Chapter 1 – Weed Control in Corn

This chapter is intended to provide herbicide information for weed control in corn. Corn herbicide management programs are grouped into three main strategies based on application timing. Deciding what type of program to use depends on a number of factors including weed infestation level, weed species present, weather, and overall yield goals.

Recommendations and Considerations:

1. One-pass preemergence (PRE) programs:

- Target low risk fields with light weed infestations.
- Avoid fields with populations of large-seeded broadleaf weeds, perennials, or herbicide-resistant species (waterhemp, Palmer amaranth).
- Must contain multiple effective sites of action with residual activity.
- Advantages include: one-pass, effective on many annual broadleaf and grass weeds, and with sufficient rainfall provides residual control.
- Disadvantages include: activity is dependent on rainfall and are not effective on fields with historically heavy weed pressure, large-seeded broadleaf weeds, perennials, or herbicide-resistant species.
- **Table 1B** provides the effectiveness of soil-applied herbicides, **Table 1D** outlines the components of herbicide premixtures, and **Table 1F** provides important information on each soil-applied herbicide.

2. One-pass early postemergence (EPOS) programs:

- Target low risk fields with light weed infestations.
- Avoid fields with populations of large-seeded broadleaf weeds, perennials, or herbicide-resistant species (waterhemp, Palmer amaranth).
- Must contain multiple effective sites of action with residual activity.
- Advantages include: one-pass, effective on many annual broadleaf and grass weeds, and with sufficient rainfall provides residual control.
- Disadvantages include: herbicides need to be applied before weeds exceed 2-4 inches in height to avoid yield loss and residual activity is dependent on adequate rainfall.
- **Table 1E** lists the maximum weed sizes for postemergence weed control, **Table 1F** provides important information on each herbicide, and **Table 1G** provides information on delayed applications of soil-applied herbicides.

3. Two-pass (PRE followed-by POST) programs:

- Target high risk fields with moderate or heavy weed pressure, perennial weeds, and hard to control weed species (waterhemp, Palmer amaranth, giant ragweed).
- Must contain multiple effective sites of action with residual activity.
- Advantages include: good fit for any field, very consistent, helps minimize early-season weed competition, and lengthens the application window for POST herbicide applications.
- Disadvantages include: two-pass and perceived higher cost, however previous research at MSU has shown economic returns similar to or more than one-pass programs.
- **Table 1C** provides the effectiveness of postemergence herbicides, **Table 1D** outlines premixture components, **Table 1E** lists the maximum weed sizes for postemergence weed control, and **Table 1F** provides important information on each herbicide. For extended or late-season weed control, several soil-applied residual herbicides may be tank-mixed with a postemergence herbicide application consult **Table 1G** for various products.

4. Rotation restrictions.

- Prior to herbicide use it is always important to determine if the herbicide application that you make this year may affect your crop rotation plan for the following years. **Table 12** provides a complete listing of crop rotation restrictions for all corn herbicides.

Abbreviations for this chapter:

Herbicide Formulations: Table 14
Herbicide Sites of Action: Pages 14-15

Application Timings:

EPP = early preplant
PPI = preplant incorporated
PRE = preemergence
POST = postemergence

Units of Measure:

fl oz = fluid ounces
lb = pounds
oz = ounces
pt = pints
qt = quarts
% v/v = % volume/volume

Additives:

AMS = ammonium sulfate
COC = crop oil concentrate
HSMOC = high surfactant methylated oil concentrate
MSO = methylated seed oil
NIS = non-ionic surfactant

Corn Traits:

N = no specific trait required
RR = Roundup Ready
LL = LibertyLink
E = Enlist

TABLE 1A — Effectiveness of Herbicides for Spring Burndown in Corn*

	Annual Broadleaves										Annual Grasses								Winter Annuals/ Perennials							Cover Crops			
	Cocklebur	Jimsonweed	Lambsquarters	Nightshade	Pigweed	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	Horseweed (Marestail)[a]	Dandelion	Quackgrass	Rye	Wheat	Clover	Hairy vetch
Herbicide	**Maximum Height (inches)**																		**Herbicide Effectiveness**										
atrazine (1 lb a.i.)[b]	2	2	2	2	2	2	2	2	2	2	–	–	–	–	–	–	–	–	–	**G**	**E**	**G**	**G**	P	P	P	P	P	P
atrazine (2 lb a.i.)[b]	3	3	3	3	3	3	3	3	3	3	–	–	–	1.5	1.5	–	–	–	–	**E**	**E**	**E**	**E**	F	F	F	F	F	F
2,4-D ester (1 pt)	3	–	3	3	3	3	3	–	2	3	–	–	–	–	–	–	–	–	P	F	**G**	F	**E**	N	N	N	N	F	F
2,4-D ester (1 qt)	6	3	6	6	6	6	6	3	5	6	–	–	–	–	–	–	–	–	F	**G**	**E**	**G**	**E**	P	N	N	N	**G**	**G**
Glyphosate (0.75 lb a.e.)[cd]	6	6	6	6	6	6	6	6	6	6	6	–	6	6	6	–	–	–	**E**	**E**	**E**	**E**	N[a]	F	**G**	**E**	**E**	F	F
Gramoxone SL 2.0 (2.0 pt)/Gramoxone SL 3.0 (1.33 pt)[e]	3	3	3	3	3	3	3	–	3	3	3	3	3	3	3	3	3	3	**E**	**G**	**G**	**G**	P	P	P	F	F	P	P
Gramoxone SL 2.0 (2.5 pt)/Gramoxone SL 3.0 (1.66 pt)[e]	6	6	6	6	6	6	6	–	6	6	6	6	6	6	6	6	6	6	**E**	**E**	**E**	**E**	P	P	P	**G**	**G**	F	F
Reviton (1 oz) + glyphosate (0.75 lb a.e.)[b]	6	6	6	6	6	6	6	6	6	6	6	–	6	6	6	–	–	–	**E**	**E**	**E**	**E**	F	F	**G**	**E**	**E**	F	F
Liberty (29 oz)[d]	14	10	6	8	4	10	12	14	4	6	5	5	12	12	4	5	6	–	**E**	**G**	**G**	**G**	**G**	F	N	P	F	P	**G**
Basis Blend (1.25 oz) + 2,4-D ester (1 pt) + atrazine (1 lb a.i.)[b]	3	2	3	3	3	3	3	3	3	3	2	–	2	2	2	2	–	–	**E**	**G**	**E**	**G**	**E**	**G**	F	P	P	F	F
Crusher (1 oz) + 2,4-D ester (1 pt) + atrazine (1 lb a.i.)[b]	3	2	3	3	3	3	3	3	3	3	2	–	2	2	2	2	–	–	**E**	**G**	**E**	**G**	**E**	**G**	F	P	P	F	F
Fierce EZ (6 oz)[g]	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	**G**	**E**	**G**	P	F	N	N	N	P	P
Panoflex (0.6 oz) + 2,4-D ester (1 pt) + atrazine (1 lb a.i.)[b]	3	2	3	3	3	3	3	3	3	3	2	–	2	2	2	2	–	–	**E**	**G**	**E**	**E**	F	**G**	F	P	P	F	F
Resolve Q (1.25 oz) + 2,4-D ester (1 pt) + atrazine (1 lb a.i.)[b]	3	2	3	3	3	3	3	3	3	3	2	–	2	2	2	2	–	–	**E**	**G**	**E**	**G**	**E**	**G**	F	P	P	F	F
Sharpen (1 oz)[f]	6	6	6	6	6	6	6	6	6	6	–	–	–	–	–	–	–	–	F	**G**	**G**	**G**	**E**	F	–	–	–	–	–
Sharpen (1 oz) + glyphosate (0.75 lb a.e.)[cf]	16	10	10	10	16	10	6	6	6	16	5	–	16	16	16	–	–	–	**G**	**E**	**E**	**E**	**E**	F	**G**	**E**	**E**	F	F
Valor (2 oz)[g]	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	P	**G**	**E**	**G**	P	F	N	N	N	P	P
Vida (1 oz) + glyphosate (0.75 lb ae)[cd]	4	–	4	4	4	4	4	4	4	–	–	–	–	–	–	–	–	–	**E**	**E**	**E**	**E**	**E**	F	**G**	**E**	**E**	F	F

TABLE 1A — Effectiveness of Herbicides for Spring Burndown in Corn*

Herbicide Effectiveness: P = Poor; F = Fair; **G** = Good; **E** = Excellent; N = None; – = 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.

[a] Most horseweed populations in Michigan are resistant to ALS-inhibiting herbicides (Group 2), glyphosate (Group 9), or both herbicide site of action groups. Herbicides that have these site of action groups will not control these resistant horseweed populations.

[b] Always add crop oil concentrate at 1 qt/A to maximize foliar activity with atrazine. Always add methylated seed oil at 0.25% to maximize foliar activity with Reviton.

[c] See Table 10 for glyphosate products, formulations and rates.

[d] Always include 8.5-17 lb/100 gal of ammonium sulfate (AMS).

[e] Always add either a non-ionic surfactant (0.25%) or a crop oil concentrate (1%) with Gramoxone. Gramoxone is a restricted-use pesticide. Certified applicators are now required to complete a paraquat specific training prior to use of Gramoxone. The paraquat training course can be found online at: https://www.epa.gov/pesticide-worker-safety/paraquat-dichloride-training-certified-applicators.

[f] Must be applied with a methylated seed oil (MSO) at 1% and ammonium sulfate at (17 lb/100 gal).

[g] 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).

TABLE 1B — Weed Response to Soil-Applied Herbicides in Corn*

Soil-applied	Site of Action	Corn Tolerance**	Annual Broadleaves													Annual Grasses								Perennials				
			Cocklebur	Horseweed (Marestail)[a]	Jimsonweed	Lambsquarters	Nightshade (E. black)	Palmer amaranth[b]	Pigweed	Ragweed (Common)	Ragweed (Giant)	Smartweed	Velvetleaf	Waterhemp[b]	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	**E**	F	**E**	**E**	**G**	**G**	**E**	**G**	**G**	F	**G**	**E**	**G**	P	F	F	**G**	P	P	P	F	P	F	N	N
Balance Flexx	27	2	P	**G/E**	**E**	**E**	**E**	F/**G**	**E**	**E**	F	**G**	**E**	**G**	**E**	**G**	F	**G**	**G**	F	P	P	F	P	P	P	**G**	F
Callisto[c]	27	1	P	**G**	**G**	**E**	**E**	**G**	**E**	F	F	**E**	**E**	**G**	**G**	N	P	N	N	N	N	N	N	P	N	N	N	N
Dual II Magnum[d]	15	1	N	N	N	P	F	F/**G**	**G**	P	N	P	N	**G**	P	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	N	N	F	P	N
Harness/Surpass NXT	15	2	P	N	N	F	**G**	**G**	**G**	F	N	P	P	**G**	P	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	N	N	F	P	N
Outlook	15	2	N	N	N	P	**G**	F	**G**	P	N	P	N	F	P	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	N	N	P	P	N
Princep	5	1	F	**E**	F	**E**	**E**	F	**G**	**E**	F	**G**	F	F	**E**	**G**	F	F	F	**G**	P	P	P	P	F	F	N	N
Prowl H_2O[e] (PRE only)	3	3	N	N	N	**G**	P	P	F	P	N	P	F	P	P	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	N	N	N	P	N
Python	2	3	F	N	F	**E**	**G**	N	**E**	F	P	**G**	**G**	N	**E**	P	P	P	P	P	P	P	P	N	N	N	N	N
Sharpen	14	2	**G**	**G**	**G**	**G**	**G**	P	**E**	**G**	F	**G**	**G**	**G**	**G**	N	N	N	N	N	N	N	N	P	N	N	N	N
Valor[f] (7d EPP or more)	14	2	P	P	F	**G**	**G**	F/**G**	**G**	**G**	F	F	F	F/**G**	**G**	P	P	P	P	P	P	P	P	N	N	P	P	N
Zidua	15	1	P	N	F	F	**G**	**G**	**E**	F	N	F	F	**E**	F	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	N	N	F	F	N
Premixes																												
Acuron	5/15/27/27	1	**G**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	F	P	F	F	N
Acuron Flexi	15/27/27	1	**G**	**G/E**	**G**	**E**	**E**	**G**	**E**	**E**	**G**	**E**	**E**	**G**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	F	N	F	P	N
Anthem MAXX	15/14	2	P	N	F	F	**G**	**G**	**E**	F	N	F	F	**G**	F	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	N	N	F	F	N
Armezon PRO	15/27	2	N	N	N	P	**G**	F	**G**	P	N	P	N	F	P	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	N	N	P	P	N
Basis Blend	2/2	1	**G**	N	F	**G**	P	N	**E**	F	P	F	F	N	**E**	**G**	F	**G**	**G**	**G**	F	F	P	P	P	P	P	P	P
Bicep II Lite Magnum	5/15	1	F	**G**	F	**G**	**E**	F/**G**	**G**	**G**	F	F	F	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	P	N	F	P	N
Bicep II Magnum	5/15	1	F	**E**	F	**E**	**E**	**G**	**G**	**E**	**G**	**G**	F	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	F	P	F	P	N
Calibra	15/27	1	P	**G**	**G**	**E**	**E**	**G**	**E**	F	F	**E**	**E**	**G**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	P	N	F	P	N
Corvus	2/27	2	**G**	**G/E**	**E**	**E**	**E**	F/**G**	**E**	**E**	**G**	**E**	**E**	**G**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	P	F	P	**G**	F
Degree XTRA/Fultime NXT/Keystone LA NXT	5/15	2	F	**G**	F	**G**	**E**	**G**	**G**	**G**	F	F	F	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	P	N	F	P	N
Crusher	2/2	2	**G**	N	F	**G**	F	N	**E**	F	P	F	F	N	**E**	**G**	F	**G**	**G**	**G**	F	F	P	F	F	F	F	P
Fierce EZ[f] (7d EPP or more)	14/15	2	P	P	F	**G**	**G**	**G**	**E**	**G**	F	F	F	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	F	N	N	F	F	N
Harness MAX	15/27	1	P	**G**	**G**	**E**	**E**	**G**	**E**	F	F	**E**	**E**	**G**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	P	N	F	P	N
Harness XTRA/ Keystone NXT	5/15	2	F	**E**	F	**E**	**E**	**G**	**G**	**E**	**G**	**G**	F	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	F	P	F	P	N
Hornet	2/4	3	**G**	N	F	**E**	**G**	N	**E**	**E**	**G**	**G**	**G**	N	**E**	N	N	N	N	N	N	N	N	F	N	N	N	N
Lexar EZ/Lumax EZ/ Stalwart 3W	5/27/15	1	F	**E**	**G**	**E**	**E**	**G/E**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	F	P	F	P	N
Maverick	4/15/27	2	**G**	**E**	**G**	**E**	**E**	**G**	**E**	**E**	**G**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	F	N	F	F	N
Panoflex[f] (14 d EPP)	2/2	2	F	N	F	**E**	F	N	**E**	F	P	**E**	**G**	N	**E**	N	N	N	N	N	N	N	N	F	N	N	N	N

