

# TOP CROP MANAGER



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## WEED CONTROL GUIDE 2019

CORN ..... 2  
 SOYBEANS.....5  
 CEREALS.....9

There are several herbicides that help control tough weeds like Canada fleabane.

**W**eed management is a part of crop production that never leaves a grower's mind. Weeds are constantly evolving and changing; weeds that pop up this year may not have even been a blip on the radar in previous seasons. Adding to this, new forms of resistance are constantly emerging, and decisions can become overwhelming.

To simplify the decision-making process, we're pleased to bring you another edition of our annual Weed Control Guide, in which we've listed products available to you (as of publication time) in alphabetical order. The information herein primarily comes directly from chemical companies themselves. However, growers should always double-check provincial guidelines and product labels to avoid errors. Furthermore, the ratings provided in the tables should be used as a guide when selecting herbicides. Herbicide-tolerant varieties are listed in red type, and the overall format allows you to compare options for grassy and broadleaf weed products. Once you've selected your choices, be sure to compare tank-mixes to best address the range of weeds in your fields. The ratings provided in the tables should be used as a guide when selecting herbicides. It is important to remember that actual control can vary greatly depending on a number of factors, including soil type, moisture conditions, weed pressure and size, and environment. Also, products can sometimes become antagonistic and will therefore be less effective on a particular weed when used in combination, compared to when it's used separately. Each year, new products are introduced to the market while others are withdrawn. We have done our best to include all registered products in this guide, but as new products are introduced, we recommend readers make notes in their copy.

We are grateful for the numerous weed management specialists for their assistance and helpful suggestions contained in *Top Crop Manager's Weed Control Guide*.



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CORN		
	Chemical group	Crop tolerance
Option 2.25 OD	2	E
Pardner / Koril / Brotex / Bromotril II	6	E
Peak (75% WG)	2,4	E
Permit	2	E
Primextra II Magnum	5,15	E
Prowl H2O	3	E
Shotgun	4,5	
Simadex / Simazine 480 / Princep Nine-T	5	E
Tropotox Plus / Clovitox Plus / Topside + A3	4	G
Ultim	2	G
Valtera	14	G
Zidua SC	15	E

**APPLICATION TIMING**

Pre-plant or burndown	Pre-plant incorporated	Pre-emergence	Early post-emergence	Late post-emergence
			•	•
			•	•
			•	•
•	•	•	•	
		•	•	
			•	•
	•	•		
			•	•
•		•		
•	•	•		

Tank-mix partners (herbicide group in parentheses)
atrazine(5), Banvel II/Engenia(4), Callisto(27), Distinct(4,19), Marksman/Propero(4,5), Pardner/Koril/Brotex/Bromotril(6), PeakPlus(2,4)
Accent(2), atrazine(5), Banvel II/Engenia(4), Option(2), Ultim(2)
atrazine(5), Accent(2), Option(2), Ultim(2)
2,4-D(4), Accent(2), atrazine(5), Armezon/Impact(27), Beacon(2), Callisto(27), Converge(27), dicamba(4), Dual II Magnum(15), Frontier Max(15), glyphosate(9), Halex GT(9,15,27), Liberty(10), Lumax(5,15,27), Option(2), Pardner(6), PrimeExtra II Magnum(5,15), Ultim(2)
Banvel II/Engenia/Hawkeye/Oracle(4), Broadstrike RC(2), Callisto(27), glyphosates(9), Lorox/Linuron(7)
Accent(2), atrazine(5), Banvel II/Engenia/Hawkeye/Oracle(4), glyphosates(9), Liberty(10), Marksman(4,5), Shotgun(4,5)
Accent(2), Prowl H2O(3), Ultim(2)
atrazine(5), Banvel II/Engenia/Hawkeye/Oracle(4), Callisto(27), Distinct(4,19), Marksman(4,5), Pardner/Koril/Brotex/Bromotril(6), PeakPlus(2,4), Shotgun(4,5)
glyphosates(9)
atrazine(5), Marksman(4,5), glyphosates(9)

**GRASSY WEEDS**

Barnyard grass(A)	Crabgrass, smooth	Crabgrass, large	Fall panicum	Foxtail, giant	Foxtail, green(B)	Foxtail, yellow(A)	Old witchgrass(A)	Proso millet
9	0	7/8	9	9	9	8	9	9
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
9	9	9	8a	8	9/8c	9/8c	9	2
9	9	9	9	8	8	8	?	5
0	0	0	0	0	0	0	0	0
9	8	8	7	9	9	9	9	2
0	0	0	0	0	0	0	0	0
9	?	7/8	9	9	9	7	9	9
3	3	3	3	5	5	5	3	?
9	9	9	?	9	9	9	?	?

**BROADLEAF WEEDS**

Buckwheat, wild	Cocklebur(B)	Corn spurry	Fleabane, Canada (B,C)	Lady's thumb	Lamb's-quarters (A,B)	Mustards (A)	Nightshades (B)	Pigweeds (A,B)	Ragweed, common(A,B,C)	Ragweed, giant(B,C)	Velvetleaf
0	0	0	0	0	0	0	0	9	0	0	0
9	7	?	?	9	9	8	9	8	9	?	9
?	9	?	7	9	9	9	?	9	9	7	9
?	9	7	5	7	5	9	5	9	8	7	9
9	7	9	?	9	9	9	9	9	7	?	2
?	?	?	?	6	9	0	8	8	2	?	6
9	7	?	?	9	9	9	9	9	9	?	9
9	7	9	?	9	9	9	9	9	8	?	5
8	8	0	?	0	7	8	7	9	9	?	9
?	?	?	?	5	5	7	2	9	?	?	5
7	4	?	8	7	9	?	9	9	7	3	7
?	?	?	?	?	?	?	9	9	?	?	?

**PERENNIAL WEEDS**

Bindweed	Field horsetail	Milkweed	Nutsedge	Quackgrass	Sowthistle	Thistle, Canada
0	0	0	0	9	0	0
7	0	0	0	0	7	7
?	?	?	0	0	?	?
5	5	5	9	0	?	0
0	0	0	8b	0	0	0
?	?	?	?	?	?	?
0	?	0	0	0	?	?
2	0	0	5	5	2	2
8	0	0	0	0	8	8
?	?	7	?	9	?	?
?	?	?	?	?	?	?
?	?	?	?	?	?	?

**GLYPHOSATE PRODUCTS & TANK MIXES FOR BURNDOWN AND/OR ROUNDUP READY PROGRAMS**

Product	Chemical group	Crop tolerance	RR	RR
Armezon / Impact + atrazine + glyphosates	27+5+9	E		
Armezon Pro + atrazine + glyphosate	15,27+9+5	E	•	
atrazine + glyphosates	5+9	E		
BlackHawk + glyphosates	4,14+9	E	•	*
Callisto 480SC + atrazine + glyphosates	27+5+9	E		
Callisto GT (Callisto + glyphosate)	27+9	E		
Converge XT + glyphosates	5,27+9	E	•	•
Destra IS + glyphosates	2,27+9	G		
Elevore + glyphosates	4+9	G	•	
Engarde + glyphosates	2,27+9	E		•
glyphosates (many different product names)	9	E	•	
Halex GT + atrazine	9,15,27+5	E		

Marksman(4,5)
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**CONTROL RATINGS: CONTACT/RESIDUAL**

