



# CORN

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
-----------	---------------------	-------	---------------	------------------------

Refer to page 6 for Fall or Spring Early Preplant Herbicides.

Refer to page 23 for additional herbicides to use in conventional or herbicide resistant corn.

## Soil-Applied Herbicides




Harness / Surpass / generic acetochlor & dichlormid safener 	<b>1.25 to 2.75 pt 7EC</b> (1.1 to 2.4 lb) <b>1.5 to 3 pt 6.4EC</b> (1.2 to 2.4 lb)	Grass and some broadleaf weeds.	PPI, PRE or Fall.	Poor wild oat and wild mustard control. Provides greater weed control compared to metolachlor or Outlook. Adjust rate for soil type. Shallow PPI gives more consistent weed control than PRE. PRE requires precipitation for herbicide activation. Refer to label for tank-mix options. A1 B1 D1 D8 S4 Pages: 104-105
Dual II Magnum (S-metolachlor & benoxacor safener)  Dual / generic metolachlor & dichlormid safener	<b>1 to 2 pt</b> (0.95 to 1.9 lb)		PPI or PRE. Fall: After Sept 30 but before ground freezes.	S-metolachlor at an equal product/A rate may give greater weed control than metolachlor which has less lb ai/A. Adjust rate for soil type. Provides less weed control than acetochlor products. Shallow PPI gives more consistent weed control than PRE. PRE requires precipitation for herbicide activation. Refer to label for tank-mix options. A1 B1 D1 E6 S4 Pages: 104-105
Outlook / generic dimethenamid	<b>16 to 21 fl oz</b> (0.75 to 1 lb)		EPP, shallow PPI or PRE.	PRE requires precipitation for herbicide activation. A1 B1 D1 E5
<b>Python</b> (flumetsulam)	<b>0.8 to 1.33 oz DG</b> (0.64 to 1.06 oz)	Small-seeded broadleaf weeds.	EPP, shallow PPI, PRE or EPOST.	PRE requires precipitation for herbicide activation. Refer to label for tank-mix options. C9 D1 E8 S4 S7 X1 Y2 Pages: 102-103, 108-110
<b>Balance Flexx</b> (isoxaflutole & cyprosulfamide safener) 	<b>3 to 6 fl oz</b> (0.75 to 1.5 oz)	Annual grass and broadleaf weeds including foxtails, pigweed, kochia, lambsquarters, and nightshade.		Adjust rate for soil texture and pH. PRE requires precipitation for herbicide activation. Refer to label for tank-mix options. A1 D1 D6 S4 Y8 Pages: 108-110
<b>Lumax</b> (S-metolachlor & mesotrione & atrazine)	<b>3 to 5 pt</b> (1 to 1.68 & 0.1 to 0.168 & 0.375 to 0.625)	Grass and broadleaf weeds.	EPP and PRE. POST. Corn: Up to 12 inches tall.	PRE requires precipitation for herbicide activation. Apply EPP up to 14 days before planting. Foundation rate for a planned 2-pass program is 4 pt/A. Add NIS to emerged corn and weeds. Do not apply with MSO or nitrogen based adjuvants to emerged corn.
<b>Sharpen</b> (saflufenacil)	<b>1 to 3 fl oz</b> (0.36 to 1.07 oz)	Annual broadleaf weeds.	EPP, shallow PPI, or PRE.	Sharpen has no grass activity. Adjust rate for soil type. PPI up to 14 days before planting. Provides burndown and rate dependant residual control of emerged broadleaf weeds. PRE requires precipitation for herbicide activation. Refer to label for tank-mix options. A1 B1-2 B9 S1 S3-5 S7-8 X1
<b>Verdict</b> (saflufenacil & dimethenamid)	<b>10 to 18 fl oz</b> (0.71 to 1.28 oz + 0.39 to 0.7 lb)	Annual grass and broadleaf weeds.		
<b>Valor</b> (flumioxazin)	<b>2 to 3 oz WDG</b> (1 to 1.5 oz)	Small-seeded broadleaf weeds.	EPP - At least 7 days prior to planting.	Requires precipitation for herbicide activation. Refer to label for tank-mix options, application information, and rate structure. A1 B1-2 E1 E13 S3-5 S7 Y14
<b>Prowl</b> <b>Prowl H2O</b> (pendimethalin)	<b>2.4 to 3.6 pt 3.3EC</b> <b>2.1 to 3 pt 3.8ACS</b> (1 to 1.5 lb)	Annual grass and some broadleaf weeds.	PRE or EPOST. Corn: Before 4-leaf stage. Weeds: Less than 1 inch tall.	DO NOT INCORPORATE. Seed corn at least 1.5 inches deep to ensure adequate separation of seed from herbicide. A1 B1 B6 D1 D14 Y14 Pages: 104-105, 108-110