TABLE 1B — Weed Response to Soil-Applied Herbicides in Corn*

Premixes	Site of Action	Corn Tolerance**	Annual Broadleaves													Annual Grassess								Perennial				
			Cocklebur	Horseweed (Marestail)[a]	Jimsonweed	Lambsquarters	Nightshade (E. black)	Palmer amaranth[b]	Pigweed	Ragweed (Common)	Ragweed (Giant)	Smartweed	Velvetleaf	Waterhemp[b]	Wild mustard	Barnyardgrass	Crabgrass	Giant foxtail	Green foxtail	Yellow foxtail	Fall panicum	Witchgrass	Sandbur	Canada thistle	Quackgrass	Yellow nutsedge	Johnsongrass (seedling)	Johnsongrass (rhizome)
Resicore	4/15/27	2	F	**E**	**G**	**E**	**E**	**G/E**	**E**	**G**	F	**E**	**E**	**G/E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	P	N	F	P	N
Resicore XL	4/15/27	2	F	**E**	**G**	**E**	**E**	**G/E**	**E**	**G**	F	**E**	**E**	**G/E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	P	N	F	P	N
Restraint	15/27	2	P	N	F	F	**G**	**G**	**G**	F	N	P	P	**G**	P	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	N	N	F	P	N
Stalwart 2W	27/15	1	P	**G**	**G**	**E**	**E**	**G**	**E**	F	F	**E**	**E**	**G**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	P	N	F	P	N
Surestart II/Tripleflex II	2/4/15	3	**G**	**E**	F	**E**	**G**	F	**E**	**G**	F	**G**	**G**	F	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	P	N	F	P	N
TriVolt	2/15/27	2	**G**	**G/E**	**E**	**E**	**E**	**G**	**E**	**E**	**G**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	P	F	P	**G**	F
Verdict[g]	14/15	2	**G**	F	**G**	**G**	**G**	F	**E**	**G**	F	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	**G**	F	P	N	P	P	N

Herbicide Site of Action: The site of action key is located on pages 14-15.

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.

[a] Almost all populations of horseweed (marestail) found in Michigan are resistant to the ALS-inhibiting herbicides (Group 2) and glyphosate (Group 9).

[b] Almost all populations of Palmer amaranth and waterhemp found in Michigan are resistant to the ALS-inhibiting herbicides (Group 2) and glyphosate (Group 9). Refer to the factsheet on "Keys to Managing Multiple-Resistant Palmer amaranth" on pages 169-173.

[c] There are other mesotrione (Motif, Quartz) products registered for use in corn, consult specific labels.

[d] There are other s-metolachlor (Moccasin II Plus) and metolachlor (Stalwart C) products registered for use in corn, consult specific labels.

[e] DO NOT incorporate Prowl H_2O and corn should be planted a minimum of 1.5-inches deep.

[f] Valor or Fierce must be applied at least 7 days before planting, for use only in no-till corn. Panoflex must be applied at least 14 days before planting.

[g] 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.

TABLE 1C — Weed Response to Postemergence Herbicides in Corn*

			Annual Broadleaves													Annual Grassess								Perennial				
Postemergence	**Site of Action**	Corn Tolerance**	Cocklebur	Horseweed (marestail)[a]	Jimsonweed	Lambsquarters	Nightshade (E. black)	Palmer amaranth[b]	Pigweed	Ragweed (Common)	Ragweed (Giant)	Smartweed	Velvetleaf	Waterhemp[b]	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	F	**G**	**G**	F/**G**	**G**	**G**	**G**	P	F	F/**G**	**G**	N	N	N	N	N	N	N	N	F	N	N	N	N
Accent Q	2	2	F	N	**G**	F	P	N	**E**	P	N	**G**	F	N	P	**E**	P	**E**	**E**	**E**	**E**	**E**	**G**	F	**G**	F	**E**	**G**
Aim	14	3	P	N	F	F	**G**	P	**G**	P	P	P	**E**	P	F	N	N	N	N	N	N	N	N	N	N	N	N	N
Armezon/Imapct	27	1	**G**	P	**E**	**E**	**E**	**G**	**E**	**E**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	F	F	P	P	F	P
Atrazine	5	1	**G**	N	**G**	**E**	**G**	**G**	**E**	**E**	**G**	**G**	F	**G**	**E**	F	P	F	F	F	P	P	P	F	F	F	N	N
Banvel/Clarity	4	3	**G**	**G/E**	**G**	**G**	**G**	**G**	**G**	**G**	**E**	**E**	F	**G**	**G**	N	N	N	N	N	N	N	N	F	N	N	N	N
Basagran	6	1	**E**	P	**G**	F	P	N	P	F	P	**G**	F	N	**E**	N	N	N	N	N	N	N	N	**G**	N	**G**	N	N
Beacon	2	2	**E**	N	**G**	F	**G**	N	**E**	**E**	**E**	**G**	**G**	N	F	P	P	F	F	F	**G**	**G**	F	F	**G**	F	**G**	F
Buctril/Moxy	6	2	**G**	P	**G**	**E**	**G**	N	F	**G**	**G**	**G**	**G**	N	F	N	N	N	N	N	N	N	N	P	N	N	N	N
Callisto[d]	27	1	F	P	**E**	**E**	**E**	F	**G**	**G**	**G**	**E**	**E**	**G**	**E**	N	F[c]	N	N	N	N	N	N	P	N	P	N	N
DiFlexx	4	2	**G**	**G/E**	**G**	**G**	**G**	**G**	**G**	**G**	**E**	**E**	F	**G**	**G**	N	N	N	N	N	N	N	N	F	N	N	N	N
Laudis	27	1	**G**	P	**E**	**E**	**E**	**G**	**E**	**G**	**G**	**G**	**E**	**G**	F	**G**	F	**G**	**G**	**E**	N	P	F	P	P	P	F	P
Permit	2	1	**E**	N	**G**	N	P	N	**E**	**G**	**G**	F	**G**	N	**E**	N	N	N	N	N	N	N	N	P	N	**E**	N	N
Resource	14	2	P	N	P	F	P	P	P	P	P	P	**E**	P	P	N	N	N	N	N	N	N	N	N	N	N	N	N
Shieldex	27	1	**G**	**G**	**E**	**E**	**E**	**G**	**E**	**G**	**G**	F	**E**	**G**	F	**G**	**G**	**E**	**G**	**G**	F	–	–	P	P	P	F	P
Stinger	4	1	**E**	F	**G**	P	F	P	P	**E**	**E**	F	P	P	P	N	N	N	N	N	N	N	N	**E**	N	N	N	N
Premixes																												
Anthem MAXX	14/15	2	P	P	**G**	F	F	P	**G**	P	P	P	**E**	P	P	N	N	N	N	N	N	N	N	N	N	N	N	N
Armezon PRO	15/27	1	**G**	P	**E**	**E**	**E**	**G**	**E**	**E**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	**E**	**E**	**G**	**G**	**G**	F	F	P	P	F	P
Callisto XTRA	5/27	1	**G**	P	**E**	**E**	**E**	**G**	**E**	**E**	**G**	**G**	**E**	**G**	**G**	N	F[c]	N	N	N	N	N	N	F	N	P	N	N
Capreno	2/27	2	**G**	P	**E**	**G**	**E**	F	**E**	**G**	**G**	**G**	**E**	F	**G**	**G**	**G**	**G**	**G**	**E**	**G**	**G**	F	P	F	P	**E**	**G**
DiFlexx DUO	4/27	2	**G**	**G/E**	**E**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**G**	**G**	F	P	F	F	**G**	N	N	P	F	P	P	P	P
Hornet	2/4	2	**E**	P	F	F	F	N	P	**E**	**E**	**G**	**G**	N	**G**	N	N	N	N	N	N	N	N	**E**	N	N	N	N
ImpactZ	5/27	1	**G**	P	**E**	**E**	**E**	**G**	**E**	**E**	**G**	**G**	**E**	**G**	**E**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	F	F	F	F	F	P
Impact Core	15/27	1	**G**	P	**E**	**E**	**E**	**G**	**E**	**E**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	**E**	**E**	**G**	**G**	**G**	F	F	P	P	F	P
Katagon	2/27	2	**G**	**G**	**E**	**E**	**E**	**G**	**E**	**G**	**G**	**G**	**E**	**G**	F	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**G**	F	**G**	F	**E**	**G**
Kyro	15/27/4	1	**E**	F	**E**	**E**	**E**	**G**	**E**	**E**	**E**	**G**	**E**	**G**	**G**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	F	**E**	P	P	F	P
Perpetuo	14/15	2	P	N	P	F	P	P	P	P	P	P	**E**	P	P	N	N	N	N	N	N	N	N	N	N	N	N	N
Realm Q	2/27	2	**G**	P	**E**	**E**	**E**	P	**E**	**G**	F	**E**	**E**	F	**E**	**G**	F	**G**	**G**	**G**	**G**	**G**	P	F	F	P	F	N
Resolve Q	2/2	2	**G**	N	P	**G**	F	N	**E**	F	P	**G**	F	N	**E**	**G**	F	**G**	**G**	**G**	**G**	**G**	P	F	F	P	F	N
Restraint	15/27	1	**G**	**G**	**E**	**E**	**E**	**G**	**E**	**E**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	**E**	**E**	**G**	**G**	**G**	F	F	P	P	F	P
Revulin Q	2/27	2	F	N	**E**	**E**	**E**	P	**E**	**G**	F	**E**	**E**	F	**E**	**E**	F[c]	**E**	**E**	**E**	**E**	**E**	**G**	F	**G**	F	**E**	**G**
Status	4/19	2	**E**	**E**	**G**	**E**	**G**	**G**	**E**	**E**	**E**	**E**	**G**	**G**	**G**	P	P	P	P	P	P	P	P	**G**	N	N	N	N
Steadfast Q	2/2	2	F	N	**G**	F	P	N	**E**	P	N	**G**	F	N	**G**	**E**	F	**E**	**E**	**E**	**E**	**E**	**G**	F	**G**	F	**E**	**G**
Yukon	2/4	2	**E**	P	**G**	**G**	**G**	N	**E**	**G**	**G**	**G**	**G**	N	**E**	N	N	N	N	N	N	N	N	P	N	**E**	N	N

TABLE 1C — Weed Response to Postemergence Herbicides in Corn*

Glyphosate-Resistant Corn	Site of Action	Corn Tolerance**	Annual Broadleaves													Annual Grassess								Perennial				
			Cocklebur	Horseweed (marestail)[a]	Jimsonweed	Lambsquarters	Nightshade (E. black)	Palmer amaranth[b]	Pigweed	Ragweed (Common)	Ragweed (Giant)	Smartweed	Velvetleaf	Waterhemp[b]	Wild mustard	Barnyardgrass	Crabgrass	Giant foxtail	Green foxtail	Yellow foxtail	Fall panicum	Witchgrass	Sandbur	Canada thistle	Quackgrass	Yellow nutsedge	Johnsongrass (seedling)	Johnsongrass (rhizome)
Glyphosate	9	1	**E**	N	**E**	**G**	**G**	N	**E**	**G**	**G**	**G**	**G**	N	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**
Acuron GT	9/15/27	1	**E**	P	**E**	**E**	**E**	**G**	**E**	**G**	**G**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**
Callisto GT	9/27	1	**E**	P	**E**	**E**	**E**	F	**E**	**G**	**G**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**
Halex GT	9/15/27	1	**E**	P	**E**	**E**	**E**	F	**E**	**G**	**G**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**
Sequence	9/15	1	**E**	P	**E**	**G**	**G**	N	**E**	**G**	**G**	**G**	**G**	N	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**
Warrant + Glyphosate	9/15	1	**E**	P	**E**	**G**	**G**	N	**E**	**G**	**G**	**G**	**G**	N	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**
LibertyLink Corn																												
Liberty[e]	10	1	**E**	**E**	**G**	F	**G**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	**E**	F	F	**G**	**G**	F	F	F	P	P	P	P	**G**	F
Sinate	10/27	1	**E**	**E**	**E**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	F	F	F	P	**G**	F
Enlist Corn																												
Assure II	1	1	P	N	P	P	P	P	P	P	P	P	P	P	P	**G**	**G**	**E**	**E**	**G**	**E**	**E**	**E**	N	**E**	N	**E**	**E**
Enlist One	4	1	**G**	**G**	F	**G**	**G**	**G**	**G**	**G**	**G**	P	F	**G**	**G**	N	N	N	N	N	N	N	N	F	N	N	N	N
Enlist Duo	4/9	1	**E**	**G**	**E**	**G**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**

Herbicide Site of Action: The site of action key is located on pages 14-15.

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.

[a] Almost all populations of horseweed (marestail) found in Michigan are resistant to the ALS-inhibiting herbicides (Group 2) and glyphosate (Group 9).

[b] Almost all populations of Palmer amaranth and waterhemp found in Michigan are resistant to the ALS-inhibiting herbicides (Group 2) and glyphosate (Group 9). Refer to the factsheet on "Keys to Managing Multiple-Resistant Palmer amaranth" on pages 169-173.

