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 22-24 for additional herbicides to use in conventional or herbicide-resistant corn**.				
Dual/II/Magnum (S/metolachlor[15] & benoxacor safener)	**1 to 2 pt EC** (0.95 to 1.9 lb)	Annual grass and some broadleaf weeds.	Shallow PPI or PRE.	PRE requires precipitation for activation. Pyroxasulfone may require multiple rain events for activation. Adjust rate for soil type. Shallow PPI gives more consistent weed control than PRE. 3 to 4 weeks residual weed control after activation. Weed control: pyroxasulfone = acetochlor > dimethenamid = metolachlor. Use the highest rates allowed for greater and more consistent weed control. Refer to label for tank-mix options. A1-2 B1-2 D1 D5 D6
Harness/Surpass (acetochlor[15] & dichlormid safener)	**1.25 to 2.75 pt 7EC** (1.1 to 2.4 lb) **1.5 to 3 pt 6.4EC** (1.2 to 2.4 lb)			
Outlook (dimethenamid[15])	**16 to 21 fl oz EC** (0.75 to 1 lb)		Shallow PPI, PRE or EPOST to V4 corn.	
Zidua (pyroxasulfone[15])	**1 to 4 oz WDG** (0.85 to 3.4 oz)			
Anthem Maxx (pyroxasulfone[15] & fluthiacet[14])	**2.5 to 6.5 fl oz SC** (1.3 to 3.4 oz + 0.04 to 0.1 oz)			Fluthiacet (Cadet) in Anthem Maxx is for POST control of emerged weeds and does not have soil activity.
Fierce (pyroxasulfone[15] & flumioxazin[14])	**3 oz WDG** (1.28 oz & 1 oz)	Annual grass and broadleaf weeds.	EPP - At least 7 days prior to planting.	Planting interval is at least 14 days for Valor at 3 oz/A and 7 days for min-till and 30 days for conv.-till corn. Requires precipitation for herbicide activation. Refer to label for tank-mix options and crop rotation restrictions. A1-2 B1-2 D1 D6 E12 S1-13 Y15
Valor SX/EZ (flumioxazin[14])	**2 to 3 oz WDG/SC** (1 to 1.5 oz)	Small-seeded broadleaf weeds.		
LeadOff (rimsulfuron[2] & thifensulfuron[2])	**1.5 to 2.7 oz WDG** (0.25 to 45 oz + 0.25 to 0.45 oz)	Some grass and broadleaf weeds.	EPP, shallow PPI, or PRE.	Requires precipitation for herbicide activation. Adjust rate for application timing. Refer to label additional restrictions. A1-2 B1-2 E5 S1 S7
Sharpen (saflufenacil[14])	**1 to 3 fl oz SC** (0.36 to 1.07 oz)	Annual broadleaf weeds.		PRE requires precipitation for herbicide activation. Adjust rate for soil type. Sharpen has no grass activity. Provides burndown and rate dependant residual control of emerged broadleaf weeds. Refer to label for tank-mix options. A1-2 B1-2 B12 S1-13
Verdict (saflufenacil[14] & dimethenamid[15])	**10 to 18 fl oz EC** (0.71 to 1.28 oz + 0.39 to 0.7 lb)	Annual grass and broadleaf weeds.		
Balance Flexx (isoxaflutole[27] & safener) **RUP**	**3 to 6 fl oz L** (0.75 to 1.5 oz)		Shallow PPI, PRE or EPOST up to V2 corn.	PRE requires precipitation for herbicide activation. Adjust rate for soil texture and pH. Provides residual weed control after activation. Do not apply EPOST with oil adjuvant. Balance Flexx and Corvus contains cyprosulfamide to safen corn. Refer to label for crop rotation restrictions. A1-2 D1 S6-13 Y8 Y15
Corvus (isoxaflutole[27] & thiencarbazone[2] & safener) **RUP**	**3.33 to 5.6 fl oz SC** (0.78 to 1.32 oz & 0.31 to 0.53 oz)			
SureStart/II TripleFlex/II (acetochlor[15] & flumetsulam[2] & clopyralid[4])	**1.5 to 3 pt SC** (0.7 to 1.4 lb & 0.36 to 0.72 oz & 0.87 to 1.74 oz)		Shallow PPI, PRE or EPOST up to 11 inch tall corn.	PRE requires precipitation for herbicide activation. Adjust rate for soil texture and pH. Provides residual weed control after activation. Add NIS at 1 qt/100 gal water or PO at 1% v/v to POST applications. Do not add MSO adjuvants to emerged corn. Add AMS only in POST applications with glyphosate. Refer to label for tank-mix options. A1-2 D5 D8 Y2 Y15
Resicore (acetochlor[15] & mesotrione[27] & clopyralid[4])	**2.25 to 3 qt SC** (1.58 to 2.1 lb & 2.7 to 3.6 oz & 1.68 to 2.24 oz)			
Acuron Flexi (S-metolachlor[14] & mesotrione[27] & bicyclopyrone[27] & benoxacor safener)	**2 to 2.25 qt SC** (0.72 to 0.8 lb & 1.28 to 1.44 oz & 0.32 to 0.37 oz)		Shallow PPI, PRE or EPOST up to 12 inch tall corn.	PRE requires precipitation for herbicide activation. Adjust rate for organic matter. Provides residual weed control after activation. Bicyclopyrone improves large-seeded broadleaf weed control. Foundation rate for Acuron as a planned 2-pass program is 2 qt/A. Apply Acuron Flexi EPOST with atrazine at 0.38 lb ai/A for greater weed control. Add NIS at 1 qt/100 gal water + AMS at 8.5 lb/100 gal water to emerged corn and weeds. Do not apply with MSO or nitrogen based adjuvants to emerged corn. Refer to label for tank-mix options and crop rotation restrictions. A1-2 D2 D4 F3 Y4 Y15
Acuron (S-metolachlor[14] & mesotrione[27] & bicyclopyrone[27] & atrazine[5] & benoxacor safener)	**1.5 to 3 qt SC** (0.8 to 1.6 lb & 1.44 to 2.88 oz & 0.36 to 0.72 oz & 0.375 to 0.75 lb)		Shallow PPI, PRE or POST up to 30 inch tall corn.	

