G	P-F	F-G	P	G-E	G-E	N	M
Instigate	-	-	E	E	E	E	E	E	G-E	N	F-G	E	E	-	-	N	M
Lumax EZ	G	-	E	E	G-E	E	E	E	G-E	G-E	G-E	G-E	G-E	G-E	G-E	N	L
Metribuzin*	F	-	E	G-E	G-E	P	P	G-E	F-G	G-E	P-F	G	P-F	G-E	G-E	N	M
Nortron/Ethotron	-	P	P	P-F	-	F-G	F-G	G-E	F-G	-	P	G-E	P	F-G	-	N	L
Olympus	-	-	-	G	G	P	P	P	N	P	P	P	P	P	-	N	L
Outlook*	N	N	N	P-F	-	F-G	F-G	G-E	G	-	N	N	N	P-F	N	N	S-M
Permit*	-	-	-	E	E	N	N	F-E	N	-	E	E	-	N	N	N	M
PrePare	N	F	-	-	G	G	G	G	N	P	N	F-G	N	F	P	N	M
Prequel	-	-	F-G	E	E	G-E	G-E	G-E	G	G-E	G-E	F-G	P-F	P-F	G-E	N	M
Prowl*/Sonalan*/Treflan*	N	-	N	N	P	N-P	N-P	E	G-E	N	N	P	N	F-G	N	N	VL
Resicore	-	-	E	E	E	E	E	E	G-E	-	E	E	E	-	E	N	M
Rimsulfuron*	N	-	N	F	-	P	P	E	N	-	F	P	F	P	N	N	M
Ro-Neet	N	F-G	P	P	P	F-G	F-G	G	F-G	P	F	P	N	P	-	N	S
Sharpen (1 fl oz/A)	-	P-G	-	P-G	P-G	P-G	-	F-G	F	P	F	F	P-G	P-G	P-G	N	S
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	M
Spartan/Charge	N	-	P-G	P	P	E	F-G	F-E	F-E	P	N	G-E	N	G-E	G	N	L
SureStart II/TripleFlex II	G	-	E	E	E	G-E	G-E	G-E	P	G-E	F-G	G-E	E	F-G	E	F	M
Surveil	E	-	E	E	E	G-E	G-E	G-E	G	F-E	F-G	G-E	E	G-E	G	N	L
Valor*	N	E	P	G	G	E	G-E	G-E	G-E	F-G	N-P	F	P	F-G	G	N	M
Verdict (10-18 fl oz)	-	G-E	-	E	E	G-E	-	E	E	G-E	G-E	E	G-E	E	E	P	M
Warrant (Pre to weeds)	N	-	N	P	-	F-G	F-G	G-E	G	-	N	N	N	N	N	N	S-M
Zidua/Anthem	-	-	P	P	-	F-G	F-G	G	G	-	N-P	F	N	F	F	N	M-L
Zidua Pro	-	-	E	E	E	E	E	E	G-E	-	F-G	E	F-G	E	E	N	L

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
Affinity BS* (1:1) + 2,4-D	2,2,4	N	N	N	N	N	N	N	G-E	G	F ¹	F ¹	F
Thifen&Triben* (2:1) + 2,4-D	2,2,4	N	N	P	P	N	N	N	G-E	F	F ¹	F ¹	F
Audit* (3:1) + 2,4-D	2,2,4	N	N	P	P	N	N	N	G-E	F	F ¹	F ¹	F
Affinity TM* (4:1) + 2,4-D	2,2,4	N	N	P	P	N	N	N	G-E	F	F ¹	F ¹	F
Aim	14	N	N	N	N	N	N	N	P	P	N	F-E	F-G
Armezon/Pro + atrazine	5,27	E	F-G	G-E	G-E	-	-	-	E	E	G	E	E
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	P	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 XL	1	G-E	N	E	G-E	N	N	E ¹	N	N	N	N	N
Basagran*	6	N	N	N	N	N	N	N	P-G	G-E	P-F	P-E	F-E
Betamix	5,5	P	N	F	F	N	N	N	F	P-F	-	F-G	G
Betamix + Nortron	5,8	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
Bromoxynil*	6	N	N	N	N	N	N	N	G-E	E	F	G-E	G
Bromoxynil & MCPA*	4,6	N	N	N	N	N	N	N	G-E	E	F-G	G-E	E
Cadet	14	N	N	N	N	N	N	N	N-P	N	N	P-F	F-G
Callisto	27	N	-	N	F	N	N	N	P	E	F-G	P-F	E
Callisto Xtra	5,27	N	F-G	N	F	N	N	N	G-E	E	E	E	E
Capreno + atrazine	2,5,27	G	G	G	G	N	F-G	G-E	G	G-E	G	G-E	E
Cobra/Phoenix	14	N	N	N	N	N	N	N	P	G-E	N	P-F	N
Curtail* / M*	4,4	N	N	N	N	N	N	N	G	E	G	P	G
Dicamba ² (1-4 oz ai/A)	4	N	N	N	N	N	N	N	E	E	F-E	G-E ¹	G-E
Dicamba ² (8 oz ai/A)	4	P	N	P	P	N	P	P	E	E	G-E	E ¹	E
DiFlexx ²	4	N	N	N	N	N	N	N	E	E	G	G-E	E
DiFlexx Duo ²	4,27	E	F-G	F	G-E	N	N	N	E	E	G-E	E	E
Discover NG	1	E	N	E	G-E	P	N	E ¹	N	N	N	N	N