[c] Large crabgrass only.

[d] There are other mesotrione (Motif, Quartz) products registered for use in corn, consult specific labels.

[e] There are other glufosinate (Cheetah, Interline, Noventa) products registered for use in LibertyLink corn, consult specific labels.

TABLE 1D — Herbicide Premixes in Corn

Trade Name	Company	Formulation	Typical Use Rate/A[a]	=	Equivalent Rates
Soil-applied					
Acuron	Syngenta	3.44ZC	3 qt	=	1.68 pt Dual II Magnum + 0.045 lb ai bicyclopyrone 5.76 fl oz Callisto + 0.75 qt Atrazine +
Acuron Flexi	Syngenta	3.26ZC	2.25 qt	=	1.68 pt Dual II Magnum + 0.045 lb ai bicyclopyrone 5.76 fl oz Callisto +
Anthem MAXX	FMC	4.3SE	5 fl oz	=	0.75 fl oz Cadet + 5 fl oz Zidua SC
Armezon PRO	BASF	5.35EC	20 fl oz	=	0.71 fl oz Armezon + 17.5 fl oz Outlook
Basis Blend	Corteva	30WG	1.25 oz	=	1 oz Resolve SG + 0.25 oz Harmony SG
Bicep II Magnum	Syngenta	5.5F	2.1 qt	=	1.33 pt Dual II Magnum + 1.6 qt atrazine 4L
Bicep Lite II Magnum	Syngenta	6F	1.5 qt	=	1.33 pt Dual II Magnum + 1 qt atrazine 4L
Calibra	Syngenta	3.1ZC	2.8 qt	=	2.07 pt Dual II Magnum + 6.2 fl oz Callisto
Corvus	Bayer	2.63SC	5.6 fl oz	=	5.26 fl oz Balance Flexx + 0.033 lb ai thiencarbazone
Crusher	FMC	50WG	1 oz	=	1 oz Resolve SG 0.5 oz Harmony SG
Degree Xtra	Bayer	4L	3 qt	=	2.3 pt Harness + 1 qt atrazine 4L
Fierce EZ[b]	Valent	3.04L	6 oz	=	2 oz Valor + 2.5 fl oz Zidua SC
FulTime NXT	Corteva	4L	3 qt	=	2.3 pt Surpass + 1 qt atrazine 4L
Harness MAX	Bayer	3.82L	75 fl oz	=	2.35 pt Harness + 6.18 fl oz Callisto
Harness Xtra 5.6L	Bayer	5.6L	2.4 qt	=	2.2 pt Harness + 1.5 qt atrazine 4L
Hornet	AMVAC	68.5WG	3 oz	=	0.7 oz Python + 0.25 pt Stinger
Keystone NXT	Corteva	5.6L	2.4 qt	=	2.2 pt Surpass NXT + 1.5 qt atrazine 4L
Keystone LA NXT	Corteva	6L	2 qt	=	2.5 pt Suprass NXT + 0.85 qt atrazine 4L
Lexar EZ	Syngenta	3.7ZC	3 qt	=	5.34 fl oz Callisto + 1.36 pt Dual II Magnum + 1.3 qt atrazine 4L
Lumax EZ	Syngenta	3.67ZC	2.7 qt	=	5.38 fl oz Callisto + 1.76 pt Dual II Magnum + 0.63 qt atrazine 4L
Maverick	Valent	2.05SC	24 fl oz	=	4.97 fl oz Callisto + 0.26 pt Stinger + 3.99 fl oz Zidua SC
Panoflex	FMC	50WG	0.6 oz	=	0.48 oz Express 0.12 oz Harmony SG
Parallel Plus	ADAMA	5.5SL	2.3 qt	=	1.6 pt Parallel + 1.6 qt atrazine 4L

TABLE 1D — Herbicide Premixes in Corn

Trade Name	Company	Formulation	Typical Use Rate/A[a]	=	Equivalent Rates
Resicore	Corteva	3.29SE	2.75 qt	=	2.2 pt Surpass NXT + 6.6 fl oz Callisto + 5.6 fl oz Stinger
Resicore XL	Corteva	3.26ZC	2.75 qt	=	2.2 pt Surpass NXT + 5.9 fl oz Callisto + 5.6 fl oz Stinger
SureStart II[b]	Corteva	4.16SE	2 pt	=	1.07 pt Surpass NXT + 3 fl oz Stinger + 0.6 oz Python
TripleFLEX II[b]	Bayer	4.16SE	2 pt	=	1.07 pt Harness + 3 fl oz Stinger + 0.6 oz Python
TriVolt	Bayer	3.65SC	20 fl oz	=	5.7 fl oz Balance Flexx + 0.036 lb ai thiencarbazone + 0.445 lb ai flufenacet
Verdict[b]	BASF	5.57EC	15 fl oz	=	3 fl oz Sharpen + 12.5 fl oz Outlook
Postemergence					
Acuron GT	Syngenta	4.3ZC	3.75 pt	=	0.98 pt Dual Magnum + 3 fl oz Callisto + 0.045 lb ai bicyclopyrone + 0.94 lb a.e. glyphosate
Anthem MAXX	FMC	4.3SE	4 fl oz	=	0.6 fl oz Cadet + 4 fl oz Zidua SC
Armezon PRO	BASF	5.35EC	20 fl oz	=	0.71 fl oz Armezon + 17.5 fl oz Outlook
Callisto GT[c]	Syngenta	4.18L	2 pt	=	3 fl oz Callisto + 0.95 lb a.e. glyphosate
Callisto Xtra	Syngenta	3.7SC	24 fl oz	=	3 fl oz Callisto + 1.2 pt atrazine 4L
Capreno	Bayer	3.45SC	3 fl oz	=	2.5 fl oz Laudis + 0.01 lb ai thiencarbazone-methyl
DiFlexx DUO	Bayer	2.13SC	32 fl oz	=	2.46 fl oz Laudis + 10 fl oz DiFlexx
Enlist Duo[d]	Corteva	3L	3.5 pt	=	0.7 lb a.e. 2,4-D + 0.74 lb a.e. glyphosate
Halex GT[c]	Syngenta	4.38L	3.6 pt	=	1 pt Dual Magnum + 3 fl oz Callisto + 0.93 lb a.e. glyphosate
Hornet	AMVAC	68.5WG	3 oz	=	0.7 oz Python + 0.25 pt Stinger
ImpactZ	AMVAC	4.26SC	8 fl oz	=	0.74 fl oz Impact + 0.25 qt atrazine 4L
Impact Core	AMVAC	7.15EC	30 fl oz	=	1.9 pt Harness + 0.76 fl oz Impact
Katagon	HELM Agro US, Inc.	2L	3.2 fl oz	=	0.96 fl oz Shieldex + 0.69 oz Accent Q
Kyro	Corteva	3.07ZC	60 fl oz	=	1.49 pt Surpass NXT + 0.99 fl oz Armezon/Impact + 4.94 fl oz Stinger
Perpetuo	Valent	2.3SC	8 fl oz	=	5.49 fl oz Resource + 3.28 fl oz Zidua SC

TABLE 1D — Herbicide Premixes in Corn

Trade Name	Company	Formulation	Typical Use Rate/A[a]	=	Equivalent Rates
Realm Q	Corteva	38.75WG	4 oz	=	1.2 oz Resolve + 2.5 fl oz Callisto
Resolve Q	Corteva	22.4WG	1.25 oz	=	0.9 oz Resolve + 0.1 oz Harmony SG
Restraint	Summit Agro	6.5EC	36 fl oz	=	2.06 pt Harness + 1.02 fl oz Shieldex
Revulin Q	Corteva	51.2WG	3.4 oz	=	0.9 oz Accent Q + 2.5 fl oz Callisto
Sequence[c]	Syngenta	5.25L	2.5 pt	=	0.98 pt Dual Magnum + 0.7 lb a.e. glyphosate
Sinate	AMVAC	2.57SL	28 fl oz	=	1 fl oz Impact + 29 fl oz Liberty
Stalwart 2W	Sipcam Agro USA	3.59L	2 qt	=	0.33 pt Quartz + 1.67 pt Stalwart C
Stalwart 3W	Sipcam Agro USA	3.58L	3 qt	=	0.33 pt Quartz + 1.3 pt Stalwart C + 1.25 qt atrazine 4L
Status	BASF	56WG	5 oz	=	4 fl oz Clarity + 0.05 lb ai diflufenzopyr
Steadfast Q	Corteva	37.7WG	1.5 oz	=	0.7 oz Accent Q + 0.75 oz Resolve
Yukon	Gowan	67.5WG	4 oz	=	4 fl oz Banvel + 0.66 oz Permit

[a] Rates recommended are for medium textured soils with 3% organic matter.

[b] 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.

[c] Postemergence applications should only be made to glyphosate-resistant corn.

[d] Postemergence applications should only be made to Enlist (2,4-D resistant) corn.

TABLE 1E — Weed and Crop Heights for Postemergence Herbicide Applications in Corn[a,b]

		Annual Broadleaves													Annual Grasses									Corn	
		Cocklebur	Horseweed (marestail)	Jimsonweed	Lambsquarters	Nightshade (E. black)	Palmer amaranth	Pigweed	Ragweed (Common)	Ragweed (Giant)	Smartweed	Velvetleaf	Waterhemp	Wild mustard	Barnyardgrass	Crabgrass	Giant foxtial	Green foxtail	Yellow foxtail	Fall panicum	Sandbur	Witchgrass		
Herbicide	**Rate/A**	**Maximum Weed Sizes - Height (inches)/Leaf number (L)[a]**																					**Minimum Height**	**Maximum Height**
2,4-D amine/ester	1 pt/0.5 pt	4	4	–	4	4	3	4	4	4	–	–	3	4	–	–	–	–	–	–	–	-–	None	8”
Accent Q	0.9 oz	–	–	3	–	–	–	4	–	–	4	–	–	–	4	–	4	4	4	4	3	6	None	20” or 6 collars
Aim	0.5 oz	–	–	–	3	4	–	4	–	–	–	4	2	–	–	–	–	–	–	–	–	–	None	8 collars
Anthem MAXX	4 oz	–	–	2	2	2*	–	2*	–	–	2*	6	2*	–	–	–	–	–	–	–	–	–	None	4 collars
Armezon/Impact	0.75 oz	8	6	6	6	6	6	6	6	8	3	8	6	6	4	3	4	3*	3*	3*	–	–	None	45 day PHI
Armezon PRO	20 oz	5	4	4	4	4	4	4	4	5	2	4	4	4	4	3	4	3*	3*	3*	–	–	None	30” or 8 collars
Assure II	7 oz	–	–	–	–	–	–	–	–	–	–	–	–	–	6	6	8	4	4	6	6	6	V2	V6
Atrazine 4L	2 qt	4	–	4	6	4	2	6	4	4	4	4*	2	4	1.5	–	1.5	1.5	1.5	–	–	–	None	12”
Banvel/Clarity	1 pt	4	3	4	4	4	3	4	4	4	6	3*	3	2	–	–	–	–	–	–	–	–	None	8” or 5 lf
Basagran	2 pt (4L) 1.6 pt (5L)	10	–	10	2	–	–	–	3	6	10	5	–	8	–	–	–	–	–	–	–	–	None	None
Beacon	0.76 oz	4	4*	4	1.5*	4	–	4	9	9	4	4	–	4	–	–	2*	2*	2*	2	2*	–	4”	20”
Buctril, Moxy, others	1 pt	8	–	4	6	6	–	–	4	4	4	3	–	–	–	–	–	–	–	–	–	–	None	tassel emergence
Cadet	0.9 oz	–	–	2	3*	2	–	4	–	–	2	36	2	–	–	–	–	–	–	–	–	–	None	48”
Callisto	3 oz	5	5*	5	5	5	3*	5	5*	3	3	5	3	5	–	–	–	–	–	–	–	–	None	30” or 8 collars
Callisto Xtra	24 oz	4	4	4	4	4	2	4	2	2	4	4	2	4	–	–	–	–	–	–	–	–	None	12”
Capreno	3 oz	6	6*	6	6	6	3	6	6	6	6	6	3	6	5	3	3	2	3	5	2	–	1 collar	5 collars
DiFlexx	8 oz	3	3	3	3	3	3	3	3	3	3	3	3	3	–	–	–	–	–	–	–	–	None	36” or 10 collars
DiFlexx Duo	32 oz	6	6	6	6	6	4	6	6	6	6	6	4	6	5	3	3	2*	3	–	2*	–	None	36” or 6 collars
Hornet	3 oz	6	6	6	–	–	–	–	6	6	6	6	–	6	–	–	–	–	–	–	–	–	None	20” or 6 collars
ImpactZ	8 oz	8	4	6	6	6	4	6	6	6	3	6	4	6	4	3	4	3	3*	3*	–	–	None	12”
Impact Core	30 oz	4	4	4	4	4	4	4	4	4	2	4	4	4	3	3	3	3	3*	3*	–	3*	Spike	11”
Katagon	3.2 oz	–	–	–	5	–	5	5*	5*	5*	–	5	5	–	5*	5	5*	5	5*	5*	–	–	VE	20” or 5 collars
Kyro	60 oz	6	6*	6	6	6	6	6	6	6	3*	6	6	6	4	4*	4	4	3*	3*	4*	–	VE	24"
Laudis	3 oz	6	6*	6	6	6	6	6	6	6	6	6	6	6	5	3	3	2*	3	–	2*	–	None	8 collars
Permit	0.67 oz	9	–	–	–	–	–	3	9	3	2*	9	–	3	–	–	–	–	–	–	–	–	Spike	canopy closure
Perpetuo	8 oz	4 lf*	–	4 lf	3 lf*	–	4 lf*	3 lf	3 lf	–	–	6 lf	–	–	–	–	–	–	–	–	–	–	V2	V6
Realm Q	4 oz	5	5*	5	5	5	3*	5	3	3	5	5	3*	5	5	2	4	4	4	5	3	5	None	20” or 6 collars
Resolve Q	1.25 oz	4*	4*	–	4	–	–	4	4*	–	4	4	–	4	3	0.5	3	3	3	3	–	–	None	20” or 6 collars
Resource	4 oz	–	–	–	–	–	–	–	2 lf*	–	–	5 lf	–	–	–	–	–	–	–	–	–	–	2 lf	10 collars

