

**TABLE 1A – Weed Response to Soil-Applied Herbicides in Corn\***

Soil Applied	SITE OF ACTION	CORN TOLERANCE**	ANNUAL BROADLEAVES										ANNUAL GRASSES							PERENNIALS						
			COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	T-R LAMBSQUARTERS <sup>a</sup>	NIGHTSHADE (E. BLACK)	PIGWEEED	RAGWEED (COMMON)	RAGWEED (GIANT)	SMARTWEED	VELVETLEAF	WILD MUSTARD	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEDGE	JOHNSONGRASS (seedling)	JOHNSONGRASS (Rhizome)
ATRAZINE	5	1	F	F	<b>E</b>	N	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	<b>G</b>	F	<b>E</b>	<b>G</b>	P	F	F	<b>G</b>	P	P	P	F	P	F	N	N
BREAKFREE/DEGREE/HARNESS/ SURPASS/TOPNOTCH	15	2	P	N	F	F	<b>G</b>	<b>G</b>	F	N	P	P	P	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	N	N	F	P	N
CALLISTO	27	1	P	<b>G</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	<b>E</b>	<b>E</b>	<b>G</b>	N	P	N	N	N	N	N	N	P	N	N	N	N
DUAL II MAGNUM/ CINCH/PARALLEL	15	1	N	N	P	P	F	<b>G</b>	P	N	P	N	P	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	N	N	F	P	N
MICRO-TECH	15	2	N	N	P	P	<b>G</b>	<b>G</b>	P	N	P	N	P	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	N	N	P	P	N
OUTLOOK	15	2	N	N	P	P	<b>G</b>	<b>G</b>	P	N	P	N	P	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	N	N	P	P	N
PRINCEP	5	1	F	F	<b>E</b>	N	<b>E</b>	<b>G</b>	<b>E</b>	F	<b>G</b>	F	<b>E</b>	<b>G</b>	F	F	F	<b>G</b>	P	P	P	P	F	F	N	N
PROWL H <sub>2</sub> O <sup>b</sup> (PRE only)	3	3	N	N	<b>G</b>	<b>G</b>	P	F	P	N	P	F	P	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	N	N	N	P	N
PYTHON	2	3	F	F	<b>E</b>	<b>E</b>	<b>G</b>	<b>E</b>	F	P	<b>G</b>	<b>G</b>	<b>E</b>	P	P	P	P	P	P	P	P	N	N	N	N	N
RESOLVE SG	2	1	<b>G</b>	F	F	F	P	<b>E</b>	F	P	F	F	<b>E</b>	<b>G</b>	F	<b>G</b>	<b>G</b>	<b>G</b>	F	F	P	P	P	P	P	P
SHARPEN	14	1	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>E</b>	<b>G</b>	F	<b>G</b>	<b>G</b>	<b>G</b>	N	N	N	N	N	N	N	N	P	N	N	N	N
VALOR <sup>c</sup> (7d EPP or more)	14	2	P	F	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	F	F	F	<b>G</b>	P	P	P	P	P	P	P	P	N	N	P	P	N
ZIDUA	15	1	P	F	F	F	<b>G</b>	<b>E</b>	F	N	F	F	F	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	N	N	F	F	N
<b>Premixes</b>																										
BASIS BLEND	2/2	1	<b>G</b>	F	<b>G</b>	<b>G</b>	P	<b>E</b>	F	P	F	F	<b>E</b>	<b>G</b>	F	<b>G</b>	<b>G</b>	<b>G</b>	F	F	P	P	P	P	P	P
BICEP II LITE MAGNUM/ CINCH ATZ LITE	5/15	1	F	F	<b>G</b>	P	<b>E</b>	<b>G</b>	<b>G</b>	F	F	F	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	P	N	F	P	N
BICEP II MAGNUM/CINCH ATZ/ PARALLEL PLUS	5/15	1	F	F	<b>E</b>	P	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	<b>G</b>	F	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	P	F	P	N
BREAKFREE ATZ LITE/ DEGREE XTRA/FULTIME/ KEYSTONE LA	5/15	2	F	F	<b>G</b>	F	<b>E</b>	<b>G</b>	<b>G</b>	F	F	F	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	P	N	F	P	N
BREAKFREE ATZ/HARNESS XTRA/ KEYSTONE	5/15	2	F	F	<b>E</b>	F	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	<b>G</b>	F	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	P	F	P	N
BULLET/LARIAT	5/15	2	F	F	<b>E</b>	P	<b>E</b>	<b>G</b>	<b>E</b>	F	<b>G</b>	F	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	P	P	P	N
CAPRENO <sup>d</sup>	2/27	2	P	P	<b>G</b>	<b>G</b>	P	<b>E</b>	F	P	<b>G</b>	<b>G</b>	P	F	N	F	P	F	F	N	N	N	N	N	N	N
FIERCE <sup>c</sup> (7d EPP or more)	14/15	2	P	F	<b>G</b>	<b>G</b>	<b>G</b>	<b>E</b>	<b>G</b>	F	F	F	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	F	N	N	F	F	N
G-MAX LITE	5/15	2	F	F	<b>G</b>	P	<b>E</b>	<b>G</b>	<b>G</b>	F	F	F	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	P	N	P	P	N
GUARDSMAN MAX	5/15	2	F	F	<b>E</b>	P	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	<b>G</b>	F	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	P	P	P	N
HORNET WDG	2/4	3	<b>G</b>	F	<b>E</b>	<b>E</b>	<b>G</b>	<b>E</b>	<b>E</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>E</b>	N	N	N	N	N	N	N	N	F	N	N	N	N
INSTIGATE	2/27	1	<b>G</b>	<b>G</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	<b>E</b>	<b>E</b>	<b>E</b>	<b>G</b>	F	<b>G</b>	<b>G</b>	<b>G</b>	F	F	P	P	P	P	P	P
LEXAR EZ/LUMAX EZ	5/27/15	1	F	<b>G</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>G</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	P	F	P	N
SURESTART/TRIPLEFLEX <sup>d</sup>	2/4/15	3	<b>G</b>	F	<b>E</b>	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	F	<b>G</b>	<b>G</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	P	N	F	P	N
VERDICT <sup>d</sup>	14/15	2	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>E</b>	<b>G</b>	F	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	F	P	N	P	P	N
ZEMAX	27/15	1	P	<b>G</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	<b>E</b>	<b>E</b>	<b>G</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	P	N	F	P	N

(continued)

## TABLE 1A — Weed Response to Soil-Applied Herbicides in Corn (*continued*)\*

Herbicide Site of Action: The site of action key is located on pages 16-17.

Herbicide Effectiveness: P = Poor; F = Fair; **G** = Good; **E** = Excellent; N = None; – = Not enough information to rank

\**The above ratings are a relative comparison of herbicide effectiveness. Weather conditions greatly influence the herbicide's effectiveness, and weed control may be better under favorable conditions or poorer under unfavorable conditions.*

\*\*Crop Tolerance: 1=Minimal risk of crop injury; 2=Crop injury can occur under certain conditions; 3=Severe crop injury can occur. Follow precautions under Remarks and Limitations and on the label; 4=Risk of severe crop injury is high.

<sup>a</sup> Triazine-resistant common lambsquarters.

<sup>b</sup> DO NOT incorporate Prowl H<sub>2</sub>O and corn should be planted a minimum of 1.5-inches deep.

<sup>c</sup> Valor or Fierce must be applied at least 7 day before planting, for use only in no-till corn.

<sup>d</sup> These herbicides are intended only for use only in planned preemergence followed by postemergence programs. Ratings only reflect early-season weed control, not full-season control.

# TABLE 1B – Weed Response to Postemergence Herbicides in Corn\*

Postemergence	SITE OF ACTION	CORN TOLERANCE**	ANNUAL BROADLEAVES											ANNUAL GRASSES							PERENNIALS					
			COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	T-R LAMBSQUARTERS <sup>a</sup>	NIGHTSHADE (E. BLACK)	PIGWEEED	RAGWEED (COMMON)	RAGWEED (GIANT)	SMARTWEED	VELVETLEAF	WILD MUSTARD	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEDGE	JOHNSONGRASS (seedling)	JOHNSONGRASS (Rhizome)
2,4-D	4	3	G	F	G	G	G	G	G	P	F	G	N	N	N	N	N	N	N	N	N	F	N	N	N	N
ACCENT Q	2	2	F	G	F	F	P	F	P	N	G	F	P	F	F	F	F	F	F	G	F	G	F	F	G	
AIM	14	3	P	F	F	F	G	G	P	P	P	F	F	N	N	N	N	N	N	N	N	N	N	N	N	N
ARMEZON/IMPACT	27	1	G	F	F	F	F	F	F	G	G	F	G	G	F	G	G	G	G	F	F	P	P	F	P	
ATRAZINE	5	1	G	G	F	N	G	F	F	G	G	F	F	F	P	F	P	P	P	F	F	F	F	N	N	
BANVEL/CLARITY	4	3	G	G	G	G	G	G	G	F	F	G	N	N	N	N	N	N	N	N	F	N	N	N	N	
BASAGRAN	6	1	F	G	F	F	P	P	F	P	G	F	F	N	N	N	N	N	N	N	G	N	G	N	N	
BEACON	2	2	F	G	F	F	G	F	F	F	G	F	P	P	F	F	G	G	F	F	G	F	G	F	F	
BUCTRIL/MOXY	6	2	G	G	F	F	G	F	G	G	G	F	N	N	N	N	N	N	N	N	P	N	N	N	N	
CADET	14	2	P	F	F	F	F	G	P	P	P	F	N	N	N	N	N	N	N	N	N	N	N	N	N	
CALLISTO	27	1	F	F	F	F	F	G	G	G	F	F	N	F <sup>b</sup>	N	N	N	N	N	N	P	N	P	N	N	
LAUDIS	27	1	G	F	F	F	F	F	G	G	G	F	G	F	G	P	F	P	F	F	P	P	P	F	P	
OPTION	2	2	F	G	F	F	G	F	F	P	P	F	F	P	G	G	G	G	G	F	F	G	F	F	G	
PERMIT	2	1	F	G	N	N	P	F	G	G	F	G	N	N	N	N	N	N	N	N	P	N	F	N	N	
RESOURCE	14	2	P	P	F	F	P	P	P	P	P	F	N	N	N	N	N	N	N	N	N	N	N	N	N	
STINGER	4	1	F	G	P	P	F	P	F	F	P	P	N	N	N	N	N	N	N	N	F	N	N	N	N	
<b>Premixes</b>																										
CALLISTO XTRA	5/27	1	G	F	F	F	F	F	F	G	G	F	N	F <sup>b</sup>	N	N	N	N	N	N	F	N	P	N	N	
CAPRENO	2/27	2	G	F	G	G	F	F	G	G	G	F	G	G	G	G	F	F	F	P	P	P	G	G		
HORNET WDG	2/4	2	F	F	F	F	F	P	F	F	G	G	N	N	N	N	N	N	N	N	F	N	N	N	N	
MARKSMAN	4/5	3	G	G	F	G	G	F	F	F	F	F	P	N	P	P	P	N	N	N	F	P	F	N	N	
NORTHSTAR	2/4	2	F	G	G	G	G	F	F	F	F	G	P	P	F	F	F	G	G	F	F	G	F	G	F	
REALM Q	2/27	2	G	F	F	F	F	F	G	F	F	F	G	F	G	G	G	G	G	P	F	F	P	F	N	
REQUIRE Q	2/4	2	G	G	G	G	G	F	G	G	F	F	G	F	G	G	G	G	G	P	F	F	P	F	N	
RESOLVE Q	2/2	2	G	P	G	G	F	F	F	P	G	F	G	F	G	G	G	G	G	P	F	F	P	F	N	
SHOTGUN	5/4	3	G	G	F	G	G	F	F	G	F	F	N	N	N	N	N	N	N	N	F	N	N	N	N	
STATUS	4/19	2	F	G	F	F	G	F	F	F	F	G	P	P	P	P	P	P	P	G	N	N	N	N	N	
STEADFAST Q	2/2	2	F	G	F	F	P	F	P	N	G	F	F	F	F	F	F	F	F	G	F	G	F	F	G	
YUKON	2/4	2	F	G	G	G	G	F	G	G	G	F	N	N	N	N	N	N	N	N	P	N	F	N	N	
<b>Glyphosate-Resistant Corn</b>																										
GLYPHOSATE	9	1	F	F	G	G	F	G	G	G	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	
EXPERT	5/9/15	2	F	F	F	G	G	F	F	G	G	F	F	F	F	F	F	F	F	F	G	F	F	F	F	
FIELD MASTER	5/9/15	2	F	F	F	G	G	F	F	F	F	F	F	F	F	F	F	F	F	F	F	G	F	F	G	
HALEX GT	9/15/27	1	F	F	F	F	F	F	G	G	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	
SEQUENCE	9/15	1	F	F	G	G	F	G	G	G	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	
WARRANT + GLYPHOSATE	9/15	1	F	F	G	G	F	G	G	G	F	F	F	F	F	F	F	F	F	F	G	F	F	F	F	
<b>LibertyLink Corn</b>																										
LIBERTY	10	1	F	G	F	F	G	G	F	G	G	F	F	F	G	G	F	F	F	P	P	P	P	G	F	