Pages 102-103 = Herbicides resistance, Pages 104-105 = Generic and commercial names, Pages 108-110 = Crop rotation restrictions.

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
-----------	------------------	-------	---------------	------------------------

Refer to page 23 for additional herbicides to use in conventional or herbicide resistant corn.

**POST-Applied Herbicides**

atrazine + oil adjuvant  <b>RUP</b>	<b>0.42 to 0.75 lb DF + 1 qt</b> (0.38 to 0.75 lb)	Annual broadleaf weeds.	POST. Corn: Up to 12 inches tall.  Weeds: Up to 1.5 inches tall.	Apply with other POST broadleaf and/or grass herbicides. Improves control of many grass and broadleaf weeds. Atrazine may leave a soil residue and injure crops planted the following year. A7 D1 D4 Y2-7 Pages: 104-105, 108-110
<b>Aim</b> (carfentrazone)	<b>0.5 fl oz EC</b> (0.128 oz)	Small pigweed and lambsquarters. Suppression of small kochia, nightshade, and wild buckwheat.	EPOST. Corn: Up to 12 inches tall.  Weeds: Small.	Contact, non-residual herbicides requiring thorough coverage. Apply with other herbicides for broad-spectrum weed control. Most active in hot and sunny conditions. May cause speckling on corn leaves. Refer to label for tank-mix options and adjuvant use. A3 B4 D1 S3 S4-5 X1
<b>Cadet</b> (fluthiacet)	<b>0.4 to 0.9 fl oz EC</b> (0.045 to 0.1 oz)			
<b>Resource</b> (flumiclorac)	<b>2 to 3 fl oz EC</b> (0.215 to 0.32 oz)			
Buctril / generic bromoxynil	<b>1 to 1.5 pt EC</b> (0.25 to 0.37 lb)			
Banvel / generic dicamba	<b>0.5 to 1 pt</b> (0.25 to 0.5 lb ae)	Broadleaf weeds.	EPOST. Corn: From spike to 8 inches tall.	Apply 0.5 pt/A with drop nozzles when corn is 8 to 36 inches tall or 15 days prior to tassel. A3 A5-7 B5 D1 D5 X1 Y10. Pages: 102-103, 104-105, 108-110.
<b>Status</b> (dicamba & diflufenzopyr & isoxadifen safener)	<b>2.5 to 10 oz WDG</b> (0.0625 to 0.25 lb ae)		EPOST. Corn: From 4 to 36 inches tall (V2-V10).	
<b>Peak</b> (pro sulfuron)	<b>0.5 to 1 oz DF</b> (0.28 to 0.57 oz)	Broadleaf weeds.	POST. Corn: From 4 to 30 inches tall. Weeds: 1 to 6 inches tall.	Add NIS at 0.25% v/v or PO at 1% v/v. Use drop nozzles when corn is 20 to 30 inches tall. Does not control ALS resistant weeds. See label for rotational crop restrictions and use with OP insecticides.
<b>Permit</b> (halosulfuron) 	<b>0.67 to 1.33 oz DF</b> (0.5 to 1 oz)	Most large-seeded broadleaf weeds and nutsedge.	POST. Corn: Up to 36 inches tall.	Add NIS at 0.25 to 0.5% v/v or oil adjuvant at 1 qt/A + 28% UAN at 2 to 4 qt/A. Refer to label for application information. A3 D1 X1 Y3 Pages: 102-103, 108-110
<b>Callisto</b> (mesotrione) 	<b>3 fl oz</b> (1.5 oz)	Most broadleaf weeds.	POST. Corn: Up to 30 inches tall or 8-leaf stage. Weeds: Small.	Add oil adjuvant at 1 qt/A + UAN at 2.5% v/v or AMS at 8.5 lb/100 gallons water. MSO or MSO blend adjuvants are not prohibited. Atrazine at 0.42 lb DF/A improves broadleaf weed control. Commercial mixture with atrazine available as Callisto Xtra. A3 D1 D7 X1 Y9 Pages: 108-110
<b>Impact</b> (topramezone)	<b>0.5 to 0.75 fl oz</b> (0.175 to 0.26 oz)	Most broadleaf weeds and foxtail.	POST. Corn: Up to 45 day PHI. Weeds: Small.	Add oil adjuvant at 1 to 1.5% v/v + 28% UAN at 1.25 to 2.5% v/v or AMS at 8.5 lb/A. Atrazine at 0.42 lb DF/A improves grass and broadleaf weed control. Refer to label for tank-mix options and other restrictions. A3 D1 D7 X1 Y9 Pages: 108-110
<b>Laudis</b> (tembotrione & isoxadifen safener) 	<b>2 to 3 fl oz</b> (0.88 to 1.31 oz)	Most broadleaf weeds and some grasses including barnyardgrass, yellow foxtail, proso millet. Partial green foxtail control.	POST. Corn: Up to V8 stage. Weeds: Less than 3 to 4 inches tall.	Add MSO adjuvant at 1.25 pt/A or petroleum oil at 1% v/v + 28% UAN at 1.5 qt/A or AMS at 1.5 lb/A. Atrazine at 0.42 lb DF/A improves grass and broadleaf weed control. Refer to label for tank-mix options. A3 D1 D7 X1 Pages: 108-110

