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

			ANNUAL BROADLEAVES												ANNUAL GRASSES								PERENNIALS				
Soil Applied	SITE OF ACTION	CORN TOLERANCE**	COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. BLACK)	PALMER AMARANTH[a]	PIGWEED	RAGWEED (COMMON)	RAGWEED (GIANT)	SMARTWEED	VELVETLEAF	WATERHEMP[a]	WILD MUSTARD	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEDGE	JOHNSONGRASS (seedling)	JOHNSONGRASS (Rhizome)
ATRAZINE	5	1	F	F	**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	**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[b]	27	1	P	**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/CINCH/ PARALLEL[c]	15	1	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	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	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	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 H2O[d] **(PRE only)**	3	3	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	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**	P	**E**	**G**	F	**G**	**G**	**G**	**G**	N	N	N	N	N	N	N	N	P	N	N	N	N
VALOR[e] **(7d EPP or more)**	14	2	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	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**	**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**	**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	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	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**	F	**G**	P	N	**E**	F	P	F	F	N	**E**	**G**	F	**G**	**G**	**G**	F	F	P	P	P	P	P	P
BICEP II LITE MAGNUM/ CINCH ATZ LITE	5/15	1	F	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/CINCH ATZ/ PARALLEL PLUS	5/15	1	F	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**	**E**	**E**	**G**	**E**	F	F	**E**	**E**	**G**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	P	N	F	P	N
CALLISTO XTRA	5/27	1	F	**G**	**E**	**E**	**G**	**E**	**E**	**G**	**E**	**E**	**G**	**E**	**G**	P	F	F	**G**	P	P	P	F	P	F	N	N
CORVUS	2/27	2	**G**	**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	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**	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[e] **(7d EPP or more)**	14/15	2	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**	**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	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**	F	**E**	**G**	N	**E**	**E**	**G**	**G**	**G**	N	**E**	N	N	N	N	N	N	N	N	F	N	N	N	N
IMPACT CORE	15/27	2	P	N	F	**G**	**G**	**G**	F	N	P	P	**G**	P	**E**	**E**	**E**	**E**	**E**	**E**	**E**	F	N	N	F	P	N
LEXAR EZ/LUMAX EZ/ STALWART 3W	5/27/15	1	F	**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**	**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[e] **(14 d EPP)**	2/2	2	F	F	**E**	F	N	**E**	F	P	**E**	**G**	N	**E**	N	N	N	N	N	N	N	N	F	N	N	N	N

See footnotes at the end of the chart.

(Continued on next page)

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

			ANNUAL BROADLEAVES												ANNUAL GRASSES								PERENNIALS				
Soil Applied	SITE OF ACTION	CORN TOLERANCE**	COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. BLACK)	PALMER AMARANTH[a]	PIGWEED	RAGWEED (COMMON)	RAGWEED (GIANT)	SMARTWEED	VELVETLEAF	WATERHEMP[a]	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	**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	**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	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**	**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[f]	2/4/15	3	**G**	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**	**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[f]	14/15	2	**G**	**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 15-16.

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 Palmer amaranth and waterhemp found in Michigan are resistant to the ALS-inhibiting herbicides (Group 2). Refer to the factsheet on "Keys to Managing Multiple-Resistant Palmer amaranth" on pages 221-225.

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

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

[d] DO NOT incorporate Prowl H2O and corn should be planted a minimum of 1.5-inches deep.

[e] 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.

[f] 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 1B – Weed Response to Postemergence Herbicides in Corn*

			ANNUAL BROADLEAVES												ANNUAL GRASSES								PERENNIALS				
Postemergence	SITE OF ACTION	CORN TOLERANCE**	COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. BLACK)	PALMER AMARANTH[a]	PIGWEED	RAGWEED (COMMON)	RAGWEED (GIANT)	SMARTWEED	VELVETLEAF	WATERHEMP[a]	WILD MUSTARD	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	CANADA THISTLE	QUACKGRASS	YELLOW NUTSEDGE	JOHNSONGRASS (seedling)	JOHNSONGRASS (Rhizome)
2,4-D	4	3	**G**	F	**G**	**G**	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	**G**	F	P	N[a]	**E**	P	N	**G**	F	N[a]	P	**E**	P	**E**	**E**	**E**	**E**	**E**	**G**	F	**G**	F	**E**	**G**
AIM	14	3	P	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/IMPACT	27	1	**G**	**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**	**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**	**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**	**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**	**G**	F	**G**	N[a]	**E**	**E**	**E**	**G**	**G**	N[a]	F	P	P	F	F	F	**G**	**G**	F	F	**G**	F	**G**	F
BUCTRIL/MOXY	6	2	**G**	**G**	**E**	**G**	N	F	**G**	**G**	**G**	**G**	N	F	N	N	N	N	N	N	N	N	P	N	N	N	N
CADET	14	2	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
CALLISTO[c]	27	1	F	**E**	**E**	**E**	F	**G**	**G**	**G**	**E**	**E**	**G**	**E**	N	F[b]	N	N	N	N	N	N	P	N	P	N	N
DIFLEXX	4	2	**G**	**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**	**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**	**G**	N	P	N[a]	**E**	**G**	**G**	F	**G**	N[a]	**E**	N	N	N	N	N	N	N	N	P	N	**E**	N	N
RESOURCE	14	2	P	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**	**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**	**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	**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**	**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**	**E**	**E**	**E**	**G**	**E**	**E**	**G**	**G**	**E**	**G**	**G**	N	F[b]	N	N	N	N	N	N	F	N	P	N	N
CAPRENO	2/27	2	**G**	**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**	**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**	F	F	F	N[a]	P	**E**	**E**	**G**	**G**	N[a]	**G**	N	N	N	N	N	N	N	N	**E**	N	N	N	N
IMPACTZ	5/27	1	**G**	**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**	**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**	**E**	**E**	**E**	**G**	**E**	**G**	**G**	**G**	**E**	**G**	F	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**G**	F	**G**	F	**E**	**G**
PERPETUO	14/15	2	P	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**	**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**	P	**G**	F	N[a]	**E**	F	P	**G**	F	N[a]	**E**	**G**	F	**G**	**G**	**G**	**G**	**G**	P	F	F	P	F	N
RESTRAINT	15/27	1	**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	**E**	**E**	**E**	P	**E**	**G**	F	**E**	**E**	F	**E**	**E**	F[b]	**E**	**E**	**E**	**E**	**E**	**G**	F	**G**	F	**E**	**G**
STATUS	4/19	2	**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	**G**	F	P	N[a]	**E**	P	N	**G**	F	N[a]	**G**	**E**	F	**E**	**E**	**E**	**E**	**E**	**G**	F	**G**	F	**E**	**G**
YUKON	2/4	2	**E**	**G**	**G**	**G**	N[a]	**E**	**G**	**G**	**G**	**G**	N[a]	**E**	N	N	N	N	N	N	N	N	P	N	**E**	N	N
Glyphosate-Resistant Corn																											
GLYPHOSATE	9	1	**E**	**E**	**G**	**G**	N[a]	**E**	**G**	**G**	**G**	**G**	N[a]	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**
ACURON GT	9/15/27	1	**E**	**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**	**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**	**E**	**E**	**E**	F	**E**	**G**	**G**	**E**	**E**	**G**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**

See footnotes at the end of the chart.

(Continued on next page)

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

			ANNUAL BROADLEAVES												ANNUAL GRASSES								PERENNIALS				
Postemergence	**SITE OF ACTION**	**CORN TOLERANCE****	**COCKLEBUR**	**JIMSONWEED**	**LAMBSQUARTERS**	**NIGHTSHADE (E. BLACK)**	**PALMER AMARANTH[a]**	**PIGWEED**	**RAGWEED (COMMON)**	**RAGWEED (GIANT)**	**SMARTWEED**	**VELVETLEAF**	**WATERHEMP[a]**	**WILD MUSTARD**	**BARNYARDGRASS**	**CRABGRASS**	**GIANT FOXTAIL**	**GREEN FOXTAIL**	**YELLOW FOXTAIL**	**FALL PANICUM**	**WITCHGRASS**	**SANDBUR**	**CANADA THISTLE**	**QUACKGRASS**	**YELLOW NUTSEDGE**	**JOHNSONGRASS (seedling)**	**JOHNSONGRASS (Rhizome)**
SEQUENCE	9/15	1	**E**	**E**	**G**	**G**	N[a]	**E**	**G**	**G**	**G**	**G**	N[a]	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**
WARRANT + GLYPHOSATE	9/15	1	**E**	**E**	**G**	**G**	N[a]	**E**	**G**	**G**	**G**	**G**	N[a]	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	F	**E**	**E**
LibertyLink Corn																											
LIBERTY[d]	10	1	**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**	**G**	**E**	**E**	**E**	**E**	**E**	**G**	**E**	**G**	**G**	**E**	**G**	**G**	**G**	**G**	F	F	F	P	**G**	F
Enlist (2,4-D resistant) Corn																											
ASSURE II	1	1	P	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**	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**	**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 15-16.

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 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 221-225.

[b] Large crabgrass only.