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Refer to page 22-24 for additional herbicides to use in conventional or herbicide-resistant corn.				
Dicamba[4]	**0.25 to 0.5 pt SL** (0.25 to 0.5 lb)	Broadleaf weeds.	PRE or EPOST up to 8 inch tall corn.	Seed corn at least 1.5 inches. PRE applications requires precipitation for herbicide activation. Residual weed control from soil application is weed and dicamba rate dependant. DiFlexx/Duo contains cyprosulfamide safener and Status contains isoxadifen to safen dicamba on corn. In one growing season do not apply more than 2 qt/A of dicamba, 24 fl oz/A of DiFlexx, 40 fl oz/A of DiFlexx Duo, or 12.5 oz/A of Status. Apply with PO and MSO adjuvants at 1% v/v and AMS/UAN to improve weed control. Apply with HSMOC adjuvants when mixed with glyphosate. Refer to label for adjuvant type and rate recommendations, crop rotation restrictions, and other information. A3 A5-8 B6 D1 D3 Y9 Y15
DiFlexx (dicamba[4] & cyprosulfamide safener)	**0.5 to 1 pt SL** (0.25 to 0.5 lb)		PRE or POST up to V10 or 36 inch tall corn. Weeds: Small.	
DiFlexx Duo (dicamba[4] & tembotrione[27] & cyprosulfamide safener)	**24 to 40 fl oz SC** (0.24 to 0.39 lb + 0.051 to 0.08)	Broadleaf weeds and some annual grass weeds.	PRE or POST prior to V7 or 36 inch tall corn. Weeds: Small.	
Status (dicamba[4] & diflufenzopyr[19] & isoxadifen safener)	**5 to 10 oz WDG** (0.125 to 0.25 lb)	Broadleaf weeds.	POST from V2 to V10 or from 4 to 36 inch tall corn. Weeds: Small	
Armezon / Impact + Atrazine[5] (topramezone[27])	**0.5 to 0.75 fl oz SC + 0.75 pt DF 0.42 lb 4L** (0.175 to 0.26 oz + 0.375 lb)	Broadleaf weeds and foxtail.	POST to corn. Up to 45 day PHI. Weeds: Small.	Apply early to small weeds to increase residual weed control. Add atrazine at 0.42 lb DF/A or 0.75 pt 4L/A + UAN at 2.5 gal/100 gal or AMS at 8.5 lb/100 gal water. Apply to corn less than 12 inches when atrazine is applied alone or with other herbicides. Adjuvant recommendations: Armezon/Impact and Laudis: Add MSO oil adjuvant at 1 to 2 pt pt/A. Armezon Pro: Add NIS at 1 to 2 pt/100 gal. Callisto, Capreno, and Revulin Q: Add PO adjuvant at 2 to 4 pt/A or HSOC at 2 qt/A. Resicore: Add NIS at 1 pt/100 gal or PO adjuvant at 2 pt/A. Do not apply Armezon Pro, Callisto, Resicore, or Revulin Q with MSO adjuvants. Refer to label for tank-mix options and restrictions. Commercial mixtures with Callisto available: **Acuron** = mesotrione + bicyclopyrone + S-meto + atra **Acuron Flexi** = mesotrione + bicyclopyrone + S-meto **Callisto Xtra** = mesotrione + atrazine **Lumax EZ** = mesotrione + S-metolachlor + atrazine A3 A5-7 D1 D4 S1-13 Y7 Y15
Armezon Pro + Atrazine[5] (topramezone[27] & dimethenamid[15])	**16 to 24 fl oz SC + 0.75 pt DF 0.42 lb 4L** (0.175 to 0.26 oz + 0.375 lb)			
Callisto + Atrazine[5] (mesotrione[27])	**3 fl oz SE + 0.75 pt DF 0.42 lb 4L** (1.5 oz + 0.375 lb)	Broadleaf weeds.	POST up to V8 or 30 inch tall corn. Weeds: Small.	
Resicore (acetochlor[15] & mesotrione[27] & clopyralid[4])	**2.25 to 3 qt SC** (1.58 to 2.1 lb & 2.7 to 3.6 oz & 1.68 to 2.24 oz)	Broadleaf weeds, annual grasses and quackgrass.	POST up to 11 inch tall corn. Weeds: Small.	
Revulin Q (mesotrione[27] & nicosulfuron[2] & isoxadifen safener)	**3.4 to 4 oz SG +** (1.25 to 1.5 oz + 0.5 to 0.58 oz)	Broadleaf weeds, annual grasses and quackgrass.	POST up to V6 or 20 inch tall corn. Weeds: Small.	
Laudis + Atrazine[5] (tembotrione[27] & isoxadifen safener)	**3 fl oz SC + 0.75 pt DF 0.42 lb 4L** (1.31 oz + 0.375 lb)	Broadleaf weeds and some grass weeds. Partial green foxtail control.	POST up to V8 stage corn. Weeds: Less than 3 to 4 inches tall.	
Capreno + Atrazine[5] (tembotrione[27] & thiencarbazone[2] & isoxadifen safener)	**3 fl oz SC + 0.75 lb DF/ 0.42 pt 4L** (1.08 oz & 0.21 oz + 0.375 lb)	Broadleaf weeds and most grass weeds including brome and barnyardgrass.	POST up to V5 stage corn. Weeds: Less than 3 to 4 inches tall.	
Atrazine[5] + oil adjuvant **RUP**	**0.42 to 0.84 lb DF 0.75 to 1.5 pt 4L + 1 qt**(0.38 to 0.75 lb)	Annual broadleaf weeds.	EPOST up to 12 inch tall corn. Weeds: Small.	Apply with other POST herbicides to improve weed control. Atrazine may leave a soil residue and injure crops planted the following year. A3 D1-2 Y2-7 Y15
Bromoxynil[6]	**1 to 1.5 pt EC** (0.25 to 0.37 lb)	Small pigweed and lambsquarters, nightshade, kochia and buckwheat.	EPOST up to 12 inch tall corn. Weeds: Less than 2 to 3 inches.	Contact, non-residual herbicides requiring >15 gpa and full sunlight. Apply with other herbicides. May cause speckling on corn leaves. Refer to label for tank-mix options and adjuvant use. A3 B4 D1
Resource (flumiclorac[14])	**2 to 6 fl oz EC** (0.215 to 0.65 oz)			