(continued)

## TABLE 1B – Weed Response to Postemergence Herbicides in Corn\* (continued)

Herbicide Site of Action: The site of action key is located on pages 16-17.

Herbicide Effectiveness: P = Poor; F = Fair; **G** = Good; **E** = Excellent; N = None; - = Not enough information to rank

\*The above ratings are a relative comparison of herbicide effectiveness. Weather conditions greatly influence the herbicide's effectiveness, and weed control may be better under favorable conditions or poorer under unfavorable conditions.

\*\*Crop Tolerance: 1=Minimal risk of crop injury; 2=Crop injury can occur under certain conditions; 3=Severe crop injury can occur. Follow precautions under Remarks and Limitations and on the label; 4=Risk of severe crop injury is high.

<sup>a</sup> Triazine-resistant common lambsquarters.

<sup>b</sup> Large crabgrass only.

## TABLE 1C – Herbicide Premixes in Corn

### Soil Applied

TRADE NAME	COMPANY	FORMULATION	TYPICAL USE RATE <sup>a</sup> =	EQUIVALENT RATES
Basis Blend	DuPont	30WG	1.25 oz/A =	1 oz Resolve SG + 0.25 oz Harmony SG
Bicep II Magnum	Syngenta	5.5F	2.1 qt/A =	1.33 pt Dual II Magnum + 1.6 qt atrazine 4L
Bicep Lite II Magnum	Syngenta	6F	1.5 qt/A =	1.33 pt Dual II Magnum + 1 qt atrazine 4L
Breakfree ATZ	DuPont	5.25L	2.2 qt/A =	2 pt Breakfree + 1.2 qt atrazine 4L
Breakfree ATZ Lite	DuPont	5.5L	2 qt/A =	2.5 pt Breakfree + 0.75 qt atrazine 4L
Bullet	Monsanto	4L	3 qt/A =	1.88 qt Micro-Tech + 1.13 qt atrazine 4L
Capreno <sup>b</sup>	Bayer CropScience	3.45SC	3 oz/A =	2.5 oz Laudis + 0.01 lb ai thiencarbazone-methyl
Cinch ATZ	DuPont	5.5F	2.1 qt/A =	1.33 pt Cinch + 1.6 qt atrazine 4L
Cinch ATZ Lite	DuPont	6F	1.5 qt/A =	1.33 pt Cinch + 1 qt atrazine 4L
Degree Xtra	Monsanto	4L	3 qt/A =	4.3 pt Degree + 1 qt atrazine 4L
Fierce <sup>b</sup>	Valent	76WG	3 oz/A =	1.97 oz Valor 1.5 oz Zidua
Fultime	Dow AgroSciences	4L	2.7 qt/A =	2 qt TopNotch + 1 qt atrazine 4L
G-Max Lite	BASF	5SL	2.7 pt/A =	16 oz Outlook + 0.9 qt atrazine 4L
Guardzman Max	BASF	5SL	3.5 pt/A =	16 oz Outlook + 1.45 qt atrazine 4L
Harness Xtra 5.6L	Monsanto	5.6L	2 qt/A =	1.8 pt Harness + 1.25 qt atrazine 4L
Hornet WDG	Dow AgroSciences	68.5WG	3 oz/A =	0.7 oz Python + 0.25 pt Stinger
Instigate	DuPont	45.8WG	6 oz/A =	5 oz Callisto 1 oz Resolve SG
Keystone	Dow AgroSciences	5.25L	2.4 qt/A =	2.2 pt Surpass + 1.35 qt atrazine 4L
Keystone LA	Dow AgroSciences	5.5L	2 qt/A =	2.5 pt Surpass + 0.75 qt atrazine 4L
Lariat	Monsanto	4L	3 qt/A =	1.88 qt Lasso + 1.13 qt atrazine 4L
Lexar EZ	Syngenta	3.7ZC	3 qt/A =	5.34 oz Callisto + 1.36 pt Dual II Magnum + 1.3 qt atrazine 4L
Lumax EZ	Syngenta	3.67ZC	2.7 qt/A =	5.38 oz Callisto + 1.76 pt Dual II Magnum + 0.63 qt atrazine 4L
Parallel Plus	MANA	5.5SL	2.3 qt/A =	1.6 pt Parallel + 1.6 qt atrazine 4L

See footnotes on next page.

(Continued on next page)

**TABLE 1C – Herbicide Premixes in Corn (continued)****Soil Applied**

TRADE NAME	COMPANY	FORMULATION	TYPICAL USE RATE <sup>a</sup> =	EQUIVALENT RATES
SureStart <sup>b</sup>	Dow AgroSciences	4.16SE	2 pt/A	= 1.2 pt Surpass + 3 oz Stinger + 0.6 oz Python
TripleFLEX <sup>b</sup>	Monsanto	4.16SE	2 pt/A	= 1.2 pt Surpass + 3 oz Stinger + 0.6 oz Python
Verdict <sup>b</sup>	BASF	5.57EC	15 oz/A	= 3 oz Sharpen + 12.5 oz Outlook
Zemax	Syngenta	3.67ZC	2 qt/A	= 5.36 oz Callisto + 1.75 pt Dual II Magnum

**Postemergence**

Callisto Xtra	Syngenta	3.7SC	24 oz/A	= 3 oz Callisto + 1.2 pt atrazine 4L
Capreno	Bayer CropScience	3.45SC	3 oz/A	= 2.5 oz Laudis + 0.01 lb ai thiencazone-methyl
Expert <sup>c</sup>	Syngenta	4.88SC	3 qt/A	= 1.37 pt Dual II Magnum + 1.6 qt atrazine 4L + 0.75 lb a.e. glyphosate
Field Master <sup>c</sup>	Monsanto	4.06CS	4 qt/A	= 2.3 pt Harness + 1.5 qt atrazine 4L + 0.56 lb a.e. glyphosate
Halex GT <sup>c</sup>	Syngenta	4.38L	3.6 pt/A	= 1 pt Dual Magnum + 3 oz Callisto + 0.93 lb a.e. glyphosate
Hornet WDG	Dow AgroSciences	68.5WG	3 oz/A	= 0.7 oz Python + 0.25 pt Stinger
Marksman	BASF	3.2L	3.5 pt/A	= 1 pt Banvel + 1 qt atrazine 4L
Northstar	Syngenta	47.4WG	5 oz/A	= 0.5 oz Beacon + 4 oz Banvel
Realm Q	DuPont	38.75WG	4 oz/A	= 1.2 oz Resolve + 2.5 oz Callisto
Require Q	DuPont	59.19WG	4 oz/A	= 1 oz Resolve + 3.8 oz Banvel
Resolve Q	DuPont	22.4WG	1.25 oz/A	= 0.9 oz Resolve + 0.1 oz Harmony SG
Sequence <sup>c</sup>	Syngenta	5.25L	2.5 pt/A	= 0.98 pt Dual Magnum + 21 oz Touchdown Total
Shotgun	Loveland Products, Inc.	3.25F	1 qt/A	= 0.56 qt atrazine 4L + 0.5 pt 2,4-D ester
Status	BASF	56WG	5 oz/A	= 4 oz Clarity + 0.05 lb ai diflufenzopyr
Steadfast Q	DuPont	37.7WG	1.5 oz/A	= 0.7 oz Accent Q + 0.75 oz Resolve
Yukon	Gowan	67.5WG	4 oz/A	= 4 oz Banvel + 0.66 oz Permit

<sup>a</sup> Rates recommended are for medium textures soils with 3% organic matter.

<sup>b</sup> These herbicides are intended for use only in planned preemergence followed by postemergence programs. Ratings only reflect early-season weed control, not full-season control.

<sup>c</sup> Postemergence applications should only be made to glyphosate-resistant corn.