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

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

TABLE 1C – Herbicide Premixes in Corn

Soil Applied

TRADE NAME	COMPANY	FORMULATION	TYPICAL USE RATE[a]	=	EQUIVALENT RATES
Acuron	Syngenta	3.44ZC	3 qt/A	=	1.68 pt Dual II Magnum + 0.75 qt Atrazine + 5.76 oz Callisto + 0.045 lb ai bicyclopyrone
Acuron Flexi	Syngenta	3.26ZC	2.25 qt/A	=	1.68 pt Dual II Magnum + 5.76 oz Callisto + 0.045 lb ai bicyclopyrone
Anthem MAXX	FMC	4.3SE	5 oz/A	=	0.75 oz Cadet + 5 oz Zidua SC
Armezon PRO	BASF	5.35EC	20 oz/A	=	0.71 oz Armezon + 17.5 oz Outlook
Basis Blend	Corteva	30WG	1.25 oz/A	=	1 oz Resolve SG + 0.25 oz Harmony SG
Bicep II Magnum	Syngenta	5.5F	2.1 qt/A	=	1.33 pt Dual II Magnum + 1.6 qt atrazine 4L
Bicep Lite II Magnum	Syngenta	6F	1.5 qt/A	=	1.33 pt Dual II Magnum + 1 qt atrazine 4L
Calibra	Syngenta	3.1ZC	2.8 qt/a	=	2.07 pt Dual II Magnum + 6.2 oz Callisto
Cinch ATZ	Corteva	5.5F	2.1 qt/A	=	1.33 pt Cinch + 1.6 qt atrazine 4L
Cinch ATZ Lite	Corteva	6F	1.5 qt/A	=	1.33 pt Cinch + 1 qt atrazine 4L
Corvus	Bayer	2.63SC	5.6 oz/A	=	5.26 oz Balance Flexx + 0.033 lb ai thiencarbazone
Crusher	FMC	50WG	1 oz/A	=	1 oz Resolve SG 0.5 oz Harmony SG
Degree Xtra	Bayer	4L	3 qt/A	=	2.3 pt Harness + 1 qt atrazine 4L
Fierce EZ[b]	Valent	3.04L	6 oz/A	=	2 oz Valor + 2.5 oz Zidua SC
FulTime NXT	Corteva	4L	3 qt/A	=	2.3 pt Surpass + 1 qt atrazine 4L
Harness MAX	Bayer	3.82L	75 fl oz/A	=	2.35 pt Harness + 6.18 oz Callisto
Harness Xtra 5.6L	Bayer	5.6L	2.4 qt/A	=	2.2 pt Harness + 1.5 qt atrazine 4L
Hornet	AMVAC	68.5WG	3 oz/A	=	0.7 oz Python + 0.25 pt Stinger
Keystone NXT	Corteva	5.6L	2.4 qt/A	=	2.2 pt Surpass NXT + 1.5 qt atrazine 4L
Keystone LA NXT	Corteva	6L	2 qt/A	=	2.5 pt Suprass NXT + 0.85 qt atrazine 4L
Lexar EZ	Syngenta	3.7ZC	3 qt/A	=	5.34 oz Callisto + 1.36 pt Dual II Magnum + 1.3 qt atrazine 4L

See footnotes at the end of the chart.

(Continued on next page)

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

Soil Applied *(continued)*

TRADE NAME	COMPANY	FORMULATION	TYPICAL USE RATE[a]	=	EQUIVALENT RATES
Lumax EZ	Syngenta	3.67ZC	2.7 qt/A	=	5.38 oz Callisto + 1.76 pt Dual II Magnum + 0.63 qt atrazine 4L
Maverick	Valent	2.05SC	24 oz/A	=	4.97 oz Callisto + 0.26 pt Stinger + 3.99 oz Zidua SC
Panoflex	FMC	50WG	0.6 oz/A	=	0.48 oz Express 0.12 oz Harmony SG
Parallel Plus	ADAMA	5.5SL	2.3 qt/A	=	1.6 pt Parallel + 1.6 qt atrazine 4L
Resicore	Corteva	3.29SE	2.75 qt/A	=	2.2 pt Surpass NXT + 6.6 oz Callisto + 5.6 oz Stinger
Resicore XL	Corteva	3.26ZC	2.75 qt/A	=	2.2 pt Surpass NXT + 5.9 oz Callisto + 5.6 oz Stinger
SureStart II[b]	Corteva	4.16SE	2 pt/A	=	1.07 pt Surpass NXT + 3 oz Stinger + 0.6 oz Python
TripleFLEX II[b]	Bayer	4.16SE	2 pt/A	=	1.07 pt Harness + 3 oz Stinger + 0.6 oz Python
TriVolt	Bayer	3.65SC	20 oz/A	=	5.7 oz Balance Flexx + 0.036 lb ai thiencarbazone + 0.445 lb ai flufenacet
Verdict[b]	BASF	5.57EC	15 oz/A	=	3 oz Sharpen + 12.5 oz Outlook
Postemergence					
Acuron GT	Syngenta	4.3ZC	3.75 pt/A	=	0.98 pt Dual Magnum + 3 oz Callisto + 0.045 lb ai bicyclopyrone + 0.94 lb a.e. glyphosate
Anthem MAXX	FMC	4.3SE	4 oz/A	=	0.6 oz Cadet + 4 oz Zidua SC
Armezon PRO	BASF	5.35EC	20 oz/A	=	0.71 oz Armezon + 17.5 oz Outlook
Callisto GT[c]	Syngenta	4.18L	2 pt/A	=	3 oz Callisto + 0.95 lb a.e. glyphosate
Callisto Xtra	Syngenta	3.7SC	24 oz/A	=	3 oz Callisto + 1.2 pt atrazine 4L
Capreno	Bayer	3.45SC	3 oz/A	=	2.5 oz Laudis + 0.01 lb ai thiencarbazone-methyl
DiFlexx DUO	Bayer	2.13SC	32 oz/A	=	2.46 oz Laudis + 10 oz DiFlexx

See footnotes at the end of the chart.

(Continued on next page)

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

Postemergence *(continued)*

TRADE NAME	COMPANY	FORMULATION	TYPICAL USE RATE[a]	=	EQUIVALENT RATES
Enlist Duo[d]	Corteva	3L	3.5 pt/A	=	0.7 lb a.e. 2,4-D + 0.74 lb a.e. glyphosate
Halex GT[c]	Syngenta	4.38L	3.6 pt/A	=	1 pt Dual Magnum + 3 oz Callisto + 0.93 lb a.e. glyphosate
Hornet	AMVAC	68.5WG	3 oz/A	=	0.7 oz Python + 0.25 pt Stinger
ImpactZ	AMVAC	4.26SC	8 fl oz/A	=	0.74 oz Impact + 0.25 qt atrazine 4L
Impact Core	AMVAC	7.15EC	30 oz/A	=	1.9 pt Harness + 0.76 oz Impact
Katagon	HELM Agro US, Inc.	2L	3.2 oz/A	=	0.96 oz Shieldex + 0.69 oz Accent Q
Perpetuo	Valent	2.3SC	8 oz/A	=	5.49 oz Resource + 3.28 oz Zidua SC
Realm Q	Corteva	38.75WG	4 oz/A	=	1.2 oz Resolve + 2.5 oz Callisto
Resolve Q	Corteva	22.4WG	1.25 oz/A	=	0.9 oz Resolve + 0.1 oz Harmony SG
Restraint	Summit Agro	6.5EC	36 oz/A	=	2.06 pt Harness + 1.02 oz Shieldex
Revulin Q	Corteva	51.2WG	3.4 oz/A	=	0.9 oz Accent Q + 2.5 oz Callisto
Sequence[c]	Syngenta	5.25L	2.5 pt/A	=	0.98 pt Dual Magnum + 0.7 lb a.e. glyphosate
Sinate	AMVAC	2.57SL	28 oz/A	=	1 oz Impact + 29.56 Liberty
Stalwart 2W	Sipcam Agro USA	3.59L	2 qt/A	=	0.33 pt Quartz + 1.67 pt Stalwart C
Stalwart 3W	Sipcam Agro USA	3.58L	3 qt/A	=	0.33 pt Quartz + 1.3 pt Stalwart C + 1.25 qt atrazine 4L
Status	BASF	56WG	5 oz/A	=	4 oz Clarity + 0.05 lb ai diflufenzopyr
Steadfast Q	Corteva	37.7WG	1.5 oz/A	=	0.7 oz Accent Q + 0.75 oz Resolve
Yukon	Gowan	67.5WG	4 oz/A	=	4 oz Banvel + 0.66 oz Permit

[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 1D – Corn Herbicides – Remarks and Limitations

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

Corn — Soil Applied — All Tillage Systems

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses	pyroxasulfone + fluthiacet *(Anthem MAXX)*	0.168	5 oz 4.3SE	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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 oz/A (5 oz/A). Lower rates (4 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. • May be applied postemergence. Refer to the post-emergence application section for *Anthem MAXX* and Table 1I. • Refer to Table 12 for crop rotation restrictions.
	topramezone + dimethenamid-P (*Armezon PRO*)	0.835	20 oz 5.35L	• **May be applied preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • *Atrazine* at 1 lb ai/A may be applied with *Armezon PRO* to increase the spectrum of weeds controlled. • Refer to label and Table 12 for crop rotation restrictions.
	s-metolachlor *(Dual II Magnum, Cinch, Moccasin II Plus)*	1.27	1.33 pt 7.64EC	• **May be applied preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • *Dual II Magnum, Cinch, and Moccasin II Plus* contain a safener which increases corn tolerance to s-metolachlor. • Increase the 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 1H. • Refer to Table 12 for crop rotation restrictions.