Pages 102-103 = Herbicides resistance, Pages 104-105 = Generic and commercial names, Pages 108-110 = Crop rotation restrictions.

# CORN

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
<b>Refer to page 23 for additional herbicides to use in conventional or herbicide resistant corn.</b>				
Accent / generic nicosulfuron <b>Accent Q</b> (nicosulfuron & isoxadifen safener)	<b>0.67 oz DF</b> <b>2 fl oz L</b> (0.5 oz) <b>0.67 to 1.8 oz DF</b> (0.36 to 1 oz)	Annual grasses, quackgrass and some broadleaf weeds.	POST. Corn: Up to 20 inches with 6 or fewer collars. Use drop nozzles on 20 to 36 inch corn.	Add oil adjuvant at 1 to 2 qt/A + 28% UAN at 2 qt/A or AMS at 2 lb/A or add basic pH blend adjuvant at 1% v/v. Do not apply to corn previously treated with Counter 15G insecticide. Refer to label for tank-mix options. A3 A5-8 D1-3 X1 Y3 Pages: 102-103, 108-110
Steadfast / generic nicosulfuron & rimsulfuron <b>Steadfast Q</b> (nicosulfuron & rimsulfuron & isoxadifen safener)	<b>0.75 oz DF</b> (0.375 oz & 0.188 oz) <b>1.5 oz DF</b> (0.93)		POST. Corn: Up to 12 inches tall with 5 or fewer collars.	Add oil adjuvant at 1 to 2 qt/A + 28% UAN at 2 qt/A or AMS at 2 lb/A or add basic pH blend adjuvant at 1% v/v. For corn hybrids of at least 77 day CRM. Refer to label for tank-mix options. A3 A5-8 D1-3 X1 Y3 Pages: 102-103, 108-110
<b>Option</b> (foramsulfuron & isoxadifen safener)	<b>1.5 to 1.75 oz WG</b> (0.53 to 0.61 oz & 0.53 to 0.61 oz)		POST. Corn: 6 or fewer collars. Weeds: 1 to 3 inches tall.	Add an approved MSO-type adjuvant at 1.25 pt/A + liquid nitrogen fertilizer at 1.5 to 2 qt/A. All crops can be planted the following year. Tank-mixing atrazine will antagonize yellow foxtail control when applied to foxtail >2 inches tall. Refer to label for tank-mix options. A3 A5-8 D1-3 X1 Y3 Pages: 102-103