Enlist Duo ²	4,9	N	N	N	N	N	N	N	P-G	E	G-E ¹	F-E ¹	E
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	N-F	N ¹	E ¹	P-F
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 ¹	E	G
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
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	P-G	G-E ¹	G-E
Fusilade DX	1	E	F-G	G-E	G-E	G	E	E ¹	N	N	N	N	N
Glyphosate ²	9	E	G-E	E	E	E	E	E	P-G	E	G-E ¹	F-E ¹	P-E ¹
Goal/Collide	14	P	N	P	P	P	P	F-G	G-E	E	-	G-E	G
GoldSky	2,4	G-E	F-G	F-G	G-E	F	-	G-E	G-E	G-E		G-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	N	N	N	N	F-G
Harmony* (0.3 to 0.6 oz)	2	N	N	N	N	N	N	N	G-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	F	G-E	G-E	P	N	G-E	E	E	G-E	G-E	E
Impact + atrazine (3/8 lb ai)	5,27	E	F-G	G-E	G-E	-	-	-	E	E	G-E	E	E
Laudis + atrazine (3/8 lb ai)	5,27	E	F-G	F	G-E	-	-	P-F	E	E	G-E	E	E
Liberty	10	E	-	E	G	P	F-G	G-E	E	E	F	E	F-G
Lumax EZ (3 pt)	5,15,27	N	F-G	N	F	N	N	N	E	G	G-E	E	E
Marvel	14,14	N	N	P-F	P-F	N	N	N	P	G-E	N-P	G-E	P-F

**POST- APPLIED
HERBICIDES***

	Lanceleaf Sage	Mallow, Common	Marshelder	Mustard, Wild	Mustard, Wntr. 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
Affinity BS*(1:1) + 2,4-D*	F-G	F	E	E	E	F-G	F-G	G	F-G	G-E ¹	G ¹	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 ¹	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 ¹	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 ¹	E	G-E	E ¹	F-G	G	N
Aim	-	-	P	P	P	N-P	N-P	G	F-G	P	N	N	P	F	-	N	N
Armezon/Pro + atrazine	E	E	E	E	E	E	E	E	E	E	E	E	E	E	E	G	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 XL	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Basagran*	P	P	G-E	E	E	N	F-G	F-E	N-E	G	P-F	E	E	G	G-E	F-G	N
Betamix	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
Bromoxynil*	E	P	E	F-G	F-G	E	E	F	P-F	F-G	E	G-E	G-E	E	P-F	P	N
Bromoxynil & MCPA*	E	P	E	E	G-E	E	E	G	F-G	F-G	E	G	E	E	F	P-F	N
Cadet	-	-	-	-	-	-	-	F-G	P-G	-	N	-	-	-	-	N	N
Callisto	-	-	E	E	E	E	E	E	G-E	N	P	E	E	-	-	N	S
Callisto Xtra	E	G-E	E	E	E	E	E	E	E	E	F	E	E	E	E	P	S
Capreno + atrazine	-	F-G	G-E	E	E	E	G-E	E	E	G	G-E	E	E	E	G-E	F	O
Cobra/Phoenix	E	G-E	G	E	-	P	P	G-E	G	-	P-E	P	P-F	P	P	N	N
Curtail* / M*	F-G	F-E	E	E	E	E	E	P	P-G	E	E	E	E	G	E	G-E	S
Dicamba ² (1-4 oz ai/A)	F	P	E	P	P	G-E	G-E	P-G	P-G	G	E	E	E	F	G-E	F	S
Dicamba ² (8 oz ai/A)	F-G	P	E	P	P	E	E	F-E	P-E	E	E	E	E	F-G	E	F-G	S
DiFlexx ²	G	P	E	P	P	G	G	P-G	P-G	G	E	E	E	F	G-E	F-G	S
DiFlexx Duo ²	G	G	E	E	G-E	E	E	E	G-E	G-E	E	E	E	G-E	E	G	S
Discover NG	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Enlist Duo	E	P-F	E	E	G-E	P-G	P-G	E	F-E ¹	E	E	P-E	E	G	F-E	G-E	N
Everest 2.0	N	N	N	E	E	E ¹	N	G-E	N	P	N	E	P-F	N	-	N	S
Express*	N	P-F	E	E	E	P-F	-	F-E	N	G ¹	N	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-E ¹	P-E	E	G-E	P-E	G-E	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
