

Annual weed control with Lumax, Halex GT, Callisto, Impact, Laudis, and Status in corn at Lamberton, MN in 2008.

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The objective of this study was to evaluate corn herbicide combinations for annual grass and annual broadleaf weed control in corn. This study was conducted on a Ves loam soil containing 4.3% organic matter, pH 6.7 and soil test P and K levels of 24 and 326 lb/A, respectively. A randomized complete block design with four replications and a plot size of 10 by 30 ft was used. The site was planted to soybeans in 2007 and was fall chiseled. The area was fertilized with 160-60-60 lbs of N, P, and K, respectively. On May 15, 2008, Pioneer '37N16' glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. All treatments were applied with a tractor-mounted sprayer delivering 20 gpa at a pressure of 40 psi. The sprayer was equipped with 8002 flat-fan nozzles spaced 15 inches apart on the boom. Application dates, environmental conditions, plant sizes and rainfall data are listed below:

Date	May 14	June 10	June 23
Treatment	PRE	POST I	POST II
Temperature (F)			
air	64	52	77
soil (4 inch)	66	60	80
Relative humidity (%)	32	82	34
Wind (mph)	calm	W 2	calm
Sky	clear	clear	p. cloudy
Soil moisture	dry	moist	dry
Corn			
leaf no.	-	V4	V7
height (inch)	-	6	22
Green foxtail			
leaf no.	-	2 to 4	1 to 3
height (inch)	-	3 to 5	1 to 3
no./ft ²	-	32	< 1
Common lambsquarters			
leaf no.	-	4 to 6	-
height (inch)	-	2 to 4	-
no./ft ²	-	4	-
Tall waterhemp			
leaf no.	-	4 to 6	2 to 4
height (inch)	-	1 to 4	1 to 3
no./ft ²	-	7	< 1
Rainfall after application (inch)			
1 week	0.10	1.05	0.61
2 week	0.18	0.00	0.00
3 week	0.87	0.61	0.02

(Southwest Research and Outreach Center, University of Minnesota, Lamberton).

Table. Annual weed control with Lumax, Halex GT, Callisto, Impact, Laudis, and Status in corn at Lamberton, MN in 2008 (Getting).