## NDSU Micro-rates

Steadfast/generic + dicamba + atrazine + MSO adjuvant <b>RUP</b> (nicosulfuron & thifensulfuron)  or  Steadfast/generic + <b>Lumax +</b> adjuvant <b>RUP</b> (nicosulfuron & thifensulfuron) + (mesotrione & s-metolachlor & atrazine)	<b>0.33 to 0.67 oz DF+ 4 fl oz + 0.42 lb DF/0.75pt L</b> ((0.338 to 0.5 oz & 0.025 to 0.038 oz) + 0.188 oz ae + 0.375 lb)  <b>0.33 to 0.67 oz DF+ 3 pt</b> ((0.338 to 0.5 oz & 0.025 to 0.038 oz) + (0.1 lb + 1 lb + 0.375 lb))	Grass and most broadleaf weeds.  Steadfast rates less than 0.67 oz/A may not control yellow foxtail, wild proso millet, volunteer cereals, and quackgrass  Lumax and atrazine improves yellow foxtail control.	POST. Corn: Up to 12 inches tall.  Weeds: Small	<b>User assumes all risk of inadequate weed control when herbicides are used at less than labeled rate.</b> Accent 0.33 to 0.67 oz DF/A can be substituted for Steadfast. Add basic pH blend at 1% v/v or MSO adjuvant at 1.25 pt/A. Steadfast or Accent at 0.33 to 0.67 oz DF/A will control green foxtail and wild oat. Atrazine at 0.42 lb DF/A or 0.75 pt/A will allow most crops to be planted the following year, including sugarbeet, sunflower, and canola. Refer to Accent and Steadfast above for other precautions. Refer to label for tank-mix options. A3 A5-8 D1-3 D5 D7 X1 Y3 Y4 Y7 Y9 Y10 Pages: 102-103, 108-110
--	---	--	--	--

## Preharvest Herbicides

Roundup / generic glyphosate	Up to 3.7 lb ae <b>See Remarks.</b>	Annual and perennial grass and broadleaf weeds.	Preharvest.	<table border="0"> <thead> <tr> <th>lb ae/gal</th> <th>lb ai/gal</th> <th>0.75 ae</th> <th>1.5 ae</th> <th>3 ae</th> </tr> </thead> <tbody> <tr> <td>3</td> <td>4</td> <td>= 32 fl oz</td> <td>64 fl oz</td> <td>128 fl oz</td> </tr> <tr> <td>4/4.17</td> <td>5.4/5.1</td> <td>= 24 fl oz</td> <td>48 fl oz</td> <td>96 fl oz</td> </tr> <tr> <td>4.5</td> <td>5.5</td> <td>= 22 fl oz</td> <td>44 fl oz</td> <td>88 fl oz</td> </tr> <tr> <td>5</td> <td>6.1</td> <td>= 20 fl oz</td> <td>40 fl oz</td> <td>80 fl oz</td> </tr> </tbody> </table> <p>Apply when grain moisture is 35% or less and corn seed is physiologically mature (black layer formed). Allow a 7 day PHI. Add AMS fertilizer at 4 lb/100 gal, or more for hard water. Refer to label for adjuvant use. A4-6 B2 X1 Pages: 102-103, 104-105</p>	lb ae/gal	lb ai/gal	0.75 ae	1.5 ae	3 ae	3	4	= 32 fl oz	64 fl oz	128 fl oz	4/4.17	5.4/5.1	= 24 fl oz	48 fl oz	96 fl oz	4.5	5.5	= 22 fl oz	44 fl oz	88 fl oz	5	6.1	= 20 fl oz	40 fl oz	80 fl oz
lb ae/gal	lb ai/gal	0.75 ae	1.5 ae	3 ae																									
3	4	= 32 fl oz	64 fl oz	128 fl oz																									
4/4.17	5.4/5.1	= 24 fl oz	48 fl oz	96 fl oz																									
4.5	5.5	= 22 fl oz	44 fl oz	88 fl oz																									
5	6.1	= 20 fl oz	40 fl oz	80 fl oz																									
paraquat <b>RUP</b>	<b>1 to 2 pt 2SL</b> <b>0.8 to 1.3 pt 3SL</b> (0.25 to 0.5 lb)	Annual broadleaf and grass weeds.		Add NIS at 0.25% v/v. Apply when grain moisture is 35% or less and corn seed is physiologically mature (black layer formed). Most active in hot and sunny conditions. Allow a 7 day PHI. B8 D11 Pages: 104-105																									

Pages 102-103 = Herbicides resistance, Pages 104-105 = Generic and commercial names, Pages 108-110 = Crop rotation restrictions.