# TABLE 1D – Corn Herbicides – Remarks and Limitations

Apply all agricultural chemicals in accordance with regulations and labels as to rate, timing and crops for which they may be used. Rates recommended in this bulletin are for medium-textured soils with 3% organic matter.

## Corn – Soil Applied – All Tillage Systems

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses	s-metolachlor ( <i>Dual II Magnum</i> , <i>Cinch</i> )	1.27	1.33 pt 7.64EC	<ul style="list-style-type: none"> <li>• <b>May be applied preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• <i>Dual II Magnum</i> and <i>Cinch</i> contain a safener which increases corn tolerance to s-metolachlor.</li> <li>• Increase the rate to 1.66 pt/A for effective nutsedge control.</li> <li>• Nutsedge control is improved when s-metolachlor is incorporated.</li> <li>• May be applied postemergence on corn up to 5 inches tall, but this application alone will not control emerged weeds. Refer to Table 1G.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	acetochlor ( <i>Harness</i> ) OR ( <i>Breakfree</i> , <i>Surpass</i> ) OR ( <i>TopNotch</i> ) OR ( <i>Degree</i> )	1.6	1.8 pt 7EC OR 2 pt 6.4EC OR 2 qt 3.2CS OR 3.4 pt 3.8L	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• DO NOT apply acetochlor to the following soils if water depth is 30 feet or less: sands with less than 3% organic matter, loamy sands with less than 2% organic matter, or sandy loams with less than 1% organic matter.</li> <li>• All commercial acetochlor products contain a safener that increases corn tolerance.</li> <li>• Application rate varies by soil type.</li> <li>• EC formulations of acetochlor require less rainfall for incorporation compared with alachlor, s-metolachlor, or pendimethalin.</li> <li>• <i>TopNotch</i> and <i>Degree</i> are micro-encapsulated formulations of acetochlor.</li> <li>• May be applied postemergence on corn up to 11 inches tall, but this application alone will not control emerged weeds. Refer to Table 1G.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	alachlor ( <i>Micro-Tech</i> )	2	2 qt 4ME	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• The rate should be increased to 2.5 qt/A for effective nutsedge and fall panicum control.</li> <li>• Nutsedge control is improved when alachlor is incorporated.</li> <li>• Refer to Table 1C for premixes containing alachlor.</li> <li>• Refer to Table 1G for information on delayed herbicide application.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>

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## Corn – Soil Applied – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual grasses	dimethenamid-P <i>(Outlook)</i>	0.84	18 oz 6EC	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• Increase the rate to 21 oz/A for effective nutsedge control.</li> <li>• Nutsedge control is improved when incorporated.</li> <li>• <i>Outlook</i> rates vary with soil texture and organic matter.</li> <li>• May be applied postemergence on corn up to 12 inches tall, but this application alone will not control emerged weeds. Refer to Table 1G.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	metolachlor <i>(Parallel, others)</i>	1.3	1.33 pt 7.8L	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• <i>Parallel</i> is a mix of the R and S-isomers of metolachlor. Limited research has shown that 1.33 pt/A of these products provide similar initial activity to s-metolachlor products at 1.33 pt/A. However, <i>Parallel</i> may not provide the consistency, length of control or performance on more difficult to control weeds. Rates would need to be increased to 2.0 pt/A to provide the same amount of s-metolachlor (the more active isomer) in the 1.33 pt/A rate of <i>Dual II/Magnum/Cinch</i> (s-metolachlor).</li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• <i>Parallel</i> contains a safener which increases corn tolerance to metolachlor.</li> <li>• May be applied postemergence on corn up to 40 inches tall, but this application alone will not control emerged weeds. Refer to Table 1G.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	pendimethalin <i>(Prowl)</i> OR <i>(Prowl H<sub>2</sub>O)</i>	1.5 OR 1.4	3.6 pt 3.3EC OR 3 pt 3.8AS	<ul style="list-style-type: none"> <li>• <b>DO NOT apply preplant incorporated.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• Extreme care must be taken to assure complete closure of the seed furrow. If the seed furrow remains open (even partially open), severe injury will occur.</li> <li>• Apply after planting.</li> <li>• Plant at least 1.5 inches deep.</li> <li>• Adjust rate according to soil type.</li> <li>• DO NOT use on sandy soil with less than 1.5% organic matter.</li> <li>• May be applied postemergence on corn up to 30 inches tall or 8 collars, but this application alone will not control emerged weeds. Refer to Table 1G.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>

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## Corn – Soil Applied – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual grasses</b>	rimsulfuron ( <i>Resolve SG</i> )	0.016	1.0 oz 25WG	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• DO NOT apply to seed corn.</li> <li>• DO NOT apply preemergence to coarse-textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter.</li> <li>• Atrazine at 1.0 lb a.i./A tank mixed with <i>Resolve</i> will improve control of broadleaf weeds.</li> <li>• Insecticide interaction. Allow at least 60 days between a pre-emergence <i>Resolve SG</i> application and application of an organophosphate insecticide.</li> <li>• The rotation restriction intervals need to be extended to 18 months for alfalfa and sugar beets unless there is 15 inches of rainfall between application and planting or if 2 oz/A of <i>Resolve</i> is applied.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	pyoxasulfone ( <i>Zidua</i> )	0.133	2.5 oz 85WG	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• Application rate varies with soil texture and application timing.</li> <li>• DO NOT apply more than 2.75 oz/A on course; 3 oz/A on medium; or 4 oz/A on use on fine textured soils.</li> <li>• DO NOT use on peat or muck soils with 10% or more organic matter.</li> <li>• May be applied postemergence up to 4 collar (V4) corn, but this application alone will not control emerged weeds. Refer to Table 1G.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
<b>Annual broadleaves</b>	atrazine ( <i>AAtrex</i> , others)	1	1 qt 4L OR 1.1 lb 90WG	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• Mixing, loading, and application setbacks are required for atrazine. See page 12 or label for details.</li> <li>• DO NOT exceed an application rate of 2 lb a.i. of atrazine per acre per application and the total pounds of atrazine applied must not exceed 2.5 lb a.i. per acre per year.</li> <li>• May be applied postemergence on corn up to 12 inches tall. Refer to Table 1G and the postemergence application section for atrazine.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	mesotrione ( <i>Callisto</i> )	0.188	6 oz 4SC	<ul style="list-style-type: none"> <li>• <b>May be applied preplant or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• Mesotrione can be applied preemergence to field corn, seed corn, sweet corn, and yellow popcorn.</li> <li>• Tank mixes with atrazine (1 a.i. lb/A) will improve control of common ragweed, giant ragweed, and cocklebur.</li> <li>• DO NOT apply <i>Callisto</i> with an emulsifiable concentrate herbicide or liquid fertilizer if corn has already emerged.</li> <li>• DO NOT exceed a total of 7.7 oz/A of <i>Callisto</i> per season.</li> <li>• Mesotrione preemergence is generally applied in a premix. Mesotrione premixes include <b>Lumax EZ</b>, <b>Lexar EZ</b>, and <b>Zemax</b>. Refer to Table 1C for premix use rates and components. May be applied postemergence on corn up to 30 inches tall or through 8 collars. Refer to Table 1G and the post-emergence application section for <i>Callisto</i>.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>

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## Corn – Soil Applied – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual broadleaves	tembotrione + thiencarbazone-methyl <i>(Capreno)</i>	0.08	3 oz 3.45SC	<ul style="list-style-type: none"> <li>• <b>May be applied preplant or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• <i>Capreno</i> should be used as part of a planned preemergence followed by postemergence herbicide program. <i>Capreno</i> alone will not provide full-season weed control.</li> <li>• DO NOT apply on course textured soils with less than 2% organic matter.</li> <li>• May be applied postemergence, however corn must have 1 leaf collar through the 5 collar stage of growth. Refer to the postemergence application section for <i>Capreno</i> and Table 1H.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	flumetsulam + clopyralid <i>(Hornet WDG)</i>	0.128	3.0 oz 68.5WG	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Corn should be planted at least 1.5 inches deep.</li> <li>• Adjust application rate according to soil type and organic matter.</li> <li>• DO NOT apply to soils with less than 1.5% organic matter, a pH &gt; 7.8, or soils with &gt;5% organic matter and low soil pH (5.9).</li> <li>• DO NOT follow this treatment with a postemergence application of an ALS-inhibiting herbicide if plants are under stress.</li> <li>• Tank mixes with atrazine (1 a.i. lb/A) will improve control of heavy populations of jimsonweed.</li> <li>• Insecticide interaction. Consult label for organophosphate insecticide restrictions.</li> <li>• May be applied postemergence on corn up to 20 inches tall or through 6 collars. Refer to Table 1G and the postemergence application section for <i>Hornet WDG</i>.</li> <li>• Requires a 26-month rotation interval and a successful field bioassay before planting sugar beets, cucumbers or tomatoes.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	simazine <i>(Princep, others)</i>	1	1 qt 4L OR 1.1 lb 90WG	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• May be substituted for atrazine for slightly better grass control.</li> <li>• DO NOT apply after corn emergence.</li> <li>• <i>Princep</i> has similar carryover risk as atrazine.</li> <li>• When <i>Princep</i> and atrazine are both applied to corn, carryover risk is additive.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>

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## Corn – Soil Applied – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual broadleaves	flumetsulam <i>(Python)</i>	0.05	1.0 oz 80WG	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• Corn should be planted at least 1.5 inches deep.</li> <li>• Adjust application rate according to soil type and organic matter.</li> <li>• DO NOT apply to soils with less than 1.5% organic matter – severe injury may occur.</li> <li>• DO NOT apply to areas where soil pH is greater than 7.8 or to soils with greater than 5% organic matter and pH less than 5.9.</li> <li>• DO NOT follow this treatment with a postemergence application of an ALS-inhibiting herbicide if plants are under stress.</li> <li>• Tank mixes with atrazine (1 a.i. lb/A) will improve control of heavy populations of common ragweed, cocklebur, and jimsonweed.</li> <li>• Insecticide interaction. Consult label for organophosphate insecticide restrictions.</li> <li>• May be applied postemergence on corn up to 20 inches tall or through 6 collars, rates should be reduced. Refer to Table 1G.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	saflufenacil <i>(Sharpen)</i>	0.056	2.5 oz 2.85SC	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• <i>Sharpen</i> can be applied to field corn, silage corn, seed corn and popcorn. Refer to seed company recommendations for use on inbred lines.</li> <li>• Application rates vary by soil type; on coarse textured soils 2-2.5 oz/A, medium textured soils 2.5-3 oz/A, and fine textured soils 3-3.5 oz/A can be applied.</li> <li>• The maximum <i>Sharpen</i> rate for coarse textured soils is 2.5 oz per acre per application.</li> <li>• DO NOT apply <i>Sharpen</i> after corn emergence or severe crop injury will occur.</li> <li>• Insecticide interactions. Consult label for organophosphate and carbamate insecticide restrictions.</li> <li>• DO NOT exceed an application rate of 3.5 oz of <i>Sharpen</i> per acre per application or 6 oz/A of <i>Sharpen</i> per year.</li> <li>• <i>Sharpen</i> is an effective burndown herbicide in no-till corn. Consult Table 1J for more information.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	flumioxazin <i>(Valor)</i>	0.064	2 oz 51WG	<ul style="list-style-type: none"> <li>• <b>Apply a minimum of 7 day or more prior to planting corn on no-till or minimum tillage fields.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• If there is less than 25% of the soil surface covered with residue from the previous crop or less than 0.25 inch of rainfall has occurred between application and the planting interval should be extended to 14 days.</li> <li>• <i>Valor</i> can be used as part of the burndown program in no-till corn. Refer to Table 1J.</li> <li>• DO NOT apply after corn emergence.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