TABLE 1E — Weed and Crop Heights for Postemergence Herbicide Applications in Corn[a,b]

		Annual Broadleaves													Annual Grasses									Corn	
		Cocklebur	Horseweed (marestail)	Jimsonweed	Lambsquarters	Nightshade (E. black)	Palmer amaranth	Pigweed	Ragweed (Common)	Ragweed (Giant)	Smartweed	Velvetleaf	Waterhemp	Wild mustard	Barnyardgrass	Crabgrass	Giant foxtial	Green foxtail	Yellow foxtail	Fall panicum	Sandbur	Witchgrass		
Herbicide	**Rate/A**	**Maximum Weed Sizes - Height (inches)/Leaf number (L)[a]**																					**Minimum Height**	**Maximum Height**
Restraint	36 oz	5*	5	–	5	5*	5	5	5	5	5*	5	5	–	5	5	5	5	–	5*	–	–	None	20” or 6 collars
Revulin Q	3.4 oz	4	4*	4	4	4	3*	4	3	3	4	4	3*	4	4	2	4	4	4	4	3	6	None	20” or 6 collars
Shieldex	1.3 oz	5*	5	–	5	5*	5	5	5	5	5*	5	5	–	5*	5	5	5	5	–	–	–	None	20” or 6 collars
Steadfast Q	1.5 oz	4*	–	4	4*	–	–	4	–	–	4*	4*	2*	4	4	1	4	4	4	4	2	4	None	20” or 6 collars
Status	5 oz	6	6	6	6	6	3	6	6	6	6	6	3	–	–	–	–	–	–	–	–	–	4”(V2)	36”(V8)
Stinger	0.25 pt	5 lf	5 lf	5 lf	–	–	–	–	5 lf	5 lf	–	–	–	–	–	–	–	–	–	–	–	–	None	24”
Yukon	4 oz	9	2	2	2	2	3	3	9	3	2*	9	4	3	–	–	–	–	–	–	–	–	Spike	36”
Glyphosate-Resistant Corn																								
glyphosate	1.13 lb a.e.	36	–	18	20	12	–	24	18	18	9	12	–	18	9	12	20	12	20	12	12	12	None	30” or 8 collars
Acuron GT	3.75 pt	4	4*	4	4	4	4*	4	4	4	4	4	4*	4	4	4	4	4	4	4	4	4	VE	30” or 8 collars
Callisto GT	2 pt	4	4*	4	4	4	4*	4	4	4	4	4	4*	4	4	4	4	4	4	4	4	4	None	30” or 8 collars
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	VE	30” or 8 collars
Sequence	2.5 pt	12	–	12	6	6	–	12	12	12	6	6	–	18	6	12	18	18	18	6	12	12	None	30” or 8 collars
Warrant + glyphosate	3 pt + 1.13 lb a.e.	36	–	18	20	12	–	24	18	18	9	12	–	18	9	12	20	12	20	12	12	12	VE	30” or 8 collars
LibertyLink Corn																								
Liberty	32 oz	14	6	10	6	8	4	4	10	12	14	4	5	6	3	3*	3	3	3*	3	3*	3	None	24” or 7 collars
Sinate	28 oz	6	6	6	6	6	6	6	6	6	4	6	6	6	4	4	5	4	4	4	2	4	None	24” or 7 collars
Enlist Corn																								
Enlist One	1.5 pt	6	6	6	6	6	6	6	6	6	6	6	6	6	–	–	–	–	–	–	–	–	None	30” (V8)
Enlist Duo	3.5 pt	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	None	30” (V8)

[a] The weed sizes listed on 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 environmental conditions, including soil moisture, temperature, and relative humidity.

[b] Symbols: (–) = no control or weed size not listed on the label; (*) = weed suppression only.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
2,4-D ester 4L	2,4-D	4	7 d EPP 14 d EPP	1 pt 1 qt	N N
2,4-D amine 4L **2,4-D ester 4L**	2,4-D 2,4-D	4 4	POST POST	1 pt 0.5 pt	N N

- 2,4-D ester can be used as part of the burndown program in no-till corn. Refer to Table 1A.
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn less than 8 inches tall. Drop nozzles can be used after this stage.
- Refer to Table 1E for maximum crop and weed heights.
- DO NOT apply to corn from tasseling to the dough stage.
- Ester formulations have a greater potential for crop injury and vapor drift.
- CAUTION should be taken to avoid spray drift, many broadleaf plants are sensitive to 2,4-D.
- Not effective on smartweed or wild buckwheat.
- DO NOT apply with adjuvant – crop injury.
- Corn hybrids vary in sensitivity to 2,4-D. Consult seed company for details.
- DO NOT use as fodder within 7 days of application.
- Preharvest interval (PHI): 7 days.
- Refer to Table 12 for crop rotation restrictions.

AAtrex, others	atrazine	5	PP, PPI, PRE	1 qt 4L 1.1 lb 90WG	N
			POST	2 qt 4L 2.2 lb 90WG + COC 1 qt	N

- Atrazine can be used as part of the burndown program in no-till corn. Refer to Table 1A.
- Refer to Table 1B for soil-applied and 1C for postemergence weed control and crop tolerance ratings.
- May be applied postemergence on corn up to 12 inches tall.
- Refer to Table 1E for maximum crop and weed heights.
- Postemergence lower rates of atrazine are often tank-mixed with other herbicides. Consult label for preferred adjuvants for specific tank-mixtures.
- DO NOT exceed an application rate of 2 lb ai of atrazine per acre per application and the total pounds of atrazine applied must not exceed 2.5 lb ai per acre per year.
- DO NOT apply after June 10 – carryover concerns to rotational crops.
- Mixing, loading, and application setbacks are required for atrazine. See label for details.
- DO NOT harvest or feed corn forage within 60 days of application.
- Refer to Table 12 for crop rotation restrictions.

Accent Q 54.5WG	nicosulfuron + safener	2	POST	0.9 oz + COC 1% v/v + AMS 2 lb	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to field corn up to 20 inches tall or 6 leaf collars (V6), whichever is more restrictive.
- For corn 20-36 inches tall, use drop nozzles.
- Accent Q may be applied to seed corn, however maximum corn height for application is 20 inches or 5 leaf collars (V5).
- Refer to Table 1E for maximum crop and weed heights.
- DO NOT apply more than 1.8 oz/A per season.
- DO NOT tank-mix with 2,4-D containing products – grass antagonism.
- DO NOT tank-mix with Basagran – severe crop injury.
- Consult label for preferred adjuvants for specific tank-mixtures.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest or feed corn forage, silage or fodder within 45 days of application.
- Preharvest interval (PHI): 70 days.
- Rotation restrictions for sugarbeet, potatoes, cucumbers, and tomatoes are increased to 18 months when soil pH >6.5.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Acuron 3.44ZC	bicyclopyrone + mesotrione + atrazine + s-metolachlor	27 27 5 15	PP, PRE, POST	3 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- May be applied postemergence on corn up to 12 inches tall. Refer to Table 1G.
- If the soil organic matter is <3% apply 2.5 qt/A of Acuron. For extended residual control or control of heavy weed infestations, 3.0 qt/A of Acuron may be applied to soils with <3% OM.
- Acuron at 2 qt/A may be applied as part of a planned 2-pass program.
- Acuron can be split between preemergence and early postemergence application timings.
- Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.
- Tank-mixtures with Liberty can be applied postemergence to LibertyLink corn.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest or feed corn forage within 45 days of application.
- Preharvest interval (PHI): 60 days.
- Refer to label and Table 12 for crop rotation restrictions.

Acuron Flexi 3.26ZC	bicyclopyrone + mesotrione + s-metolachlor	27 27 15	PP, PRE, POST	2.25 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- May be applied postemergence on corn up to 30 inches tall or up to the 8 leaf stage. Refer to Table 1G.
- If the soil organic matter is <3% apply 2.0 qt/A of Acuron Flexi.
- Acuron Flexi can be split between preemergence (1/2 to 2/3 rate) and postemergence (1/2 to 1/3 rate) application timings.
- Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.
- Tank-mixtures with Liberty can be applied postemergence to LibertyLink corn.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- Preharvest interval (PHI): 60 days.
- Refer to label and Table 12 for crop rotation restrictions.

Acuron GT 4.3ZC	bicyclopyrone + mesotrione + s-metolachlor + glyphosate	27 27 15 9	POST	3.75 pt + NIS 0.25% v/v + AMS 17 lb/100 gal	RR

- **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to field corn up to 30 inches tall or 8 leaf collars (V8), whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest or feed corn forage within 45 days of application.
- Preharvest interval (PHI): 45 days.
- The 10 month rotation to alfalfa only applies if the soil pH is 6.0 or greater and a minimum of 18" of rainfall or irrigation has been received between application and planting. Otherwise the rotation interval is 18 months.
- Refer to label and Table 12 for crop rotation restrictions.

Aim 2EC	carfentrazone	14	POST	0.5 fl oz+ NIS 0.25% v/v	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn up to 8 leaf collars. Drop nozzles can be used up to 14 collar corn. Avoid application into the corn whorl.
- Refer to Table 1E for maximum crop and weed heights.
- Applications should not be made within 6-8 hours of rain or irrigation — severe crop injury.
- DO NOT tank-mix with Basagran or Buctril – severe crop injury.
- Consult label for preferred adjuvants for specific tank-mixtures.
- Preharvest interval (PHI): 14 leaf collar.
- Refer to Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Anthem MAXX 4.35SE	pyroxasulfone + fluthiacet	15 14	PP, PPI, PRE	5 fl oz	N
			POST	4 fl oz + NIS 0.25% v/v	N

- Refer to Table 1B for soil-applied and 1C for postemergence weed control and crop tolerance.
- See Table 1D for individual product rate equivalents for the premix.
- Anthem MAXX use rates are based on soil texture and organic matter. Anthem MAXX rates range from 2.5 to 6.5 fl oz/A. Lower rates (4 fl oz/A) can be applied as part of a 2-pass program in glufosinate or glyphosate-resistant corn, unless resistant weeds are present.
- Anthem MAXX should be used as part of a planned preemergence followed by postemergence herbicide program.
- Postemergence applications can be made from emergence through the V4 (4 visible collars) stage.
- Refer to Table 1E for maximum crop and weed heights.
- The pyroxasulfone component of Anthem MAXX will provide residual control of grass and small seeded broadleaf weeds.
- COC or MSO at 1% v/v may be used instead of NIS.
- The addition of AMS (2 lb/A) postemergence may improve control of certain weeds.
- Avoid applications when the crop foliage is wet – increased crop response.
- Insecticide interaction: DO NOT tank-mix with chlorpyrifos containing insecticides.
- DO NOT harvest or feed corn forage within 30 days of application.
- Preharvest interval (PHI): 70 days.
- Refer to Table 12 for crop rotation restrictions.

Armezon/Impact 2.8SC	topramezone	27	POST	0.75 fl oz + MSO 1% v/v + AMS 17 lb/100 gal	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Refer to Table 1E for maximum crop and weed heights.
- Atrazine at 0.25-0.5 lb ai/A tank-mixed will improve control of broadleaf and grass weeds. Note: Tank-mixtures of Armezon/Impact with atrazine can be applied to corn up to 12 inches tall only.
- COC can be used instead of MSO in certain tank-mixes.
- Preharvest interval (PHI): 45 days.
- When Armezon/Impact is applied at 0.5 fl oz/A, dry bean (excluding cranberry beans) or snap bean may be planted after nine months.
- Armezon may be applied at maximum rate of 1 fl oz/A to provide greater control of certain grass species, however rotational crop restrictions are increased, refer to label.
- Impact may be applied at maximum rate of 2 fl oz/A to provide greater control of certain grass species, however rotational crop restrictions are increased, refer to label.
- Refer to label and Table 12 for crop rotation restrictions.

Armezon PRO 5.35L	topramezone + dimethenamid-P	27 15	PRE	20 fl oz	N
			POST	20 fl oz + MSO 1% v/v + AMS 8.5 lb/100 gal	N

- Refer to Table 1B for soil-applied and 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Postemergence applications can be made to corn up to 30 inches tall or V8 (8 visible collars), whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Armezon PRO can be applied at rates ranging from 16-20 fl oz/A, use the lower rates on lighter textured and/or lower organic matter soils.
- The dimethenamid-P component of Armezon PRO will provide residual control of grass and small seeded broadleaf weeds.
- Atrazine at 0.25-0.5 lb ai/A tank-mixed will improve control of broadleaf weeds. Note: Tank-mixtures of Armezon PRO with atrazine can be applied to corn up to 12 inches tall only.
- MSO is the preferred additive when Armezon PRO is applied alone. A NIS at 0.25% v/v is recommended for most tank-mixtures. Oil adjuvants including COCs may be used in tank-mixtures, however these combinations can cause crop injury.
- DO NOT apply on sand-textured soils with less than 3% organic matter where the groundwater depth is 30 feet or less.
- DO NOT harvest or feed corn forage, silage or fodder within 45 days of application.
- Preharvest interval (PHI): 45 days.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Assure II 0.88L	quizalofop	1	POST	7 fl oz + COC 1% v/v	E

- **APPLY TO ENLIST TRAITED CORN ONLY.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Enlist traited corn is resistant to 2,4-D choline, glyphosate and aryloxyphenoxypropionate (FOPs) herbicides.
- Apply to Enlist traited when corn is in the V2 to V6 stage.
- Refer to Table 1E for maximum crop and weed heights.
- DO NOT mix any other herbicides or additives with Assure II unless they are approved on the following website: **EnlistTankMix.com/ASSUREII**
- Apply with COC (1% v/v) for best results. A NIS (0.25% v/v) may be used to replace COC with certain tank mixes.
- See label for information on mandatory within-field buffers.
- Grass antagonism can occur with tank-mixes of postemergence broadleaf herbicides. Increasing the rate to 12 fl oz/A will improve grass control in certain tank-mixes. Sequential applications are more effective. Apply the postemergence grass herbicide 1 day prior to the broadleaf herbicide(s) — if the broadleaf herbicide is applied first, wait 7 days or until the grasses are actively growing before applying the grass herbicide.
- DO NOT harvest or feed corn forage within 30 days of application.
- Preharvest interval (PHI): 79 days.
- Refer to label and Table 12 for crop rotation restrictions.