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Corn — Soil Applied – All Tillage Systems *(continued)*

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual grasses	acetochlor *(Harness, Surpass NXT)*	1.97	2.25 pt 7EC	• **May be applied preplant, preplant incorporated or preemergence**. • Refer to Table 1A for 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 (2.25 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. • Application rate varies by soil type. • 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 1H. • Refer to Table 12 for crop rotation restrictions.
	dimethenamid-P *(Outlook)*	0.84	18 oz 6EC	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • Increase the rate to 21 oz/A for effective nutsedge control. • Nutsedge control is improved when incorporated. • *Outlook* rates vary with soil texture and organic matter from 12 to 21 oz/A.. • May be applied postemergence on corn up to 12 inches tall, but this application alone will not control emerged weeds. Refer to Table 1H. • Refer to Table 12 for crop rotation restrictions.
	metolachlor *(Parallel*, *Stalwart C)*	1.3	1.33 pt 7.8L	• **May be applied preplant, preplant incorporated or preemergence.** • *Parallel/Stalwart C* is a mix of the R and S-isomers of metolachlor. Limited research has shown that 1.33 pt/A of these products provide similar initial activity to s-metolachlor products at 1.33 pt/A. However, *Parallel/ Stalwart C* may not provide the consistency, length of control or performance on more difficult to control weeds. Rates would need to be increased to 2.0 pt/A to provide the same amount of s-metolachlor (the more active isomer) in the 1.33 pt/A rate of *Dual II Magnum/Cinch* (s-metolachlor). • Refer to Table 1A for weed control and crop tolerance ratings. • *Parallel/Stalwart C* contains a safener which increases corn tolerance to metolachlor. • May be applied postemergence on corn up to 40 inches tall, but this application alone will not control emerged weeds. Refer to Table 1H. • Refer to Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual grasses	pendimethalin *(Prowl)* OR *(Prowl H_2O)*	 1.5 OR 1.4	 3.6 pt 3.3EC OR 3 pt 3.8AS	• **DO NOT apply preplant incorporated.** • Refer to Table 1A for weed control and crop tolerance ratings. • 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 1H. • Refer to Table 12 for crop rotation restrictions.
	pyroxasulfone *(Zidua SC)*	0.133	4 oz 4.17SC	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • Application rate varies with soil texture and application timing from 1.75 to 6.5 oz/A. • DO NOT apply more than 4.5 oz/A on coarse, 5 oz/A on medium or 6.5 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 1H. • The maximum cumulative amount of *Zidua SC* that can be applied per cropping season is 4.5 oz/A on coarse textured soils and 8.25 oz/A on all other soils. • Rotation restrictions are dependent on use rate. If *Zidua SC* is applied at 6.5 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.
Annual broadleaves	atrazine (*AAtrex*, others)	1	1 qt 4L OR 1.1 lb 90WG	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • Mixing, loading, and application setbacks are required for atrazine. See page 11 or label for details. • DO NOT exceed an application rate of 2 lb a.i. of atrazine per acre per application and the total pounds of atrazine applied must not exceed 2.5 lb a.i. per acre per year. • May be applied postemergence on corn up to 12 inches tall. Refer to Table 1H and the postemergence application section for atrazine. • Refer to Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves	mesotrione *(Callisto)*	0.188	6 oz 4SC	• **May be applied preplant or preemergence.** • Refer to Table 1A for 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. • Tank mixes with atrazine (1 a.i. lb/A) will improve control of common ragweed, giant ragweed, and cocklebur. • DO NOT apply *Callisto* with an emulsifiable concentrate herbicide or liquid fertilizer if corn has already emerged. • DO NOT exceed a total of 7.7 oz/A of *Callisto* per season. • Mesotrione preemergence is generally applied in a premix. Mesotrione premixes include ***Acuron, Acuron Flexi, Lumax EZ,*** and ***Lexar EZ***. Refer to Table 1C for premix use rates and components. May be applied postemergence on corn up to 30 inches tall or through 8 collars. Refer to Table 1H and the postemergence application section for *Callisto*. • Refer to Table 12 for crop rotation restrictions.
	flumetsulam + clopyralid *(Hornet)*	0.128	3 oz 68.5WG	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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 a.i. lb/A) will improve control of heavy populations of jimsonweed. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • May be applied postemergence on corn up to 20 inches tall or through 6 collars. Refer to Table 1H and the postemergence application section for *Hornet*. • 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.
	tribenuron + thifensulfuron *(Panoflex)*	0.019	0.6 oz 50WG	• **Apply a minimum of 14 days prior to planting corn.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • *Panoflex* is used as part of the burndown program in no-till corn. Refer to Table 1K. • DO NOT apply after corn emergence. • Refer to Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves	simazine (*Princep*, others)	1	1 qt 4L OR 1.1 lb 90WG	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for 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. • Refer to Table 12 for crop rotation restrictions.
	flumetsulam *(Python)*	0.05	1 oz 80WG	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for 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. • Tank mixes with atrazine (1 a.i. lb/A) will improve control of heavy populations of common ragweed, cocklebur, and jimsonweed. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • May be applied postemergence on corn up to 20 inches tall or through 6 collars, rates should be reduced. Refer to Table 1H. • Refer to Table 12 for crop rotation restrictions.
	tiafenacil (*Reviton*) + methylated seed oil	0.044	2 oz 2.83L + 0.25%	• **May be applied preplant or preemergence.** • *Reviton* is used as part of the burndown program in no-till corn. Refer to Table 1K. • DO NOT apply after corn emergence. • Refer to Table 12 for crop rotation restrictions.
	saflufenacil *(Sharpen)*	0.056	2.5 oz 2.85SC	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for 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 oz/A, medium textured soils 2.5-3 oz/A, and fine textured soils 3-3.5 oz/A can be applied. • The maximum *Sharpen* rate for coarse textured soils is 2.5 oz per acre per application. • DO NOT apply *Sharpen* after corn emergence or severe crop injury will occur. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • DO NOT exceed an application rate of 3.5 oz of *Sharpen* per acre per application or 6 oz/A of *Sharpen* per year. • *Sharpen* is an effective burndown herbicide in no-till corn. Consult Table 1K for more information. • Refer to label and Table 12 for crop rotation restrictions. DO NOT include time in the rotation interval when the ground is frozen.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves	flumioxazin *(Valor)*	0.064	2 oz 51WG	• **Apply a minimum of 7 day or more prior to planting corn on no-till or minimum tillage fields.** • Refer to Table 1A for weed control and crop tolerance ratings. • If there is less than 25% of the soil surface covered with residue from the previous crop or less than 0.25 inch of rainfall has occurred between application and the planting interval should be extended to 14 days. • *Valor* can be used as part of the burndown program in no-till corn. Refer to Table 1K. • DO NOT apply after corn emergence. • Refer to label and Table 12 for crop rotation restrictions.
Annual broadleaves **Annual grasses**	bicyclopyrone + mesotrione + atrazine + s-metolachlor *(Acuron)*	2.85	3 qt 3.44ZC	• **May be applied preplant or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • 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. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • *Acuron* at 2 qt/A may be applied as part of a planned 2-pass program. • May be applied postemergence on corn up to 12 inches tall. Refer to Table 1H. • *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. • Refer to label and Table 12 for crop rotation restrictions.
	bicyclopyrone + mesotrione + s-metolachlor *(Acuron Flexi)*	1.83	2.25 qt 3.26ZC	• **May be applied preplant or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • If the soil organic matter is <3% apply 2.0 qt/A of *Acuron Flexi*. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • May be applied postemergence on corn up to 30 inches tall or up to the 8 leaf stage. Refer to Table 1H. • *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. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves **Annual grasses**	isoxaflutole *(Balance Flexx)*	0.0937	6 oz 2SC	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for 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 a.i. lb/A) will improve control giant ragweed and cocklebur. • 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 crop oil concentrate at 1% v/v to control existing weeds prior to corn emergence. • Insecticide interaction. Consult label for organophosphate or carbamate insecticide interactions. • May be applied postemergence from spike through V2 corn. Refer to Table 1H. • Atrazine may be tank-mixed with postemergence applications of *Balance Flexx*. DO NOT add an adjuvant. • 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.
	rimsulfuron + thifensulfuron *(Basis Blend)*	0.023	1.25 oz 30WG	• **May be applied preplant or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • *Basis Blend* is best used as part of a burndown program in no-till corn. Refer to Table 1K. • 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. • May be applied postemergence on corn up to 6 inches or 2 collar, rates need to be reduced to 0.825 oz of *Basis Blend*. • Rotation restrictions to soybean are dependent on use rate. Soybean can be planted 10 months after 1.25 oz of *Basis Blend* is applied. The rotation interval to planting soybean is reduced to 15 days if 0.825 oz of *Basis Blend* is applied. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves **Annual grasses**	atrazine + s-metolachlor *(Cinch Lite ATZ)* OR *(Bicep II Magnum, Cinch ATZ)*	2.25 2.9	1.5 qt 6F 2.1 qt 5.5F	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Lower rates may 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 12 inches tall. Refer to Table 1H. • Tank-mixtures with glyphosate can be applied post-emergence to glyphosate-resistant corn. • Tank-mixtures with *Liberty* can be applied postemergence to LibertyLink corn. • Refer to label and Table 12 for crop rotation restrictions.
	atrazine + metolachlor (*Parallel Plus*, others)	2.9	2.3 qt 5.5F	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • *Parallel Plus* may be applied at lower rates as part of a planned 2-pass program where glyphosate is used post-emergence in glyphosate-resistant corn. • May be applied postemergence on corn up to 12 inches tall. Refer to Table 1H. • Tank-mixtures with glyphosate can be applied post-emergence to glyphosate-resistant corn. • Tank-mixtures with *Liberty* can be applied postemergence to LibertyLink corn. • Refer to label and Table 12 for crop rotation restrictions.
	atrazine + acetochlor (*Keystone LA NXT*) OR (*Degree Xtra, Fultime NXT*) OR (*Harness Xtra*, *Keystone NXT*)	3 3 3.4	2 qt 6L 3 qt 4L 2.4 qt 5.6L	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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 (2 qt/A); *Degree Xtra/Fultime NXT* rates range from 2.9 to 3.7 qt/A (3 qt/A); *Harness Xtra/Keystone NXT* rates range from 1.4 to 3 qt/A (2.4 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 1H. • Tank-mixtures with glyphosate can be applied post-emergence to glyphosate-resistant corn. • Tank-mixtures with *Liberty* can be applied postemergence to LibertyLink corn. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves **Annual grasses**	s-metolachlor + mesotrione (*Calibra*)	2.17	2.8 qt 3.1ZC	• **May be applied preplant or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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 a.i. lb/A) will improve control giant ragweed and cocklebur. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • May be applied postemergence on corn (field and seed) up to 30 inches tall or 8-leaf stage, whichever comes first. Refer to Table 1H. • DO NOT exceed a total of 2.8 qt/A of *Calibra* per season. • Refer to Table 12 for crop rotation restrictions.
	isoxaflutole + thiencarbazone-methyl *(Corvus)*	0.115	5.6 oz 2.63SC	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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. • Tank-mixes with atrazine (1 a.i. lb/A) will improve control giant ragweed and cocklebur. • 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*. • 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. • Add crop oil concentrate at 1% v/v to control existing weeds prior to corn emergence. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • May be applied postemergence from spike through V2 corn. Refer to Table 1H. • Atrazine may be tank-mixed with postemergence applications *Corvus*. DO NOT add an adjuvant. • 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 Table 12 for crop rotation restrictions.
	rimsulfuron + thifensulfuron *(Crusher)*	0.031	1.0 oz 50WG	• **May be applied preplant or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • *Crusher* is used as part of the burndown program in no-till corn. Refer to Table 1K. • 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 Table 12 for crop rotation restrictions.