# HERBICIDE-RESISTANT CORN

Refer to page 23 for additional herbicides to use in conventional or herbicide resistant corn.

## Clearfield Corn

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
<b>Lightning</b> (imazethapyr & imazapyr)	<b>1.28 oz WDG</b> (0.672 oz & 0.224 oz)	Annual grass and broadleaf weeds.	POST.	<b>Apply only to Clearfield corn varieties.</b> Add oil adjuvant and liquid fertilizer. Refer to label for weeds controlled and application information. Apply with dicamba based products to increase broadleaf weed control including ALS-resistant kochia. A5-6 D1 D12 X1 Pages: 102-103, 108-110

## LibertyLink Corn

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
<b>Ignite 280</b> (glufosinate)	<b>22 fl oz</b> (0.4 lb)	Annual grass and broadleaf weeds including ALS and glyphosate weeds.	POST. Corn: Up to 7 collars (V7).  Weeds: 1 to 3 inches tall.	<b>Apply only to LibertyLink corn varieties.</b> Non-selective, contact, non-residual herbicide requiring thorough coverage. Most active in hot and sunny conditions. Add AMS at 3 lb/A. Controls weeds resistant to other herbicides. A3 A5-7 D1 D13 S2 S7 X1 Pages: 102-103

## Roundup Ready Corn

Herbicide	Product/A (ae/A)	Weeds	When to Apply	Remarks and Paragraphs																																																											
Roundup / generic glyphosate	<b>Maximum single application =</b> 0.75 lb ae  <b>Maximum in-crop =</b> 1.5 lb ae <b>See Remarks.</b>	Annual and perennial grass and broadleaf weeds.	POST. Corn: Up to 30 inches tall or 8 collars.	<b>Apply only to Roundup Ready corn varieties.</b>  <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2"></th> <th style="text-align: center;"><u>Maximum single</u></th> <th colspan="2" style="text-align: center;"><u>Maximum in-crop</u></th> </tr> <tr> <th colspan="2"></th> <th colspan="4" style="text-align: center;">lb ae</th> </tr> <tr> <th colspan="2"></th> <th style="text-align: center;"><u>0.75</u></th> <th style="text-align: center;"><u>1.125</u></th> <th style="text-align: center;"><u>1.5</u></th> <th style="text-align: center;"><u>2.25</u></th> </tr> <tr> <th colspan="2"></th> <th colspan="4" style="text-align: center;">----- fl oz -----</th> </tr> </thead> <tbody> <tr> <td style="text-align: right;">3</td> <td style="text-align: center;">= 4</td> <td style="text-align: center;">= 32</td> <td style="text-align: center;">48</td> <td style="text-align: center;">64</td> <td style="text-align: center;">96</td> </tr> <tr> <td style="text-align: right;">3.75</td> <td style="text-align: center;">= 5</td> <td style="text-align: center;">= 26</td> <td style="text-align: center;">38</td> <td style="text-align: center;">52</td> <td style="text-align: center;">77</td> </tr> <tr> <td style="text-align: right;">4/4.17</td> <td style="text-align: center;">= 5.4/5.1</td> <td style="text-align: center;">= 24</td> <td style="text-align: center;">36</td> <td style="text-align: center;">48</td> <td style="text-align: center;">72</td> </tr> <tr> <td style="text-align: right;">4.5</td> <td style="text-align: center;">= 5.5</td> <td style="text-align: center;">= 22</td> <td style="text-align: center;">32</td> <td style="text-align: center;">44</td> <td style="text-align: center;">64</td> </tr> <tr> <td style="text-align: right;">4.72</td> <td style="text-align: center;">= 6.3</td> <td style="text-align: center;">= 20</td> <td style="text-align: center;">30</td> <td style="text-align: center;">40</td> <td style="text-align: center;">61</td> </tr> <tr> <td style="text-align: right;">5</td> <td style="text-align: center;">= 6.1</td> <td style="text-align: center;">= 19</td> <td style="text-align: center;">29</td> <td style="text-align: center;">38</td> <td style="text-align: center;">58</td> </tr> </tbody> </table> Apply with AMS fertilizer. Refer to label for tank-mix options, application information, and restrictions. A4-7 B2 D1 D14 X1			<u>Maximum single</u>	<u>Maximum in-crop</u>				lb ae						<u>0.75</u>	<u>1.125</u>	<u>1.5</u>	<u>2.25</u>			----- fl oz -----				3	= 4	= 32	48	64	96	3.75	= 5	= 26	38	52	77	4/4.17	= 5.4/5.1	= 24	36	48	72	4.5	= 5.5	= 22	32	44	64	4.72	= 6.3	= 20	30	40	61	5	= 6.1	= 19	29	38	58
		<u>Maximum single</u>	<u>Maximum in-crop</u>																																																												
		lb ae																																																													
		<u>0.75</u>	<u>1.125</u>	<u>1.5</u>	<u>2.25</u>																																																										
		----- fl oz -----																																																													
3	= 4	= 32	48	64	96																																																										
3.75	= 5	= 26	38	52	77																																																										
4/4.17	= 5.4/5.1	= 24	36	48	72																																																										
4.5	= 5.5	= 22	32	44	64																																																										
4.72	= 6.3	= 20	30	40	61																																																										
5	= 6.1	= 19	29	38	58																																																										
Roundup / generic glyphosate	<b>Maximum single application =</b> 1.125 lb ae  <b>Maximum in-crop =</b> 2.25 lb ae <b>See Remarks.</b>		POST. RR Corn 2: Up to 30 inches tall or 8 collars. Drop nozzles: 30 to 48 inches tall (free standing).	<b>Apply only to Roundup Ready Corn II varieties.</b> Refer to glyphosate above for remarks. Add AMS fertilizer at 4 lb/100 gal, or more for hard water. Refer to label for registered uses and for additional information and restrictions. A4-7 D1 D14-15 X1 Pages: 102-103, 104-105																																																											