Flexstar	E	G-E	G-E	E	E	G-E	F-G	E	P-E	-	P-E	G-E	F	-	P	N	O
Flexstar GT	E	F-E	E	E	E	G-E	G	E	P-E	F-G	F-E	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
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
Goal/Collide	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	G-E	G	G	G-E	G-E	G	F-G	G	G-E	F-G ¹	-	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	G	N	P ¹	N	F-G	P	P ¹	N	N	N
Harmony* (0.3 - 0.6 oz)	N	F	G-E	E	G-E	N	N	G-E	P-E	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	E	F-G	E	G-E	E	E	G	F-G	S
Huskie Complete	E	G	E	E	G-E	E	E	E	E	F-G	E	G-E	E	E	G	F-G	S
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	E	E	G	S
Liberty	E	G	E	E	G-E	G-E	G-E	E	F-E	G-E	G-E	E	E	G-E	E	P	N
Lumax EZ (3 pt)	E	-	E	E	E	E	E	E	E	E	E	E	E	E	E	P	S
Marvel	E	G-E	G-E	E	E	G-E	F-G	E	E	-	G-E	G-E	F	-	P	N	O

POST- APPLIED HERBICIDES* (cont.)	Mode of Action								Buckwheat, Wild	Cocklebur, Common	Horseweed (Marestail)	Kochia	Lambsquarters
		Barnyardgrass	Brome, Downy	Foxtail, Green	Foxtail, Yellow	Quackgrass	Volunteer Cereals	Wild Oat					
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	N	E
Metribuzin*	5	F	N	F	F	P	P	-	G	P	F-G	F-G	E
Olympus	2	F	F-E	P-F	P-F	F-G	N	G-E ¹	-	-	P	-	-
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
Paraquat	22	G	-	G	G	P	F-G	G	F	F-G	F-G	G-E	E
PerfectMatch	2,4	G-E	F-g	F-G	G-E	F	-	G-E	E	E	G-E	F-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	G-E	F-G	F	G	-	-	G-E	F-G	-	-	F ¹	G-E
Pursuit*	2	G	-	G	F-G	N	G	F ¹	P	G-E	N	E ¹	P
Quelex	2,4	N	N	N	N	N	N	N	G-E	-	G-E	F	G-E
Raptor	2	E	F-E	E	G-E	F	G-E	E ¹	P	G-E	N	E ¹	P-F
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	P-F	E	F-G	P-F ¹	E
Reflex*	14	N	N	N	N	N	N	N	P	G	N-P	F-E	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
Resicore	4,15,27	N	N	N	N	N	N	N	G-E	E	G-E	P-F	E
Resolve Q	2,2	G-E	-	G-E	G-E	G-E	G-E	G-E	P	N	N	E ¹	F-G
Resource	14	N	-	N	N	N	N	N	-	F	N	P	F-G
Revulin Q	2,27	G-E	-	G-E	G-E	G-E	G-E	G-E	P-F	E	F-G	P-F ¹	E
Rimfire Max	2,2	G	P-F	P-F	P-F	F	N	G-E ¹	N	-	P	N	-
Rimsulfuron	2	G-E	-	G-E	G-E	G-E	G-E	G-E	N	N	N	E ¹	F
Select* / Select Max	1	E	P-E	E	E	G-E	E	E	N	N	N	N	N
Starane Ultra	4	N	N	N	N	N	N	N	P	E	-	F-E	N
Starane Flex	4	N	N	N	N	N	N	N	G	E	-	F-E	P
Starane NXT*	4,6	N	N	N	N	N	N	N	E	E	G-E	E	E
Status	4,19	P-F	N	P-F	P-F	N	P	P	E	E	G-E	G-E	E
Stinger* (<0.061 lb ai/A)	4	N	N	N	N	N	N	N	F	G-E	G	N	N
Stinger* (>0.061 lb ai/A)	4	N	N	N	N	N	N	N	F-G	E	G-E	N	P
Storm	6,14	N	N	P-F	P-F	N	N	N	P-F	F-G	N	P-E	F-E
Supremacy	2,2,4	N	N	P	P	N	N	N	E	E	F ¹	E	E
SureStart II/TripleFlex II	2,4,15	E	-	E	E	N	G	P	E	E	G-E	G-E ¹	E
Talinor	6,27	N	N	N	N	N	N	N	E	E	G-E	G-E	E
Teammate	2	G-E	F-G	F-G	G	F	N	G-E	F-G	-	-	F ¹	G