## Corn – Soil Applied – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves Annual grasses	rimsulfuron + thifensulfuron ( <i>Basis Blend</i> )	0.023	1.25 oz 30WG	<ul style="list-style-type: none"> <li>• <b>May be applied preplant or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• <i>Basis Blend</i> is best used as part of a burndown program in no-till corn. Refer to Table 1J.</li> <li>• DO NOT apply on course textured soils with less than 1% organic matter.</li> <li>• DO NOT apply to popcorn, sweet corn or corn grown for seed.</li> <li>• May be applied postemergence on corn up to 6 inches or 2 collar, rates need to be reduced to 0.825 oz of <i>Basis Blend</i>.</li> <li>• Rotation restrictions to soybean are dependent on use rate. Soybean can be planted 10 months after 1.25 oz of <i>Basis Blend</i> is applied. The rotation interval to planting soybean is reduced to 15 days if 0.825 oz of <i>Basis Blend</i> is applied.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	atrazine + s-metolachlor ( <i>Bicep Lite II Magnum,</i> <i>Cinch Lite ATZ</i> )	2.25	1.5 qt 6F	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• These premixes may be applied at lower rates as part of a planned 2-pass program where glyphosate is used post-emergence in glyphosate-resistant corn.</li> <li>• May be applied postemergence on corn up to 12 inches tall. Refer to Table 1G.</li> <li>• Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.</li> <li>• Tank-mixtures with <i>Liberty</i> can be applied postemergence to LibertyLink corn.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	OR ( <i>Bicep II Magnum,</i> <i>Cinch ATZ</i> )	2.9	2.1 qt 5.5F	
	atrazine + metolachlor ( <i>Parallel Plus, others</i> )	2.9	2.3 qt 5.5F	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• <i>Parallel Plus</i> may be applied at lower rates as part of a planned 2-pass program where glyphosate is used post-emergence in glyphosate-resistant corn.</li> <li>• May be applied postemergence on corn up to 12 inches tall. Refer to Table 1G.</li> <li>• Tank-mixtures with glyphosate can be applied post-emergence to glyphosate-resistant corn.</li> <li>• Tank-mixtures with <i>Liberty</i> can be applied postemergence to LibertyLink corn.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

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## Corn — Soil Applied — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual broadleaves Annual grasses</b>	atrazine + acetochlor ( <i>Breakfree ATZ Lite</i> , <i>Keystone LA</i> )	2.5	2 qt 5L	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• <i>Degree Xtra</i> and <i>FulTime</i> are encapsulated formulations of acetochlor.</li> <li>• These premixes may be applied at lower rates as part of a planned 2-pass program where glyphosate is used post-emergence in glyphosate-resistant corn.</li> <li>• May be applied postemergence on corn up to 11 inches tall. Refer to Table 1G.</li> <li>• Tank-mixtures with glyphosate can be applied post-emergence to glyphosate-resistant corn.</li> <li>• Tank-mixtures with <i>Liberty</i> can be applied postemergence to LibertyLink corn.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	OR ( <i>Degree Xtra</i> )	3	3 qt 4L	
	OR ( <i>FulTime</i> )	2.7	2.7 qt 4L	
	OR ( <i>Breakfree ATZ</i> )	2.9	2.2 qt 5.25L	
	OR ( <i>Keystone</i> )	3.2	2.4 qt 5.25L	
	OR ( <i>Harness Xtra</i> )	2.8	2 qt 5.6L	
	atrazine + alachlor ( <i>Bullet</i> ) OR ( <i>Lariat</i> )	3	3 qt 4L	
pyroxasulfone + flumioxazin ( <i>Fierce</i> )	0.133	3 oz 76WG	<ul style="list-style-type: none"> <li>• <b>Apply a minimum of 7 days up to 30 days prior to planting corn on no-till or minimum tillage fields.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Use only on no-till or minimum tillage fields where last year's crop residue has not been incorporated into the soil.</li> <li>• DO NOT use on soils with less than 1% organic matter unless an incorporating rainfall has occurred between herbicide application and planting.</li> <li>• DO NOT use on seed corn.</li> <li>• <i>Fierce</i> can be used as part of the burndown program in no-till corn. Refer to Table 1J.</li> <li>• DO NOT apply after corn emergence.</li> <li>• The rotation restriction for no-till field corn is 7 days and for conventional till field corn is 30 days. Refer to Table 12 for additional crop rotation restrictions.</li> </ul>	

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## Corn – Soil Applied – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual broadleaves Annual grasses</b>	atrazine + dimethenamid-P ( <i>G-Max Lite</i> ) OR ( <i>Guardman Max</i> )	1.7	2.7 pt 5SL	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• These premixes may be applied at lower rates as part of a planned 2-pass program where glyphosate is used post-emergence in glyphosate-resistant corn.</li> <li>• May be applied postemergence on corn up to 12 inches tall. Refer to Table 1G.</li> <li>• Tank-mixtures with glyphosate can be applied post-emergence to glyphosate-resistant corn.</li> <li>• Tank-mixtures with <i>Liberty</i> can be applied postemergence to LibertyLink corn.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	mesotrione + rimsulfuron ( <i>Instigate</i> )	0.82	6 oz 45.8WG	
	mesotrione + atrazine + s-metolachlor ( <i>Lexar EZ</i> ) OR ( <i>Lumax EZ</i> )	2.8  2.5	3 qt 3.7ZC  2.7 qt 3.67ZC	<ul style="list-style-type: none"> <li>• <b>May be applied preplant or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Insecticide interaction: Consult label for organophosphate and carbamate insecticide restrictions.</li> <li>• <i>Lexar EZ</i> at 2.25 qt/A or <i>Lumax EZ</i> at 2 qt/A may be applied as part of a planned 2-pass program where glyphosate is used postemergence in glyphosate-resistant corn.</li> <li>• May be applied postemergence on corn up to 12 inches tall. Refer to Table 1G.</li> <li>• <i>Lexar EZ</i> or <i>Lumax EZ</i> can be split between preemergence and early postemergence application timings.</li> <li>• Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.</li> <li>• Tank-mixtures with <i>Liberty</i> can be applied postemergence to LibertyLink corn.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

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## Corn — Soil Applied — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual broadleaves Annual grasses	flumetsulam + clopyralid + acetochlor <i>(Surestart, Tripleflex)</i>	1.04	2 pt 4.16SE	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Corn should be planted at least 1.5 inches deep.</li> <li>• DO NOT apply to soils with less than 1.5% organic matter, a pH &gt; 7.8, or soils with &gt;5% organic matter and low soil pH (5.9).</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• <i>Surestart</i> or <i>Tripleflex</i> should be used as part of a planned preemergence followed by postemergence herbicide program. These premixes alone will not provide full-season weed control.</li> <li>• May be applied postemergence on corn up to 11 inches tall. Refer to Table 1G.</li> <li>• Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.</li> <li>• Tank-mixtures with <i>Liberty</i> can be applied postemergence to LibertyLink corn.</li> <li>• Requires a 26-month rotation interval and a successful field bioassay before planting sugar beets, cucumbers or tomatoes.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	saflufenacil + dimethenamid-P + <i>(Verdict)</i>	0.65	15 oz 5.57EC	<ul style="list-style-type: none"> <li>• <b>May be applied preplant, preplant incorporated or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• <i>Verdict</i> should be used as part of a planned preemergence followed by postemergence herbicide program. This premix alone will not provide full-season weed control.</li> <li>• <i>Verdict</i> can be used as part of a burndown program in no-till corn. Refer to Table 1J.</li> <li>• DO NOT apply after corn emergence.</li> <li>• <i>Verdict</i> can be used on seed corn at use rates ranging from 5 to 10 oz/A; DO NOT exceed 5 oz/A on course soils.</li> <li>• Crop rotation to soybean ranges between 0-4 months depending on soil type and application rate.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	mesotrione + s-metolachlor <i>(Zemax)</i>	1.9	2 qt 3.67L	<ul style="list-style-type: none"> <li>• <b>May be applied preplant or preemergence.</b></li> <li>• Refer to Table 1A for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Insecticide interaction: Consult label for organophosphate and carbamate insecticide restrictions.</li> <li>• <i>Zemax</i> may be applied at 1.6 qt/A as part of a planned 2-pass program where glyphosate is used postemergence in glyphosate-resistant corn.</li> <li>• May be applied postemergence on corn up to 30 inches tall or up to the 8 leaf stage. Refer to Table 1G.</li> <li>• Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.</li> <li>• Tank-mixtures with <i>Liberty</i> can be applied postemergence to LibertyLink corn.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