Treatment ^a	Rate	Green foxtail				Common lambsquarters				Tall waterhemp				Yield ^b	
		Jun 4	Jun 20	Jul 10	Aug 19	Jun 4	Jun 20	Jul 10	Aug 19	Jun 4	Jun 20	Jul 10	Aug 19		
Preemergence/POST I (3 to 4-inch weeds)	(oz/A, pt/A, qt/A, or %)	-----(% control)-----												(bu/A)	
Lumax / Touchdown Total + AMS	2 qt / 24 oz + 2 qt	82 ab	98 a	95 ab	95 ab	94 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	160 de
Lumax / Halex GT + NIS + AMS	1.5 qt / 3.6 pt + 0.25% + 2 qt	81 b	98 a	96 ab	97 a	91 ab	98 a	98 a	98 a	97 a	98 a	98 a	98 a	98 a	168 a-d
Bicep Lite II Magnum / Halex GT + NIS + AMS	1 qt / 3.6 pt + 0.25% + 2 qt	71 d	98 a	96 ab	95 ab	86 bc	98 a	98 a	98 a	97 a	98 a	98 a	97 a	98 a	164 b-e
Aatrex / Halex GT + NIS + AMS	1 qt / 3.6 pt + 0.25% + 2 qt	75 cd	98 a	96 ab	94 a-c	93 a	98 a	98 a	98 a	97 ab	98 a	98 a	98 a	98 a	159 de
Harness Xtra / Roundup Powermax + AMS	1.25 qt / 22 oz + 2 qt	86 a	98 a	95 ab	94 a-c	96 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	174 ab
Surestart / Durango DMA + AMS	1.75 pt / 24 oz + 2 qt	81 ab	98 a	93 bc	94 a-c	83 cd	98 a	98 a	98 a	96 ab	98 a	98 a	98 a	98 a	163 b-e
Dual II Magnum / Callisto + Aatrex + COC + AMS	1 pt / 3 oz + 0.5 pt + 1% + 2 qt	72 d	86 c	83 d	83 e	83 cd	98 a	98 a	98 a	97 ab	98 a	98 a	98 a	98 a	160 c-e
Dual II Magnum / Impact + Aatrex + COC + AMS	1 pt / 0.5 oz + 0.5 pt + 1% + 2 qt	74 cd	95 b	91 c	91 cd	73 e	98 a	98 a	98 a	96 ab	98 a	98 a	98 a	98 a	162 b-e
Dual II Magnum / Laudis + Aatrex + COC + AMS	1 pt / 3 oz + 0.5 pt + 1% + 2 qt	79 bc	96 ab	91 c	93 b-d	80 d	98 a	98 a	98 a	94 b	98 a	98 a	98 a	98 a	173 ab
Dual II Magnum / Status + Aatrex + COC + AMS	1 pt / 5 oz + 0.5 pt + 1% + 2 qt	64 e	86 c	85 d	83 e	78 de	97 b	98 a	98 a	91 c	97 b	98 a	98 a	98 a	154 e
POST I (3 to 4-inch weeds)															
Roundup Powermax + AMS	22 oz + 2 qt	0 f	97 ab	91 c	91 d	0 f	98 a	97 b	97 b	0 d	98 a	98 a	91 b	98 a	173 a-c
Halex GT + NIS + AMS	3.6 pt + 0.25% + 2 qt	0 f	97 ab	96 ab	97 a	0 f	98 a	98 a	98 a	0 d	98 a	98 a	98 a	98 a	173 ab
Halex GT + Aatrex + NIS + AMS	3.6 pt + 1 pt + 0.25% + 2 qt	0 f	98 a	94 b	96 ab	0 f	98 a	98 a	98 a	0 d	98 a	98 a	98 a	98 a	178 a
Roundup Powermax + Laudis + AMS	22 oz + 3 oz + 2 qt	0 f	98 a	91 c	91 cd	0 f	98 a	98 a	98 a	0 d	98 a	98 a	97 a	98 a	160 c-e
Surestart + Durango DMA + AMS	1.75 pt + 24 oz + 2 qt	0 f	97 ab	97 a	97 a	0 f	98 a	98 a	98 a	0 d	98 a	98 a	98 a	98 a	173 ab
Roundup Powermax + Status + AMS	22 oz + 2.5 oz + 2 qt	0 f	98 a	93 bc	93 b-d	0 f	98 a	98 a	98 a	0 d	98 a	98 a	98 a	98 a	164 b-e
Roundup Powermax + Impact + AMS	22 oz + 0.5 oz + 2 qt	0 f	98 a	91 c	91 d	0 f	98 a	98 a	98 a	0 d	98 a	98 a	97 a	98 a	164 b-e
Halex GT + Northstar + NIS + AMS	3.6 pt + 2.5 oz + 0.25% + 2 qt	0 f	97 ab	95 ab	96 ab	0 f	98 a	98 a	98 a	0 d	98 a	98 a	98 a	98 a	163 b-e
Sequence + Northstar + AMS	3 pt + 2.5 oz + 2 qt	0 f	98 a	95 ab	97 a	0 f	98 a	98 a	98 a	0 d	98 a	98 a	98 a	98 a	170 a-d
POST I (3 to 4-inch weeds)/POST II (regrowth)															
Roundup Powermax + AMS / Roundup Powermax + AMS	22 oz + 2 qt / 22 oz + 2 qt	0 f	98 a	97 a	97 a	0 f	98 a	98 a	98 a	0 d	98 a	98 a	98 a	98 a	171 a-d
Checks															
Weedy check		0 f	0 d	0 e	0 f	0 f	0 c	0 c	0 c	0 d	0 c	0 b	0 c	80 f	
	LSD (0.10)	5.4	2.6	2.8	3.1	6.2	0.4	0.4	.04	2.7	0.4	ns	1.3	12.5	

^a NIS = nonionic surfactant; AMS = liquid spray grade ammonium sulfate; COC = crop oil concentrate.

^b Yield adjusted to 15.5% moisture.