CORN

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Preharvest Herbicides				
Glyphosate[9]	Up to 3.7 lb ae **See Remarks.**	Grass and broadleaf weeds.	Preharvest. Apply when grain moisture is <35% and corn seed has formed a black layer.	Add AMS fertilizer at 8.5 lb/100 gal. Allow a 7 day PHI. A3 A4-8 B1-2 B8
Paraquat[22] **RUP**	**1 to 2 pt 2SL 0.8 to 1.3 pt 3SL** (0.25 to 0.5 lb)	Annual broadleaf and grass weeds.		Add NIS at 0.25% to 0.5% v/v. Allow a 7 day PHI. B11

HERBICIDE-RESISTANT CORN

Refer to pages 22-24 for additional herbicides to use in conventional or herbicide-resistant corn.
Refer to page 111 for control of volunteer glyphosate resistant corn, canola, and soybean.
Refer to Herbicide Resistant Weeds section (X1 - pages 96-97) for weed management strategies to delay herbicide resistant weeds.

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

Average ND corn yield loss vs. weed free or herbicide applied at corn plating.

Weed height when weeds were removed	Average corn yield loss vs. weed-free control	
	ND research* (bu/A)	Mid-west research**
2-6 inches	0%	6%
6-8 inches	16%	9%
8-12 inches	20%	21%
Untreated	63%	Not harvested

Corn yield loss from weeds may be greater in dry North Dakota environments than other areas of the mid-west that receive greater precipitation.