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Corn – Soil Applied – All Tillage Systems (continued)

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves **Annual grasses**	pyroxasulfone + flumioxazin (*Fierce EZ*)	0.1425	6 oz 3.04L	• **Apply a minimum of 7 days up to 30 days prior to planting corn on no-till or minimum tillage fields.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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. • *Fierce EZ* can be used as part of the burndown program in no-till corn. Refer to Table 1K. • DO NOT apply after corn emergence. • 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.
	acetochlor + mesotrione *(Harness MAX)*	2.26	75 fl oz/A 3.82L	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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*). • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • DO NOT graze, feed forage, grain or fodder within 60 days of application. • May be applied postemergence on corn up to 11 inches tall. Refer to Table 1H. • *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 oz/A. • Refer to Table 12 for crop rotation restrictions.
	mesotrione + atrazine + s-metolachlor *(Lexar EZ)* OR *(Lumax EZ)*	 2.8 2.5	 3 qt 3.7ZC 2.7 qt 3.67ZC	• **May be applied preplant or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • *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 1H. • *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. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves **Annual grasses**	mesotrione + clopyralid + pyroxasulfone (*Maverick*)	0.38	24 oz 2.05SC	• **May be applied preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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 a.i. lb/A) will improve control giant ragweed and cocklebur. • Application rate varies with soil texture and application timing from 18 to 32 oz/A. • DO NOT apply more than 18 oz/A on coarse, 24 oz/A on medium or 32 oz/A on fine textured soils preemergence of *Maverick*. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • May be applied postemergence (field, silage, and seed corn) up to 18 inch corn or V6, whichever occurs first. Refer to Table 1H. • 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 oz/A on coarse textured soils and 32 oz/A on all other soils. • Rotation restrictions are dependent on use rate. If *Maverick* is applied at 32 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 Table 12 for crop rotation restrictions.
	acetochlor + mesotrione + clopyralid *(Resicore)*	2.26	2.75 qt 3.29SE	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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). • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • *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 1H. • *Resicore* can be tank-mixed with glyphosate in glyphosate-resistant corn or *Liberty* in LibertyLink corn and applied postemergence at rates as low as 1.25 qt/A. • *Resicore* can be split between preemergence (1/2 rate) and postemergence (1/2 rate) application timings. • 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.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves **Annual grasses**	acetochlor + mesotrione + clopyralid (*Resicore XL*)	2.24	2.75 qt 3.26SC	• **May be applied preplant, preplant incorporated, or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • *Resicore X*L contains an encapsulated formulation of acetochlor. • Use rates are based on soil texture and organic matter; ranging from 2.25 to 3 qt/A (2.75 qt/A). • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • *Resicore XL* may be applied at rates as low as 2.0 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 1H. • *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. • 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.
	mesotrione + atrazine + metolachlor (*Stalwart 3W*)	2.68	3 qt 3.58L	• **May be applied preplant or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Insecticide interaction: Consult label for organophosphate insecticide restrictions. • May be applied postemergence on corn up to 12 inches tall. Refer to Table 1H. • Refer to label and Table 12 for crop rotation restrictions.
	mesotrione + metolachlor *(Stalwart 2W)*	1.8	2 qt 3.59L	• **May be applied preplant or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Insecticide interaction: Consult label for organophosphate insecticide restrictions. • May be applied postemergence on corn up to 30 inches tall or up to the 8 leaf stage. Refer to Table 1H. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves **Annual grasses**	flumetsulam + clopyralid + acetochlor (*SureStart II, TripleFLEX II*)	1.04	2 pt 4.16SE	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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 (2 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). • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • *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 1H. • Tank-mixtures with glyphosate can be applied postemergence to glyphosate-resistant corn. • Tank-mixtures with *Liberty* can be applied postemergence to LibertyLink corn. • 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.
	isoxaflutole + thiencarbazone-methyl + flufenacet (*TriVolt*)	0.57	20 oz 3.65SC	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C 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 a.i.lb/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 *TriVol*t. • 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 1L. • May be applied postemergence from spike through V2 corn. Refer to Table 1H. DO NOT add an adjuvant. • 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 Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves **Annual grasses**	saflufenacil + dimethenamid-P *(Verdict)*	0.65	15 oz 5.57EC	• **May be applied preplant, preplant incorporated or preemergence.** • Refer to Table 1A for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Use rates are based on soil texture; ranging from 10 to 18 oz/A (15 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 as part of a burndown program in no-till corn. Refer to Table 1K. • DO NOT apply after corn emergence. • *Verdict* can be used on seed corn at use rates ranging from 5 to 10 oz/A; DO NOT exceed 5 oz/A on coarse soils. • 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.

