

Annual weed control with Lumax, Callisto, and Halex GT in glyphosate resistant corn at Lamberton, MN in 2007. Getting, Jodie K. 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 6.5 and soil test P and K levels of 26 and 332 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 2006 and was fall chiseled. The area was fertilized with 150 lbs/A nitrogen applied as urea. On April 30, 2007, Pioneer '35F40' glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. Tefluthrin (Force) was applied at 5.0 oz/1000 row feet in a T-band for the control of northern corn rootworm larvae. 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 1	May 21	May 31	June 11
Treatment	PRE	POST I	POST II	POST III
Temperature (F)				
air	64	66	52	78
soil (4 inch)	66	66	60	70
Relative humidity (%)	34	68	88	70
Wind (mph)	NW 7	S 10	SW 8	S 6
Sky	clear	clear	clear	clear
Soil moisture	dry	dry	dry	dry
Corn				
leaf no.	-	V3	V5	V7
height (inch)	-	3.5	11	21
Green foxtail				
leaf no.	-	2 to 3	3 to 5	1 to 2
height (inch)	-	1 to 1.5	4 to 6	0.5 to 1.0
no./ft ²	-	34	18	1
Common lambsquarters				
leaf no.	-	2 to 3	6 to 8	-
height (inch)	-	0.5 to 1.0	3 to 4	-
no./ft ²	-	2	1	-
Tall waterhemp				
leaf no.	-	2 to 3	3 to 5	1 to 2
height (inch)	-	0.5 to 1.0	3 to 4	0.5 to 1.0
no./ft ²	-	9	9	1
Rainfall after application (inch)				
1 week	1.83	0.27	1.90	1.43
2 week	0.15	1.97	0.19	0.17
3 week	0.06	0.24	1.43	0.00

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

Table. Annual weed control with Lumax, Callisto, and Halex GT in glyphosate resistant corn at Lamberton, MN in 2007 (Getting).

Treatment ^a	Rate (oz/A, pt/A, qt/A, or %)	Green foxtail				Common lambsquarters				Tall waterhemp				Yield ^b (bu/A)
		5/30	6/7	6/19	8/22	5/30	6/7	6/19	8/22	5/30	6/7	6/19	8/22	
		-----(% control)-----												
<u>Preemergence/POST II (3 to 4-inch weeds)</u>														
Lumax / Touchdown Total + AMS	1.5 qt + 24 oz + 2 qt	81	100	94	95	99	100	100	98	99	100	100	98	179
Harness Xtra / Roundup Original Max + AMS	1.2 qt + 22 oz + 2 qt	88	100	98	97	98	100	100	98	97	100	100	98	176
Dual II Magnum / Touchdown Total + AMS	1.34 pt / 24 oz + 2 qt	83	100	97	97	85	100	100	98	88	100	100	98	178
Dual II Magnum / Touchdown Total + Callisto + AMS	1.34 pt / 24 oz + 3 oz + 2 qt	75	100	96	93	73	100	100	98	85	100	100	97	172
Surestart / Roundup Original Max + AMS	1.75 pt / 22 oz + 2 qt	78	100	94	93	97	100	100	98	98	100	100	97	179
Outlook / Roundup Original Max + Status + AMS	12 oz / 22 oz + 2.5 oz + 2 qt	71	100	95	93	81	100	100	97	92	100	100	98	181
Dual II Magnum / Callisto + Aatrex + COC + AMS	2 pt / 3 oz + 1 pt + 1% + 2 qt	83	98	91	91	85	100	100	98	96	100	100	98	173
Define / Laudis + Aatrex + MSO + AMS	20 oz / 3 oz + 1 pt + 1% + 2 qt	70	100	95	93	84	100	100	97	71	100	100	98	182
Outlook / Impact + Aatrex + COC + AMS	21 oz / 0.5 oz + 1 pt + 1% + 2 qt	89	100	97	97	97	100	100	98	97	100	100	98	178
Lumax / Halex GT + NIS + AMS	1.5 qt / 3.6 pt + 0.25% + 2 qt	81	100	98	97	100	100	100	98	100	100	100	98	181
<u>POST I (1 to 3-inch weeds)</u>														
Halex GT + NIS + AMS	4 pt + 0.25% + 2 qt	100	98	91	90	100	100	100	98	100	100	100	98	184
Halex GT + Aatrex + NIS + AMS	4 pt + 1 pt + 0.25% + 2qt	100	99	92	91	100	100	100	98	100	100	100	98	177
Roundup Original Max + Laudis + AMS	22 oz + 3 oz + 2 qt	100	91	81	78	100	100	99	96	100	99	95	91	175
<u>POST II (3 to 4-inch weeds)</u>														
Roundup Original Max + AMS	22 oz + 2 qt	0	100	91	90	0	100	95	91	0	97	84	79	176
<u>POST II (3 to 4-inch weeds)/ POST III (regrowth)</u>														
Roundup Original Max + AMS / Roundup Original Max + AMS	22 oz + 2 qt / 22 oz + 2 qt	0	100	98	96	0	100	100	98	0	96	100	98	176
<u>Check</u>														
Weedy check	-	0	0	0	0	0	0	0	0	0	0	0	0	96
	LSD (0.10)	5.5	1.2	2.3	2.9	5.8	ns	1.0	1.5	4.7	1.6	0.7	1.2	15.1

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

^b Yield adjusted to 15.5% moisture.