*Source: 8 site-years (Carrington and Minot, 2009-2014).
**Source: 2005 Ohio State University summary of 35 university trials in IA, MI, IL, MO, KY, OH TN, and WI.

Roundup Ready Corn

Herbicide	Product/A (ae/A)	Weeds	When to Apply	Remarks and Paragraphs
Glyphosate[9]	**Maximum single application =** 0.75 lb ae **Maximum in-crop =** 1.5 lb ae **See Remarks.**	Annual and perennial grass and broadleaf weeds.	POST. Corn: Up to 30 inches tall or 8 collars.	**Apply only to Roundup Ready corn varieties**. Maximum single 0.75 / Maximum in-crop 1.125 (lb ae); 1.5 / 2.25 (lb ae). lb ae/gal = lb ai/gal: 3 = 4 = 32 fl oz; 48; 64; 96. 4/4.17 = 5.4/5.1 = 24/23; 36/35; 48/46; 72/69. 4.5 = 5.5 = 21.3; 32; 42.6; 64. Apply with AMS fertilizer at 8.5 lbs/100 gal. Refer to label for tank-mix options, application information, and restrictions. A4-7 B8 D1 D8 S1-13
Glyphosate[9]	**Maximum single application =** 1.125 lb ae **Maximum in-crop** 2.25 lb ae **See Remarks.**		POST. RR Corn 2: Up to 30 inches tall or 8 collars. Drop nozzles: 30 to 48 inches tall (free standing).	**Apply only to Roundup Ready Corn II varieties**. Refer to glyphosate above for remarks. Refer to label for registered uses and for additional information and restrictions. A4-7 B8 D1 D8 S1-13

LibertyLink Corn

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Liberty 280 + AMS (glufosinate[10])	**22 fl oz SL + 3 lb/A** (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.	**Apply only to LibertyLink corn varieties**. Contact herbicide requiring thorough coverage. Most active in high humidity and temperature. Add AMS - do not use non-AMS adjuvants. A3 A5-6 B9 D1 D7 S1-12

GENERAL WEED MANAGEMENT GUIDELINES

1. Scout fields before and soon after herbicide application. Correctly identify weeds. Use effective herbicides, handweeding, cultivation/ tillage, and other methods of weed control to kill weeds that escape or germinate after chemical application. Scout fields at the end of the season and draw field maps to denote locations of weed species, weed density, and weed escapes. Save maps as a field record.

2. Diversified crop sequences with different life cycles e.g. winter annual crops (winter wheat), perennial crops (alfalfa) and summer annual crops (spring wheat, corn or beans) results in different planting and harvest times, more herbicide options, and decreased risk of herbicide resistant weeds.

3. Consider weed biology and ecology. Use tillage, crop sequence, soil fertility, planting date, crop competition, weed seed longevity, and response to herbicides to increase successful weed management.

4. "Don't forget the PRE". Apply effective PRE herbicides at full rates and include multiple mechanisms of action. PRE herbicides will reduce weed emergence and allow flexibility in POST herbicide timing. Residual PRE herbicides applied to soil and early POST (if labeled) will suppress weed emergence through canopy closure, particularly those with a long germination pattern (kochia and waterhemp). Use PRE herbicides that will effectively control problem weeds.

5. Apply effective POST herbicides. Apply herbicides that include multiple mechanisms of action in tank-mix or in sequential applications. Two or more herbicides in mixture must have activity against potentially resistant weeds to be effective. Herbicides in most commercial mixtures do not target the same weed species. Effective tank-mixtures on weeds will reduce selection of herbicide-resistant biotypes more successfully than rotating herbicide modes of action. Antagonism may occur with some mixtures, especially between contact and systemic herbicides.

6. Use high herbicide rates and effective adjuvants. Full rates kill weeds with low-level resistance and dead plants cannot produce resistant progeny. Reduced rates allow plants with low-level resistance to survive, hybridize, and produce progeny with elevated resistance. Hybrid plants (>1 resistance gene) express a higher level of resistance and require even higher herbicide rates to kill the plant. Dead weeds means zero tolerance (no seed production, zero resistant progeny) and is effective resistance weed management.

7. Spray small annual weeds. Generally, small weeds (<3 inches) are more susceptible to herbicides than large weeds. Even weeds with low level herbicide resistance are more susceptible at 1 inch than at larger growth stages.

8. Practice Zero Tolerance. Scout fields after row closure and kill uncontrolled weeds. Seed from escaped weeds will contribute to the weed seedbank and will require diversified weed management strategies of mowing, cultivation/tillage, and hand weeding to achieve near 100% weed control. Timely cultivation can improve weed control and hand-pulling is effective for single plants or small patches.