Corn – Postemergence – All Tillage Systems

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses	nicosulfuron + safener (*Accent Q*) + crop oil concentrate + ammonium sulfate	0.031	0.9 oz 54.5WG + 1% + 2 lb	• Refer to Table 1B for 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. • Refer to Table 1I for maximum crop and weed heights. • DO NOT apply more than 1.8 oz/A per season. • *Accent Q* may be applied to seed corn, however maximum corn height for application is 20 inches or 5 leaf collars (V5). • DO NOT tank-mix with 2,4-D containing products – grass antagonism. • DO NOT tank-mix with *Basagran* – severe crop injury. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • Consult label for preferred adjuvants for specific tank mixtures. • 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.
	rimsulfuron + thifensulfuron *(Resolve Q)* + crop oil concentrate + ammonium sulfate	0.017	1.25 oz 22.4WG + 1% + 2.5 lb	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn up to 20 inches tall or 6 leaf collars (V6), whichever is more restrictive. • Refer to Table 1I for maximum crop and weed heights. • DO NOT apply to seed corn. • DO NOT tank-mix with *Basagran* – severe crop injury. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • Consult label for preferred adjuvants for specific tank mixtures. • Refer to label and Table 12 for crop rotation restrictions.
	nicosulfuron + rimsulfuron + safener *(Steadfast Q)* + crop oil concentrate + ammonium sulfate	0.035	1.5 oz 37.7WG + 1% + 2 lb	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn up to 20 inches tall or 6 leaf collars (V6), whichever is more restrictive. • Refer to Table 1I 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. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • Consult label for preferred adjuvants for specific tank mixtures. • 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.
Annual broadleaves	2,4-D amine OR 2.4-D ester	0.5 OR 0.25	1 pt 4L OR 0.5 pt 4L	• Refer to Table 1B for 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 1I 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. • Refer to Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves	atrazine (*AAtrex*, others) + crop oil concentrate	2	2 qt 4L OR 2.2 lb 90DG + 1 qt	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn up to 12 inches tall. • Refer to Table 1I for maximum crop and weed heights. • Lower rates of atrazine are often tank-mixed with other herbicides. • Consult label for preferred adjuvants for specific tank mixtures. • DO NOT exceed 2 lb ai/A for any single application or 2.5 lb ai/A per season. • DO NOT apply after June 10 – carryover concerns to rotational crops. • Mixing, loading, and application setbacks are required for atrazine. See page 11 or label for details. • Refer to Table 12 for crop rotation restrictions.
	carfentrazone *(Aim)* + surfactant	0.008	0.5 oz 2EC + 0.25%	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn up to 8 leaf collars. Drop nozzles can be used up to 14 collar corn. • Refer to Table 1I for maximum crop and weed heights. • Applications should not be made within 6–8 hours of rain or irrigation — severe crop injury. • Avoid applications into the corn whorls. • DO NOT tank-mix with *Basagran*, or *Buctril* – severe crop injury. • Consult label for preferred adjuvants for specific tank mixtures. • Refer to Table 12 for crop rotation restrictions.
	pyroxasulfone + fluthiacet *(Anthem MAXX)* + surfactant	0.134	4 oz 4.3SE + 0.25%	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Apply from emergence through the V4 (4 visible collars) stage. • Refer to Table 1I for maximum crop and weed heights. • Crop oil concentrate or methylated seed oil at 1% may be used instead of surfactant. • The addition of ammonium sulfate (2 lb/A) may improve control of certain weeds. • The pyroxasulfone component of *Anthem MAXX* will provide residual control of grass and small seeded broadleaf weeds. • Avoid applications when the crop foliage is wet – increased crop response. • DO NOT harvest corn forage or grain until 30 or 70 days, respectively, after *Anthem MAXX* application. • Insecticide interaction: DO NOT tank-mix with chlorpyrifos containing insecticides. • Refer to Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves	dicamba *(Banvel, Clarity)*	0.5	1 pt 4SL	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn up to the 5-leaf stage or 8 inches tall, whichever comes first. • *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. • Refer to Table 1I for maximum crop and weed heights. • 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 85º 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.
	bentazon *(Basagran)* OR *(Basagran 5L)* + crop oil concentrate	1	2 pt 4SL OR 1.6 pt 5L + 1 qt	• Refer to Table 1B for weed control and crop tolerance ratings. • Refer to Table 1I for maximum crop and weed heights. • The addition of 2.5 lb/A of ammonium sulfate (AMS) is recommended if velvetleaf is the targeted weed. • Rates can be reduced if weeds are small – consult label. • DO NOT use AMS if common lambsquarters is present. • Refer to Table 12 for crop rotation restrictions.
	primisulfuron *(Beacon)* + crop oil concentrate	0.036	0.76 oz 75WG + 1%	• Refer to Table 1B for 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 1I for maximum crop and weed heights. • Surfactant (0.25%) may be used instead of crop oil concentrate. The addition of ammonium sulfate at 2 lb/A may improve control of certain weeds. • Corn inbreds and a small number of corn hybrids are sensitive to *Beacon*. Consult seed companies for lists of sensitive inbreds and hybrids. • *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 1L. *(Continued on next page)* • The rotation restriction to potatoes is 8 months at the 0.38 oz/A, and is increased to 18 months at the 0.76 oz/A. • Refer to Table 12 for crop rotation restrictions.
	bromoxynil (*Buctril, Moxy*, others)	0.375	1 pt 2EC	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn up to tassel emergence. • Refer to Table 1I 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 a.i./A is a common tank mix partner. • For ground applications, use minimum of 20 gal of water/A and 30 psi. • Refer to Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves	fluthiacet *(Cadet)* + surfactant	0.006	0.9 oz 0.91EC + 0.25%	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn up to 48 inches tall, but before tassel emergence. • Refer to Table 1I for maximum crop and weed heights. • Crop oil concentrate at 1% may be used instead of surfactant. • The addition of ammonium sulfate (2 lb/A) may improve control of certain weeds. • *Cadet* can be applied at 0.5 oz/A when tank-mixed with other herbicides for additional broadleaf weed control. • Use drop nozzles when corn canopy will prevent complete spray coverage of the weeds. • DO NOT apply more than 1.25 oz/A of *Cadet* per cropping season. • Refer to label and Table 12 for crop rotation restrictions
	mesotrione *(Callisto)* + crop oil concentrate + ammomium sulfate	0.094	3 oz 4SC + 1% + 8.5 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn up to 30 inches tall or 8-collar, whichever is more restrictive. • Refer to Table 1I for maximum crop and weed heights. • There are other mesotrione (*Motif, Quartz)* products registered for use in corn, consult specific labels. • DO NOT use methylated seed oil (MSO) or MSO blends. • Atrazine at 0.25-0.5 lb a.i./A tank mixed with *Callisto* will improve control of broadleaf weeds. Note: Tank mixtures of *Callisto* with atrazine can be applied to corn up to 12 inches tall only. • Consult label for preferred adjuvants for specific tank mixtures. • DO NOT exceed 7.7 fl oz/A of *Callisto* (0.24 lb a.i./A of mesotrione) in one growing season, including premixes that contain *Callisto*. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • Refer to Table 12 for crop rotation restrictions.
	mesotrione + atrazine *(Callisto Xtra)* + crop oil concentrate + ammonium sulfate	0.69	24 oz 3.7SC + 1% + 8.5 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • *Callisto Xtra* maybe be applied preplant and preemergence at rates ranging from 44-51 fl oz/A depending on soil type and organic matter. Consult label for details. Refer to Table 1A for preemergence weed control and crop tolerance ratings. • Apply to corn up to 12 inches tall. • Refer to Table 1I 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 a.i./A of mesotrione) in one growing season, including premixes that contain *Callisto*. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves	dicamba + safener *(DiFlexx)* + surfactant + ammonium sulfate	0.25	8 oz 4SC + 0.25% + 17 lb/100 gal	• Refer to Table 1B for 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 1I for maximum crop and weed heights. • *DiFlexx* will likely be tank-mixed with other postemergence herbicides for an integrated weed management program. • Crop oil concentrate at 1% v/v or methylated seed oil at 1% v/v can be used instead of a non-ionic surfactant for certain tank-mixtures. • *DiFlexx* can be applied up to 16 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 1L. • DO NOT harvest or feed corn forage, silage or fodder within 45 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.
	tembotrione + dicamba + safener (*DiFlexx DUO*) + methylated seed oil + ammonium sulfate	0.53	32 oz 2.13SC + 1% + 8.5-17 lb/100 gal	• Refer to Table 1B for 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 1I for maximum crop and weed heights. • Apply *DiFlexx DUO* at rates ranging from 24 to 40 oz/A (32 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. • Use a methylated seed oil or crop oil concentrate at 1% v/v for improved weed control. • 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 speed are between 2 and 10 mph. • DO NOT apply into areas of temperature inversions. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • DO NOT graze or harvest corn forage within 45 days of application. • 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. Through tillage should be used preceding rotation to sugarbeets. The rotation restriction for kidney beans and cranberry beans is 18 months.

(Continued on next page)