9/6	9/0	9/6	9/0	9/6	9/6	9/0	9/0	9/0
9/9	9/9	9/9	9/9	9/9	9/9	9/9	9/9	9/4
9/2	9/2	9/2	9/2	9/2	9/2	9/2	9/2	9/2
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/2	9/0	9/2	9/0	9/2	9/2	9/2	9/2	9/2
9/2	9/0	9/2	9/0	9/2	9/2	9/2	9/2	9/2
9/9	9/?	9/?	9/9	9/?	9/9	9/9	9/9	9/?
9/9	9/?	9/9	9/8	9/8	9/8	9/7	9/8	9/8
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/9	9/5	9/8	9/9	9/9	9/9	9/8	9/9	9/9
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/9	9/8	9/?	8/6	9/9	9/9	9/9	9/9	9/4

8/8	9/7	8/9	9/?	8/9	9/9	9/9	9/9	9/9	9/9	9/6	9/6
9/9	9/8	9/?	8/?	9/9	9/9	9/9	9/9	9/9	9/8	9/5	9/7
8/9	9/7	8/9	9/?	8/9	9/9	9/9	9/9	9/9	9/9	8/6	9/5
9/0	9/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
8/8	9/7	8/9	8/8	9/9	9/9	9/9	9/9	9/9	9/9	8/5	9/9
8/8	9/8	8/9	8/8	9/5	9/9	9/9	9/9	9/9	9/6	8/5	9/9
9/9	9/?	9/?	9/?	9/9	9/9	9/9	9/?	9/9	9/9	8/6	9/9
8/8	9/5	8/?	8/?	8/8	9/7	9/8	9/9	9/8	9/7	8/6	9/9
9/0	9/0	8/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/8	9/7	9/?	8/8	9/9	9/9	9/9	9/9	9/9	9/9	9/8	9/9
8/0	9/0	8/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0
9/9	9/8	9/?	8/6	9/9	9/9	9/9	9/9	9/9	9/9	7/6	9/9

7/0	7/0	8/0	8/0	9/0	8/0	9/0
7/0	7/?	8/0	8/3	9/0	8/0	9/0
7/2	7/0	8/0	8/0	9/0	8/0	9/0
8/0	6/0	8/0	8/0	9/0	8/0	9/0
7/2	7/0	8/0	8/0	9/0	8/0	9/0
7/2	3/0	8/0	8/0	9/0	8/0	9/0
7/?	7/0	8/0	8/0	9/0	8/0	9/0
8/2	5/0	8/0	8/0	9/7	8/0	9/0
8/0	6/0	8/0	8/0	9/0	8/0	9/0
7/2	6/0	9/0	9/4	9/0	8/0	9/0
8/0	5/0	8/0	8/0	9/0	8/0	9/0
7/2	4/0	8/0	8/3	9/0	8/0	9/0

Control rating: 9=>90% control      8= 80 to 90% control      Ratings 5,6,7= 50 to 80% control

Performance of some products on certain weeds may vary according to application timing. Some tank-mixes may have higher ratings on some weeds than shown, especially if various timings are recommended. Various formulations may be available and additional application rates may be recommended.

? - Insufficient data available to provide control rating  
 a - Use high rate for optimum control  
 b - Use ppi timing for optimum control  
 c - Use pre timing for optimum control

d- Directed spray only  
 e- Use post timing for optimum control  
 A - Triazine resistant biotypes exist  
 B - Group 2 resistant biotypes exist

C - Glyphosate resistant biotypes exist  
 LL - Liberty Link corn only  
 RR - Roundup Ready corn only  
 EWC - Enlist Tolerant corn only

\* - Early post-emergence/late post-emergence: each product has its own specific recommendation on stage of crop growth. Check product label for details.



# CORN

### APPLICATION TIMING

	Chemical group	Crop tolerance
Integrity + glyphosates	14,15+9	E
Marskman / Propero + glyphosates	4,5+9	E
Permit + glyphosates	2+9	E
Primextra II Magnum + glyphosates	5,15+9	E
Roundup Xtend with VaporGrip	4,9	E
Vios G3 + glyphosates	2,27+9	E
XtendiMax with VaporGrip Technology + Roundup WeatherMax	4+9	E
Zidua SC + glyphosates	15+9	E

Pre-plant or burndown	Pre-plant incorporated	Pre-emergence	Early post-emergence	Late post-emergence
•	•	•		
			RR	
			RR	RR
•			RR	
			RR	RR
•			RR	
			RR	RR
•			RR	

Tank-mix partners (herbicide group in parentheses)

atrazine(5)
dicamba(4), atrazine(5)
Marksman(4,5)

### GRASSY WEEDS

Barnyard grass(A)	Crabgrass, smooth	Crabgrass, large	Fall panicum	Foxtail, giant	Foxtail, green(B)	Foxtail, yellow(A)	Old witchgrass(A)	Proso millet
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9/9	9/9	9/9	9/8	9/8	9/9	9/9	9/9	9/4
9/2	9/2	9/2	9/2	9/2	9/2	9/2	9/2	9/2
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/9	9/8	9/8	9/8	9/8	9/8	9/8	9/9	9/2
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/9	9/8	9/8	9/9	9/9	9/9	9/9	9/9	9/7
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/9	9/9	9/9	9/7	9/9	9/9	9/9	9/9	9/7

### BROADLEAF WEEDS

Buckwheat, wild	Cocklebur(B)	Corn spurry	Fleabane, Canada (B,C)	Lady's thumb	Lamb's-quarters (A,B)	Mustards (A)	Nightshades (B)	Pigweeds (A,B)	Ragweed, common(A,B,C)	Ragweed, giant(B,C)	Velvetleaf
-----------------	--------------	-------------	------------------------	--------------	-----------------------	--------------	-----------------	----------------	------------------------	---------------------	------------

9/9	9/9	9/?	9/9	9/9	9/9	9/9	9/9	9/9	9/9	9/9	9/9
9/9	9/7	9/9	9/?	9/9	9/9	9/9	9/9	9/9	9/9	9/7	9/8
9/?	9/9	9/7	9/5	9/7	9/5	9/9	9/5	9/9	9/8	9/7	9/9
9/9	9/7	9/9	9/?	9/9	9/9	9/9	9/9	9/9	9/9	8/?	9/5
9/9	9/7	9/9	9/8	9/9	9/9	9/6	9/9	9/9	9/9	9/7	9/8
9/9	9/?	9/?	9/?	9/9	9/9	9/9	9/9	9/9	9/9	8/?	9/8
9/8	9/7	9/9	9/8	9/9	9/9	9/6	9/9	9/9	9/9	9/7	9/8
8/?	9/?	9/?	8/?	8/?	9/?	9/?	9/9	9/9	9/?	8/?	9/?

### PERENNIAL WEEDS

Bindweed	Field horsetail	Milkweed	Nutsedge	Quackgrass	Sowthistle	Thistle, Canada
----------	-----------------	----------	----------	------------	------------	-----------------

7/?	7/?	8/?	8/9	9/?	8/?	9/?
7/2	7/0	8/0	8/0	9/2	8/2	9/2
7/5	7/5	8/5	8/9	9/0	8/?	9/0
7/0	7/0	8/0	8/3	9/0	8/0	9/0
8/2	5/0	8/0	8/0	9/0	8/2	9/2
7/?	7/?	8/?	8/0	9/?	8/0	9/?
8/2	5/0	8/0	8/0	9/0	8/2	9/2
8/?	5/?	8/?	8/?	9/?	8/?	9/?