Balance Flexx 2SC	isoxaflutole	27	PP, PPI, PRE, POST	6 fl oz	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- Balance Flexx can be applied to field corn, silage, and seed corn. Refer to seed company recommendations for use on inbred lines.
- Tank-mixes with atrazine (1 lb ai/A) will improve control of giant ragweed and cocklebur. DO NOT add an adjuvant postemergence.
- Application rates vary by soil type; on coarse textured soils 3-4 fl oz/A, medium textured soils 5-6 fl oz/A, and fine textured soils 6 fl oz/A can be applied.
- DO NOT apply on coarse-textured soils with less than 2% organic matter where the water table is less than 25 feet below the ground surface.
- Lower rates of Balance Flexx (4 fl oz/A) can be used as part of a planned 2-pass program or when tank-mixed with grass herbicide-atrazine premixtures.
- Add COC at 1% v/v to control existing weeds prior to corn emergence.
- May be applied postemergence from spike through V2 corn. Refer to Table 1G.
- Insecticide interaction. Consult label for organophosphate or carbamate insecticide interactions.
- DO NOT harvest or feed corn forage within 45 days of application.
- 15 inches of precipitation is needed for a 10 month rotation interval to alfalfa or sugarbeet. If this criteria is not met the rotation interval is increased to 18 months. Dry beans should not be planted until 18 months after Balance Flexx applications – planting the following year after application has resulted in dry bean injury.
- Refer to Table 12 for crop rotation restrictions.

Banvel, Clarity 4SL	dicamba	4	POST	1 pt	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn up to the 5-leaf stage or 8 inches tall, whichever comes first.
- Refer to Table 1E for maximum crop and weed heights.
- Banvel/Clarity 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.
- AMS or 28% liquid nitrogen fertilizer may be added for improved control of larger velvetleaf. See label for details.
- Consult label for preferred adjuvants for specific tank-mixtures.
- Corn hybrids vary in sensitivity to dicamba. Consult seed company for details.
- CAUTION should be taken to avoid vapor and particle spray drift.
- 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.
- Refer to label and Table 12 for crop rotation restrictions. DO NOT include time in the rotation interval when the ground is frozen.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Basagran 4SL	bentazon	6	POST	2 pt + COC 1 qt	N
Basagran 5L	bentazon	6	POST	1.6 pt + COC 1 qt	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Refer to Table 1E for maximum crop and weed heights.
- The addition of 2.5 lb/A AMS is recommended if velvetleaf is the targeted weed.
- DO NOT use AMS if common lambsquarters is present.
- Rates can be reduced if weeds are small – consult label.
- DO NOT graze within 12 days of application.
- Refer to Table 12 for crop rotation restrictions.

Basis Blend 30WG	rimsulfuron + thifensulfuron	2 2	PP, PRE	1.25 oz	N
			POST	0.825 oz	N

- Basis Blend is best used as part of a burndown program in no-till corn. Refer to Table 1A.
- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- May be applied postemergence on corn up to 6 inches or 2 collars.
- DO NOT apply on coarse textured soils with less than 1% organic matter.
- DO NOT apply to popcorn, sweet corn or corn grown for seed.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- Refer to label and Table 12 for crop rotation restrictions.

Beacon 75WG	primisulfuron	2	POST	0.76 oz + COC 1% v/v	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn between 4 and 20 inches tall.
- Drop nozzles can be used up to tassel emergence.
- Refer to Table 1E for maximum crop and weed heights.
- Corn inbreds and a small number of corn hybrids are sensitive to Beacon. Consult seed companies for lists of sensitive inbreds and hybrids.
- NIS (0.25%) may be used instead of COC. The addition of AMS at 2 lb/A may improve control of certain weeds.
- Beacon may be tank-mixed with other postemergence herbicides for control of a broader spectrum of weeds.
- Consult label for preferred adjuvants for specific tank-mixtures.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT graze or feed corn forage within 30 days of application.
- DO NOT harvest silage within 45 days of application.
- Preharvest interval (PHI): 60 days.
- The rotation restriction to potatoes is 8 months when applied at 0.38 oz/A, and is increased to 18 months when applied at 0.76 oz/A.
- Refer to Table 12 for crop rotation restrictions.

Bicep II Magnum 6F	atrazine + s-metolachlor	5 15	PP, PPI, PRE, POST	1.5 qt	N
Bicep Lite II Magnum 5.5F	atrazine + s-metolachlor	5 15	PP, PPI, PRE, POST	2.1 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- May be applied postemergence on corn up to 12 inches tall. Refer to Table 1G.
- Lower rates may be applied as part of a 2-pass program in glufosinate or glyphosate-resistant corn, unless resistant weeds are present.
- Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.
- Tank-mixtures with Liberty can be applied postemergence to LibertyLink corn.
- DO NOT graze or feed corn forage within 60 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Buctril, Moxy, others 2EC	bromoxynil	6	POST	1.0 pt	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn up to tassel emergence.
- Refer to Table 1E for maximum crop and weed heights. The minimum corn stage is 4 leaves if the rate of Buctril is increased to 1.5 pt/A.
- Good spray coverage is important.
- DO NOT mix with spray additives or liquid fertilizers unless specified for tank-mixes.
- Atrazine at 0.5 lb ai/A is a common tank-mix partner.
- For ground applications, use minimum of 20 gal of water/A and 30 psi.
- DO NOT harvest or feed corn forage within 45 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

Calibra 3.1ZC	s-metolachlor + mesotrione	15 27	PP, PRE, POST	2.8 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Calibra can be applied preemergence to field corn, seed corn, sweet corn, and yellow popcorn. Refer to seed company recommendations for use on inbred lines.
- Tank-mixes with atrazine (1 lb ai/A) will improve control of giant ragweed and cocklebur.
- May be applied postemergence on corn (field and seed) up to 30 inches tall or 8-leaf stage, whichever comes first. Refer to Table 1G.
- DO NOT exceed a total of 2.8 qt/A of Calibra per season.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest or feed corn forage within 45 days of application.
- Preharvest interval (PHI): 60 days.
- Refer to Table 12 for crop rotation restrictions.

Callisto 4SC	mesotrione	27	PP, PRE	6 fl oz	N
			POST	3 fl oz + COC 1% v/v + AMS 8.5 lb/100 gal	N

- Refer to Table 1B for soil-applied and 1C for postemergence weed control and crop tolerance ratings.
- There are other mesotrione (Motif, Quartz) products registered for use in corn, consult specific labels.
- Mesotrione can be applied preemergence to field corn, seed corn, sweet corn, and yellow popcorn.
- May be applied postemergence on corn up to 30 inches tall or through 8 collars. Refer to Table 1G.
- Refer to Table 1E for maximum crop and weed heights.
- Tank-mixes with atrazine (1 lb ai/A PRE, 0.25-0.5 lb ai/A POST) will improve control of broadleaf weeds. Note: Tank-mixtures of Callisto with atrazine can be applied to corn up to 12 inches tall only.
- Mesotrione preemergence is generally applied in a premix. Mesotrione premixes include Acuron, Acuron Flexi, Lumax EZ, and Lexar EZ. Refer to Table 1D for premix use rates and components.
- DO NOT apply Callisto with an emulsifiable concentrate herbicide or liquid fertilizer if corn has already emerged.
- Postemergence DO NOT use MSO or MSO blends. Consult label for preferred adjuvants for specific tank-mixtures.
- DO NOT exceed 7.7 fl oz/A of Callisto (0.24 lb ai/A of mesotrione) in one growing season, including premixes that contain Callisto.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- Preharvest interval (PHI): 45 days.
- Refer to Table 12 for crop rotation restrictions.

Callisto GT 4.18L	mesotrione + glyphosate	27 9	POST	2 pt + NIS 0.25% v/v + AMS 17 lb/100 gal	RR

- **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply from corn emergence up to 30 inches tall or 8 collars, whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- DO NOT tank-mix with emulsifiable concentrate grass herbicides – severe crop injury.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- Preharvest interval (PHI): 45 days.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Callisto Xtra 3.7SC	mesotrione + atrazine	27 5	PP, PRE	44 fl oz	N
			POST	24 fl oz + COC 1% v/v + AMS 8.5 lb/100 gal	N

- Refer to Table 1B for soil-applied and 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- For preplant and preemergence applications Callisto Xtra may be applied at rates ranging from 44-51 fl oz/A depending on soil type and organic matter. Consult label for details.
- Apply to corn up to 12 inches tall.
- Refer to Table 1E for maximum crop and weed heights.
- Consult label for preferred adjuvants for specific tank-mixtures.
- DO NOT exceed 7.7 fl oz/A of Callisto (0.24 lb ai/A of mesotrione) in one growing season, including premixes that contain Callisto.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT graze or feed corn forage within 60 days of application.
- Preharvest interval (PHI): 60 days.
- Refer to lable and Table 12 for crop rotation restrictions.

Capreno 3.45SC	tembotrione + thiencarbazone	27 2	POST	3 fl oz + COC 1% v/v + AMS 8.5 lb/100 gal	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn from 1 (V1) to 5 collars (V5).
- Refer to Table 1E for maximum crop and weed heights.
- DO NOT exceed a total of 6 fl oz/A of Capreno in a year.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest or feed corn forage within 45 days of application.
- If soil pH is 7.5 or greater crop rotation intervals are extended for all crops, except field corn, soybean, wheat, and barley.
- Alfalfa and oats can be planted the following spring if the total amount of Capreno applied in a 365 day period does not exceed 3 fl oz/A and the soil pH is not 7.5 or above.
- Refer to lable and Table 12 for crop rotation restrictions.

Corvus 2.63SC	isoxaflutole + thiencarbazone	27 2	PP, PPI, PRE, POST	5.6 fl oz	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Corvus can be applied to field corn, silage, and seed corn. Refer to seed company recommendations for use on inbred lines.
- Add COC at 1% v/v to control existing weeds prior to corn emergence.
- Tank-mixes with atrazine (1 lb ai/A) will improve control of giant ragweed and cocklebur. Postemergence DO NOT add an adjuvant.
- Application rates vary by soil type from 3.33 to 5.6 fl oz/A. On coarse-textured soils with 2% or less organic matter use 3.33 fl oz/A of Corvus.
- May be applied postemergence from spike through V2 corn. Refer to Table 1G.
- DO NOT apply on coarse textured soils with less than 2% organic matter where the water table is less than 25 feet below the ground surface.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest or feed corn forage within 45 days of application.
- 15 inches of precipitation is needed for a 9 month rotation interval to soybean and barley.
- When soil pH is 7.5 or above the rotation interval should be extended to 24 months for alfalfa, dry bean, oat, potato, sugarbeet, tomato, and cucumber.
- Refer to label and Table 12 for crop rotation restrictions.

Crusher 50WG	rimsulfuron + thifensulfuron	2 2	PP, PRE	1.0 oz	N

- Crusher is used as part of the burndown program in no-till corn. Refer to Table 1A.
- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- When used as part of the burndown program in no-till corn with atrazine add COC at 1 qt/A to maximize foliar activity.
- DO NOT apply after corn emergence.
- DO NOT apply on coarse textured soils with less than 1% organic matter.
- DO NOT apply to popcorn, sweet corn or corn grown for seed.
- Refer to lable and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Degree Xtra, Fultime NXT 4L	atrazine + acetochlor	5 15	PP, PPI, PRE, POST	3 qt	N
Harness Xtra, Keystone NXT 5.6L	atrazine + acetochlor	5 15	PP, PPI, PRE, POST	2.4 qt	N
Keystone LA NXT 6L	atrazine + acetochlor	5 15	PP, PPI, PRE, POST	2 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Degree Xtra and Fultime NXT contain encapsulated formulations of acetochlor.
- Use rates of these products are based on soil texture and organic matter. Keystone LA NXT rates range from 1.8 to 2.3 qt/A; Degree Xtra/Fultime NXT rates range from 2.9 to 3.7 qt/A; Harness Xtra/Keystone NXT rates range from 1.4 to 3 qt/A.
- Lower rates can be applied as part of a 2-pass program in glufosinate or glyphosate-resistant corn, unless resistant weeds are present.
- May be applied postemergence on corn up to 11 inches tall. Refer to Table 1G.
- Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.
- Tank-mixtures with Liberty can be applied postemergence to LibertyLink corn.
- DO NOT harvest or feed corn forage within 60 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

DiFlexx 4SC	dicamba + safener	4	POST	8 fl oz + NIS 0.25% v/v	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn from preplant up to 36 inches tall or V10 (10 visible collars), whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- DiFlexx will likely be tank-mixed with other postemergence herbicides for an integrated weed management program.
- COC at 1% v/v or MSO at 1% v/v can be used instead of a NIS for certain tank-mixtures.
- DiFlexx can be applied up to 16 fl oz/A for weeds with known resistance to tank-mix partners, weeds not controlled with tank-mix partners, heavy weed populations, biennial/perennial weeds, and annual weeds taller than 6 inches.
- DO NOT apply when soybeans are growing nearby and corn is more than 24 inches tall, soybean are more than 10 inches tall, or soybean have begun to bloom.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest or feed corn forage within 45 days of application.
- Preharvest interval (PHI): corn grain and stover can be harvested once corn has reached the ensilage (milk) stage.
- Refer to label and Table 12 for crop rotation restrictions. DO NOT include time in the rotation interval when the ground is frozen.