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves	flumetsulam + clopyralid *(Hornet)* + surfactant + ammonium sulfate	0.128	3.0 oz 68.5WG + 0.25% + 2 lb	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Apply to corn up to 20 inches tall or 6 collars, whichever is more restrictive. • Refer to Table 1I for maximum crop and weed heights. • Crop oil concentrate at 1% may be used instead of surfactant. • 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 1L. • CAUTION should be taken to avoid spray drift. • 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.
	halosulfuron *(Permit)* + surfactant	0.03	0.67 oz 75DF + 0.25%	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn from spike up to canopy closure. • Refer to Table 1I for maximum crop and weed heights. • *Permit* provides excellent control of yellow nutsedge. • *Permit* does NOT control common lambsquarters. • Crop oil concentrate at 1% may be used instead of surfactant. • Include ammonium sulfate (2 lb/A) for improved velvetleaf and pigweed control. • Refer to Table 12 for crop rotation restrictions.
	flumiclorac + pyroxasulfone *(Perpetuo)* + crop oil concentrate	0.144	8 oz 2.3SC + 1 pt	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn between V2 and V6. May be applied preemergence as a spring burndown in corn. • Refer to Table 1I for maximum crop and weed heights. • 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. • Rotation restrictions are dependent on use rate. If *Perpetuo* is applied at 10 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.
	flumiclorac *(Resource)* + crop oil concentrate	0.027	4 oz 0.86EC + 1 pt	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn between 2 and 10 collars. • Refer to Table 1I 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. • Refer to Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual broadleaves	dicamba + diflufenzopyr + safener *(Status)* + surfactant + ammonium sulfate	0.18	5 oz 56WG + 0.25% + 17 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • 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 1I 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 85º 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 1L. • 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. • Refer to Table 12 for crop rotation restrictions.
	clopyralid *(Stinger)*	0.094	0.25 pt 3SL	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to field corn up to 24 inches tall. • Refer to Table 1I for maximum crop and weed heights. • Treat ragweed, cocklebur, jimsonweed and Jerusalem artichoke 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. • Refer to Table 12 for crop rotation restrictions.
	halosulfuron + dicamba *(Yukon)* + surfactant + ammonium sulfate	0.169	4 oz 67.5WG + 0.25% + 17 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I 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. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses **Annual broadleaves**	topramezone *(Armezon/Impact)* + methylated seed oil + ammonium sulfate	0.016	0.75 oz 2.8SC + 1% + 17 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • *Armezon/Impact* may be applied to corn up to 45 days prior to harvest. • Refer to Table 1I for maximum crop and weed heights. • Atrazine at 0.25-0.5 lb a.i./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. • Crop oil concentrate can be used instead of methylated seed oil in certain tank mixes. • When *Armezon/Impact* is applied at 0.5 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 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 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.
	topramezone + dimethenamid-P *(Armezon PRO)* + methylated seed oil + ammonium sulfate	0.835	20 oz 5.35L + 1% + 8.5 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Apply to corn up to 30 inches tall or V8 (8 visible collars), whichever is more restrictive. • *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. • Refer to Table 1I for maximum crop and weed heights. • 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 a.i./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. • Methylated seed oil is the preferred additive when *Armezon PRO* is applied alone. A non-ionic surfactant at 0.25% v/v is recommended for most tank-mixtures. Oil adjuvants including crop oil concentrates may be used in tank mixtures, however these combinations can cause crop injury. • *Armezon PRO* can be applied at 16 fl oz/A on lighter textured and/or lower organic matter soils. • 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. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual grasses **Annual broadleaves**	tembotrione + thiencarbazone-methyl *(Capreno)* + crop oil concentrate + ammonium sulfate	0.081 + +	3.0 oz 3.45SC + 1% + 8.5 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Apply to corn from 1 (V1) to 5 collars (V5). • Refer to Table 1I for maximum crop and weed heights. • DO NOT exceed a total of 6 oz/A of *Capreno* in a year. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • 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 oz/A and the soil pH is not 7.5 or above. • Refer to label and Table 12 for crop rotation restrictions.
	topramezone + atrazine *(ImpactZ)* + methylated seed oil + ammonium sulfate	0.266 + 1% + 8.5lb/100gal	8 oz 4.26SC	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Apply to corn up to 12 inches tall. • Refer to Table 1I for maximum crop and weed heights. • DO NOT graze, feed forage, grain or fodder within 60 days of application. • *ImpactZ* may be applied at maximum rate of 10.7 oz/A to provide greater control of certain grass species, however rotational crop restrictions are increased, refer to label. • Refer to Table 12 for crop rotation restrictions.
	acetochlor + topramezone *(Impact Core)* + methylated seed oil + ammonium sulfate	1.676 + +	30 oz 7.15EC + 0.5% + 8.5 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I 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 a.i./A tank mixed will improve control of broadleaf weeds. Note: Tank mixtures of *Impact Core* with atrazine can be applied to corn up to 11 inches tall only. • Methylated seed oil is the preferred additive when *Impact Core* is applied alone. A non-ionic surfactant at 0.25% v/v is recommended for most tank-mixtures. Oil adjuvants including crop oil concentrates 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. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual grasses **Annual broadleaves**	nicosulfuron + tolpyralate (*Katagon*) + crop oil concentrate	0.05	3.2 oz 2L + 1%	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I for maximum crop and weed heights. • Full coverage of emerged target weeds is essential for postemergence applications. • Atrazine at 0.25-0.5 lb a.i./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 harvest grain within 70 days of application. • DO NOT graze or feed corn forage, silage or fodder within 45 days of application. • Refer to label and Table 12 for crop rotation restrictions.
	tembotrione *(Laudis)* + methylated seed oil + ammonium sulfate	0.082	3 oz 3.5SC + 1% + 8.5 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • Apply to corn up to 8 collars (V8). • Refer to Table 1I for maximum crop and weed heights. • Atrazine at 0.25-0.5 lb a.i./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. • Crop oil concentrate can be used instead of methylated seed oil in certain tank mixes. • Consult label for preferred adjuvants for specific tank mixtures. • 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 label and Table 12 for crop rotation restrictions.
	rimsulfuron + mesotrione + safener *(Realm Q)* + crop oil concentrate + ammonium sulfate	0.097	4 oz 38.75WG + 1% + 17 lb/100 gal	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I 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 1L. • Refer to label and Table 12 for crop rotation restrictions.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual grasses **Annual broadleaves**	acetochlor + tolpyralate (*Restraint*) + crop oil concentrate	1.83	36 oz 6.5EC + 1%	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I 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 a.i./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. • DO NOT harvest grain within 45 days of application. • DO NOT graze or feed corn forage, silage or fodder within 21 days of application. • Refer to label and Table 12 for crop rotation restrictions.
	nicosulfuron + mesotrione *(Revulin Q)* + crop oil concentrate + ammonium sulfate	0.109	3.4 oz 51.2WG + 1% + 2 lb	• Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I 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 1L. • Refer to label and Table 12 for crop rotation restrictions.
	tolpyralate *(Shieldex)* + methylated seed oil + ammonium sulfate	0.034	1.3 fl oz/A 3.33L + 1% + 8.5 lb/100 gal	• Refer to Table 1B for 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 1I for maximum crop and weed heights. • Atrazine at 0.5 lb a.i./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. • Refer to Table 12 for crop rotation restrictions.

TABLE 1E – Weed Control in Glyphosate-Resistant Corn

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

1) Soil-applied residual herbicide applied preemergence followed by glyphosate postemergence.
   a) Preemergence herbicide options can be found in Tables 1A and 1C.
   b) Glyphosate should be applied when weeds are 2-4 inches tall.

2) Postemergence tank-mixtures with glyphosate when weeds are 2-4 inches tall.
   a) Several soil-applied residual herbicides can be tank-mixed with glyphosate and applied postemergence. Refer to Tables 1H and 1C for options. Tank-mixtures with some residual herbicides may cause temporary burn or discoloration.
   b) There are many postemergence products that can be tank-mixed with glyphosate for additional weed control. Refer to Tables 1I and 1C for options.
   c) There are several premixtures containing glyphosate that can be applied postemergence to glyphosate-resistant corn. Refer to Table 1B and the following section for options.

3) Split-applications of soil-applied residual herbicides with glyphosate.
   a) Apply one-half to two-thirds of the soil-applied herbicide preemergence.
   b) Apply the remainder of the soil-applied herbicide postemergence with glyphosate.

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses **Annual broadleaves** **Suppression of perennials**	glyphosate + ammonium sulfate	0.75–1.13 a.e.	See Table 10 + 17 lb/100 gal	• **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY. See above recommendations for appropriate use of glyphosate in glyphosate-resistant corn.** • Corn hybrids that are glyphosate-resistant are designated as *Roundup Ready Corn, Roundup Ready 2 Corn,* or *Glyphosate Tolerant (GT)*. • Refer to Table 1B for 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 ammonium sulfate (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 1I 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. • Higher glyphosate rates and second application of glyphosate will improve control of perennial weeds. • Refer to label and Table 12 for crop rotation restrictions.

(Continued on next page)

Glyphosate-Resistant Corn *(continued)*

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual grasses **Annual broadleaves** **Suppression of perennials**	bicyclopyrone + mesotrione + s-metolachlor + glyphosate (*Acuron GT*) + surfactant + ammonium sulfate	2.02	3.75 pt 4.3ZC + 0.25% + 17 lb/100 gal	• **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.** • Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I for maximum crop and weed heights. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • 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.
	mesotrione + glyphosate *(Callisto GT)* + surfactant + ammonium sulfate	1.045	2 pt 4.18L + 0.25% + 17 lb/100 gal	• **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.** • Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I 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 1L. • Refer to Table 12 for crop rotation restrictions.
	mesotrione + s-metolachlor + glyphosate *(Halex GT)* + surfactant + ammonium sulfate	1.97	3.6 pt 4.38L + 0.25% + 17 lb/100 gal	• **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.** • Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I for maximum crop and weed heights. *Halex GT* does not contain a safener for preemergence applications. • DO NOT tank-mix with emulsifiable concentrate grass herbicides – severe crop injury. • Insecticide interaction: Consult label for organophosphate insecticide restrictions and Table 1L. • Refer to label and Table 12 for crop rotation restrictions.
	s-metolachlor + glyphosate *(Sequence)* + ammonium sulfate	1.64	2.5 pt 5.25L + 17 lb/100 gal	• **APPLY TO GLYPHOSATE-RESISTANT CORN ONLY.** • Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C 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 1I for maximum crop and weed heights. • *Sequence* can be applied preplant or preemergence for all corn types in no-till production. • Refer to label and Table 12 for crop rotation restrictions.