### LIBERTY-TOLERANT PRODUCTS & TANK MIXES

Atrazine + Liberty 200 SN	5+10	E
Distinct + Liberty 200 SN	4,19+10	E
Liberty 200 SN	10	E
Marksman / Propero + Liberty 200 SN	4,5+10	E
Permit + Liberty 200 SN	2+10	E
Prowl H2O + Liberty 200 SN	3+10	E
Vios G3 + Liberty 200 SN	2,27+10	E

			LL	LL
			LL	LL
			LL	LL
		•	LL	LL
			LL	LL
		•	LL	LL
			LL	LL

atrazine(5)
-------------

### CONTROL RATINGS: CONTACT/RESIDUAL

8/9	9/7	9/9	7/?	9/9	8/9	9/9	9/9	9/9	9/9	9/9	7/6	9/5
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
8/0	9/0	7/0	7/0	9/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0	
9/9	9/7	7/9	9/?	9/9	9/9	9/9	9/9	9/9	9/9	9/7	9/8	
9/?	9/9	7/7	9/5	9/7	9/5	9/9	9/5	9/9	9/8	9/7	9/9	
8/?	9/?	7/?	7/?	9/6	9/9	9/0	9/8	9/8	9/2	7/?	8/6	
8/9	9/?	7/?	7/?	9/9	8/9	9/9	9/9	9/9	9/9	8/?	9/8	

6/2	6/0	7/0	6/0	7/0	8/0	7/0
8/0	6/0	7/0	6/0	7/0	9/0	9/0
6/0	6/0	7/0	6/0	7/0	8/0	7/0
8/2	6/0	7/0	6/0	7/2	8/2	8/2
8/5	6/5	7/5	6/9	7/0	8/?	8/0
6/?	6/?	7/?	6/?	7/?	8/?	7/?
6/?	6/?	7/?	6/0	7/?	8/0	7/0

### ENLIST WEED CONTROL SYSTEM PRODUCTS & TANK MIXES

atrazine + Enlist Duo	5+4,9	E
Callisto + atrazine + Enlist Duo	27+5+4,9	E
Converge XT + Enlist Duo	5,27+4,9	E
Destra IS + Enlist Duo	2,27+4,9	G
Engarde + Enlist Duo	2,27+4,9	E
Elevore + Enlist Duo	4+4+9	G
Enlist Duo	4,9	E
Halex GT + atrazine + Enlist Duo	9,15,27+5+4,9	E
Primextra II Magnum + Enlist Duo	5,15+4,9	E
Primextra II Magnum + Broadstrike RC + Enlist Duo	5,15+2+4,9	E

•			EWC	
			EWC	
•				
			EWC	EWC
		•	EWC	
•			EWC	EWC
			EWC	
•			EWC	
•			EWC	

atrazine(5)
-------------

### CONTROL RATINGS: CONTACT/RESIDUAL

8/9	9/7	9/9	9/?	9/9	9/9	9/9	9/9	9/9	9/9	9/9	9/6	9/5
8/8	9/7	9/?	9/?	9/9	9/9	9/9	9/9	9/9	9/8	9/8	9/9	
8/8	9/7	9/?	9/8	9/9	9/9	9/9	9/9	9/9	9/9	9/7	9/9	
9/8	9/5	9/?	9/8	9/9	9/9	9/9	9/9	9/9	9/9	9/8	9/9	
9/8	9/7	9/?	9/8	9/9	9/9	9/9	9/9	9/9	9/9	9/8	9/9	
9/0	9/0	8/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	
8/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	
9/9	9/8	9/?	8/?	9/9	9/9	9/9	9/9	9/9	9/8	9/6	9/9	
9/9	9/7	9/9	9/?	9/9	9/9	9/9	9/9	9/9	9/9	9/?	9/2	
9/9	9/7	9/9	9/8	9/9	9/9	9/9	9/9	9/9	9/9	9/7	9/9	

8/2	8/?	8/0	8/0	9/2	8/2	9/0
8/2	8/?	8/0	8/0	9/0	8/0	9/0
8/?	8/?	8/0	8/0	9/0	8/0	9/0
8/2	8/?	8/0	8/0	9/7	8/0	9/0
8/2	8/?	9/0	9/4	9/0	8/0	9/0
8/0	6/0	8/0	8/0	9/0	8/0	9/0
8/0	8/0	8/0	8/0	9/0	8/0	9/0
8/2	8/?	8/0	8/3	9/0	8/0	9/0
8/0	8/?	8/0	8/3	9/0	8/0	9/0
8/0	8/8	8/0	8/3	9/0	8/0	9/0

Control rating: 9=>90% control

8= 80 to 90% control

Ratings 5,6,7= 50 to 80% control

Performance of some products on certain weeds may vary according to application timing. Some tank-mixes may have higher ratings on some weeds than shown, especially if various timings are recommended. Various formulations may be available and additional application rates may be recommended.

? - Insufficient data available to provide control rating  
 a - Use high rate for optimum control  
 b - Use ppi timing for optimum control  
 c - Use pre timing for optimum control

d - Directed spray only  
 e - Use post timing for optimum control  
 A - Triazine resistant biotypes exist  
 B - Group 2 resistant biotypes exist

C - Glyphosate resistant biotypes exist  
**LL - Liberty Link corn only**  
**RR - Roundup Ready corn only**  
**EWC - Enlist Tolerant corn only**

\* - Early post-emergence/late post-emergence: each product has its own specific recommendation on stage of crop growth. Check product label for details.



SOYBEANS		
	Chemical group	Crop tolerance
Pursuit / Phantom / Nu-Image	2	E
Reflex	14	G
Select	1	E
Sencor / Tricor / Metrix / Buzzin	5	G
Statue	1	E
Treflan / Bonanza / Rival	3	G
TriActor	2,5,14	G
Valtera	14	G
Venture L	1	E
Zidua SC	15	E

APPLICATION TIMING				
Pre-plant or burndown	Pre-plant incorporated	Pre-emergence	Early post-emergence	Late post-emergence
•	•	•	•	•
			•	
			•	•
•		•		
			*	*
•				
•	•			
•			•	•
•	•			

Tank-mix partners (herbicide group in parentheses)	
Basagran Forte(6), Command 360 ME(13), Dual II Magnum(15), FirstRate(2), Frontier Max(15), glyphosates(9), Liberty(10), Lorox(7), Prowl H2O(3), Reflex(14), Sencor/Tricor(5), Treflan/Bonanza/Rival(3), Valtera(14)	
Pinnacle SG(2), Pursuit(2), Venture L(1)	
Command 360 ME(13), Dual II Magnum(15), Frontier Max(15), glyphosates(9), Gramoxone(22), Lorox(7), Pursuit/Phantom/Nu-Image(2), Treflan/Bonanza/Rival(3)	
Chaperone(2), Glyphosate(9), Liberty(10)	
Broadstrike RC(2), Pursuit/Phantom/Nu-Image(2), Sencor/Tricor/Metrix/Buzzin(5)	
BlackHawk(4,14), glyphosates(9)	
Classic/Chaperone(2), Conquest(2,5), glyphosates(9), Pursuit/Phantom/Nu-Image(2)	
Basagran Forte(6), glyphosates(9), Reflex(14)	
Eragon (14), glyphosates(9), Optill (2,14)	

GRASSY WEEDS								
Barnyard grass(A)	Crabgrass	Fall panicum	Foxtail, giant	Foxtail, green(B)	Foxtail, yellow(A)	Old witchgrass(A)	Proso millet	
8/9e	8e	7/6c	9	9	9	9e	7	
0	0	0	0	0	0	0	0	
9	8	9	9	9	9	9	9	
7	6	7	5	5	5	8	3	
9	8	9	9	9	9	9	9	
9	9	8	9	9	9	9	6	
8	7	7	9	9	9	8	7	
3	3	3	5	6	6	3	?	
9	8	9	8	8	9	9	9	
9	9	8	9	9	9	9	?	