DiFlexx DUO 2.13SC	tembotrione + dicamba + safener	27 4	POST	32 fl oz + MSO 1% v/v	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply from corn emergence up to, but not including, V7 (7 visible collars) corn or 36 inches tall, whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Apply DiFlexx DUO at rates ranging from 24 to 40 fl oz/A (32 fl oz/A). Higher use rates should be used when Group 4 or 27 resistant weeds are present.
- DiFlexx DUO will likely be tank-mixed with other postemergence herbicides for an integrated weed management program.
- DO NOT apply when there is a possibility of off-target movement to sensitive crops. Wind speeds, nozzle selection, spray pressure, sprayer operating speed, boom height and proximity to sensitive crops all influence off-target movement. Drift potential is lowest when wind speeds are between 2 and 10 mph.
- DO NOT apply into areas of temperature inversions.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT graze or harvest corn forage within 45 days of application.
- Preharvest interval (PHI): corn grain and stover can be harvested once corn has reached the ensilage (milk) stage.
- Refer to label and Table 12 for crop rotation restrictions. Cumulative precipitation between DiFlexx DUO application and planting sugarbeets or dry beans must total 20 inches for the 10 month rotation restriction. Thorough tillage should be used preceding rotation to sugarbeets. The rotation restriction for kidney beans and cranberry beans is 18 months.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Dual II Magnum, Moccasin II Plus 7.64EC	s-metolachlor	15	PPI, PRE, POST	1.33 pt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- Dual II Magnum and Moccasin II Plus contain a safener which increases corn tolerance to s-metolachlor.
- Increase rate to 1.66 pt/A for effective nutsedge control. Nutsedge control is improved when s-metolachlor is incorporated.
- May be applied postemergence on corn up to 40 inches tall, but this application alone will not control emerged weeds. Refer to Table 1G.
- DO NOT graze or harvest corn forage within 30 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

Enlist Duo 3.3L	2,4-D choline + glyphosate	4 9	PP, PRE, POST	3.5 pt	E

- **APPLY TO ENLIST TRAITED CORN ONLY.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Can be applied as a preplant burndown or used preemergence in non-Enlist traited corn. Refer to Table 1A for spring burndown applications.
- Enlist traited corn is resistant to 2,4-D choline, glyphosate and aryloxyphenoxypropionate (FOPs) herbicides.
- DO NOT mix any other herbicides or additives with Enlist Duo unless they are approved on the following website: EnlistTankMix.com
- The use of AMS (17 lb/100 gal) is currently approved, check **EnlistTankMix.com** prior to making application to verify.
- See label for proper nozzle selection.
- See label for protection of sensitive areas via buffer.
- Apply to corn up to 30 inches tall or 8 collars, whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Enlist Duo applications to corn from 30 to 48 inches tall can be made with drop nozzles only – avoid application into the whorls.
- Maximum in-season use is one preemergence and two postemergence applications in Enlist traited corn.
- Allow 12 days between sequential postemergence applications in Enlist traited corn.
- DO NOT apply more than 9.5 pt/A in non-Enlist traited corn per growing season.
- DO NOT apply more than 14.25 pt/A in Enlist traited corn per growing season.
- DO NOT apply within 24 hours of predicted rainfall.
- Clethodim herbicides such as Select Max may be used to control volunteer Enlist corn in the following soybean, sugarbeet, or dry bean crop.
- DO NOT harvest or feed corn forage within 50 days of application.
- Refer to lable and Table 12 for crop rotation restrictions.

Enlist One 3.8L	2,4-D choline	4	PP, PRE, POST	1.5 pt	E

- **APPLY TO ENLIST TRAITED CORN ONLY.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Can be applied as a preplant burndown or used preemergence in non-Enlist traited corn. Refer to Table 1A for spring burndown applications.
- Enlist traited corn is resistant to 2,4-D choline, glyphosate and aryloxyphenoxypropionate (FOPs) herbicides.
- DO NOT mix any other herbicides or additives with Enlist One unless they are approved on the following website: **EnlistTankMix.com**
- See label for proper nozzle selection.
- See label for protection of sensitive areas via buffer.
- Apply to corn up to 30 inches tall or 8 collars, whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Enlist One applications to corn from 30 to 48 inches tall can be made with drop nozzles only – avoid application into the whorls.
- Maximum in-season use is one preemergence and two postemergence applications in Enlist traited corn.
- Allow 12 days between sequential postemergence applications in Enlist traited corn.
- DO NOT apply more than 4 pt/A in non-Enlist traited corn per growing season.
- DO NOT apply more than 6 pt/A in Enlist traited corn per growing season.
- DO NOT apply within 24 hours of predicted rainfall.
- Clethodim herbicides such as Select Max may be used to control volunteer Enlist corn in the following soybean, sugarbeet, or dry bean crop.
- DO NOT harvest or feed corn forage within 30 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Fierce EZ 3.04L	pyroxasulfone + flumioxazin	15 14	7 d EPP	6 fl oz	N

- Fierce EZ can be used as part of the burndown program in no-till corn. Refer to Table 1A.
- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- **Apply a minimum of 7 days up to 30 days prior to planting corn on no-till or minimum tillage fields.**
- **DO NOT apply after corn emergence.**
- See Table 1D for individual product rate equivalents for the premix.
- Use only on no-till or minimum tillage fields where last year's crop residue has not been incorporated into the soil.
- DO NOT use on soils with less than 1% organic matter unless an incorporating rainfall has occurred between herbicide application and planting.
- DO NOT use on seed corn.
- 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.

glyphosate	glyphosate	9	PP, PRE, POST	See Table 10 (0.75-1.13 a.e.) + AMS 17 lb/100 gal	RR E

- **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.**
- Corn hybrids that are glyphosate-resistant are designated as Roundup Ready Corn, Roundup Ready 2 Corn, or Glyphosate Tolerant (GT).
- Glyphosate can be used as part of the burndown program in no-till corn. Refer to Table 1A.
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- 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. Addition of AMS (17 lb/100 gal) will minimize antagonism from hard water and improve weed control if weeds are under stress or large.
- Apply to corn up to 30 inches tall or 8 collars, whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Glyphosate applications to corn from 30 to 48 inches tall can be made with drop nozzles only – avoid application into the whorls.
- Use a minimum rate of 0.75 lb a.e./A; however, a use rate 1.13 lb a.e./A of glyphosate should be applied for more consistent weed control.
- Glyphosate application rate can be increased to 1.13 lb a.e./A to control larger weeds or weeds that are under stress.
- DO NOT apply more than 2.25 lb a.e./A of glyphosate in-crop per season.
- Allow a minimum of 50 days between postemergence application and harvest of forage.
- Use extreme caution to avoid spray drift to sensitive crops.
- Refer to label and Table 12 for crop rotation restrictions.

Halex GT 4.38L	mesotrione + s-metolachlor + glyphosate	27 15 9	POST	3.6 pt + NIS 0.25% v/v + AMS 17 lb/100 gal	RR

- **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply from corn emergence up to 30 inches tall or 8 collars, whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Halex GT does not contain a safener.
- DO NOT tank-mix with emulsifiable concentrate grass herbicides – severe crop injury.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT graze or harvest corn forage within 45 days of application.
- Preharvest interval (PHI): 45 days.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Harness, Surpass NXT 7 EC	acetochlor	15	PP, PPI, PRE, POST	2.25 pt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- Harness and Surpass NXT use rates are based on soil texture and organic matter. Use rates of these products range from 1.25 to 3 pt/A. Lower rates (1.8 pt/A) can be applied as part of a 2-pass program in glufosinate or glyphosate-resistant corn, unless resistant weeds are present.
- DO NOT apply acetochlor within 50 feet of any well where the depth to groundwater 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.
- All commercial acetochlor products contain a safener that increases corn tolerance.
- EC formulations of acetochlor require less rainfall for incorporation compared with s-metolachlor or pendimethalin.
- May be applied postemergence on corn up to 11 inches tall, but this application alone will not control emerged weeds. Refer to Table 1G.
- Refer to label and Table 12 for crop rotation restrictions.

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Harness MAX 3.82L	acetochlor + mesotrione	15 27	PP, PPI, PRE, POST	75 fl oz	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- DO NOT apply to popcorn or sweet corn.
- DO NOT apply more than a total of 3 lb ai/A of acetochlor (equivalent to 3.4 pt/A Harness) or 0.24 lb ai/A of mesotrione (equivalent to 7.7 fl oz/A Callisto).
- May be applied postemergence on corn up to 11 inches tall. Refer to Table 1G.
- Harness MAX can be tank-mixed with glyphosate in glyphosate-resistant corn or with Liberty in LibertyLink corn and applied at rates as low as 40 fl oz/A.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- Preharvest interval (PHI): 60 days.
- Refer to lable and Table 12 for crop rotation restrictions.

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Hornet 68.5WG	flumetsulam + clopyralid	2 4	PP, PPI, PRE	3 oz	N
			POST	3 oz + NIS 0.25% v/v + AMS 2 lb	N

- Refer to Table 1B for soil-applied and 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Corn should be planted at least 1.5 inches deep.
- Adjust application rate according to soil type and organic matter.
- DO NOT apply to soils with less than 1.5% organic matter, a pH >7.8, or soils with >5% organic matter and low soil pH (5.9).
- DO NOT follow this treatment with a postemergence application of an ALS-inhibiting herbicide if plants are under stress.
- Tank-mixes with atrazine (1 lb ai/A) will improve control of heavy populations of jimsonweed.
- May be applied postemergence on corn up to 20 inches tall or through 6 collars, whichever is more restrictive. Refer to Table 1G.
- Refer to Table 1E for maximum crop and weed heights.
- COC at 1% v/v may be used instead of NIS.
- DO NOT tank-mix with Basagran — severe crop injury.
- Consult label for preferred adjuvants for specific tank-mixtures.
- CAUTION should be taken to avoid spray drift.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest or feed corn forage within 45 days of application.
- Preharvest interval (PHI): 85 days.
- Requires a 26-month rotation interval and a successful field bioassay before planting sugar beets, cucumbers or tomatoes.
- Refer to Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
ImpactZ 4.26SC	topramezone + atrazine	27 5	POST	8 fl oz + MSO 1% v/v + AMS 8.5 lb/100 gal	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn up to 12 inches tall.
- Refer to Table 1E for maximum crop and weed heights.
- ImpactZ may be applied at maximum rate of 10.7 fl oz/A to provide greater control of certain grass species, however rotational crop restrictions are increased, refer to label.
- Preharvest interval (PHI): 60 days.
- Refer to lable and Table 12 for crop rotation restrictions.

Impact Core 7.15EC	topramezone + acetochlor	27 15	POST	30 fl oz + MSO 0.5% v/v + AMS 8.5 lb/100 gal	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn from emergence up to 11 inches tall.
- Impact Core can be applied at rates ranging from 20-40 fl oz/A, use the lower rates on lighter textured and/or lower organic matter soils.
- Refer to Table 1E for maximum crop and weed heights.
- The acetochlor component of Impact Core will provide residual control of grass and small seeded broadleaf weeds.
- Atrazine at 0.25-0.5 lb ai/A tank-mixed will improve control of broadleaf weeds.
- MSO is the preferred additive when Impact Core is applied alone. A NIS at 0.25% v/v is recommended for most tank-mixtures. Oil adjuvants including COCs may be used in tank-mixtures, however these combinations can cause crop injury.
- DO NOT apply on sand-textured soils with less than 3% organic matter where the groundwater depth is 30 feet or less.
- Preharvest interval (PHI): 45 days.
- Refer to lable and Table 12 for crop rotation restrictions.

Katagon 2L	nicosulfuron + tolpyralate	2 27	POST	3.2 fl oz + COC 1% v/v	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to field corn up to 20 inches tall or 5 leaf collars (V5), whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Full coverage of emerged target weeds is essential for postemergence applications.
- Atrazine at 0.25-0.5 lb ai/A tank-mixed with Katagon will improve control. Note: Tank-mixtures of Katagon with atrazine can be applied to corn up to 12 inches tall only.
- DO NOT graze or feed corn forage or fodder within 45 days of application.
- Preharvest interval (PHI): 70 days.
- Refer to Table 12 for crop rotation restrictions.

Kyro 3.07ZC	acetochlor + topramezone + clopyralid	15 27 4	POST	60 fl oz + COC 1% v/v	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn from emergence up to 24-inch tall corn.
- Refer to Table 1E for maximum crop and weed heights.
- Kyro contains an encapsulated formulation of acetochlor.
- Use rates range from 35-60 fl oz/A. Lower use rates of Kyro (45 fl oz/A) may be applied however tank mixtures (i.e., atrazine plus glyphosate) can be used to improve the weed control spectrum.
- Kyro provides postemergence and residual control of many grass and broadleaf weed species.
- DO NOT make more than 1 application of Kyro per season.
- Preharvest interval (PHI): 45 days ears and forage, 60 days stover.
- 15 inches of precipitation is needed on soils with greater than 2% organic matter for a 10.5 month rotation interval to soybean. On soils with less than 2% organic matter and less than 15 inches of precipitation the rotation restriction is extended to 18 months.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Laudis 3.5SC	tembotrione	27	POST	3 fl oz + MSO 1% v/v + AMS 8.5 lb/100 gal	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn up to 8 collars (V8).
- Refer to Table 1E for maximum crop and weed heights.
- Atrazine at 0.25-0.5 lb ai/A tank-mixed will improve control of broadleaf weeds. Note: Tank-mixtures of Laudis with atrazine can be applied to corn up to 8 collars or 12 inches tall, whichever is more restrictive.
- COC can be used instead of MSO in certain tank-mixes.
- Consult label for preferred adjuvants for specific tank-mixtures.
- DO NOT graze or feed corn forage within 45 days of application.
- 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 Laudis application if cumulative precipitation exceeds 20 inches.
- Refer to lable and Table 12 for crop rotation restrictions.