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Glyphosate-Resistant Corn *(continued)*

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual grasses **Annual broadleaves** **Suppression of perennials**	acetochlor *(Warrant)* + glyphosate + ammonium sulfate	1.125	3 pt 3CS + See Table 10 + 17 lb/100 gal	• **APPLY TO GLYPHOSATE-RESISTANT CORN WHEN TANK-MIXED WITH GLYPHOSATE.** • Refer to Table 1B for 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 1I for maximum crop and weed heights. • *Warrant* does not contain a safener for preemergence applications. • *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.

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

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

One of the two following strategies is recommended:

1) Soil-applied residual herbicide applied preemergence followed by *Liberty* postemergence.
   a) Preemergence herbicide options can be found in Tables 1A and 1C.
   b) *Liberty* should be applied when weeds are 2-4 inches tall.

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

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses **Annual broadleaves**	glufosinate *(Liberty)* + ammonium sulfate	0.58	32 oz 2.34L + 17 lb/100 gal	• **APPLY TO LIBERTYLINK OR GLUFOSINATE-RESISTANT CORN ONLY.** • **See above recommendations for appropriate use of *Liberty* in LibertyLink corn.** • There are other glufosinate products (i.e. *Cheetah, Interline, Noventa*) registered for use in LibertyLink corn, consult specific labels. • Refer to Table 1B for weed control and crop tolerance ratings. • Always add ammonium sulfate at 8.5–17 lb/100 gal. • Apply from emergence up to V6 corn. • Refer to Table 1I 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 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. • DO NOT apply *Liberty* within 60 days of harvesting corn forage or within 70 days of harvesting corn grain. • *Liberty* is a contact herbicide that may provide some top growth control of perennial weeds. • 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. • Refer to Table 12 for crop rotation restrictions.

(Continued on next page)

Weed Control in LibertyLink (Glufosinate-Resistant) Corn *(continued)*

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
(continued)				
Annual grasses **Annual broadleaves**	topramezone + glufosinate *(Sinate)* + methylated seed oil + ammonium sulfate	0.56	28 oz 2.57L + 1% + 3 lb/A	• **APPLY TO LIBERTYLINK OR GLUFOSINATE-RESISTANT CORN ONLY.** • Refer to Table 1B for weed control and crop tolerance ratings. • See Table 1C for individual product rate equivalents for the premix. • Always add ammonium sulfate at 3 lb/A. • Methylated seed oil (MSO, 1% v/v) or High surfactant methylated oil concentrate (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 1I 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 a.i./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 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 apply *Sinate* within 60 days of harvesting corn forage or within 70 days of harvesting corn grain. • Refer to label and Table 12 for crop rotation restrictions.

TABLE 1G – Weed Control in Enlist (2,4-D-Resistant) Corn

RECOMMENDATIONS: One application of 2,4-D choline containing herbicides alone will not consistently provide season-long weed control. One of the two following strategies is recommended:

1) Soil-applied residual herbicide applied preemergence followed by *Enlist One/Duo* postemergence.
   a) Preemergence herbicide options can be found in Tables 1A and 1C.
   b) *Enlist One/Duo* should be applied when weeds are 2-4 inches tall. Additional tank mix partners can be applied with these herbicides. Refer to EnlistTankMix.com for options.

2) Postemergence tank-mixtures with *Enlist One/Duo* when weeds are 2-4 inches tall.
   a) Several soil-applied residual herbicides can be tank-mixed with *Enlist One/Duo* and applied postemergence. Refer to EnlistTankMix.com for options. Tank-mixtures with some residual herbicides may cause temporary burn or discoloration.
   b) There are many postemergence products that can be tank-mixed with *Enlist One/Duo* for additional weed control. Refer to EnlistTankMix.com for options.

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual broadleaves	2,4-D choline *(Enlist One)*	0.71 a.e.	1.5 pt 3.8L	• **APPLY PREPLANT, PREEMERGENCE, AND/OR POSTEMERGENCE TO ENLIST TRAITED CORN.** • Can be applied as a preplant burndown or used preemergence in non-Enlist traited corn. • 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 1I 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. • Refer to Table 1B for weed control and crop tolerance ratings. • 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. • Refer to Table 1K for spring burndown applications. • Clethodim herbicides such as *Select* or *Select Max* may be used to control volunteer Enlist corn in the following soybean, sugarbeet, or dry bean crop. • Refer to Table 12 for crop rotation restrictions.

(Continued on next page)

Weed Control in Enlist (2,4-D-Resistant) Corn *(continued)*

Weed Controlled	Herbicide	Rate lb/A a.i.	Formulation/A	Remarks and Limitations
Annual grasses **Annual broadleaves**	2,4-D choline + glyphosate *(Enlist Duo)*	1.44 a.e.	3.5 pt 3.3L	• **APPLY PREPLANT, PREEMERGENCE, AND/OR POSTEMERGENCE TO ENLIST TRAITED CORN.** • Can be applied as a preplant burndown or used preemergence in non-Enlist traited corn. • 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 ammonium sulfate (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 1I 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. • Refer to Table 1B for weed control and crop tolerance ratings. • 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. • Refer to Table 1K for spring burndown applications. • Clethodim herbicides such as *Select* or *Select Max* may be used to control volunteer Enlist corn in the following soybean, sugarbeet, or dry bean crop. • Refer to Table 12 for crop rotation restrictions.
Annual grasses	quizalofop P-ethyl *(Assure II)* + crop oil concentrate	0.048	7 oz 0.88L + 1%	• **APPLY POSTEMERGENCE TO ENLIST TRAITED CORN.** • Apply to Enlist traited corn only. Application to any other type of corn will result in crop death. • Enlist traited corn is resistant to 2,4-D choline, glyphosate and aryloxyphenoxypropionate (FOPs) herbicides. • DO NOT mix any other herbicides or additives with *Assure II* unless they are approved on the following website: **EnlistTankMix.com/ASSUREII** • Refer to Table 1B for weed control and crop tolerance ratings. • Apply to Enlist traited when corn is in the V2 to V6 stage. • Refer to Table 1I for maximum crop and weed heights. • Apply with crop oil concentrate (1% v/v) for best results. • A non-ionic surfactant (0.25% v/v) may be used to replace crop oil concentrate 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 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 apply *Assure II* within 30 days of harvesting corn of harvesting corn grain. • Refer to label and Table 12 for crop rotation restrictions.

TABLE 1H – 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, Cinch, Parallel, Moccasin II Plus, Stalwart C	40 inches

TABLE 1I – Weed and Crop Heights for Postemergence Herbicide Applications in Corn*