BROADLEAF WEEDS										
Buckwheat, wild	Cocklebur(B)	Fleabane, Canada (B,C)	Lady's thumb	Lamb's-quarters (A,B)	Mustards (A)	Nightshades (B)	Pigweeds (A,B)	Ragweed, common(A,B,C)	Ragweed, giant(B,C)	Velvetleaf
8	8e	2	9	9c	9	9	9	8	6	9
8	7	2	8	6	9	8	9	9	7	6
0	0	0	0	0	0	0	0	0	0	0
7	7	5	9	9	9	3	9	8	7	7
0	0	0	0	0	0	0	0	0	0	0
5	2	0	2	8	2	2	8	2	1	2
8	8	8	9	9	9	9	9	9	7	9
7	4	8	7	9	7	9	9	8	5	7
0	0	0	0	0	0	0	0	0	0	0
?	?	?	?	?	?	9	9	?	?	?

PERENNIAL WEEDS							
Bindweed	Field horsetail	Milkweed	Nutsedge	Quackgrass	Sowthistle	Thistle, Canada	
2	2	2	7	6/2c	2	2	
3	6	2	?	0	5	3	
0	0	0	0	7	0	0	
2	2	2	2	2	2	2	
0	0	0	0	7	0	0	
2	2	2	2	2	2	2	
?	?	?	6	6	5	5	
?	?	?	?	?	?	?	
0	0	0	0	8	0	0	
?	?	?	?	?	?	?	

### GLYPHOSATE PRODUCTS & TANK MIXES FOR BURNDOWN AND/OR ROUNDUP READY PROGRAMS

Assure II + glyphosates (to control Roundup Ready corn)	1+9	E			RR	RR
Bifecta + glyphosates	5,14+9	G	•	•		
BlackHawk + glyphosates	4,14+9	E	•	•		
Canopy Pro [Classic + Tricor] + glyphosates	2,5+9	G	•	•		
Classic / Chaperone + glyphosates	2+9	G	•	•	RR	RR
CleanStart Plus [Aim + glyphosate]	14+9	E	•			
Diligent (Classic + flumioxazin) + glyphosates	2,14	G	•	•		
Elevore + Canopy Pro + glyphosate	4,2,5,9	G	•			
Eragon LQ + glyphosates	14+9	E	•	•		
Fierce + glyphosates	14,15+9	G	•	•		
Firstate + glyphosates	2+9	E		•	RR	RR
Flexstar GT [Reflex + glyphosate]	14+9	E			RR	
Freestyle (Classic + imazethapyr) + glyphosates	2,2+9	G	•	•		
Glacier [Assure II + glyphosate]	1+9	E			RR	RR
glyphosates (many different product names)	9	E	•		RR	RR
Guardian [Classic + glyphosate]	2,9	G	•	•	RR	RR

BlackHawk(4,14)	
Bifecta(5,14)	
Pursuit(2), Zidua SC(15)	

9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/7	9/6	9/7	9/5	9/7	9/6	9/5	9/7
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/7	9/6	9/7	9/5	9/5	9/5	9/8	9/3
9/7	9/7	9/6	9/6	9/6	9/6	9/6	9/7
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/7	9/7	9/6	9/5	9/5	9/6	9/6	9/7
9/7	9/6	9/7	9/5	9/5	9/5	9/8	9/3
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/9	9/9	9/9	9/9	9/9	9/9	9/9	9/7
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/8	9/7	9/7	9/9	9/9	9/9	9/8	9/7
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/7	9/7	9/6	9/6	9/6	9/6	9/6	9/7

### CONTROL RATINGS: CONTACT/RESIDUAL

8/0	9/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0
8/7	9/7	8/8	8/8	9/9	9/9	9/9	9/9	9/9	8/7	9/7
9/0	9/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
8/8	9/7	8/8	8/9	9/9	9/9	9/3	9/9	9/8	8/8	9/8
8/8	9/4	8/8	8/8	9/7	9/9	9/2	9/7	9/7	8/7	9/7
8/0	9/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0
8/8	9/8	8/8	8/8	9/9	9/9	9/9	9/9	9/7	8/7	9/7
8/8	9/7	9/8	8/9	9/9	9/9	9/3	9/9	9/8	8/8	9/8
8/0	9/0	9/0	8/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0
8/8	9/5	8/8	8/7	9/9	9/9	9/9	9/9	9/9	8/7	9/9
8/7	9/9	9/9	8/7	9/2	9/9	9/2	9/2	9/9	9/9	9/9
8/0	9/0	8/0	8/0	9/0	9/0	9/0	9/8	9/8	8/0	9/0
8/8	9/4	8/8	9/9	9/9	9/9	9/9	9/9	9/8	8/7	9/8
8/0	9/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0
8/0	9/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0
8/5	5/3	8/8	8/8	9/0	9/0	9/0	9/0	9/0	8/5	9/5
8/0	5/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0
8/0	5/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0
8/5	5/3	8/8	8/8	9/5	8/5	9/5				

Control rating: 9=>90% control

8= 80 to 90% control

Ratings 5,6,7= 50 to 80% control

Performance of some products on certain weeds may vary according to application timing. Some tank-mixes may have higher ratings on some weeds than shown, especially if various timings are recommended. Various formulations may be available and additional application rates may be recommended.

- ? - Insufficient data available to provide control rating
- a - Use high rate for optimum control
- b - Use ppi timing for optimum control
- c - Use pre timing for optimum control

- d- Directed spray only
- e- Use post timing for optimum control
- A - Triazine resistant biotypes exist
- B - Group 2 resistant biotypes exist

- C - Glyphosate resistant biotypes exist
- LL - Liberty Link corn only
- RR - Roundup Ready corn only
- EWC - Enlist Tolerant corn only

RR2XT - Roundup Ready 2 Xtend soybeans only  
 \*\*\* - Most annual weeds will be controlled if emerged

SOYBEANS		
Chemical group		Crop tolerance
Guardian Plus WDG [Classic + Valtera + glyphosate]	2,14,9	G
Integrity [Frontier + Eragon] + glyphosates	14,15+9	G
Optill [Pursuit + Eragon] + glyphosates	2,14+9	E
Prowl H2O + glyphosates	3+9	E
Pursuit / Nu-Image+ glyphosates	2+9	G
Venture L + glyphosates (to control Roundup Ready Corn)	1+9	E
Zidua SC + glyphosates	15+9	E

### APPLICATION TIMING

Pre-plant or burndown	Pre-plant incorporated	Pre-emergence	Early post-emergence	Late post-emergence
•		•		
•		•		
•		•		
•			RR	RR
			RR	RR
•		•		

Tank-mix partners (herbicide group in parentheses)
Zidua SC(15)
Pursuit(2)
Eragon(14), Optill(2,14)

### GRASSY WEEDS

Barnyard grass(A)	Crabgrass	Fall panicum	Foxtail, giant	Foxtail, green(B)	Foxtail, yellow(A)	Old witchgrass(A)	Proso millet
9/7	9/7	9/6	9/5	9/5	9/6	9/6	9/7
9/7	9/7	9/7	9/5	9/8	9/7	9/7	9/7
9/8	9/7	9/7	9/9	9/9	9/9	9/8	9/7
9/9	9/9	9/9	9/9	9/9	9/9	9/7	9/7
9/8	9/7	9/7	9/9	9/9	9/9	9/8	9/7
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/9	9/9	9/7	9/9	9/9	9/9	9/9	9/7