9. Control weeds in field perimeters, drown out, and non-crop area. Weeds surviving a partial herbicide dose on field borders can be a repository for the introduction of resistant weeds into a field. Control weeds in all areas of the field where crop is not growing including field edges, fence lines, water-ways, ditch banks, and areas where crop has either not been planted or has been destroyed.

10. Rotate herbicides with different mechanisms of action in consecutive years. Diverse crop rotations can introduce herbicides with different mechanisms of action to delay herbicide resistance. A mix of dead plants, unaffected plants, and plants showing intermediate responses indicate herbicide resistance has occurred.

11. Clean tillage and harvest equipment to ensure weed seed will not be transported between fields. This is particularly important in crops that are harvested with a platform header equipped combine.

12. Evaluate weed management at the end of each season and revise to improve weed control the next year.

Refer to Herbicide Resistant Weeds section (X1 - pages 96-97) for additional information on resistant weeds.

Roundup Ready Corn - Herbicides to apply in tank-mix or sequentially with glyphosate for control of weeds not controlled by glyphosate.

Refer to pages 18 through 21 for additional herbicides and information.

Herbicides[Site of action-pg 98-99]	Rate/A	Cost/A	Buckwheat, Wild	Canola, Vol. RR[b]	Horseweed (Marestail)	Kochia	Lambsquarters	Nightshade species	Pigweed, Redroot	Prickly lettuce	Ragweed, Common	Smartweed, Annual	Waterhemp
Preplant-burndown Herbicides[a] - add AMS at 1.5-3 lb/A.			Weed Control Ratings[c,d] - ***without glyphosate***										
Glyphosate[9] (4.5 lb ae) + AMS + HSMOC	32 - 105 fl oz	$7.00-25.00	F-E	N	P-E	P-E	E	E	E	E	P-E	E	P-E
+ 2,4-D[4]	+ 1 pt + 1-2 pt	$5.00	N	P-G	F-E	P	E	N-P	G	E	E	P	F-G
+ 2,4-D[4]e + Express[2]	+ 1pt+0.3oz	$18.00	F-E	G-E	P-E	P-E	E	E	E	E	P-E	E	P-E
+ Dicamba[4]	+ 8 fl oz	$5.50-7.00	E	N	F-E	E	G	E	G	G-E	G	E	F
	+ 16 fl oz	$11.00-14.00	E	N	E	E	E	G-E	E	E	E	E	G
+ Dicamba[4] + **Sharpen**[14]	+8 floz + 2-3 floz	$19.00-25.00	E	G-E	E	E	E	E	E	E	E	E	E
Paraquat[22]* + NIS	3pt 2SL+1-2qt	$10.00	F	-	F-G	G-E	E	G-E	E	F-G	G-E	E	G-E
+ Dicamba[4] + MSO	8 fl oz + 1.5 pt	$17.00	F	-	F-G	G-E	E	G-E	E	F-G	G-E	E	G-E
+ **Sharpen**[14] + MSO	2-3 fl oz + 1.5 pt	$23.00-30.00	G-E	F-E	G-E	E	E	G-E	G-E	G-E	G-E	E	G-E