## Corn – Postemergence – All Tillage Systems

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<b>Annual grasses</b>	nicosulfuron + safener ( <i>Accent Q</i> )	0.031	0.9 oz 54.5WG	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to field corn up to 20 inches tall or 6 leaf collars (V6), whichever is more restrictive.</li> <li>• For corn 20-36 inches tall, use drop nozzles.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• DO NOT apply more than 1.8 oz/A per season.</li> <li>• <i>Accent Q</i> may be applied to seed corn, however maximum corn height for application is 20 inches or 5 leaf collars (V5).</li> <li>• DO NOT tank-mix with 2,4-D containing products – grass antagonism.</li> <li>• DO NOT tank-mix with <i>Basagran</i> – severe crop injury.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Rotation restrictions for sugarbeet, potatoes, cucumbers, and tomatoes are increased to 18 months when soil pH &gt;6.5.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	+ crop oil concentrate		+ 1%	
	+ ammonium sulfate		+ 2 lb	
	<hr/>			
	foramsulfuron ( <i>Option</i> )	0.033	1.5 oz 35WG	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn between 1 collar (V1) and 6 leaf collars (V6).</li> <li>• May be applied with drop nozzles when corn is 16-36 inches tall.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Substitution of surfactant or crop oil concentrate for methylated seed oil will result in reduced control.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	+ methylated seed oil		+ 1.5 pt	
	+ ammonium sulfate		+ 3 lb	
	<hr/>			
	rimsulfuron + thifensulfuron ( <i>Resolve Q</i> )	0.017	1.25 oz 22.4WG	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn up to 20 inches tall or 6 leaf collars (V6), whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• DO NOT apply to seed corn.</li> <li>• DO NOT tank-mix with <i>Basagran</i> – severe crop injury.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	+ crop oil concentrate		+ 1%	
	+ ammonium sulfate		+ 2.5 lb	
	<hr/>			
	nicosulfuron + rimsulfuron + safener ( <i>Steadfast Q</i> )	0.035	1.5 oz 37.7WG	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn up to 20 inches tall or 6 leaf collars (V6), whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• DO NOT tank-mix with 2,4-D containing products – grass antagonism.</li> <li>• DO NOT tank-mix with <i>Basagran</i> – severe crop injury.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Rotation restrictions for sugarbeet, potatoes, cucumbers, and tomatoes are increased to 18 months when soil pH &gt;6.5.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	+ crop oil concentrate		+ 1%	
	+ ammonium sulfate		+ 2 lb	
	<hr/>			



## Corn – Postemergence – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<b>Annual broadleaves</b>	2,4-D amine OR 2,4-D ester	0.5  0.25	1 pt 4L OR 0.5 pt 4L	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn less than 8 inches tall. Drop nozzles can be used after this stage.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• DO NOT apply to corn from tasseling to the dough stage.</li> <li>• Ester formulations have a greater potential for crop injury and vapor drift.</li> <li>• CAUTION should be taken to avoid spray drift, many broadleaf plants are sensitive to 2,4-D.</li> <li>• Not effective on smartweed or wild buckwheat.</li> <li>• DO NOT apply with adjuvant – crop injury.</li> <li>• Corn hybrids vary in sensitivity to 2,4-D. Consult seed company for details.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	carfentrazone ( <i>Aim</i> ) + surfactant	0.008	0.5 oz 2EC  + 0.25%	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn up to 8 leaf collars. Drop nozzles can be used up to 14 collar corn.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Applications should not be made within 6–8 hours of rain or irrigation — severe crop injury.</li> <li>• Avoid applications into the corn whorls. DO NOT tank-mix with <i>Basagran</i>, or <i>Buctril</i> – severe crop injury.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	atrazine ( <i>AAtrex</i> , others)  + crop oil concentrate	2	2 qt 4L OR 2.2 lb 90DG  + 1 qt	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn up to 12 inches tall.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Lower rates of atrazine are often tank-mixed with other herbicides.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• DO NOT exceed 2 lb ai/A for any single application or 2.5 lb ai/A per season.</li> <li>• DO NOT apply after June 10 – carryover concerns to rotational crops.</li> <li>• Mixing, loading, and application setbacks are required for atrazine. See page 12 or label for details.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>

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## Corn – Postemergence – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual broadleaves</b>	dicamba <i>(Banvel, Clarity)</i>	0.5	1 pt 4SL	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn up to the 5-leaf stage or 8 inches tall, whichever comes first.</li> <li>• <i>Banvel/Clarity</i> may be applied at 0.5 pt/A to corn up to 36 inches tall or 15 days before tassel emergence. Drop nozzles are recommended for corn over 8 inches tall.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• AMS or 28% liquid nitrogen fertilizer may be added for improved control of larger velvetleaf. See label for details.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Corn hybrids vary in sensitivity to dicamba. Consult seed company for details.</li> <li>• CAUTION should be taken to avoid vapor and particle spray drift.</li> <li>• DO NOT apply when temperature is expected to exceed 85° F or if soybeans in the vicinity are over 10 inches tall or have begun to bloom.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	bentazon <i>(Basagran)</i> + crop oil concentrate	1	2 pt 4SL  + 1 qt	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• The addition of 2.5 lb/A of ammonium sulfate (AMS) is recommended if velvetleaf is the targeted weed.</li> <li>• Rates can be reduced if weeds are small – consult label.</li> <li>• DO NOT use AMS if common lambsquarters is present.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	primisulfuron <i>(Beacon)</i> + crop oil concentrate	0.036	0.76 oz 75WG  + 1%	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn between 4 and 20 inches tall.</li> <li>• Drop nozzles can be used up to tassel emergence.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Surfactant (0.25%) may be used instead of crop oil concentrate. The addition of ammonium sulfate at 2 lb/A may improve control of certain weeds.</li> <li>• Corn inbreds and a small number of corn hybrids are sensitive to <i>Beacon</i>. Consult seed companies for lists of sensitive inbreds and hybrids.</li> <li>• <i>Beacon</i> may be tank mixed with other postemergence herbicides for control of a broader spectrum of weeds.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• The rotation restriction to potatoes is 8 months at the 0.38 oz/A, and is increased to 18 months at the 0.76 oz/A.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	bromoxynil <i>(Buctril, Moxy, others)</i>	0.375	1 pt 2EC	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn up to tassel emergence.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• The minimum corn stage is 4 leaves if the rate of <i>Buctril</i> is increased to 1.5 pt/A.</li> <li>• Good spray coverage is important.</li> <li>• DO NOT mix with spray additives or liquid fertilizers unless specified for tank mixes.</li> <li>• <i>Atrazine</i> at 0.5 lb a.i./A is a common tank mix partner</li> <li>• For ground applications, use minimum of 20 gal of water/A and 30 psi.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>

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## Corn — Postemergence — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual broadleaves</b>	fluthiacet ( <i>Cadet</i> ) + surfactant	0.006	0.9 oz 0.91EC  + 0.25%	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn up to 48 inches tall, but before tassel emergence.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Crop oil concentrate at 1% may be used instead of surfactant.</li> <li>• The addition of ammonium sulfate (2 lb/A) may improve control of certain weeds.</li> <li>• <i>Cadet</i> can be applied at 0.5 oz/A when tank-mixed with other herbicides for additional broadleaf weed control.</li> <li>• Use drop nozzles when corn canopy will prevent complete spray coverage of the weeds.</li> <li>• DO NOT apply more than 1.25 oz/A of <i>Cadet</i> per cropping season.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	mesotrione ( <i>Callisto</i> ) + crop oil concentrate + ammonium sulfate	0.094	3 oz 4SC  + 1%  + 8.5 lb/100 gal	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn up to 30 inches tall or 8-collar, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• DO NOT use methylated seed oil (MSO) or MSO blends.</li> <li>• Atrazine at 0.25-0.5 lb a.i./A tank mixed with <i>Callisto</i> will improve control of broadleaf weeds. Note: Tank mixtures of <i>Callisto</i> with atrazine can be applied to corn up to 12 inches tall only.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• DO NOT exceed 7.7 fl oz/A of <i>Callisto</i> (0.24 lb a.i./A of mesotrione) in one growing season, including premixes that contain <i>Callisto</i>.</li> <li>• Insecticide interaction: Consult label for organophosphate and carbamate insecticide restrictions.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	mesotrione + atrazine ( <i>Callisto Xtra</i> ) + crop oil concentrate + ammonium sulfate	0.69	24 oz 3.7SC  + 1%  + 8.5 lb/100 gal	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply to corn up to 12 inches tall.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• DO NOT exceed 7.7 fl oz/A of <i>Callisto</i> (0.24 lb a.i./A of mesotrione) in one growing season, including premixes that contain <i>Callisto</i>.</li> <li>• Insecticide interaction: Consult label for organophosphate and carbamate insecticide restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

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## Corn — Postemergence — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual broadleaves</b>	flumetsulam + clopyralid <i>(Hornet WDG)</i>	0.128	3.0 oz 68.5WG	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply to corn up to 20 inches tall or 6 collars, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Crop oil concentrate at 1% may be used instead of surfactant.</li> <li>• DO NOT tank mix <i>Hornet WDG</i> with <i>Basagran</i> — severe crop injury.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Insecticide interaction: Consult label for organophosphate and carbamate insecticide restrictions.</li> <li>• CAUTION should be taken to avoid spray drift.</li> <li>• Requires a 26-month rotation interval and a successful field bioassay before planting sugar beets, cucumbers or tomatoes.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	+ surfactant + ammonium sulfate		+ 0.25% + 2 lb	
	tembotrione <i>(Laudis)</i>	0.082	3 oz 3.5SC	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn up to 8 collars (V8).</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Atrazine at 0.25-0.5 lb a.i./A tank mixed will improve control of broadleaf weeds. Note: Tank mixtures of <i>Laudis</i> with atrazine can be applied to corn up to 8 collars or 12 inches tall, whichever is more restrictive.</li> <li>• Crop oil concentrate can be used instead of methylated seed oil in certain tank mixes.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Thorough tillage and 20 inches of cumulative precipitation is needed for a 10 month rotation interval to sugarbeet. If these criteria are not met the rotation interval is increased to 18 months. The rotation restriction is 18 months for the red kidney and cranberry classes of dry edible beans. All other commercial dry bean classes can be planted 10 months after <i>Laudis</i> application if cumulative precipitation exceeds 20 inches.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	+ methylated seed oil + ammonium sulfate		+ 1% + 8.5 lb/100 gal	