### BROADLEAF WEEDS

Buckwheat, wild	Cocklebur(B)	Fleabane, Canada (B,C)	Lady's thumb	Lamb's-quarters (A,B)	Mustards (A)	Nightshades (B)	Pigweeds (A,B)	Ragweed, common(A,B,C)	Ragweed, giant(B,C)	Velvetleaf
8/8	9/8	8/8	8/8	9/9	9/9	9/9	9/9	9/7	8/7	9/7
8/0	9/7	9/7	9/7	9/6	9/7	9/7	9/5	9/5	7/7	9/3
8/8	9/7	8/2	8/9	9/8	9/9	9/9	9/9	9/8	8/6	9/9
9/7	8/7	8/7	9/7	9/7	9/7	9/7	9/8	9/7	8/7	9/7
8/8	9/7	8/2	8/9	9/8	9/9	9/9	9/9	9/8	8/6	9/9
8/0	9/0	8/0	8/0	9/0	9/0	9/0	9/0	9/0	8/0	9/0
8/7	9/7	8/7	8/7	9/7	9/7	9/9	9/9	9/7	8/7	9/7

### PERENNIAL WEEDS

Bindweed	Field horsetail	Milkweed	Nutsedge	Quackgrass	Sowthistle	Thistle, Canada
8/5	5/3	8/8	8/8	9/5	8/5	9/5
8/7	7/7	8/7	8/0	9/7	8/7	9/7
8/2	5/2	8/2	8/4	9/2	8/2	9/2
8/7	5/7	8/7	8/7	9/7	8/7	9/7
8/2	5/2	8/2	8/4	9/2	8/2	9/2
8/0	5/0	8/0	8/0	9/0	8/0	9/0
8/0	5/0	8/0	8/7	9/7	8/7	9/7

### LIBERTY TOLERANT PRODUCTS & TANK MIXES

Product	Rate	Crop tolerance	LL	LL
Basagran Forte + Liberty 200 SN	6+10	G		
FirstRate + Liberty 200 SN	2+10	E	LL	LL
Liberty 200 SN	10	E	LL	LL
Pursuit + Liberty 200 SN	2+10	G	LL	LL

### ENLIST WEED CONTROL SYSTEM PRODUCTS & TANK MIXES

Product	Rate	Crop tolerance	*	*	EWC
Bifecta + Enlist duo	5,14+4,9	E	*	*	
Broadstrike RC + Enlist Duo	2+4,9	E	•	•	EWC
Classic + Enlist Duo	2+4,9	E	•	•	EWC
Classic/ Chaperone + Enlist Duo	2+4,9	E	•	•	EWC
Canopy Pro [Classic + Tricor] + Enlist Duo	2,5+4,9	G	•	•	EWC
Diligent (Classic + flumioxazin) + Enlist Duo	2,14+4,9	G	•	•	EWC
Elevore + Canopy Pro + Enlist Duo	4+2, 5+4,9	G	•		EWC
Eragon LQ + Enlist Duo	14+4,9	E	•	•	EWC
FirstRate + Enlist Duo	2+4,9	E	•	•	EWC
Integrity + Enlist Duo	14, 15+4,9	E	•	•	EWC
Optill [Pursuit + Eragon] + Enlist Duo	2,14+4,9	E	•	•	EWC
Prowl H2O + Enlist Duo	3+4,9	E	•		EWC
Pursuit + Enlist Duo	2+4,9	E	•	•	EWC
Valtera + Enlist Duo	14+4,9	E	*	*	

### CONTROL RATINGS: CONTACT/RESIDUAL

8/0	9/0	7/0	9/0	9/0	9/0	9/0	9/0	6/0	8/0	
8/7	9/9	9/9	9/7	9/9	9/7	9/2	9/9	9/9	8/9	
8/0	9/0	7/0	9/0	8/0	9/0	9/0	9/0	6/0	9/0	
8/8	9/7	7/2	9/9	8/8	9/9	9/9	9/9	9/8	6/6	8/9

### CONTROL RATINGS: CONTACT/RESIDUAL

8/9	9/8	9/9	8/9	9/9	9/9	9/9	9/9	9/7	9/8	
8/7	9/7	9/8	9/8	9/9	9/8	9/7	9/9	9/7	9/5	9/9
8/8	9/4	9/8	9/8	9/7	9/9	9/2	9/7	9/7	9/7	9/7
8/8	9/4	9/8	9/8	9/7	9/9	9/2	9/7	9/7	9/7	9/7
8/8	9/7	9/8	9/8	9/9	9/9	9/3	9/9	9/8	8/8	9/8
8/8	9/8	9/8	8/8	9/9	9/9	9/9	9/9	9/7	8/7	9/7
8/8	9/7	9/8	8/9	9/9	9/9	9/3	9/9	9/8	8/8	9/8
8/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
8/7	9/9	9/9	9/7	9/2	9/7	9/2	9/9	9/9	9/9	9/9
9/2	9/2	9/0	9/2	9/7	9/2	9/8	9/8	9/4	9/3	9/2
8/8	9/7	9/2	9/9	9/9	9/9	9/9	9/9	9/8	9/6	9/9
9/7	9/7	9/7	9/7	9/7	9/7	9/7	9/8	9/7	9/7	9/7
8/8	9/7	9/2	9/9	9/9	9/9	9/9	9/9	9/8	9/6	9/9
8/7	9/5	9/8	8/7	9/9	9/7	9/9	9/9	9/7	9/7	9/8

6/0	6/0	7/0	6/0	7/0	8/0	7/0
6/7	6/2	7/7	6/7	7/2	8/6	7/7
6/0	6/0	7/0	6/0	7/0	8/0	7/0
6/2	6/2	7/2	7/4	7/2	8/2	7/2

8/2	5/7	8/0	8/0	9/7	8/3	9/3
8/2	8/8	8/0	8/0	9/0	8/3	9/4
8/5	8/3	8/8	8/8	9/5	8/5	9/5
8/5	8/3	8/8	8/8	9/5	8/5	9/5
8/2	8/2	8/2	8/8	9/2	8/5	9/5
8/5	5/3	8/8	8/8	9/5	8/5	9/5
8/2	6/2	8/2	8/8	9/2	8/5	9/5
8/0	8/0	8/0	8/0	9/0	8/0	9/0
8/7	8/2	8/7	8/7	9/2	8/6	9/7
8/7	8/7	8/7	8/0	9/7	8/7	9/7
8/2	8/2	8/2	8/4	9/2	8/2	9/2
8/7	8/7	8/7	8/7	9/7	8/7	9/7
8/2	8/2	8/2	8/4	9/2	8/2	9/2
8/2	5/7	8/0	8/0	9/7	8/3	9/3

Control rating: 9=>90% control

8= 80 to 90% control

Ratings 5,6,7= 50 to 80% control

Performance of some products on certain weeds may vary according to application timing. Some tank-mixes may have higher ratings on some weeds than shown, especially if various timings are recommended. Various formulations may be available and additional application rates may be recommended.