Refer to page 115 for control of volunteer Roundup Ready canola and soybean in Roundup Ready corn.

Pages 102-103 = Herbicides resistance, Pages 104-105 = Generic and commercial names, Pages 108-110 = Crop rotation restrictions.

# WEED MANAGEMENT IN ROUNDUP READY CORN

NDSU recommends using herbicides with different modes of action and different weed control management practices in Roundup Ready corn production to delay development of glyphosate resistant weeds. See Herbicide Resistant Weed Section (pages 102-103) for more information on weed resistance.

**COMMANDMENT #1 - Control weeds when 2 to 4 inches tall to avoid yield loss. Remove weeds early especially when grass weed populations are high.**

Corn yield loss from weeds.

Weed height when sprayed with glyphosate	Average corn yield loss vs. weed-free control
2 inches	7%
4 inches	6%
9 inches	9%
12 inches	21%

Source: 2005 Ohio State University summary of 35 university trials in IA, MI, IL, MO, KY, OH TN, and WI. Yield loss in ND may be greater than those shown due to shorter growing season and less rainfall.

Roundup / generic glyphosate at 1.5 oz ae/A controls foxtail, at 2.25 oz ae/A controls volunteer small grain, and at 3 oz ae/A controls wild oat and downy brome. Use higher rates on broadleaf weeds, larger weeds, tolerant weeds, or if weeds are under environmental stress. See Roundup/glyphosate section (A4) on page 69-70 for more information about increasing weed control from Roundup/glyphosate.

## Three Systems of Weed Control in RR Corn

1. PRE followed by glyphosate POST: **All PRE herbicides require rain for activation.**

Page 18 lists many registered PRE herbicides that can be used in herbicide resistant corn. PRE herbicides (acetochlor) at full labeled rates may give 60 to 99% grass and broadleaf weed control, will reduce weed infestations emerging with corn, will allow more flexibility in application of POST herbicides, and will help protect yield from early season weed competition. NDSU studies often show greater grass and broadleaf weed control from acetochlor compared to other similar herbicides. Soil-applied atrazine is less effective than POST-applied due to soil adsorption and tie-up.

2. Roundup / generic glyphosate + POST broadleaf herbicide (different mode of action):

Several herbicides listed in the following table will help improve control of weeds not controlled by Roundup/glyphosate. Roundup/glyphosate has no soil residual and will not control weeds emerging after application. Roundup/glyphosate may not control some weed species or biotypes. Many POST herbicides listed will give residual weed control. Follow label directions for tank-mix and application information. Corn is most tolerant to Banvel / generic dicamba from spike to 4-inch corn stage.