Lexar EZ 3.72ZC	mesotrione + atrazine + s-metolachlor	27 5 15	PP, PRE, POST	3 qt	N
Lumax EZ 3.67ZC	mesotrione + atrazine + s-metolachlor	27 5 15	PP, PRE, POST	2.7 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Lexar EZ at 2.25 qt/A or Lumax EZ at 2 qt/A may be applied as part of a planned 2-pass program where glyphosate is used postemergence in glyphosate-resistant corn.
- May be applied postemergence on corn up to 12 inches tall. Refer to Table 1G.
- Lexar EZ or Lumax EZ can be split between preemergence and early postemergence application timings.
- Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.
- Tank-mixtures with Liberty can be applied postemergence to LibertyLink corn.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT graze or feed corn forage within 45 days of application.
- Preharvest interval (PHI): 60 days.
- Refer to label and Table 12 for crop rotation restrictions.

Liberty 2.34L	glufosinate	10	POST	32 fl oz + AMS 17 lb/100 gal	LL

- **APPLY TO LIBERTYLINK OR GLUFOSINATE-RESISTANT CORN ONLY.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- There are other glufosinate products (i.e. Cheetah, Interline, Noventa) registered for use in LibertyLink corn, consult specific labels.
- Apply from emergence up to V6 corn.
- Refer to Table 1E for maximum crop and weed heights.
- Drop nozzles can be used to apply Liberty until 36 inch tall LibertyLink corn. Avoid spraying into the corn whorl.
- DO NOT apply more than 87 fl oz/A of Liberty on corn per growing season.
- Use a minimum carrier volume of 15 gallons per acre.
- DO NOT use drift control agents — this reduces spray coverage and may result in reduced weed control.
- Liberty is a contact herbicide that may provide some top growth control of perennial weeds.
- Liberty can be used as part of the burndown program in no-till corn. Refer to Table 1A.
- 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.
- DO NOT feed corn forage within 60 days of application.
- Preharvest interval (PHI): 70 days.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Maverick 2.05SC	mesotrione + clopyralid + pyroxasulfone	27 4 15	PPI, PRE, POST	24 fl oz	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Maverick can be applied to field corn, silage, seed corn, and yellow popcorn. Refer to seed company recommendations for use on inbred lines.
- Corn should be planted at least 1.5 inches deep.
- Tank-mixes with atrazine (1 lb ai/A) will improve control of giant ragweed and cocklebur.
- Application rate varies with soil texture and application timing ranging from 18 to 32 fl oz/A.
- DO NOT apply more than 18 fl oz/A on coarse, 24 fl oz/A on medium or 32 fl oz/A on fine textured soils preemergence of Maverick.
- May be applied postemergence (field, silage, and seed corn) up to 18 inch corn or V6, whichever occurs first. Refer to Table 1G.
- Sequential application (fine soils only): 14-18 fl oz preemergence followed by 14 fl oz postemergence up to 18 inch corn or V6, whichever occurs first.
- Use within 12 hours of mixing.
- The maximum cumulative amount of Maverick that can be applied per cropping season is 18 fl oz/A on coarse textured soils and 32 fl oz/A on all other soils.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT graze within 45 days of application.
- Preharvest interval (PHI): 30 days ears and forage, 60 days stover.
- Rotation restrictions are dependent on use rate. If Maverick is applied at 32 fl oz/A, the rotation restrictions are extended to 6 months for wheat.
- 15 inches of precipitation is needed on soils with greater than 2% organic matter for a 10.5 month rotation interval to soybean. On soils with less than 2% organic matter and less than 15 inches of precipitation the rotation restriction is extended to 18 months.
- Refer to label and Table 12 for crop rotation restrictions.

Outlook 6EC	dimethenamid-P	15	PP, PPI, PRE, POST	18 fl oz	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- Outlook rates vary with soil texture and organic matter from 12 to 21 fl oz/A.
- Increase the rate to 21 fl oz/A for effective nutsedge control. Nutsedge control is improved when incorporated.
- May be applied postemergence on corn up to 12 inches tall, but this application alone will not control emerged weeds. Refer to Table 1G.
- DO NOT graze or feed corn forage within 40 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

Panoflex 50WG	tribenuron + thifensulfuron	2 2	14 d EPP	0.6 oz	N

- Panoflex is used as part of the burndown program in no-till corn. Refer to Table 1A.
- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- **Apply a minimum of 14 days prior to planting corn.**
- When used as part of the burndown program in no-till corn add COC at 1% v/v to maximize foliar activity.
- See Table 1D for individual product rate equivalents for the premix.
- DO NOT apply after corn emergence.
- Refer to label and Table 12 for crop rotation restrictions.

Permit 75DF	halosulfuron	2	POST	0.67 oz + NIS 0.25% v/v	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn from spike up to canopy closure.
- Refer to Table 1E for maximum crop and weed heights.
- Permit provides excellent control of yellow nutsedge.
- Permit does NOT control common lambsquarters.
- COC at 1% v/v may be used instead of NIS.
- Include AMS (2 lb/A) for improved velvetleaf and pigweed control.
- DO NOT graze or feed corn forage or silage within 30 days of application.
- Preharvest interval (PHI): 30 days.
- Refer to label and Table label and 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Perpetuo 2.3SC	flumiclorac + pyroxasulfone	14 15	POST	8 fl oz + COC 1 pt	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn between V2 and V6.
- Refer to Table 1E for maximum crop and weed heights.
- May be applied preemergence as a spring burndown in corn.
- Very effective on velvetleaf.
- Use drop nozzles when corn canopy will prevent complete spray coverage of the weeds.
- DO NOT make more than one application per year.
- Consult label for preferred adjuvants for specific tank-mixtures.
- DO NOT graze or feed corn forage within 28 days of application.
- Rotation restrictions are dependent on use rate. If Perpetuo is applied at 10 fl oz/A, the rotation restrictions are extended to 4 months for wheat and 15 months for sugar beet. Refer to Table 12 for crop rotation restrictions.

Princep, others	simazine	5	PP, PPI, PRE	1 qt 4L 1.1 lb 90 WG	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- May be substituted for atrazine for slightly better grass control.
- DO NOT apply after corn emergence.
- Princep has similar carryover risk as atrazine.
- When Princep and atrazine are both applied to corn, carryover risk is additive.
- Preharvest interval (PHI): 60 days.
- Refer to label and Table 12 for crop rotation restrictions.

Prowl 3.3EC	pendimethalin	3	PRE, POST	3.6 pt	N
Prowl H_2O 3.8ACS	pendimethalin	3	PRE, POST	3.0 pt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- DO NOT apply preplant incorporated.
- 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.
- Apply after planting.
- Plant at least 1.5 inches deep.
- Adjust rate according to soil type.
- DO NOT use on sandy soil with less than 1.5% organic matter.
- 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.
- DO NOT graze or feed corn forage within 21 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

Python 80WG	flumetsulam	2	PP, PPI, PRE, POST	1 oz	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- Corn should be planted at least 1.5 inches deep.
- Adjust application rate according to soil type and organic matter.
- DO NOT apply to soils with less than 1.5% organic matter – severe injury may occur.
- 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.
- DO NOT follow this treatment with a postemergence application of an ALS-inhibiting herbicide if plants are under stress.
- May be applied postemergence on corn up to 20 inches tall or through 6 collars, rates should be reduced (0.46-0.93 oz). Refer to Table 1G.
- Tank-mixes with atrazine (1 lb ai/A) will improve control of heavy populations of common ragweed, cocklebur, and jimsonweed.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest or feed corn forage within 45 days of application.
- Preharvest interval (PHI): 85 days.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Realm Q 38.75WG	rimsulfuron + mesotrione + safener	2 27	POST	4 oz + COC 1% v/v + AMS 17 lb/100 gal	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn up to the 20 inches tall or 6 collars, whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- A spray solution pH of 6.0-8.0 is needed for product stability.
- DO NOT tank-mix with Basagran – severe crop injury.
- Consult label for preferred adjuvants for specific tank-mixtures.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest forage or stover within 45 days of application.
- Preharvest interval (PHI): 70 days.
- Refer to label and Table 12 for crop rotation restrictions.

Resicore 3.29SE	acetochlor + mesotrione + clopyralid	15 27 4	PP, PPI, PRE, POST	2.75 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Use rates are based on soil texture and organic matter; ranging from 2.25 to 3 qt/A (2.75 qt/A).
- Resicore may be applied at rates as low as 1.8 qt/A as part of a planned 2-pass program where glyphosate is used postemergence in glyphosate-resistant corn or Liberty is applied postemergence in LibertyLink corn.
- May be applied postemergence on corn up to 11 inches tall. Refer to Table 1G.
- Resicore can be split between preemergence (1/2 rate) and postemergence (1/2 rate) application timings.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- Preharvest interval (PHI): 45 days ears and forage, 60 days stover.
- 15 inches of precipitation is needed on soils with greater than 2% organic matter for a 10.5 month rotation interval to soybean. On soils with less than 2% organic matter and less than 15 inches of precipitation the rotation restriction is extended to 18 months.
- Refer to label and Table 12 for crop rotation restrictions.

Resicore XL 3.26SC	acetochlor + mesotrione + clopyralid	15 27 4	PP, PPI, PRE, POST	2.75 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Resicore XL contains an encapsulated formulation of acetochlor.
- Use rates are based on soil texture and organic matter; ranging from 2.25 to 3 qt/A.
- Resicore XL may be applied at rates as low as 2 qt/A as part of a planned 2-pass program where glyphosate is used postemergence in glyphosate-resistant corn or Liberty is applied postemergence in LibertyLink corn.
- May be applied postemergence on corn up to 24 inches tall. Refer to Table 1G.
- Resicore XL can be tank-mixed with glyphosate in glyphosate-resistant corn or Liberty in LibertyLink corn and applied postemergence at rates as low as 1.4 qt/A.
- Resicore XL can be split between preemergence (1/2 rate) and postemergence (1/2 rate) application timings in field corn, field seed corn, or field silage corn.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- Preharvest interval (PHI): 45 days ears and forage, 60 days stover.
- 15 inches of precipitation is needed on soils with greater than 2% organic matter for a 10.5 month rotation interval to soybean. On soils with less than 2% organic matter and less than 15 inches of precipitation the rotation restriction is extended to 18 months.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Resolve Q 22.4WG	rimsulfuron + thifensulfuron	2 2	POST	1.25 oz + COC 1% v/v + AMS 2.5 lb	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn up to 20 inches tall or 6 leaf collars (V6), whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- DO NOT apply to seed corn.
- DO NOT tank-mix with Basagran – severe crop injury.
- Consult label for preferred adjuvants for specific tank-mixtures.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT graze, feed forage, grain or fodder (stover) within 30 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

Resource 0.86EC	flumiclorac	14	POST	4 fl oz + COC 1 pt	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn between 2 and 10 collars.
- Refer to Table 1E for maximum crop and weed heights.
- Very effective on velvetleaf.
- Use drop nozzles when corn canopy will prevent complete spray coverage of the weeds.
- Consult label for preferred adjuvants for specific tank-mixtures.
- DO NOT graze or feed corn forage within 28 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

Restraint 6.5EC	acetochlor + tolpyralate	15 27	PRE, POST	36 fl oz	N

- Refer to Table 1B for soil-applied and 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to field corn up to 20 inches tall or 6 leaf collars (V6), whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Use rates are based on soil texture and organic matter; ranging from 30-48 fl oz/A.
- Restraint can be split between preemergence (1/2 rate) and postemergence (1/2 rate) application timings.
- The acetochlor component of Restraint will provide residual control of grass and small seeded broadleaf weeds.
- Atrazine at 0.25-0.5 lb ai/A tank-mixed with Restraint will improve control. Note: Tank-mixtures of Restraint with atrazine can be applied to corn up to 12 inches tall only.
- When used postemergence add COC at 1% v/v.
- DO NOT graze or feed corn forage or silage within 21 days of application.
- Preharvest interval (PHI): 45 days.
- Refer to label and Table 12 for crop rotation restrictions.

Reviton 2.83L	tiafenacil	14	PP, PRE	2 fl oz + MSO 0.25% v/v	N

- Reviton is used as part of the burndown program in no-till corn. Refer to Table 1A.
- DO NOT apply after corn emergence.
- Refer to lable and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Revulin Q 51.2WG	nicosulfuron + mesotrione	2 27	POST	3.4 oz + COC 1% v/v + AMS 2 lb	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn up to 20 inches tall or V6 (6 visible collars), whichever is more restrictive. Drop nozzles can be used for directed applications up to 30 inch tall or V8 corn.
- Refer to Table 1E for maximum crop and weed heights.
- Revulin Q can be applied up to 4 oz/A.
- DO NOT tank-mix with Basagran – severe crop injury.
- Consult label for preferred adjuvants for specific tank-mixtures.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT harvest forage or stover within 45 days of application.
- Preharvest interval (PHI): 70 days.
- Refer to lable and Table 12 for crop rotation restrictions.

Sequence 5.25L	s-metolachlor + glyphosate	15 9	POST	2.5 pt + AMS 17 lb/100 gal	RR

- **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn up to 30 inches tall or 8 collars, whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Sequence can be applied preplant or preemergence for all corn types in no-till production.
- DO NOT graze or feed corn forage within 30 days of application.
- Preharvest interval (PHI): 50 days.
- Refer to label and Table 12 for crop rotation restrictions.

Sharpen 2.85SC	saflufenacil	14	PP, PPI, PRE	2.5 fl oz	N

- Sharpen is an effective burndown herbicide in no-till corn. Consult Table 1A for more information.
- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- Sharpen can be applied to field corn, silage corn, seed corn and popcorn. Refer to seed company recommendations for use on inbred lines.
- Application rates vary by soil type; on coarse textured soils 2-2.5 fl oz/A, medium textured soils 2.5-3 fl oz/A, and fine textured soils 3-3.5 fl oz/A can be applied.
- When used as part of the burndown program in no-till corn add MSO at 1% v/v and AMS at 17 lb/100 gal.
- DO NOT apply Sharpen after corn emergence or severe crop injury will occur.
- DO NOT exceed an application rate of 3.5 fl oz of Sharpen per acre per application or 6 fl oz/A of Sharpen per year.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT graze or feed corn forage or silage within 80 days of application.
- Refer to label and Table 12 for crop rotation restrictions. DO NOT include time in the rotation interval when the ground is frozen.