? - Insufficient data available to provide control rating  
 a - Use high rate for optimum control  
 b - Use ppi timing for optimum control  
 c - Use pre timing for optimum control

d - Directed spray only  
 e - Use post timing for optimum control  
 A - Triazine resistant biotypes exist  
 B - Group 2 resistant biotypes exist

C - Glyphosate resistant biotypes exist  
 LL - Liberty Link corn only  
 RR - Roundup Ready corn only  
 EWC - Enlist Tolerant corn only

RR2XT - Roundup Ready 2 Xtend soybeans only  
 \*\*\* - Most annual weeds will be controlled if emerged

# SOYBEANS

Chemical group  
Crop tolerance

## APPLICATION TIMING

Pre-plant or burndown  
Pre-plant incorporated  
Pre-emergence  
Early post-emergence  
Late post-emergence

Tank-mix partners (herbicide group in parentheses)

## GRASSY WEEDS

Barnyard grass(A)  
Crabgrass  
Fall panicum  
Foxtail, giant  
Foxtail, green(B)  
Foxtail, yellow(A)  
Old witchgrass(A)  
Proso millet

## BROADLEAF WEEDS

Buckwheat, wild  
Cocklebur(B)  
Fleabane, Canada (B,C)  
Lady's thumb  
Lamb's-quarters (A,B)  
Mustards (A)  
Nightshades (B)  
Pigweeds (A,B)  
Ragweed, common(A,B,C)  
Ragweed, giant(B,C)  
Velvetleaf

## PERENNIAL WEEDS

Bindweed  
Field horsetail  
Milkweed  
Nutsedge  
Quackgrass  
Sowthistle  
Thistle, Canada

### ROUNDUP READY XTEND CROP SYSTEM

Bifecta + glyphosates + XtendiMax	5, 14+9+4	E
Canopy Pro + Roundup WeatherMax + FeXapan	2, 5+9+4	E
Classic / Chaperone + Roundup WeatherMax + FeXapan	2+9+4	E
Diligent (Classic + flumioxazin) + FeXapan	2,14+4	G
Elevore + Canopy Pro + FeXapan	4+2,5+4	G
Engenia + glyphosates	4+9	E
Eragon LQ + Engenia + glyphosates	14+4+9	E
Freestyle + Roundup WeatherMax + FeXapan	2,2+9+4	E
Guardian MAX + FeXapan	2,9+4	E
Guardian Plus II + FeXapan	2,9,14+4	E
Optill + Engenia + glyphosates	2,14+4+9	G
Roundup WeatherMax + FeXapan	9+4	E
Roundup Xtend with VaporGrip Technology	4,9	E
XtendiMax with VaporGrip Technology + Roundup WeatherMax	4+9	E
Valtera + Enlist Duo	14+4,9	E
Zidua SC + Engenia + glyphosates	15+4+9	E

*		*		
•		•		
•		•	RR2XT	
•		•		
•		•		
•		•	RR2XT	
•		•		
•		•		
•		•	RR2XT	
•		•	RR2XT	
•		•	RR2XT	
*		*		
•		•		

Eragon(14), Integrity(14,15), Optill(2,14), Zidua SC(15)
Zidua SC(15)
Zidua SC(15)
Zidua SC(15)
Eragon(14), Optill(2,14)

9/7	9/6	9/7	9/6	9/7	9/6	9/5	9/7
9/7	9/6	9/7	9/5	9/5	9/5	9/8	9/6
9/6	9/6	9/6	9/5	9/5	9/5	9/5	9/5
9/7	9/7	9/6	9/5	9/5	9/6	9/6	9/7
9/7	9/6	9/7	9/5	9/5	9/5	9/8	9/3
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/8	9/7	9/7	9/9	9/9	9/9	9/8	9/7
9/6	9/6	9/6	9/5	9/5	9/5	9/5	9/5
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/8	9/7	9/7	9/9	9/9	9/9	9/8	9/7
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/0	9/0	9/0	9/0	9/0	9/0	9/0	9/0
9/3	9/3	9/3	9/5	9/7	9/6	9/3	9/7
9/9	9/9	9/7	9/9	9/9	9/9	9/9	9/7

### CONTROL RATINGS: CONTACT/RESIDUAL

8/9	9/8	9/9	8/9	9/9	9/9	9/9	9/9	9/9	9/7	9/8
8/8	9/7	9/9	8/9	9/9	9/9	9/6	9/9	9/8	9/8	9/8
8/8	9/4	9/8	8/8	9/7	9/9	9/6	9/7	9/7	9/7	9/8
8/8	9/8	9/8	8/8	9/9	9/9	9/9	9/9	9/7	8/7	9/7
8/8	9/7	9/8	8/9	9/9	9/3	9/9	9/8	8/8	9/8	9/8
9/8	9/6	9/8	9/9	9/9	9/6	9/9	9/9	9/9	9/7	9/8
9/8	9/6	9/8	9/9	9/9	9/6	9/9	9/9	9/9	9/7	9/8
8/8	9/7	9/8	9/9	9/9	9/9	9/9	9/8	9/7	9/7	9/8
8/8	9/4	9/8	8/8	9/7	9/9	9/6	9/7	9/7	9/7	9/8
8/8	9/8	9/8	8/9	9/9	9/9	9/8	9/9	9/8	9/7	9/7
9/8	9/7	9/8	9/9	9/9	9/9	9/9	9/9	9/9	9/7	9/9
8/7	9/6	8/5	8/6	9/6	9/2	9/5	9/7	9/7	9/6	9/6
9/8	9/6	9/8	9/9	9/9	9/6	9/9	9/9	9/9	9/7	9/8
9/8	9/6	9/8	9/9	9/9	9/6	9/9	9/9	9/9	9/7	9/8
8/7	9/5	9/8	8/7	9/9	9/7	9/9	9/9	9/9	9/7	9/8
9/8	9/6	9/8	9/9	9/9	9/6	9/9	9/9	9/9	9/7	9/8

8/2	5/?	8/0	8/0	9/?	8/3	9/3
8/5	5/3	8/2	8/8	9/0	8/5	9/5
8/5	5/3	8/2	8/8	9/0	8/5	9/5
8/5	5/3	8/8	8/8	9/5	8/5	9/5
8/2	6/2	8/2	8/8	9/2	8/5	9/5
8/2	5/0	8/0	8/0	9/0	8/2	9/2
8/2	5/0	8/0	8/0	9/0	8/2	9/2
8/5	5/3	8/2	8/8	9/0	8/5	9/5
8/5	5/3	8/2	8/8	9/0	8/5	9/5
8/3	5/0	8/0	8/0	9/0	8/2	9/2
8/2	5/2	8/2	8/4	9/2	8/2	9/2
8/2	5/0	8/0	8/0	9/0	8/2	9/2
8/2	5/0	8/0	8/0	9/0	8/2	9/2
8/2	5/?	8/0	8/0	9/?	8/3	9/3
8/2	5/0	8/0	8/0	9/0	8/2	9/2

Control rating: 9=>90% control

8= 80 to 90% control

Ratings 5,6,7= 50 to 80% control

Performance of some products on certain weeds may vary according to application timing. Some tank-mixes may have higher ratings on some weeds than shown, especially if various timings are recommended. Various formulations may be available and additional application rates may be recommended.