		ANNUAL BROADLEAVES												ANNUAL GRASSES									
		COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. BLACK)	PALMER AMARANTH[C]	PIGWEED	RAGWEED (COMMON)	RAGWEED (GIANT)	SMARTWEED	VELVETLEAF	WATERHEMP[C]	WILD MUSTARD	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	CORN	
HERBICIDE[b]	**RATE/A**	**MAXIMUM HEIGHT[a]**												**MAXIMUM HEIGHT[a]**								**MINIMUM[a] HEIGHT**	**MAXIMUM[a] HEIGHT**
2,4-D amine/ester	1 pt/0.5 pt	4"	NR	4"	4"	3"	4"	4"	4"	NR	NR	3"	4"	NR	NR	NR	NR	NR	NR	NR	NR	None	8"
Accent Q	0.9 oz	NR	3"	NR	NR	NR	4"	NR	NR	4"	NR	NR	NR	4"	NR	4"	4"	4"	4"	4"	3"	None	20" or 6 collars
Aim	0.5 oz	NR	NR	NR	4"	2"	4"	NR	NR	NR	36"	2"	NR	NR	NR	NR	NR	NR	NR	NR	NR	None	8 collars
Anthem MAXX	4 oz	NR	2"	2"	2"	–	2"	NR	NR	2"	36"	2"	NR	NR	NR	NR	NR	NR	NR	NR	NR	None	4 collars
Armezon/Impact	0.75 oz	8"	6"	6"	6"	6"	6"	6"	8"	3"	8"	6"	6"	4"	3"	4"	3"	3"	3"	3"	NR	None	45 day PHI
Armezon PRO	20 oz	5"	4"	4"	4"	4"	4"	4"	5"	2"	4"	4"	4"	4"	3"	4"	3"	3"	3"	NR	NR	None	30" or 8 collars
Assure II	7 oz	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	6"	6"	8"	4"	4"	6"	6"	6"	V2	V6
Atrazine 4L	2 qt	4"	4"	6"	4"	1.5"	6"	4"	4"	4"	NR	1.5"	4"	NR	NR	NR	1½"	1½"	NR	NR	NR	None	12"
Banvel/Clarity	1 pt	4"	4"	4"	4"	3"	4"	4"	4"	6"	NR	3"	2"	NR	NR	NR	NR	NR	NR	NR	NR	None	8" or 5 lf
Basagran	2 pt (4L) 1.6 pt (5L)	10"	10"	2"	NR	NR	NR	3"	6"	10"	5"	NR	8"	NR	NR	NR	NR	NR	NR	NR	NR	None	None
Beacon	0.76 oz	4"	4"	NR	4"	NR	4"	9"	9"	4"	4"	NR	4'	NR	NR	NR	NR	NR	2"	2"	NR	4"	20"
Buctril, Moxy, others	1 pt	8"	4"	6"	6"	NR	NR	6"	6"	4"	3"	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	None	d
Cadet	0.9 oz	NR	2"	2"	2"	–	4"	NR	NR	2"	36"	2"	NR	NR	NR	NR	NR	NR	NR	NR	NR	None	48"[d]
Callisto	3 oz	NR	NR	5"	5"	3"	5"	3"	3"	5"	5"	3"	NR	NR	2"	NR	NR	NR	NR	NR	NR	None	30" or 8 collars
Callisto Xtra	24 oz	10"	10"	10"	10"	3"	10"	10"	10"	10"	10"	5"	10"	NR	2"	NR	NR	NR	NR	NR	NR	None	12"
Capreno	3 oz	6"	6"	6"	6"	3"	6"	6"	6"	6"	6"	3"	6"	5"	3"	3"	2"	3"	5"	3"	2"	1 collar	5 collars
DiFlexx	8 oz	3"	3"	3"	3"	3"	3"	3"	3"	3"	NR	3"	2"	NR	NR	NR	NR	NR	NR	NR	NR	None	36" or 10 collars
DiFlexx Duo	32 oz	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"	NR	NR	NR	NR	NR	6"	6"	6"	6"	NR	6"	NR	NR	NR	NR	NR	NR	NR	NR	None	20" or 6 collars
ImpactZ	8 oz	8"	6"	6"	6"	6"	6"	6"	8"	3"	8"	6"	6"	4"	3"	4"	3"	3"	3"	3"	NR	None	12"
Impact Core	30 oz	5"	4"	4"	4"	4"	4"	4"	5"	2"	4"	4"	4"	4"	3"	4"	3"	3"	3"	NR	NR	Spike	11"
Katagon	3.2 oz	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	4"	3"	4"	4"	4"	4"	4"	3"	VE	20" or 5 collars
Laudis	3 oz	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	6"	5"	3"	3"	2"	3"	NR	NR	2"	None	8 collars
Permit	0.67 oz	9"	4"	NR	NR	NR	3"	9"	3"	2"	9"	NR	4"	NR	NR	NR	NR	NR	NR	NR	NR	Spike	canopy closure
Perpetuo	8 oz	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 lf	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	V2	V6
Realm Q	4 oz	4"	4"	4"	4"	3"	4"	4"	4"	4"	4"	3"	4"	2"	½"	2"	2"	2"	2"	2"	NR	None	20" or 6 collars
Resolve Q	1.25 oz	3"	NR	3"	NR	NR	3"	3"	NR	3"	3"	NR	3"	2"	0.5"	2"	2"	2"	2"	NR	NR	None	20" or 6 collars
Resource	4 oz	NR	NR	NR	NR	NR	NR	NR	NR	NR	5 lf	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	2 lf	10 collars
Restraint	36 oz	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	3"	3"	3"	3"	3"	NR	NR	None	20" or 6 collars
Revulin Q	3.4 oz	4"	4"	4"	4"	3"	4"	3"	3"	4"	4"	3"	4"	4"	2"	4"	4"	4"	4"	6"	3"	None	20" or 6 collars
Shieldex	1.3 oz	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	5"	3"	3"	2"	3"	3"	NR	NR	None	20" or 6 collars
Steadfast Q	1.5 oz	NR	4"	NR	NR	NR	4"	NR	NR	NR	NR	NR	4"	4"	NR	4"	4"	4"	4"	4"	2"	None	20" or 6 collars
Status	5 oz	6"	6"	6"	6"	3"	6"	6"	6"	6"	6"	3"	2"	NR	NR	NR	NR	NR	NR	NR	NR	4"(V2)	36"(V8)
Stinger	0.25 pt	5 lf	5 lf	NR	NR	NR	NR	5 lf	5 lf	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	None	24"
Yukon	4 oz	14"	4"	6"	6"	NR	12"	12"	NR	3"	12"	NR	6"	NR	NR	NR	NR	NR	NR	NR	NR	Spike	36"
GLYPHOSATE-RESISTANT CORN																							
glyphosate	0.75-1.13 lb a.e.	6"	6"	3"	4"	NR	4"	4"	6"	4"	4"	NR	6"	6"	4"	6"	6"	6"	6"	6"	6"	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"	Spike	30" or 8 collars
Callisto GT	2 pt	4"	4"	4"	4"	3"	4"	4"	4"	4"	4"	3"	4"	4"	4"	4"	4"	4"	4"	4"	4"	None	30" or 8 collars
Halex GT	3.6 pt	4"	4"	4"	4"	3"	4"	4"	4"	4"	4"	3"	4"	4"	4"	4"	4"	4"	4"	4"	4"	Spike	30" or 8 collars
Sequence	2.5 pt	12"	12"	6"	6"	NR	12"	12"	12"	6"	6"	NR	12"	6"	12"	18"	18"	18"	6"	12"	12"	None	30" or 8 collars
Warrant + glyphosate	3 pt + 0.75 lb a.e.	6"	6"	3"	4"	NR	4"	4"	6"	4"	4"	NR	6"	6"	4"	6"	6"	6"	6"	6"	6"	Spike	30" or 8 collars

See footnotes at the end of the chart.

(Continued on next page)

TABLE 1I – Weed and Crop Heights for Postemergence Herbicide Applications in Corn* *(continued)*

		ANNUAL BROADLEAVES												ANNUAL GRASSES								CORN	
		COCKLEBUR	JIMSONWEED	LAMBSQUARTERS	NIGHTSHADE (E. BLACK)	PALMER AMARANTH[C]	PIGWEED	RAGWEED (COMMON)	RAGWEED (GIANT)	SMARTWEED	VELVETLEAF	WATERHEMP[C]	WILD MUSTARD	BARNYARDGRASS	CRABGRASS	GIANT FOXTAIL	GREEN FOXTAIL	YELLOW FOXTAIL	FALL PANICUM	WITCHGRASS	SANDBUR	MINIMUM[a] HEIGHT	MAXIMUM[a] HEIGHT
HERBICIDE[b]	**RATE/A**	**MAXIMUM HEIGHT[a]**												**MAXIMUM HEIGHT[a]**									
LIBERTYLINK CORN																							
Liberty[e]	32 oz	6”	6”	2”	6”	2”	3”	6”	6”	6”	3”	2”	4”	3”	3”	6”	6”	3”	3”	4”	NR	None	24” or 7 collars
Sinate	28 oz	6”	6”	6”	6”	6”	6”	6”	6”	4”	6”	6”	6”	4”	4”	5”	4”	4”	4”	4”	2”	None	24” or 7 collars
ENLIST CORN																							
Enlist One	1.5 pt	6”	6”	6”	6”	3”	6”	6”	6”	6”	6”	3”	6”	6”	4”	6”	6”	6”	6”	6”	6”	None	30” (V8)
Enlist Duo	3.5 pt	6”	6”	6”	6”	3”	6”	6”	6”	6”	6”	3”	6”	6”	4”	6”	6”	6”	6”	6”	6”	None	30” (V8)

[a] NR = not recommended; – = not enough information to rank; lf=leaf stage.

[b] Consult label for recommended additives.

[c] Almost all populations of Palmer amaranth and waterhemp found in Michigan are resistant to the ALS-inhibiting herbicides (Group 2) and glyphosate (Group 9).

[d] Before tassel emergence.

[e] The inclusion of atrazine is beneficial for control of herbicide-resistant Palmer amaranth and waterhemp.

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

TABLE 1J – Plant Response to Fall or Spring Herbicides in Sod

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

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

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

[b] Treat when plants reach at least 6 inches tall.

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

TABLE 1K – 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	MARESTAIL (HORSEWEED)[a]	DANDELION	QUACKGRASS	RYE	WHEAT	CLOVER	HAIRY VETCH
	Maximum Weed Height (inches)																		Herbicide Effectiveness										
atrazine (1 lb a.i.)[b]	2	2	2	2	2	2	2	2	2	2	NR	NR	NR	NR	NR	NR	NR	NR	–	**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	NR	NR	NR	1.5	1.5	NR	NR	NR	–	**E**	**E**	**E**	**E**	F	F	F	F	F	F
2,4-D ester (1 pt)	3	NR	3	3	3	3	3	NR	2	3	NR	NR	NR	NR	NR	NR	NR	NR	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	NR	NR	NR	NR	NR	NR	NR	NR	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	NR	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	NR	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	NR	**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	NR	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	NR	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	NR	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	NR	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	NR	NR	NR	NR	NR	NR	NR	NR	F	**G**	**G**	**G**	**E**	F	NR	NR	NR	–	–
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	–	NR	NR	NR	NR	NR	NR	NR	NR	**E**	**E**	**E**	**E**	**E**	F	**G**	**E**	**E**	F	F

See footnotes at the end of the chart.

(Continued on next page)

TABLE 1K – Effectiveness of Herbicides for Spring Burndown in Corn* *(continued)*

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

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

[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. Refer to the "Controlling Horseweed" factsheet on page 226-229.

[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 1L – 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 1L, severe corn injury will occur.

	SOIL-APPLIED ORGANOPHOSPHATE INSECTICIDES			FOLIAR ORGANOPHOSPHATE INSECTICIDE 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