LeadOff[2,2] No aerial application	1.5 oz	$9.00	P	G	N	N	F-G	P-G	E	N	F	F-G	N
PRE herbicides[a]			Weed Control Ratings[c,d] - ***without glyphosate***										
Acetochlor[15]	1.25 - 2.25 pt	$20.00-35.00	P	N	N-P	P-F	F-E	F-G	G-E	-	N-P	P	F-E
+ **Balance Flexx** No aerial application	+ 1.5 fl oz	$21.00-46.00	P	E	G-E	E	E	E	E	G-E	G-E	F-G	E
+ Dicamba	+ 8 fl oz	$26.00-41.00	G-E	F-E	G-E	G-E	E	E	E	G-E	G-E	E	G-E
+ **SureStart II/Triple Flex II** No aerial ap	+ 2 pt	$44.50-61.00	G-E	P-F	F-E	P-F	E	G-E	E	-	F-G	G-E	G-E
+ **Sharpen**	+ 3 fl oz	$39.00-54.00	G-E	F-E	G-E	E	E	E	E	G-E	E	E	E
Acuron Flexi[15,27,27] No aerial application	2.25 - 3 qt	$42.00-56.00	P-F	E	F-G	P-G	E	E	E	-	G-E	G-E	G-E
Acuron[5,15,27,27] No aerial application	1.5 - 3 qt	$27.00-54.00	G-E	E	E	E	E	E	E	G-E	G-E	G-E	G-E
Anthem Maxx[14,15]	2.5 - 6.5 fl oz	$15.00-40.00	F-E	P-F	N-P	F-E	F-E	F-E	G-E	-	P-F	F-E	G-E
Balance Flexx[27] No aerial application	3 - 4.5 fl oz	$21.00-32.00	P	E	G-E	G-E	E	E	E	G-E	G-E	G	E
Corvus[2,27] No aerial application	3.33 - 5.6 fl oz	$23.00-39.00	P	E	G-E	G-E	E	E	E	G-E	G-E	G	E
+ **Verdict**[14,15] No aerial application	+ 15 fl oz	$53.00-69.00	G-E	E	G-E	E	E	E	E	G-E	E	E	E
Dicamba[4]	0.5 - 1 pt	$6.00	E	N-P	G-E	G-E	G-E	G	F-E	G-E	E	E	F-G
DiFlexx[4]	0.5 - 1pt	$16.00-32.00	E	N-P	G-E	G-E	G-E	G	F-E	G-E	E	E	F-G
Fierce[14,15]	3 oz	$24.00	G-E	F-G	F-G	F-E	F-G	F-E	G-E	F-G	P	F-G	G
Hornet[2,4]	3 - 4 oz	$15.00-20.00	G-E	P-F	F-E	N	G-E	G-E	G-E	-	F-G	G-E	N
Instigate[2,27] No aerial application	5.25 - 7 oz	$18.00-24.00	P-F	G	F-G	P-F	E	E	E	N	P	E	G-E
LeadOff[2,2] No aerial application	1.5 oz	$9.00	P	G	N	N	F-G	P-G	E	N	F	F-G	N
Lumax EZ[5,15,27] No aerial application	3* - 4 pt	$28.00-37.00	G-E	E	E	E	E	E	E	G-E	G-E	G-E	G-E
Prequel[2,27]	1.66 - 2.5 oz	$15.00-22.00	N	E	G-E	G	G-E	G-E	G-E	G-E	G-E	F-G	G
Resicore[4,15,27]	2.25 - 3 qt	$42.00-56.00	G-E	G-E	E	G	E	E	E	F-G	E	G-E	G-E
Sharpen[14]	2 - 3 fl oz	$13.00-19.00	G-E	F-E	G-E	E	E	G-E	G-E	G-E	G-E	E	G-E
SureStart II[2,4,15] No aerial application	1.5 - 3 pt	$18.00-36.00	G-E	P-F	F-E	P	G-E	G-E	G-E	-	F-G	G-E	P
TripleFlex II[2,4,15] No aerial application	1.5 - 3 pt	$18.00-36.00	G-E	P-F	F-E	P	G-E	G-E	G-E	-	F-G	G-E	P
Valor[14]	2 - 3 fl oz	$15.00-22.00	P-F	F-G	F-E	F-G	F-G	G-E	G-E	F-G	N-P	F	G-E
Verdict[14,15]	10 - 16 fl oz	$19.00-30.00	G-E	F-E	G-E	E	E	G-E	E	G-E	G-E	E	E
+ Prowl[3] + Dicamba[4] (no-till)	+ 3 pt + 8 fl oz	$44.00-56.00	E	G-E	G-E	E	E	E	E	G-E	E	E	G-E