? - Insufficient data available to provide control rating  
a - Use high rate for optimum control  
b - Use ppi timing for optimum control  
c - Use pre timing for optimum control

d- Directed spray only  
e- Use post timing for optimum control  
A - Triazine resistant biotypes exist  
B - Group 2 resistant biotypes exist

C - Glyphosate resistant biotypes exist  
LL - Liberty Link corn only  
RR - Roundup Ready corn only  
EWC - Enlist Tolerant corn only

RR2XT - Roundup Ready 2 Xtend soybeans only  
\*\*\* - Most annual weeds will be controlled if emerged



CEREALS		CROP					
Chemical group		Oats	Spring barley	Spring wheat	Winter barley	Winter rye	Winter wheat

GRASSY WEEDS								
Barnyard grass(A)	Crabgrass	Fall panicum	Foxtail, giant	Foxtail, green(B)	Foxtail, yellow(A)	Old witchgrass(A)	Proso millet	Wild oats

BROADLEAF WEEDS															
Buckwheat, wild	Cocklebur(B)	Chickweed, common	Corn spurry	Fleabane, Canada (B,C)	Hempnettle	Lady's thumb	Lamb's-quarters (A,B)	Mustards (A)	Nightshades (B)	Pigweeds (A,B)	Ragweed, common(A,B,C)	Ragweed, giant(B,C)	Shepherd's purse	Stinkweed	Velvetleaf

PERENNIAL WEEDS															
Bindweed	Chickweed, mouse-eared	Curled dock	Dandelion	Ground ivy (creeping charlie)	Field horsetail	Mallow	Milkweed	Nutsedge	Plantains	Quackgrass	Sowthistle	Thistle, Canada	Vetches		

**PRE-EMERGENCE HERBICIDES**

BlackHawk	4,14	.	.	.	.	.	.
Eragon LQ	14	.	.	.	.	.	.
Valtera	14	.	.	.	.	.	.

0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
3	3	3	5	5	5	?	?	?

9	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9
9	8	?	?	9	?	9	9	9	9	9	9	9	9	9	9
7	4	?	?	8	?	7	9	7	9	9	7	3	?	?	7

9	9	8	9	?	6	7	?	0	9	0	9	8	7
?	?	?	8	?	8	?	?	0	9	0	8	?	?
?	8	?	7	?	?	?	?	?	?	?	?	?	?

**POST-EMERGENCE GRASS HERBICIDES**

Achieve Liquid / Bison 400L	1	.	.	.	.	.
Axial	1	.	.	.	.	.
Bengal	1	.	.	.	.	.
Puma Advance	1	.	.	.	.	.
Varro	2	.	*	.	.	*

9	?	?	9	9	9	?	?	9
9	?	?	?	9	9	?	?	9
9	?	?	?	9	9	?	?	9
9	?	?	?	9	9	?	?	9
9	8	?	?	8	7	?	?	9

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	?	0	0	?	8	?	7	9	?	8	?	?	8	8	?

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
?	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0

**POST-EMERGENCE BROADLEAF HERBICIDES**

2,4-D / Salvo	4	.	.	.	.	.
2,4-DB / Caliber / Cobutox / Embutox	4	.	.	.	.	.
Barricade M	2,4	.	.	.	.	.
Buctril M / Badge II / Mextrol / Logic M	4,6	.	.	.	.	.
Enforcer M	4,4,6	*	*	*	*	*
Estaprop XT / Dichlorprop-D / Turboprop	4	.	.	.	.	.
Infinity	6,27	.	.	.	.	.
Infinity FX	4,6,27	.	.	.	.	.
Lontrel / Pyralid	4	.	.	.	.	.
MCPA / Checkmate	4	.	.	.	.	.
Mecoprop / Compitox	4	.	.	.	.	.
Pardner / Koril / Brotex / Bromotril II	6	.	.	.	.	.
Pixxaro	4,4,4	.	.	.	.	.
Refine M (Refine SG + 114g/ac MCPA) / Boost M (Boost + 225 g/ac MCPA) *ratings based on Boost M	2,4	.	.	.	.	.
Refine SG / Boost / Nimble	2	.	.	.	.	.
Simplicity GoDRI	2	.	.	.	.	.
Target / Sword / Tracker XP	4	.	.	.	.	.
Thrasher II	4,6	.	.	.	.	.

0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0

7	8	2	2	8	2	4	9	9	7	9	8	?	9	9	8
6	9	2	2	?	2	4	9	9	7	9	8	?	8	6	8
9	7	9	7	7	8	8	9	9	9	9	9	9	9	8	8
9	8	2	2	7	7	9	9	9	9	8	9	7	9	9	9
9	8	8	?	8	9	9	9	9	9	9	8	9	9	9	9
8	?	2	2	8	7	7	9	9	8	9	9	8	9	9	?
9	?	9	?	9	9	9	9	9	9	9	9	7	9	9	9
9	?	9	7	9	9	9	9	9	9	9	9	7	9	9	9
8	?	?	?	9	?	?	?	?	?	?	7	9	?	?	?
2	7	2	7	7	8	2	9	9	?	9	9	?	9	9	8
2	?	9	9	?	2	2	9	9	?	9	9	?	?	7	?
8	8	2	2	?	2	8	9	7	9	7	9	?	8	8	9
9	9	8	?	9	9	6	9	9	9	9	8	9	9	9	9
9	8	9	9	6	9	9	9	9	7	9	9	7	9	9	8
9	?	9	9	4	9	9	9	8	?	9	2	?	9	9	8
7	8	8	9	?	9	9	6	9	?	8	?	?	9	9	?
9	?	2	9	8	8	8	9	9	?	9	9	?	9	9	?
9	?	9	?	8	9	?	9	9	?	9	9	9	9	9	?

7	2	7	8	?	2	4	6	0	8	0	5	8	0
?	2	6	5	?	2	2	0	0	8	0	5	?	2
7	?	7	8	?	7	8	5	0	8	0	8	7	5
7	2	?	4	?	7	?	0	0	?	0	7	5	5
7	8	?	6	8	6	7	?	?	7	0	8	7	8
7	2	?	9	?	2	?	?	?	?	0	8	8	6
?	?	?	7	?	?	?	?	?	?	0	8	7	5
?	9	?	8	?	4	9	?	?	?	0	8	8	7
?	?	?	9	?	8	?	?	?	?	?	9	9	9
7	5	?	?	?	8	?	0	0	?	0	7	7	5
?	9	?	?	?	?	?	?	?	?	0	?	7	5
5	2	?	?	?	0	?	0	0	?	0	6	5	?
?	5	?	7	9	6	?	?	?	?	?	8	7	8
7	?	7	6	?	2	4	5	0	8	0	8	7	6
2	9	?	5	?	?	?	?	?	?	0	8	7	5
?	?	?	6	?	?	9	?	?	?	0	?	6	?
8	?	?	6	?	?	?	?	?	?	0	8	8	?
?	2	?	7	?	?	7	?	?	?	0	8	7	5

Control rating: 8= 80 to 90 % control      Ratings 5,6,7= 50 to 80 % control

Performance of some products on certain weeds may vary according to application timing. Some tank-mixes may have higher ratings on some weeds than shown, especially if various timings are recommended. Various formulations may be available and additional application rates may be recommended.