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## Corn — Postemergence — All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual broadleaves</b>	dicamba + atrazine <i>(Marksman)</i>	1.4	3.5 pt 3.2L	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply to corn up to the 5-leaf stage or 8 inches tall, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Reduce the rate to 2 pt/A on coarse textured soils or soils with less than 2.5% organic matter.</li> <li>• Corn hybrids vary in their sensitivity to dicamba. Consult seed company for details.</li> <li>• Mixing, loading, and application setbacks are required for atrazine. See page 12 or label for details.</li> <li>• CAUTION should be taken to avoid vapor and particle spray drift.</li> <li>• DO NOT apply when temperature is expected to exceed 85°F or if soybeans in the vicinity are over 10 inches tall or have begun to bloom.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	dicamba + primisulfuron <i>(Northstar)</i> + surfactant	0.148	5 oz 47.4WG  + 0.25%	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents in the premix.</li> <li>• Apply to corn between 4 and 8 inches tall.</li> <li>• Application to corn between 8 and 20 inches is labeled but not recommended because of risk of corn injury.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Ammonium sulfate (2 lb/A) in addition to surfactant may improve control of certain species.</li> <li>• Corn hybrids vary in sensitivity to dicamba. Consult seed company for details.</li> <li>• CAUTION should be taken to avoid vapor and particle spray drift.</li> <li>• DO NOT apply when temperature is expected to exceed 85° F or if soybeans in the vicinity are over 10 inches tall or have begun to bloom.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	halosulfuron <i>(Permit)</i> + surfactant	0.03	0.67 oz 75DF  + 0.25%	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn from spike up to canopy closure.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• <i>Permit</i> provides excellent control of yellow nutsedge.</li> <li>• <i>Permit</i> does NOT control common lambsquarters.</li> <li>• Crop oil concentrate at 1% may be used instead of surfactant.</li> <li>• Include ammonium sulfate (2 lb/A) for improved velvetleaf and pigweed control.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>

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## Corn – Postemergence – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual broadleaves	flumiclorac (Resource) + crop oil concentrate	0.027	4 oz 0.86EC  + 1 pt	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn between 2 and 10 collars.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Very effective on velvetleaf.</li> <li>• Use drop nozzles when corn canopy will prevent complete spray coverage of the weeds.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	atrazine + 2,4-D ester (Shotgun)	0.81	1 qt 3.25F	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply from spike to the 5 leaf stage of corn, or 12 inches whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• CAUTION should be taken to avoid spray drift, many broadleaf plants are sensitive to 2,4-D.</li> <li>• Mixing, loading, and application setbacks are required for atrazine. See page 12 or label for details.</li> <li>• Corn hybrids vary in their sensitivity to 2,4-D. Consult seed company for details.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	dicamba + diflufenzopyr + safener (Status) + surfactant + ammonium sulfate	0.18	5 oz 56WG  + 0.25% + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to corn between 4 (V2) and 36 (V10) inches tall. DO NOT make applications when corn is within 15 days of tassel emergence.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Status use rates range between 5 and 10 oz/A. Status may be applied at 2.5 oz/A when tank-mixed with other broadleaf herbicides.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Postemergence applications of Status are not recommended for use in tank mixes with plant growth regulator herbicides (e.g., dicamba, 2,4-D, or clopyralid).</li> <li>• Provides limited suppression of annual grasses.</li> <li>• CAUTION should be taken to avoid vapor and particle spray drift.</li> <li>• DO NOT apply when temperature is expected to exceed 85° F or if soybeans in the vicinity are over 10 inches tall or have begun to bloom.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• In the event of crop failure, corn may be replanted within 7 or more days of application.</li> <li>• Soybean, alfalfa, grain sorghum, or cereals may be planted 30 days after a rainfall event of 1 or more inches if Status was applied at 5 oz/A or less.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>

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## Corn – Postemergence – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual broadleaves</b>	clopyralid ( <i>Stinger</i> )	0.094	0.25 pt 3SL	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply to field corn up to 24 inches tall.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Treat ragweed, cocklebur, jimsonweed and Jerusalem artichoke up to the 5-leaf stage.</li> <li>• Increase the rate to 0.5 pt/A to control Canada thistle and perennial sowthistle.</li> <li>• DO NOT apply more than 0.66 pt/A per year.</li> <li>• CAUTION should be taken to avoid spray drift.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>
	halosulfuron + dicamba ( <i>Yukon</i> ) + surfactant + ammonium sulfate	0.169	4 oz 67.5WG  + 0.25% + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply from spike to 36 inch tall corn, drop nozzles are recommended for corn greater than 20 inches.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Corn hybrids vary in their sensitivity to dicamba. Consult seed company for details.</li> <li>• <i>Yukon</i> provides excellent control of yellow nutsedge.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• CAUTION should be taken to avoid vapor and particle spray drift.</li> <li>• DO NOT apply when temperature is expected to exceed 85°F or if soybeans in the vicinity are over 10 inches tall or have begun to bloom.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
<b>Annual grasses</b> <b>Annual broadleaves</b>	topramezone ( <i>Armezon/Impact</i> ) + methylated seed oil + ammonium sulfate	0.016	0.75 oz 2.8SC  + 1% + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• <i>Armezon/Impact</i> may be applied to corn up to 45 days prior to harvest.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Atrazine at 0.25-0.5 lb a.i./A tank mixed will improve control of broadleaf and grass weeds. Note: Tank mixtures of <i>Armezon/Impact</i> with atrazine can be applied to corn up to 12 inches tall only.</li> <li>• Crop oil concentrate can be used instead of methylated seed oil in certain tank mixes.</li> <li>• When <i>Armezon/Impact</i> is applied at 0.5 oz/A, dry bean (excluding cranberry beans) or snap bean may be planted after nine months.</li> <li>• <i>Armezon/Impact</i> may be applied at maximum rate of 1 oz/A to provide greater control of certain grass species, however rotational crop restrictions are increased, refer to label.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

*(Continued on next page)*

## Corn – Postemergence – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual grasses Annual broadleaves</b>	tembotrione + thiencarbazone-methyl ( <i>Capreno</i> )	0.081	3.0 oz 3.45SC	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply to corn from 1 (V1) to 5 collars (V5).</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• DO NOT exceed a total of 6 oz/A of <i>Capreno</i> in a year.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• If soil pH is 7.5 or greater crop rotation intervals are extended for all crops, except field corn, soybean, wheat, and barley.</li> <li>• Alfalfa and oats can be planted the following spring if the total amount of <i>Capreno</i> applied in a 365 day period does not exceed 3 oz/A and the soil pH is not 7.5 or above.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	+		+	
	crop oil concentrate		1%	
+			+	
ammonium sulfate			8.5 lb/100 gal	
<hr/>				
	rimsulfuron + mesotrione + safener ( <i>Realm Q</i> )	0.097	4 oz 38.75WG	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply to corn up to the 20 inches tall or 6 collars, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• A spray solution pH of 6.0 – 8.0 is needed for product stability.</li> <li>• DO NOT tank-mix with <i>Basagran</i> – severe crop injury.</li> <li>• Consult label for preferred adjuvants for specific tank mixtures.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	+		+	
	crop oil concentrate		1%	
+			+	
ammonium sulfate			17 lb/100 gal	
<hr/>				
	rimsulfuron + dicamba + safener ( <i>Require Q</i> )	0.15	4 oz 59.19WG	<ul style="list-style-type: none"> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply to corn from 4 inches (V2) to 20 inches tall or 6 collars, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• DO NOT apply to corn grown for seed, popcorn or sweet corn.</li> <li>• DO NOT tank mix with <i>Basagran</i> – severe injury may occur.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	+		+	
	surfactant		0.25%	
+			+	
ammonium sulfate			2.5 lb	



# TABLE 1E – Weed Control in Glyphosate-Resistant Corn

**RECOMMENDATIONS:** One application of glyphosate alone will not consistently provide season-long weed control. One of the three following strategies is recommended:

- 1) Soil-applied residual herbicide applied preemergence followed by glyphosate postemergence.
  - a) Preemergence herbicide options can be found in Tables 1A and 1C.
  - b) Glyphosate should be applied when weeds are 2-4 inches tall.
- 2) Postemergence tank-mixtures with glyphosate when weeds are 2-4 inches tall.
  - a) Several soil-applied residual herbicides can be tank-mixed with glyphosate and applied postemergence. Refer to Tables 1G and 1C for options. Tank-mixtures with some residual herbicides may cause temporary burn or discoloration.
  - b) There are many postemergence products that can be tank-mixed with glyphosate for additional weed control. Refer to Tables 1H and 1C for options.
  - c) There are several premixtures containing glyphosate that can be applied postemergence to glyphosate-resistant corn. Refer to Table 1B and the following section for options.
- 3) Split-applications of soil-applied residual herbicides with glyphosate.
  - a) Apply one-half to two-thirds of the soil-applied herbicide preemergence.
  - b) Apply the remainder of the soil-applied herbicide postemergence with glyphosate.

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses Annual broadleaves Suppression of perennials	glyphosate + ammonium sulfate	0.75 a.e.	See Table 10 + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• <b>APPLY TO GLYPHOSATE-RESISTANT CORN ONLY. See above recommendations for appropriate use of glyphosate in glyphosate-resistant corn.</b></li> <li>• Corn hybrids that are glyphosate-resistant are designated as <i>Roundup Ready Corn</i>, <i>Roundup Ready 2 Corn</i>, or <i>Glyphosate Tolerant (GT)</i>.</li> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Many glyphosate products are registered for application to glyphosate-resistant corn. Read the label and see Table 10 to determine application rates and additives needed for different products.</li> <li>• Addition of ammonium sulfate (17 lb/100 gal) will minimize antagonism from hard water and improve weed control if weeds are under stress or large.</li> <li>• Apply to corn up to 30 inches tall or 8 collars, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• Glyphosate applications to corn from 30 to 48 inches tall can be made with drop nozzles only – avoid application into the whorls.</li> <li>• Glyphosate should be applied at a minimum rate of 0.75 lb a.e./A.</li> <li>• Glyphosate application rate can be increased to 1.13 lb a.e./A to control larger weeds or weeds that are under stress.</li> <li>• DO NOT apply more than 2.25 lb a.e./A of glyphosate in-crop per season.</li> <li>• Allow a minimum of 50 days between postemergence application and harvest of forage.</li> <li>• Use extreme caution to avoid spray drift to sensitive crops.</li> <li>• Higher glyphosate rates and second application of glyphosate will improve control of perennial weeds.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