[a]May carryover more than one cropping season. Follow labeled crop rotation restrictions - see Y15.
[b]See page 111 for control of volunteer canola and soybean, and herbicide rates.
[c]E = Excellent (90-99%), G = Good (80-90%), F = Fair (65-80%), P = Poor (40-65%), N = None.
[d]Includes resistant populations.
*Atrazine at 0.38 lb ai/A. Atrazine and paraquat are RUP.

Refer to pages 18 through 21 for additional herbicides and information.

Herbicides[Site of action-pg 98-99]	**Rate/A**	**Cost/A**	Buckwheat, Wild	Canola, Vol. RR[b]	Horseweed (Marestail)	Kochia	Lambsquarters	Nightshade species	Pigweed, Redroot	Prickly lettuce	Ragweed, Common	Smartweed, Annual	Waterhemp
PRE Herbicides[a] - cont.			Weed Control Ratings[c,d] - ***without glyphosate***										
Zidua[15]	1 - 4 oz	$18.00-36.00	F-E	P-F	-	F-E	F-E	F-E	G-E	-	P	F-E	G-E
+ **Balance Flexx** No aerial application	+ 1.5 fl oz	$29.00-47.00	F-E	E	G-E	G-E	E	G-E	E	G-E	G-E	F-E	G-E
+ Dicamba based product	+ 8 fl oz	$24.00-42.00	G-E	F-E	G-E	E	E	G-E	E	G-E	G-E	E	E
+ **SureStart II/Triple Flex II** No aerial ap	+ 2 pt	$42.00-60.00	E	E	E	E	E	E	E	E	E	E	E
+ **Sharpen**	+ 3 fl oz	$37.00-55.00	G-E	F-E	G-E	E	E	G-E	E	G-E	G-E	E	G-E
+ Dicamba[4] + **Sharpen**[14](no-till)	+ 8 fl oz + 3 fl oz	$43.00-61.00	E	G-E	E	E	E	E	E	E	E	E	E
PRE fb POST Herbicides[a] - POST = add MSO or HSMOC adjuvant+AMS at 1.5 lb/A or see label for adjuvant requirements.			Weed Control Ratings[c,d] - ***without glyphosate***										
Acetochlor[15] or	1.25 - 2.25 pt	$20.00-35.00	P	N	N-P	P-F	F-E	F-G	G-E	-	N-P	P	F-E
Acuron Flexi[15,27,27]or No aerial application	2 - 2.25 qt	$46.00-52.00	G-E	E	E	E	E	E	E	G-E	G-E	G-E	G-E
Acuron[5,15,27,27] or No aerial application	1.5 - 3 qt	$27.00-54.00	G-E	E	E	E	E	E	E	G-E	G-E	G-E	G-E
Lumax EZ[5,15,27] or No aerial application	3* - 4 pt	$28.00-37.00	G-E	E	E	E	E	E	E	G-E	G-E	G-E	G-E
Resicore[4,15,27] or	2 - 2.25 qt	$42.00-56.00	G-E	G-E	E	G	E	E	E	F-G	E	G-E	G-E
Verdict[14,15] or	10 -16 fl oz	$19.00-30.00	G-E	F-E	G-E	E	E	G-E	E	G-E	G-E	E	E
Zidua[15]	1 - 4 oz	$18.00-36.00	F-E	P-F	-	F-E	F-E	F-E	G-E	-	P	F-E	G-E
fb **DiFlexx**[4] or	8 - 16 fl oz	$16.00-31.00	E	N-P	G-E	G-E	G-E	G	F-E	G-E	E	E	F-G
fb **Status**[4] + Atrazine[5]*+ oil adjuvant or	fb 5 oz	$22.00	E	P-G	E	E	E	G	E	E	G-E	E	E
fb **SureStart II**[2,4,15] + oil adj. or No aerial	1.5 - 3 pt	$20.00-37.00	G-E	P-F	F-E	P	G-E	G-E	G-E	-	F-G	G-E	P
fb **TripleFlex II**[2,4,15] + oil adj. or No aerial	1.5 - 3 pt	$20.00-37.00	G-E	P-F	F-E	P	G-E	G-E	G-E	-	F-G	G-E	P
fb **WideMatch**[4,4] + Atrazine[5]* + oil adj. or	fb 1.33 pt	$14.00	E	P-G	E	G	F-E	G-E	G-E	E	G-E	G	F-E
fb **Status**[4] + **WideMatch**[4,4] + Atrazine[5]* + oil adjuvant	fb 5 oz + 1 pt	$32.00	E	P-G	E	E	E	G-E	E	E	E	E	E

[a]May carryover more than one cropping season. Follow labeled crop rotation restrictions - see Y15.
[b]See page 111 for control of volunteer canola and soybean, and herbicide rates.
[c]E = Excellent (90-99%), G = Good (80-90%), F = Fair (65-80%), P = Poor (40-65%), N = None.
[d]Includes resistant populations.
*Atrazine at 0.38 lb ai/A. Atrazine and paraquat are RUP.

Roundup Ready Corn - cont.

Refer to pages 18 through 21 for additional herbicides and information.