Shieldex 3.33L	tolpyralate	27	POST	1.3 fl oz + MSO 1% v/v + AMS 8.5 lb/100 gal	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to corn up to 20 inches tall or V6 (6 visible collars), whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Atrazine at 0.5 lb ai/A tank-mixed will improve control of broadleaf and grass weeds. Note: Tank-mixtures of Shieldex with atrazine can be applied to corn up to 12 inches tall only.
- DO NOT graze or feed corn forage or silage within 21 days of application.
- Preharvest interval (PHI): 45 days.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Sinate 2.57L	topramezone + glufosinate	27 10	POST	28 fl oz + MSO 1% v/v + AMS 3 lb	LL

- **APPLY TO LIBERTYLINK OR GLUFOSINATE-RESISTANT CORN ONLY.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Always add AMS at 3 lb/A.
- MSO, 1% v/v or HSMOC, 0.5% v/v are the preferred additives. Sinate does not contain the active surfactant in Liberty herbicide which makes adjuvant selection and use critical for maximum herbicide efficacy. Research has shown that MSO or HSMOC adjuvants plus AMS is required to optimize herbicide activity of both active ingredients in Sinate.
- Apply to corn from emergence up to 24 inches or 7 collars (V7), whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Drop nozzles can be used to apply Sinate until 36 inch tall LibertyLink corn. Avoid spraying into the corn whorl.
- Atrazine at 0.25-0.5 lb ai/A tank-mixed will improve control of broadleaf weeds. Note: Tank-mixtures of Sinate with atrazine can be applied to corn up to 12 inches tall only.
- DO NOT apply more than 28 fl oz/A of Sinate on corn per growing season.
- Use a minimum carrier volume of 15 gallons per acre.
- Applications made between dawn and 2 hours before sunset and in high humidity, bright sunlight and warm temperatures optimize Sinate activity.
- DO NOT harvest or feed corn forage within 60 days of application.
- Preharvest interval (PHI): 70 days.
- Refer to label and Table 12 for crop rotation restrictions.

Stalwart 2W 3.59L	mesotrione + metolachlor	27 15	PP, PRE, POST	2 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- May be applied postemergence on corn up to 30 inches tall or up to the 8 leaf stage. Refer to Table 1G.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions.
- DO NOT graze or feed corn forage within 45 days of application.
- Preharvest interval (PHI): 45 days.
- Refer to label and Table 12 for crop rotation restrictions.

Stalwart 3W 3.58L	mesotrione + atrazine + metolachlor	27 5 15	PP, PRE, POST	3 qt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- May be applied postemergence on corn up to 12 inches tall. Refer to Table 1G.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions.
- DO NOT graze or feed corn forage within 45 days of application.
- Preharvest interval (PHI): 60 days.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Status 56WG	dicamba + diflufenzopyr + safener	4 19	POST	5 oz + NIS 0.25% v/v + AMS 17 lb/100 gal	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn between 4 (V2) and 36 (V8) inches tall. DO NOT make applications when corn is within 15 days of tassel emergence.
- Refer to Table 1E for maximum crop and weed heights.
- 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.
- Consult label for preferred adjuvants for specific tank-mixtures.
- 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).
- Provides limited suppression of annual grasses.
- CAUTION should be taken to avoid vapor and particle spray drift.
- 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.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- In the event of crop failure, corn may be replanted within 7 or more days of application.
- 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.
- DO NOT harvest or feed corn forage within 32 days of application.
- Preharvest interval (PHI): 72 days.
- Refer to label and Table 12 for crop rotation restrictions.

Steadfast Q 37.3WG	nicosulfuron + rimsulfuron + safener	2 2	POST	1.5 oz + COC 1% v/v + AMS 2 lb	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply to corn up to 20 inches tall or 6 leaf collars (V6), whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- DO NOT tank-mix with 2,4-D containing products – grass antagonism.
- DO NOT tank-mix with Basagran – severe crop injury.
- Consult label for preferred adjuvants for specific tank-mixtures.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT graze or feed corn forage within 30 days of application.
- Rotation restrictions for sugarbeet, potatoes, cucumbers, and tomatoes are increased to 18 months when soil pH >6.5.
- Refer to label and Table 12 for crop rotation restrictions.

Stinger 3SL	clopyralid	4	POST	0.25 pt	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply to field corn up to 24 inches tall.
- Refer to Table 1E for maximum crop and weed heights.
- Treat ragweed, cocklebur, and jimsonweed up to the 5-leaf stage.
- Increase the rate to 0.5 pt/A to control Canada thistle and perennial sowthistle.
- DO NOT apply more than 0.66 pt/A per year.
- CAUTION should be taken to avoid spray drift.
- DO NOT graze or feed corn forage or silage within 40 days of application.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
SureStart II, TripleFLEX II 4.16SE	flumetsulam + clopyralid + acetochlor	2 4 15	PP, PPI, PRE, POST	2 pt	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Use rates are based on soil texture and organic matter; ranging from 1.5 to 3 pt/A.
- Corn should be planted at least 1.5 inches deep.
- DO NOT apply to soils with less than 1.5% organic matter, a pH > 7.8, or soils with >5% organic matter and low soil pH (5.9).
- SureStart II/TripleFLEX II should be used as part of a planned preemergence followed by postemergence herbicide program. These premixes alone will not provide full-season weed control.
- May be applied postemergence on corn up to 11 inches tall. Refer to Table 1G.
- Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn.
- Tank-mixtures with Liberty can be applied postemergence to LibertyLink corn.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- Preharvest interval (PHI): 85 days.
- Requires a 26-month rotation interval and a successful field bioassay before planting sugar beets, cucumbers or tomatoes.
- Refer to label and Table 12 for crop rotation restrictions.

TriVolt 3.65SC	isoxaflutole + thiencarbazone + flufenacet	27 2 15	PP, PPI, PRE, POST	20 fl oz	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- TriVolt can be applied to field corn, silage, and seed corn. Refer to seed company recommendations for use on inbred lines.
- Tank-mixes with atrazine (1 lb ai/A) will improve control of giant ragweed and cocklebur.
- Application rates vary by soil type from 10.75 to 20 fl oz/A. On coarse-textured soils with 2% or less organic matter use 10.75 fl oz/A of TriVolt.
- DO NOT apply on coarse textured soils with less than 2% organic matter where the water table is less than 25 feet below the ground surface.
- May be applied postemergence from spike through V2 corn. Refer to Table 1G. DO NOT add an adjuvant.
- Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1H.
- DO NOT feed corn forage within 45 days of application.
- 15 inches of precipitation is needed for a 9 month rotation interval to soybean and 12 month rotation interval to barley.
- 30 inches of precipitation is needed for a 17 month rotation interval to alfalfa, dry bean, oat, potato, sugarbeet, tomato, and cucumber.
- When soil pH is 7.5 or above the rotation interval should be extended to 24 months for alfalfa, dry bean, oat, potato, sugarbeet, tomato, and cucumber.
- Refer to lable and Table 12 for crop rotation restrictions.

Valor 51WG	flumioxazin	14	7 d EPP	2 oz	N

- Valor can be used as part of the burndown program in no-till corn. Refer to Table 1A.
- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- **Apply a minimum of 7 days or more prior to planting corn on no-till or minimum tillage fields.**
- DO NOT apply after corn emergence.
- 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 planting the interval should be extended to 14 days.
- Refer to label and Table 12 for crop rotation restrictions.

Verdict 5.57EC	saflufenacil + dimethenamid-P	14 15	PP, PPI, PRE	15 fl oz	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- DO NOT apply after corn emergence.
- Use rates are based on soil texture; ranging from 10 to 18 fl oz/A.
- Verdict should be used as part of a planned preemergence followed by postemergence herbicide program. This premix alone will not provide full-season weed control.
- Verdict can be used on seed corn at use rates ranging from 5 to 10 fl oz/A; DO NOT exceed 5 fl oz/A on coarse soils.
- DO NOT graze or feed corn forage or silage within 80 days of application.
- Crop rotation to soybean ranges between 0-4 months depending on soil type and application rate.
- Refer to label and Table 12 for crop rotation restrictions.

TABLE 1F — Corn Herbicides — Remarks and Limitations

Herbicide	Common Name	Site of Action Number	Application Timing	Rate/A	Trait
Warrant 3CS+ glyphosate	acetochlor + glyphosate	15 9	POST	3 pt + See Table 10 + AMS 17 lb/100 gal	RR

- **APPLY TO GLYPHOSATE-RESISTANT CORN WHEN WARRANT IS TANK-MIXED WITH GLYPHOSATE.**
- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- Apply from corn emergence up to 30 inches tall or 8 collars, whichever is more restrictive.
- Refer to Table 1E for maximum crop and weed heights.
- Warrant does not contain a safener.
- Warrant 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 Warrant be applied with postemergence weed control products (e.g. glyphosate).
- Refer to label and Table 12 for crop rotation restrictions.

Yukon 67.5WG	halosulfuron + dicamba	2 4	POST	4 oz + NIS 0.25% v/v + AMS 17 lb/100 gal	N

- Refer to Table 1C for postemergence weed control and crop tolerance ratings.
- See Table 1D for individual product rate equivalents for the premix.
- Apply from spike to 36 inch tall corn, drop nozzles are recommended for corn greater than 20 inches.
- Refer to Table 1E for maximum crop and weed heights.
- Corn hybrids vary in their sensitivity to dicamba. Consult seed company for details.
- Yukon provides excellent control of yellow nutsedge.
- Consult label for preferred adjuvants for specific tank-mixtures.
- CAUTION should be taken to avoid vapor and particle spray drift.
- 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.
- Preharvest interval (PHI): 30 days.
- Refer to label and Table 12 for crop rotation restrictions.

Zidua SC 4.17SC	pyroxasulfone	15	PP, PPI, PRE, POST	4 fl oz	N

- Refer to Table 1B for soil-applied weed control and crop tolerance ratings.
- Application rate varies with soil texture and application timing from 1.75 to 6.5 fl oz/A.
- DO NOT apply more than 4.5 fl oz/A on coarse, 5 fl oz/A on medium or 6.5 fl oz/A on fine textured soils of Zidua SC.
- DO NOT use on peat or muck soils with 10% or more organic matter.
- May be applied postemergence up to 8 collar (V8) corn, but this application alone will not control emerged weeds. Refer to Table 1G.
- The maximum cumulative amount of Zidua SC that can be applied per cropping season is 4.5 fl oz/A on coarse textured soils and 8.25 fl oz/A on all other soils.
- Rotation restrictions are dependent on use rate. If Zidua SC is applied at 6.5 fl oz/A, the rotation restrictions are extended to 4 months for soybean, 6 months for wheat, and 18 months for other small grains. Refer to Table 12 for crop rotation restrictions.

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. 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
Balance Flexx, Corvus, TriVolt	2 collars
Basis Blend	6 inches or 2 collars
Anthem MAXX	4 collars
Degree Xtra, FulTime NXT, Harness, Harness Xtra 5.6L, Keystone NXT, Keystone LA NXT, Surpass NXT, SureStart II, TripleFLEX II	11 inches
Harness MAX	11 inches
Resicore	11 inches
Atrazine	12 inches
Bicep II Magnum, Bicep Lite II Magnum, Cinch ATZ, Cinch ATZ Lite, Parallel Plus	12 inches
Acuron, Lexar EZ, Lumax EZ, Stalwart 3W	12 inches
Outlook	12 inches
Maverick	18 inches or 6 collars
Hornet, Python, Restraint	20 inches or 6 collars
Resicore XL	24 inches
Zidua SC	8 collars
Acuron Flexi, Calibra, Callisto, Motif, Prowl, Prowl H_20, Quartz, Stalwart 2W	30 inches or 8 collars
Dual II Magnum, Moccasin II Plus, Stalwart C	40 inches

TABLE 1H — Corn Herbicide and Insecticide Use Precautions

This table is a guide to using herbicides on field corn where an organophosphate (OP) insecticide is used at planting or after corn emergence. Do not tank mix an OP insecticide with the herbicides in Table 1H, severe corn injury will occur.

	Soil-applied Organophosphate Insecticides			Foliar Organophosphate Insecticides Applied	
Herbicide	**Counter**	**Aztec**	**Smartchoice/ Index**	**Days Before**	**Days After**
Accent Q	Do not use	Y	Y	7	3
Acuron/Acuron Flexi (POST)	NR	TI	TI	7	7
Acuron GT	Do not use	Do not use	Do not use	7	7
Basis Blend	Do not use	Y	Y	7	3
Beacon	Do not use	TI	TI	10	7
Callisto/Callisto GT/Callisto Xtra/ Calibra (POST)	NR	See label	See label	7	7
Capreno	Do not use	Y	Do not use	7	7
Corvus	Do not use	Y	Y	7	7
Harness MAX	NR	NR	NR	7	7
Halex GT	NR	NR	NR	7	7
Hornet	Do not use	TI[1]	TI[1]	10	10
Lexar EZ/Lumax EZ (POST)	NR	TI	TI	7	7
Maverick (POST)	NR	TI	TI	See label	See label
Python/Accolade	Do not use	TI[1]	TI[1]	See label	See label
Realm Q	NR	Y	Y	7	7
Resicore/Resicore XL (POST)	NR	TI	TI	7	7
Resolve Q	Do not use	Y	Y	7	3
Revulin Q	NR	Y	Y	7	3
Sharpen	Do not use	Y	Y	See label	See label
Steadfast Q	Do not use	Y	Y	7	3
Surestart II/Tripleflex II	Do not use	TI[1]	TI[1]	10	10
TriVolt	Do not use	Do not use	Do not use	7	7
Verdict	Do not use	Y	Y	See label	See label

Do not use = do not apply the herbicide if a soil OP insecticide has been applied

NR = not recommended

TI = temporary injury may occur if the herbicide is applied to corn treated with the soil OP insecticide

Y = little risk of injury

[1] Apply the soil insecticide in a T-band or a band to reduce risk of crop injury