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## Glyphosate-Resistant Corn (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
Annual grasses Annual broadleaves Suppression of perennials	atrazine + s-metolachlor + glyphosate <i>(Expert)</i> + ammonium sulfate	3.66	3 qt 4.88SC  + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• <b>APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.</b></li> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply to corn up to 12 inches tall.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• <i>Expert</i> applications may cause some minor leaf burn.</li> <li>• <i>Expert</i> can be applied preplant or preemergence for all corn types in no-till production.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	atrazine + acetochlor + glyphosate <i>(Field Master)</i> + ammonium sulfate	4.06	4 qt 4.06CS  + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• <b>APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.</b></li> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• The addition of 0.19 lb a.e./A of glyphosate will provide an overall glyphosate application rate of 0.75 lb a.e./A.</li> <li>• Apply to corn up to 11 inches tall.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• <i>Field Master</i> applications may cause some minor leaf burn.</li> <li>• <i>Field Master</i> can be applied preplant or preemergence for all corn types in no-till production.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	mesotrione + s-metolachlor + glyphosate <i>(Hallex GT)</i> + surfactant + ammonium sulfate	1.97	3.6 pt 4.38L  + 0.25% + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• <b>APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.</b></li> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply from corn emergence up to 30 inches tall or 8 collars, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights. <i>Hallex GT</i> does not contain a safener for preemergence applications.</li> <li>• DO NOT tank-mix with emulsifiable concentrate grass herbicides – severe crop injury.</li> <li>• Insecticide interaction: Consult label for organophosphate insecticide restrictions.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>
	s-metolachlor + glyphosate <i>(Sequence)</i> + ammonium sulfate	1.64	2.5 pt 5.25L  + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• <b>APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.</b></li> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• See Table 1C for individual product rate equivalents for the premix.</li> <li>• Apply to corn up to 30 inches tall or 8 collars, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• <i>Sequence</i> can be applied preplant or preemergence for all corn types in no-till production.</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

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## Glyphosate-Resistant Corn (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
<i>(continued)</i>				
<b>Annual grasses</b> <b>Annual broadleaves</b> <b>Suppression of</b> <b>perennials</b>	acetochlor <i>(Warrant)</i> + glyphosate + ammonium sulfate	1.125	3 pt 3CS  + See Table 10 + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• <b>APPLY TO GLYPHOSATE-RESISTANT CORN WHEN TANK-MIXED WITH GLYPHOSATE.</b></li> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Apply from corn emergence up to 30 inches tall or 8 collars, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• <i>Warrant</i> does not contain a safener for preemergence applications.</li> <li>• <i>Warrant</i> applied alone will not control emerged weeds, but will provide residual control of annual grasses and small seeded broadleaf weed species. Therefore, it is recommended <i>Warrant</i> be applied with postemergence weed control products (e.g., glyphosate).</li> <li>• Refer to label and Table 12 for crop rotation restrictions.</li> </ul>

## TABLE 1F – Weed Control in LibertyLink (Glufosinate-Resistant) Corn

**RECOMMENDATIONS:** One application of *Liberty* (glufosinate) alone will not consistently provide season-long weed control.

One of the two following strategies is recommended:

- 1) Soil-applied residual herbicide applied preemergence followed by *Liberty* postemergence.
  - a) Preemergence herbicide options can be found in Tables 1A and 1C.
  - b) *Liberty* should be applied when weeds are 2-4 inches tall.
- 2) Postemergence tank-mixtures with *Liberty* when weeds are 2-4 inches tall.
  - a) Several soil-applied residual herbicides can be tank-mixed with *Liberty* and applied postemergence. Refer to Tables 1G and 1C for options. Tank-mixtures with some residual herbicides may cause temporary burn or discoloration.
  - b) There are many postemergence products that can be tank-mixed with *Liberty* for additional weed control. Refer to Tables 1H and 1C for options.

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses Annual broadleaves	glufosinate ( <i>Liberty</i> ) + ammonium sulfate	0.40	22 oz 2.34L  + 17 lb/100 gal	<ul style="list-style-type: none"> <li>• <b>APPLY TO LIBERTYLINK OR GLUFOSINATE-RESISTANT CORN ONLY.</b></li> <li>• <b>See above recommendations for appropriate use of <i>Liberty</i> in LibertyLink corn.</b></li> <li>• Refer to Table 1B for weed control and crop tolerance ratings.</li> <li>• Always add ammonium sulfate at 17 lb/100 gal.</li> <li>• Apply to corn up to 24 inches tall or 7 collars, whichever is more restrictive.</li> <li>• Refer to Table 1H for maximum crop and weed heights.</li> <li>• <i>Liberty</i> applications to corn from 24 to 36 inches tall can be made with drop nozzles only – avoid application into the whorls.</li> <li>• DO NOT apply more than two applications of <i>Liberty</i> to corn.</li> <li>• DO NOT apply more than 44 oz/A of <i>Liberty</i> on corn per growing season.</li> <li>• Use a minimum carrier volume of 15 gallons per acre.</li> <li>• DO NOT use drift control agents — this reduces spray coverage and may result in reduced weed control.</li> <li>• DO NOT apply <i>Liberty</i> within 60 days of harvesting corn forage or within 70 days of harvesting corn grain.</li> <li>• <i>Liberty</i> is not very effective on perennial weeds.</li> <li>• Application should be made between dawn and 2 hours before sunset to avoid the risk of reduced control of lambsquarters and velvetleaf, optimum control is between 10:00 a.m. and 5:00 p.m.</li> <li>• Refer to Table 12 for crop rotation restrictions.</li> </ul>

## Table 1G – Delayed Applications of Soil Applied Herbicides in Corn

Preemergence herbicides should be applied as soon after planting as possible. Delayed application increases the risk of poor herbicide performance, especially for grass control. This table lists herbicides commonly applied preemergence that are also labeled for application after corn emergence. Tank mix combinations are not included in the table. All the herbicide treatments should be applied with water as the carrier. Applying herbicides to emerged corn with 28% liquid nitrogen fertilizer as the carrier poses a risk of severe crop injury. Refer to the herbicide labels for information on application rates and specific restrictions for tank mixtures.

Herbicide	Maximum Corn Stage
Princep, Sharpen, Verdict	Before corn emergence
Bullet, Lariat, Micro-Tech	5 inches
Instigate	2 collars
Basis Blend	6 inches or 2 collars
Zidua	4 collars
Breakfree, Breakfree ATZ, Degree, Degree Xtra, Fulltime, Harness, Harness Xtra, Harness Xtra 5.6L, Keystone, Keystone LA, Surpass, Surestart, TopNotch, TripleFLEX	11 inches
Atrazine	12 inches
Bicep II Magnum, Bicep Lite II Magnum, Cinch ATZ, Cinch ATZ Lite, Parallel Plus	12 inches
Lexar EZ, Lumax EZ	12 inches
Outlook	12 inches
Guardsman Max, G-Max Lite	12 inches
Resolve SG	12 inches or 5 collars
Hornet WDG, Python	20 inches or 6 collars
Callisto, Zemax	30 inches or 8 collars
Prowl, Prowl H <sub>2</sub> O	30 inches or 8 collars
Dual II Magnum, Cinch, Parallel	40 inches

# TABLE 1H – Weed and Crop Heights for Postemergence Herbicide Applications in Corn\*

HERBICIDE <sup>b</sup>	RATE/A	ANNUAL BROADLEAVES											ANNUAL GRASSES							CORN		
		COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	T-R LAMBSQUARTERS <sup>c</sup>	NIGHTSHADE (E. BLACK)	PIGWEEED	RAGWEED (COMMON)	RAGWEED (GIANT)	SMARTWEED	VELVETLEAF	WILD MUSTARD	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	MINIMUM <sup>a</sup> HEIGHT	MAXIMUM <sup>a</sup> HEIGHT
2,4-D amine/ester	1 pt/0.5 pt	4" NR	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	NR NR	NR NR	4"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	8"
Accent Q	0.9 oz	NR 3"	NR NR	NR NR	NR 4"	NR 4"	NR NR	NR NR	4" NR	NR NR	4"	NR NR	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 3"	NR NR	NR NR	None	20" or 6 collars
Aim	0.5 oz	NR NR	NR NR	NR 4"	4" 4"	NR NR	NR NR	NR NR	36" NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	8 collars
Armezon/Impact	0.75 oz	8" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 8"	3" 8"	6" 6"	4" 3"	4" 3"	3" 3"	3" 3"	3" 3"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	45 day PHI
Atrazine 4L	2 qt	4" 4"	6" NR	4" 6"	4" 4"	4" 4"	4" 4"	NR 4"	4" 4"	NR NR	NR NR	NR NR	1 1/2" 1 1/2"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	12"
Banvel/Clarity	1 pt	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	6" NR	2" NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	8" or 5 lf
Basagran	2 pt	10" 10"	2" 2"	NR NR	NR NR	3" 6"	10" 5"	8" NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	None
Beacon	0.76 oz	4" 4"	NR NR	4" 4"	9" 9"	4" 4"	4" 4"	4" 4"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	4"	20"
Buctril, Moxly, others	1 pt	8" 4"	6" 6"	6" NR	6" NR	6" 6"	6" 6"	4" 3"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	d
Cadet	0.9 oz	NR 2"	2" 2"	2" 2"	4" NR	NR NR	2" 36"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	48" <sup>d</sup>
Callisto	3 oz	NR NR	5" 5"	5" 5"	3" 3"	5" 5"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	30" or 8 collars
Callisto Xtra	24 oz	10" 10"	10" 5"	10" 10"	10" 10"	10" 10"	10" 10"	10" 10"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	12"
Capreno	3 oz	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	5" 3"	3" 2"	3" 5"	3" 2"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	1 collar	5 collars
Hornet WDG	3 oz	6" NR	NR NR	NR NR	6" 6"	6" 6"	6" 6"	6" 6"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	20" or 6 collars
Laudis	3 oz	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	5" 3"	3" 2"	3" NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	8 collars
Marksman	3.5 pt	4" 4"	6" 4"	4" 4"	6" 4"	4" 4"	4" 6"	NR 4"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	8" or 5 lf
Northstar	5 oz	6" 6"	4" 4"	6" 5"	9" 9"	4" 4"	4" 4"	NR NR	NR NR	NR NR	3" 3"	3" 3"	NR 4"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	4"(V2)	20" (V6)
Option	1.5 oz	2" 3"	2" 2"	4" 3"	2" NR	NR NR	2" 4"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	1 collar	6 collars
Permit	0.67 oz	9" 4"	NR NR	NR 3"	9" 3"	2" 9"	4" NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	Spike	canopy closure
Realm Q	4 oz	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	2" 1/2"	2" 2"	2" 2"	2" 2"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	20" or 6 collars
Require Q	4 oz	3" 3"	3" 3"	3" 3"	3" 3"	3" 3"	3" 3"	3" 3"	2" 0.5"	2" 2"	2" 2"	2" NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	4"(V2)	20" or 6 collars
Resolve Q	1.25 oz	3" NR	3" NR	NR 3"	3" NR	3" NR	3" 3"	NR NR	2" 0.5"	2" 2"	2" 2"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	20" or 6 collars
Resource	4 oz	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	5 lf NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	2 lf	10 collars
Shotgun	1 qt	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" NR	4" NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	spike	12" or 5 lf
Steadfast Q	1.5 oz	NR 4"	NR NR	NR 4"	NR 4"	NR NR	NR NR	NR 4"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	20" or 6 collars
Status	5 oz	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 2"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	4"(V2)	36"(V10)
Stinger	0.25 pt	5 lf 5 lf	NR NR	NR NR	5 lf 5 lf	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	24"
Yukon	4 oz	14" 4"	6" 6"	6" 12"	12" NR	3" 12"	6" NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	spike	36"
<b>GLYPHOSATE-RESISTANT CORN</b>																						
glyphosate	0.75 lb a.e.	6" 6"	3" 3"	4" 4"	4" 4"	4" 6"	4" 4"	4" 6"	6" 4"	4" 6"	6" 4"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	None	30" or 8 collars
Expert	3 qt	6" 6"	3" 3"	4" 4"	4" 4"	4" 6"	4" 4"	4" 6"	6" 4"	4" 6"	6" 4"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	None	12"
Field Master	4 qt	6" 6"	3" 3"	4" 4"	4" 4"	4" 6"	4" 4"	4" 6"	6" 4"	4" 6"	6" 4"	6" 6"	6" 3"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	None	11"
Halex GT	3.6 pt	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	4" 4"	spike	30" or 8 collars
Sequence	2.5 pt	12" 12"	6" 6"	6" 12"	12" 12"	12" 6"	6" 12"	NR NR	6" 12"	18" 18"	18" 6"	12" 12"	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	30" or 8 collars
Warrant + glyphosate	3 pt + 0.75 lb a.e.	6" 6"	3" 3"	4" 4"	4" 4"	4" 6"	4" 4"	4" 6"	6" 4"	4" 6"	6" 4"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	6" 6"	spike	30" or 8 collars
<b>LIBERTYLINK CORN</b>																						
Liberty	22 oz	6" 6"	2" 2"	6" 3"	6" 6"	6" 6"	6" 3"	4" NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	NR NR	None	24" or 7 collars