3. Roundup / generic glyphosate (EPOST = 2 to 4 inch tall weeds) followed by Roundup/glyphosate (POST = less than 24 inch tall corn): This program will increase the risk of weed resistance unless other strategies are used in rotational crops - see Herbicide Resistant Weed Section, pages 102-103.

The following table shows herbicides to apply in tank-mix or sequentially with Roundup/glyphosate in RR corn for control of weeds not controlled by Roundup/glyphosate. Weed ratings reflect control without Roundup/glyphosate. Refer to label for tank-mix and specific application information. Residual weed control listed in the table refers to control of subsequent flushes of weeds after herbicide application.

**Herbicides to apply in tank-mix or sequentially with Roundup / generic glyphosate in RR corn for control of weeds not controlled by Roundup/glyphosate. Refer to pages 18 through 21 for additional herbicides.**

Corn ht.	Rate/A	Cost/A	Buckwheat, Wild	Canola, Vol. RR <sup>1</sup>	Horseweed (Marestail)	Kochia	Lambsquarters	Mallow, Common	Nightshade species	Prickly lettuce	Ragweed, Common	Smartweed, Annual	Waterhemp	
<b>Preplant or PRE herbicides - no residual weed control</b>			Weed Control Ratings <sup>3</sup>											
2,4-D	0.5 - 1 pt	\$1.00 - 2.00	P	P-G	G-E	P	E	P	N-P	E	E	P-F	F-G	
Aim	0.5 - 1 fl oz	\$3.35 - 6.75	P	N-P	N	F-E	F-G	-	N-P	P	N	N	F-E	
Banvel/dicamba*	2 - 4 fl oz	\$1.00 - 2.00	E	N-P	F-E	E	G	P	E	G-E	E	E	F-G	
Harmony/thifensulfuron*	See label	\$3.30 - 6.60	P-E	F-G	N	G-E <sup>4</sup>	E	G-E	N	G-E <sup>4</sup>	N	E <sup>4</sup>	P-E <sup>4</sup>	
<b>Preplant or PRE herbicides - with residual weed control - See Combination herbicides for corn.</b>														
Balance Flexx <sup>2</sup>	2 - 4 fl oz	\$9.00 - 18.00	N	E	G-E	E	E	N	G-E	G-E	G-E	G	G-E	
Harness/Surpass/acetochlor*	1.25 - 2.25 pt	\$15.00 - 28.00	P	N	N-P	F	G-E	N	G-E	-	P	P	G-E	
Outlook/dimethenamid*	10 - 14 fl oz	\$14.00 - 19.00	N	N	N	N	F-G	N	F-G	-	N	N	G	
Sharpen	2 - 3 fl oz	\$9.40 - 14.00	G-E	F-E	G-E	E	E	P-E	G-E	G-E	G-E	E	G-E	
<b>POST herbicides - See Combination herbicides for corn.</b>														
atrazine	<12 inches	0.38 lb ai	\$1.90	G-E	P-G	E	E	E	-	G-E	E	P	G	F
Banvel/dicamba*	<6 inches	4 - 8 fl oz	\$2.00 - 4.00	E	P-F	E	E	G-E	G	G-E	G-E	E	E	G-E
Callisto <sup>2</sup> + atra <sup>5</sup>	<12 inches	2 - 3 fl oz	\$9.00 - 15.00	G-E	G-E	E	E	E	G-E	E	E	E	E	E
Impact <sup>2</sup> + atra <sup>5</sup>	<12 inches	0.5 - 0.75 fl oz	\$10.50 - 15.50	E	G-E	E	E	E	-	E	E	E	E	E
Laudis <sup>2</sup> + atra <sup>5</sup>	<12 inches	2 - 3 fl oz	\$10.00 - 15.00	E	G-E	G	E	E	-	E	E	E	E	E
Resolve/rimsulf <sup>*2</sup>	<12 inches	1 oz DF/SG	\$7.50	N	G-E	N	E <sup>4</sup>	F	-	P-F	-	P	F	P-G <sup>4</sup>
Status	4-36 inches	2.5 - 5 oz WDG	\$7.00 - 14.00	E	P-F	E	E	E	G	G	E	E	E	G

<sup>1</sup>See page 115 for size of volunteer canola and herbicide rates.