Herbicides[Site of action-pg 98-99]	Rate/A	Cost/A	Buckwheat, Wild	Canola, Vol. RR[b]	Horseweed (Marestail)	Kochia	Lambsquarters	Nightshade species	Pigweed, Redroot	Prickly lettuce	Ragweed, Common	Smartweed, Annual	Waterhemp
POST Herbicides[a] - add MSO or HSMOC adjuvant + AMS at 1.5 lb/A or see label for adjuvant requirements.			Weed Control Ratings[c,d] - ***without glyphosate***										
Atrazine[5]* + oil adjuvant	0.75 pt/0.42 lb	$2.00	G	P-G	F	F	F	F	F	-	P	F	P-F
Dicamba[4] + oil adjuvant	4 - 8 fl oz	$3.50-7.00	E	N-P	G	F-E	G-E	G	F-G	G-E	E	E	F-G
Armezon[27]+ Atrazine[5]* + oil adjuvant	0.5 - 0.75 fl oz	$12.00-18.00	E	G-E	G-E	E	E	E	E	E	E	E	G-E
Armezon Pro[27]+ Atrazine[5]* + oil adjuvant	16 - 24 fl oz	$20.00-30.00	E	E	E	E	E	E	E	E	E	E	E
Callisto GT[9,27]+ Atrazine[5]* + NIS + AMS	2 pt	$25.00	G-E	G-E	G-E	E	E	E	E	E	F	E	E
Callisto Xtra[5,27] + oil adjuvant	15* - 24 fl oz	$14.00-21.00	G-E	G-E	G-E	E	E	E	E	E	F	E	E
Capreno[2,27] + Atra[5]* + adj. No aerial app.	3 fl oz	$23.00	G-E	G-E	G-E	G-E	E	E	E	G-E	E	G-E	E
DiFlexx[4] + Atrazine + oil adjuvant	0.5 - 1 pt	$10.00-33.00	E	N-P	G-E	G-E	G-E	G	F-G	E	E	E	F-E
DiFlexx Duo[4,27] + Atrazine + oil adjuvant	24 - 40 fl oz	$22.00-36.00	E	E	G-E	E	E	E	E	E	E	E	G-E
Glyphosate[9] (4.5 lb ae) + NIS + AMS	32 fb 32 fl oz	$7.00 fb 7.00	G	N	P-E	P-E	E	E	E	E	P-E	E	P-E
Halex GT[9,15,27] + NIS + AMS	3.6 - 4 pt	$28.00-31.00	P-G	E	G-E	E	E	E	E	F-G	E	E	G-E
Impact[27]+ Atrazine[5]* + oil adjuvant	0.5 - 0.75 fl oz	$14.00-21.00	E	G-E	G-E	E	E	E	E	E	E	E	G-E
Instigate[2,27] + Atrazine+oil adjuvant+AMS	6 oz	$22.00	P-F	G	F-G	E	E	E	E	N	P	E	G-E
Laudis[27] + Atrazine[5]* + MSO	3 fl oz	$20.00	E	G-E	G-E	E	E	E	E	E	E	E	E
Lumax EZ[5,15,27] + oil adjuv. No aerial app.	3*- 4 pt	$30.00-40.00	E	E	G-E	E	E	E	E	E	F	E	E
Realm Q[2,27] + Atra+oil adj. No aerial app.	4 oz	$22.00	P-F	E	F-G	E	G-E	E	E	N	P	E	G-E
Resicore[4,15,27]	2.25 - 3 qt	$42.00-56.00	G-E	G-E	G-E	G	E	E	E	E	E	E	G-E
Resolve Q[2] + Atra+oil adj. No aerial app.	1 - 1.25 oz	$12.00-15.00	P	G	N	N	F-G	P-G	E	N	F	F-G	N
Revulin Q[2,27] +Atra+oil adj. No aerial app.	3.4 - 4 oz	$21.00-24.00	P-F	E	F-G	E	G-E	E	E	N	P	E	G-E
Status[4,19] + MSO No aerial app.	5 to 10 oz WDG	$22.00-44.00	E	N-P	G-E	G-E	G-E	G	G-E	E	E	E	G-E
SureStart II[2,4,15] + oil adj. No aerial app.	1.5 - 3 pt	$20.00-37.00	G-E	P-F	F-E	P	G-E	G-E	G-E	-	F-G	G-E	P
TripleFlex II[2,4,15] + oil adj. No aerial app.	1.5 - 3 pt	$20.00-37.00	G-E	P-F	F-E	P	G-E	G-E	G-E	-	F-G	G-E	P
WideMatch[4,4] + oil adjuvant	1.33 pt	$14.00	E	N	G-E	G	N	G-E	N	E	G-E	G	N
Herbicides for Liberty Link corn ONLY - add AMS at 3 lb/A			Weed Control Ratings[c,d] - ***without glyphosate***										
Liberty 280[10 +]	22 fl oz	$16.00	F-G	P-E	G	P-E	P-G	P-G	P-G	P-G	P-G	P-E	P-G
+ Atrazine[5]* + adjuvant	+ 0.38 lb ai	$18.00	E	G	G	G-E	G-E	E	E	G-E	E	E	G
+ Dicamba[4] based product	+ 8 fl oz	$22.00	F-E	F-E	G-E	E	G-E	E	E	G-E	E	E	F-E
Residual PRE fb **Liberty**[10] + Atrazine[5]* + adjuvant	X rate fb 22 fl oz + 0.38 lb ai	$28 fb 16.00 + 2.00	E	E	E	E	E	E	E	E	E	E	E

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[c]E = Excellent (90-99%), G = Good (80-90%), F = Fair (65-80%), P = Poor (40-65%), N = None.
[d]Includes resistant populations.
*Atrazine at 0.38 lb ai/A. Atrazine and paraquat are RUP.