Ultra Blazer	14	N	N	P-F	P-F	N	N	N	P	F-G	N	P-E	N
UpBeet (0.5 to 1 oz/A)	2	N	N	F-G	F-G	N	N-P	N	F-G	P	-	F-E ¹	P
UpBeet + Betamix	2,5	P	N	F-G	F-G	N	P	N	F-G	F-G	-	E ¹	G-E
Varisto	2,6	E	F-E	E	G-E	F	G-E	E ¹	P-G	E	N	E ¹	F-E
Varro	2	G-E	F	G-E	G-E	P	N	G-E	P	-	-	N	P
WideMatch*	4,4	N	N	N	N	N	N	N	E	E	G-E	F-E ¹	N-F
Wolverine Advanced	1,6,27	E	N	E	E	N	N	E ¹	E	E	G-E	G-E	E
2,4-D ²	4	N	N	N	N	N	N	N	P	G-E	F-E	P	E
2,4-DB/Butyrac	4	N	N	N	N	N	N	N	P	E	-	N	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
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
Metribuzin*	-	-	-	E	E	P	P	G	P-G	G-E	E	E	F	-	-	N	O
Olympus	-	-	-	E	E	-	-	P-F	N	-	-	-	-	-	-	-	O
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
Paraquat	E	G	G	E	G	G-E	G-E	E	E	F-G	G-E	E	E	E	-	P	N
PerfectMatch	P-F	F-E	E	G-E	G	G-E	G-E	G-E	N	E	E	G	E	P	G	G-E	S
Permit	P	-	G-E	E	E	P	P	F	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
Pursuit*	E	P	E	E	E	E	E	E	N	E ¹	N	G	G-E	P-E ¹	N	N	O
Quelex	-	-	-	E	E	G-E	G-E	G-E	-	F	G-E	G-E	F	F	-	P-F	S
Raptor	E	P	G-E	E	E	E	E	E	N	G ¹	N	G-E	E	G-E ¹	P	N-P	N
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	N	P	E	E	-	-	N	S
Reflex*	E	-	G	E	E	G	P	G-E	G-E	-	P-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
Resicore	-	-	E	E	E	E	E	E	F-E	-	E	E	E	-	E	N	S
Resolve Q	-	P-F	-	E	E	G/N	P-F	F-E	N	P-F	F-G	F-G	P	P ¹	N	N	S
Resource	-	-	-	-	-	-	-	F-G	N-P	-	N-P	-	-	-	-	N	N
Revulin Q	-	-	E	E	E	E	E	E	G-E	N	P	E	E	-	-	N	S
Rimfire Max	N	N	-	E	E	-	-	P-F	N	-	-	N	-	-	-	-	S
Rimsulfuron	-	-	-	E	E	G/N	P-F	E	N	-	P	F	P	P ¹	N	N	S
Select* / Select Max	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Starane Ultra	-	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	G-E	G-E	E	E	E	E	E	E	G	S
Stinger* (<0.061 lb ai/A)	P	F	G-E	N	N	G-E	G-E	N	N	G-E	F-E	G	G	P	G-E	F-G	S
Stinger* (>0.061 lb ai/A)	F	F-G	E	N	N	E	E	N	N	E	G-E	G-E	G-E	P-F	E	E	S
Storm	P-F	P	F-G	E	G-E	F-G	F-G	E	F-E	G	P-F	E	F-E	G	G-E	N	N
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
SureStart II/TripleFlex II	G	-	E	E	E	G-E	G-E	G-E	P	G-E	F-G	G-E	E	F-G	E	F	O
Talinator	E	G	E	E	G-E	E	E	E	E	F-G	E	G-E	E	E	F	F-G	S
Teammate	-	-	-	E	E	-	-	E	N	P-F	-	F	E	G	-	P-F	N
Ultra Blazer	P-F	N	F	E	-	F-G	F-G	E	G-E	-	N-F	E	P-F	G	P	N	N
UpBeet (0.5-1 oz)	N-P	G	N	G-E	G	F	F	F	F	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
Varisto	E	P	E	E	E	E	E	E	N	G ¹	P-F	E	E	G-E ¹	G-E	F-G	S
Varro	-	-	-	G	F	-	-	F-G	F ¹	-	-	-	-	P	-	-	S
WideMatch*	P-F	F-E	E	P	P	G-E	G-E	P	N	E	G-E	G	E	P	E	G-E	S
Wolverine Advanced	E	G	E	E	G-E	E	E	E	G-E	F-G	E	G-E	E	E	G	F	S
2,4-D ²	P-F	P	E	E	F-G	N-P	N-P	F-G	F	E	E	P	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 is dependant on rate, size of weeds, environmental conditions, and number of applications.