<sup>a</sup> NR = not recommended; – = not enough information to rank; lf=leaf stage.

<sup>b</sup> Consult label for recommended additives.

<sup>c</sup> Triazine-resistant lambsquarters.

<sup>d</sup> Before tassel emergence.

\*The weed heights and growth stages listed in this table are estimates of the maximum size where consistent control is expected. The maximum height for effective control in any specific situation is dependent on environment conditions, including soil moisture, temperature, and relative humidity.

**TABLE 11 — Plant Response to Fall or Spring Herbicides in Sod**

	Alfalfa	Red Clover	Hairy Vetch	Dandelion	Curled Dock	Bromegrass	Timothy	Bluegrass	Orchardgrass	Quackgrass
<b>Fall Application<sup>a</sup></b>										
glyphosate (0.75 lb a.e.) <sup>c</sup>	<b>F-G</b>	<b>F-G</b>	<b>F-G</b>	<b>G</b>	-	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G-E</b>
glyphosate (1.5 lb a.e.) <sup>c</sup>	<b>G-E</b>	<b>G-E</b>	<b>G-E</b>	<b>G</b>	-	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>
2,4-D ester (1 qt)	<b>F-G</b>	<b>F-G</b>	F	F	-	N	N	N	N	N
glyphosate (0.75 lb a.e.) + 2,4-D ester (1 qt)	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	-	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G-E</b>
glyphosate (1.5 lb a.e.) <sup>c</sup> + 2,4-D ester (1 qt)	<b>G-E</b>	<b>G-E</b>	<b>G-E</b>	<b>G</b>	-	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>
<b>Spring Application<sup>b</sup></b>										
glyphosate (0.75 lb a.e.)	F	F	F	F	P	F	F	<b>G</b>	P	<b>G</b>
glyphosate (1.5 lb a.e.)	<b>F-G</b>	<b>F-G</b>	<b>F-G</b>	F	F	<b>G</b>	<b>G</b>	<b>G</b>	F	<b>E</b>
2,4-D ester (1 qt)	<b>F-G</b>	<b>G</b>	<b>F-G</b>	P	P	N	N	N	N	N
glyphosate (0.75 lb a.e.) <sup>c</sup> + 2,4-D ester (1 qt)	<b>F-G</b>	<b>F-G</b>	<b>F-G</b>	F	P-F	F	F	<b>G</b>	P	<b>G</b>
glyphosate (1.5 lb a.e.) <sup>c</sup> + 2,4-D ester (1 qt)	<b>G</b>	<b>G</b>	<b>G</b>	F	F	<b>G</b>	<b>G</b>	<b>G</b>	F	<b>E</b>

P = Poor; F = Fair; **G** = Good; **E** = Excellent; N = None; - = Not enough information to rank

<sup>a</sup> Ideal timing is 4-6 weeks after mowing. Mow in late August–early September and treat in early to mid-October in central or southern Michigan.

<sup>b</sup> Treat when plants reach at least 6 inches tall.

<sup>c</sup> See Table 10 for glyphosate products, formulations and rates. Always include 17 lb/100 gal of ammonium sulfate (AMS) with glyphosate applications.

# TABLE 1J – Effectiveness of Herbicides for Spring Burndown in Corn\*

	ANNUAL BROADLEAVES										ANNUAL GRASSES							WINTER ANNUALS/ PERENNIALS						COVER CROPS							
	COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE	PIGWEEED	RAGWEED (COMMON)	RAGWEED (GIANT)	SMARTWEED	VELVETLEAF	WILD MUSTARD	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	CHICKWEED (COMMON)	YELLOW ROCKET	SHEPHERD'S PURSE	PENNYCRESS	MARESTAIL (HORSEWEED)	DANDELION	QUACKGRASS	RYE	WHEAT	CLOVER	HAIRY VETCH		
																														Maximum Weed Height (inches)	
atrazine (1 lb a.i.) <sup>a</sup>	2	2	2	2	2	2	2	2	2	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	-	<b>G</b>	<b>E</b>	<b>G</b>	<b>G</b>	P	P	P	P	P	P
atrazine (2 lb a.i.) <sup>a</sup>	3	3	3	3	3	3	3	3	3	3	NR	NR	NR	1.5	1.5	NR	NR	NR	NR	NR	-	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	F	F	F	F
2,4-D ester (1 pt)	3	NR	3	3	3	3	3	NR	2	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	P	F	<b>G</b>	F	<b>E</b>	N	N	N	N	F	F	
2,4-D ester (1 pt)	6	3	6	6	6	6	6	3	5	6	NR	NR	NR	NR	NR	NR	NR	NR	NR	F	<b>G</b>	<b>E</b>	<b>G</b>	<b>E</b>	P	N	N	N	<b>G</b>	<b>G</b>	
glyphosate (0.75 lb a.e.) <sup>bc</sup>	16	10	10	10	16	10	5	5	5	16	5	-	16	16	16	-	-	-	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	F	<b>E</b>	<b>E</b>	F	F		
Gramoxone (2.0 pt) <sup>d</sup>	3	3	3	3	3	3	NR	3	3	3	3	3	3	3	3	3	3	3	<b>E</b>	<b>G</b>	<b>G</b>	<b>G</b>	P	P	P	F	F	P	P		
Gramoxone (2.5 pt) <sup>d</sup>	6	6	6	6	6	6	NR	6	6	6	6	6	6	6	6	6	6	6	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	P	P	P	<b>G</b>	<b>G</b>	F	F		
Liberty (29 oz) <sup>c</sup>	14	10	6	8	4	10	12	14	4	6	5	5	12	12	4	5	6	NR	<b>E</b>	<b>G</b>	<b>G</b>	<b>G</b>	<b>G</b>	F	N	P	F	P	G		
Basis Blend (1.25 oz) + 2,4-D ester (1 pt) + atrazine (1 lb a.i.) <sup>a</sup>	3	2	3	3	3	3	3	3	3	3	2	NR	2	2	2	2	-	-	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	F	P	P	F	F		
Fierce (3 oz) <sup>f</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	<b>G</b>	<b>E</b>	<b>G</b>	P	F	N	N	N	P	P		
Resolve SG (1 oz) + 2,4-D ester (1 pt) + atrazine (1 lb a.i.) <sup>a</sup>	3	2	3	3	3	3	3	3	3	3	2	NR	2	2	2	2	-	-	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	F	P	P	F	F		
Resolve Q (1.25 oz) + 2,4-D ester (1 pt) + atrazine (1 lb a.i.) <sup>a</sup>	3	2	3	3	3	3	3	3	3	3	2	NR	2	2	2	2	-	-	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	<b>E</b>	<b>G</b>	F	P	P	F	F		
Sharpen (1 oz) <sup>e</sup>	6	6	6	6	6	6	6	6	6	6	NR	NR	NR	NR	NR	NR	NR	NR	F	<b>G</b>	<b>G</b>	<b>G</b>	<b>E</b>	F	NR	NR	NR	-	-		
Sharpen (1 oz) + glyphosate (0.75 lb a.e.) <sup>be</sup>	16	10	10	10	16	10	6	6	6	16	5	-	16	16	16	-	-	-	<b>G</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	<b>G</b>	<b>E</b>	<b>E</b>	F	F		
Valor (2 oz) <sup>f</sup>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	<b>G</b>	<b>E</b>	<b>G</b>	P	F	N	N	N	P	P		
Vida (1 oz) + glyphosate (0.75 lb ae) <sup>bc</sup>	4	-	4	4	4	4	4	4	4	-	NR	NR	NR	NR	NR	NR	NR	NR	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	<b>E</b>	F	<b>G</b>	<b>E</b>	<b>E</b>	F	F		

P = Poor; F = Fair; **G** = Good; **E** = Excellent; N = None; NR = Not Recommended; - = Not enough information to rank

\*Burndown effectiveness varies, depending on several factors. This table is intended as a guide to relative effectiveness of burndown herbicide options.

<sup>a</sup>Always add crop oil concentrate at 1 qt/A to maximize foliar activity.

<sup>b</sup> See Table 10 for glyphosate products, formulations and rates.

<sup>c</sup> Always include 17 lb/100 gal of ammonium sulfate (AMS).

<sup>d</sup> Always add either a non-ionic surfactant (0.25%) or a crop oil concentrate (1%) with *Gramoxone*.

<sup>e</sup> Must be applied with a methylated seed oil (MSO) at 1% and ammonium sulfate at (17 lb/100 gal).

<sup>f</sup> Apply 7 to 30 days before planting on no-till or minimum tillage fields. Provides additional residual control of annual broadleaves. Do not irrigate corn from emergence to 2-leaf. Apply with 2,4-D, *Gramoxone*, glyphosate or other herbicides (see label).