<sup>2</sup>May carryover more than one cropping season. Follow labeled crop rotation restrictions. See pages 108-110.

<sup>3</sup>E = Excellent (90-99%), G = Good (80-90%), F = Fair (65-80%), P = Poor (40-65%), N = None.

<sup>4</sup>Except where resistant populations have developed.

<sup>5</sup>Atrazine at 0.38 lb ai/A. Atrazine and mixtures containing atrazine are RUP.

**Combination Herbicides (partial list) for Conventional and Herbicide Resistant Corn:**

Trade Name	Manufacturer	Applied at (Prod/A)...	Cost/A	Gives the equivalent product/A rates of:
Callisto Xtra <sup>2</sup> (No aerial application)	Syngenta	20 fl oz	\$11.25	2.5 fl oz Callisto + 0.5 lb ai atrazine
		24 fl oz	\$13.50	3 fl oz Callisto + 0.6 lb ai atrazine
Camix <sup>2</sup>	Syngenta	0.8 qt	\$11.00	0.7 pt Dual II Magnum + 2.15 fl oz Callisto
Halex GT <sup>2</sup>	Syngenta	2.6 pt	\$16.90	0.7 pt Dual Magnum + 2.15 fl oz Callisto + 1.8 pt glyphosate-ipa (3 lb ae/gal)
		3.6 pt	\$23.40	1 pt Dual Magnum + 3 fl oz Callisto + 1.8 pt glyphosate-ipa (3 lb ae/gal)
Hornet <sup>2</sup>	Dow	2 oz	\$ 9.00	2.67 fl oz Stinger + 0.47 oz Python
Keystone LA <sup>2*</sup> - RUP	Dow	1.33 qt	\$20.00	1.66 pt Surpass + 0.5 lb ai atrazine
Lumax <sup>2</sup> - RUP	Syngenta	2 pt	\$16.00	0.7 pt Dual II Magnum + 2.15 fl oz Callisto + 0.25 lb atrazine 90DF
		3 pt	\$24.00	1.05 pt Dual II Magnum + 3.23 fl oz Callisto + 0.375 lb atrazine 90DF
Prequel <sup>2</sup>	Dupont	1.66 oz DF	\$11.65	0.5 fl oz Balance Pro + 1 oz Resolve SG
Priority <sup>2</sup>	Tenkos	1 oz	\$ 6.00	0.5 fl oz Aim + 0.67 oz Permit
Realm Q <sup>2</sup>	Dupont	4 oz DF	\$ -	1.2 oz Resolve + 2.5 fl oz Callisto + isoxadifen safener
Require Q <sup>2</sup>	Dupont	4 oz DF	\$12.00	1 oz Resolve + 4.25 fl oz Banvel + isoxadifen safener
Resolve Q <sup>2</sup>	Dupont	1.25 oz DF	\$ 9.50	1 oz Resolve + 0.067 oz Harmony GT + isoxadifen safener
Sequence	Syngenta	2 to 3 pt	\$13-19	24 to 36 fl oz glyphosate-ipa + 0.8 to 1.2 pt Dual II Magnum
SureStart/ TripleFlex <sup>2</sup>	Dow/ Monsanto	1.5 pt	\$16.50	14 fl oz Surpass + 1.7 oz Stinger (Hornet) + 2 oz Python (Hornet)
		1.75 pt	\$19.25	16 fl oz Surpass + 2 oz Stinger (Hornet) + 2.3 oz Python (Hornet)
Verdict	BASF	10 fl oz	\$15.00	2 fl oz Sharpen + 8.3 fl oz Outlook
		18 fl oz	\$24.00	3.6 fl oz Sharpen + 14.9 fl oz Outlook
WideMatch <sup>*2</sup>	Dow	0.75 pt	\$ 6.60	3 fl oz Stinger + 3 fl oz Starane
		1 pt	\$8.90	4 fl oz Stinger + 4 fl oz Starane
Yukon <sup>2</sup>	Gowan	4 oz	\$11.00	0.5 oz Permit + 3 fl oz Banvel/Clarity

\* Or generic equivalent.