? - Insufficient data available to provide control rating  
 A - Triazine resistant biotypes exist  
 B - Group 2 resistant biotypes exist  
 C - Glyphosate resistant biotypes exist

CEREALS		CROP					
	Chemical group	Oats	Spring barley	Spring wheat	Winter barley	Winter rye	Winter wheat
Trophy	4						•
Tropotox Plus / Clovitox Plus / Topside	4	•	•	•	•	•	•
Velocity M3	2,6,27			*			*

GRASSY WEEDS								
Barnyard grass(A)	Crabgrass	Fall panicum	Foxtail, giant	Foxtail, green(B)	Foxtail, yellow(A)	Old witchgrass(A)	Proso millet	Wild oats
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
9	8	?	?	8	7	?	?	9

BROADLEAF WEEDS															
Buckwheat, wild	Cocklebur(B)	Chickweed, common	Corn spurry	Fleabane, Canada (B,C)	Hempnettle	Lady's thumb	Lamb's-quarters (A,B)	Mustards (A)	Nightshades (B)	Pigweeds (A,B)	Ragweed, common(A,B,C)	Ragweed, giant(B,C)	Shepherd's purse	Stinkweed	Velvetleaf
7	9	?	?	8	8	7	9	9	9	9	9	9	9	9	8
7	?	2	2	?	8	2	9	9	?	9	8	?	9	9	9
9	?	9	7	9	9	9	9	9	9	9	9	7	9	9	9

PERENNIAL WEEDS															
Bindweed	Chickweed, mouse-eared	Curled dock	Dandelion	Ground ivy (creeping charlie)	Field horsetail	Mallow	Milkweed	Nutsedge	Plantains	Quackgrass	Sowthistle	Thistle, Canada	Vetches		
?	?	?	5	9	6	?	?	?	?	?	8	8	8		
8	2	?	?	?	?	?	?	0	?	0	9	9	5		
?	9	?	8	?	?	8	?	?	?	0	8	7	5		

**POST-EMERGENCE TANK MIXES**

Achieve Liquid / Bison 400L + Buctril M / Badge II / Logic M / Mextrol	1+4,6		•	•				
Achieve Liquid / Bison 400L + Pardner / Koril	1+6		•	•				
Achieve Liquid / Bison 400L + Pixxaro	1+4		•	•			•	
Badge II + 2,4-D or MCPA	4,6+4	•	•	•		•	•	
Banvel II / Oracle / Xtendimax + 2,4-D or MCPA	4+4	•	•	•			•	
Bromotril II / Koril / Pardner + 2,4-D or MCPA	6+4		•	•			•	
Buctril M + 2,4-D or MCPA	4,6+4	•	•	•		•	•	
Infinity + Achieve Liquid	6,27+1	•	•	•		•	•	
Infinity FX + Puma Advance	4,6,27+1		*	*	*		*	
Infinity FX + Varro	4,6,27+2			*			*	
Lontrel / Pyralid + 2,4-D or MCPA	4+4		•	•				
Mextrol + 2,4-D or MCPA	4,6+4	•	•	•		•	•	
Peak 75WG + Pardner	2+6						•	
Pixxaro + Simplicity	4,4,4+2			•			•	
Puma Advance + Barricade M	1+2,4		•	•			•	
Puma Advance + Buctril M	1+4,6			•				
Puma Advance + Infinity	1+27,6		•	•				
Puma Advance + MCPA	1+4		•	•				
Puma Advance + Pixxaro	1+4		•	•				
Puma Advance + Refine SG	1+2	•	•	•				
Puma Advance + Refine SG + MCPA	1+2+4	•	•	•				
Refine SG + 2,4-D or MCPA	2+4		•	•			•	
Refine SG / Boost + Buctril M / Badge II / Logic M / Mextrol	2+4,6	•	•	•	•		•	
Varro + Buctril M	2+4,6			*			*	

9	?	?	?	9	9	?	?	9
9	?	?	?	?	?	?	?	9
9	?	?	?	9	9	?	?	9
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
9	8	?	?	9	9	?	?	9
9	8	?	?	8	7	?	?	9
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
9	?	?	?	9	9	?	?	9
9	?	?	?	9	9	?	?	9
9	?	?	?	9	9	?	?	9
9	?	?	?	9	9	?	?	9
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0
9	8	?	?	8	7	?	?	9

9	8	?	2	?	7	9	9	9	9	8	9	?	9	9	9
8	8	2	2	?	2	8	9	7	9	7	9	?	8	8	9
9	9	8	?	9	9	6	9	9	?	9	9	8	9	9	?
9	8	2	2	?	7	9	9	9	9	9	?	9	9	9	9
9	9	2	9	8	7	9	9	9	9	9	?	9	9	8	
9	?	9	?	8	9	?	9	9	?	9	9	9	9	?	
9	8	2	2	?	7	9	9	9	9	9	?	9	9	9	
8	8	2	2	?	2	8	9	9	9	9	?	9	9	9	
9	?	9	7	9	9	9	9	9	9	9	7	9	9	9	
9	?	9	7	9	9	9	9	9	9	9	7	9	9	9	
8	8	2	2	9	2	7	9	9	7	9	9	9	9	8	
9	8	2	2	?	7	9	9	9	9	9	?	9	9	9	
9	9	9	?	?	?	9	9	9	9	9	7	8	8	7	
8	9	8	9	9	9	9	9	9	9	9	8	9	9	9	
9	7	9	7	7	8	8	9	9	9	9	9	9	8	8	
9	8	2	2	7	7	9	9	9	9	8	9	?	9	9	
9	?	9	?	8	9	?	9	9	?	9	9	9	9	?	
2	7	2	7	7	8	2	9	9	?	9	9	?	9	9	8
9	9	8	?	9	9	6	9	9	?	9	9	8	9	9	?
9	?	9	9	4	9	9	9	8	?	9	2	?	9	9	8
9	8	9	9	8	9	9	9	9	7	9	9	?	9	9	8
9	8	9	9	8	9	9	9	9	7	9	9	9	9	9	8
9	8	9	2	?	9	9	9	9	9	8	9	?	9	9	9
9	8	2	2	7	7	9	9	9	9	8	9	7	9	9	9

7	2	?	6	?	7	?	0	0	?	0	7	7	?
5	2	?	?	?	0	?	0	0	?	0	6	5	?
?	?	?	7	9	6	?	?	?	?	?	8	6	8
7	2	7	8	?	7	4	6	0	8	0	7	8	?
8	2	9	8	?	0	?	0	0	8	0	9	8	5
?	2	?	7	?	?	7	?	?	?	0	8	7	5
7	2	7	8	?	7	4	6	0	8	0	7	8	?
7	?	7	8	?	2	4	6	0	8	0	6	8	0
?	9	?	8	?	4	9	?	?	?	0	8	8	7
?	9	?	8	?	4	9	?	?	?	0	8	8	7
7	2	7	8	?	8	4	6	?	8	?	9	9	9
7	2	7	8	?	7	4	6	0	8	0	7	8	?
?	9	?	5	?	?	?	?	?	?	?	8	?	6
?	5	?	7	9	6	9	?	?	?	?	8	6	8
7	?	7	8	?	7	8	5	0	8	0	8	7	5
7	2	?	6	?	7	?	0	0	?	0	7	7	?
?	9	?	7	?	?	7	?	?	?	0	8	7	5
7	2	?	?	?	8	?	0	0	?	0	7	7	5
?	?	?	7	9	6	?	?	?	?	?	8	6	8
2	8	?	5	?	?	?	?	?	?	0	8	7	5
7	9	7	6	?	2	4	6	?	8	0	8	7	?
7	9	7	6	?	2	4	6	?	8	0	8	8	?
7	9	?	?	?	7	?	0	0	?	0	7	7	?
7	2	?	4	?	7	8	0	0	?	0	7	5	5

Control rating: 8= 80 to 90 % control

Ratings 5,6,7= 50 to 80 % control

Performance of some products on certain weeds may vary according to application timing. Some tank-mixes may have higher ratings on some weeds than shown, especially if various timings are recommended. Various formulations may be available and additional application rates may be recommended.

- ? - Insufficient data available to provide control rating
- A - Triazine resistant biotypes exist
- B - Group 2 resistant biotypes exist
- C - Glyphosate resistant biotypes exist