

Annual weed control with Balance Flexx, Capreno, and Corvus in corn at Lamberton, MN in 2008.

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The objective of this study was to evaluate Balance Flexx, Capreno, and Corvus in Liberty-Link and Roundup Ready corn for annual grass and broadleaf weed control in corn. This study was conducted on a Normania loam soil containing 3.8% organic matter, pH 6.1 and soil test P and K levels of 64 and 296 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 oats in 2007 and was fall chiseled. The area was fertilized with 150 lbs of nitrogen applied as anhydrous ammonia. 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 15	May 28	June 10
Treatment	PRE	POST I	POST II
Temperature (F)			
air	63	55	66
soil (4 inch)	62	58	66
Relative humidity (%)	52	51	52
Wind (mph)	NW 5	SE 10	NW 10
Sky	cloudy	cloudy	clear
Soil moisture	dry	dry	dry
Corn			
leaf no.	-	1-collar	4-collar
height (inch)	-	0.75	6
Yellow foxtail			
leaf no.	-	1	2 to 4
height (inch)	-	0.75	2 to 4
no./ft ²	-	58	102
Common lambsquarters			
leaf no.	-	1 to 2	2 to 5
height (inch)	-	0.75	1 to 3
no./ft ²	-	1	1
Tall waterhemp			
leaf no.	-	Cotyledon	2 to 4
height (inch)	-	0.25	1 to 3
no./ft ²	-	2	3
Rainfall after application (inch)			
1 week	0.10	0.87	1.05
2 week	0.50	1.80	0.00
3 week	0.58	1.02	0.61

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

Table. Annual weed control with Balance Flexx, Capreno, and Corvus in corn at Lamberton, MN in 2008 (Getting).

Treatment ^a	Rate (oz/A, pt/A, qt/A, lb/A or %)	Yellow foxtail				Common lambsquarters				Tall waterhemp				Yield ^b (bu/A)
		Jun 4	Jun 20	Jul 11	Aug 19	Jun 4	Jun 20	Jul 11	Aug 19	Jun 4	Jun 20	Jul 11	Aug 19	
Preemergence/POST II (2 to 4-inch weeds)														
Balance Flexx / Ignite 280 + Laudis + AMS	3 oz / 22 oz + 2 oz + 3 qt	38 d	97 ab	87 b-e	88 b-f	95 a	98 a	98 a	98 a	95 ab	98 a	97 ab	97 ab	172 a-f
Balance Flexx / Ignite 280 + Aatrex + AMS	3 oz / 22 oz + 1 pt + 3 qt	30 d	98 a	87 b-e	87 c-f	94 a	98 a	98 a	98 a	85 c	98 a	98 a	97 ab	176 a-e
Balance Flexx / Capreno + Aatrex + COC + 28%N	3 oz / 3 oz + 1 pt + 1% + 1.5 qt	30 d	98 a	86 b-e	88 b-f	95 a	98 a	98 a	97 ab	96 ab	98 a	97 ab	95 a-c	165 d-g
Balance Flexx / Capreno + MSO + 28%N	3 oz / 3 oz + 1% + 1.5 qt	35 d	97 ab	88 a-d	89 b-e	98 a	98 a	98 a	98 a	97 ab	98 a	97 ab	97 ab	170 b-g
Corvus / Ignite 280 + Laudis + AMS	3 oz / 22 oz + 2 oz + 3 qt	48 c	98 a	87 b-e	86 d-h	87 b	98 a	98 a	97 ab	93 b	98 a	98 a	97 a-c	173 a-f
Corvus / Laudis + Aatrex + COC + 28%N	2.5 oz / 2 oz + 1 pt + 1% + 1.5 qt	38 d	95 a-d	89 a-d	90 b-d	77 c	98 a	98 a	98 a	86 c	98 a	98 a	97 ab	167 c-g
Corvus / Laudis + Aatrex + MSO + 28%N	2.5 oz / 2 oz + 1 pt + 1% + 1.5 qt	48 c	96 a-c	86 b-e	86 c-g	97 a	98 a	98 a	97 ab	97 ab	98 a	97 ab	97 ab	171 a-f
Harness Xtra / Roundup Powermax + AMS	1.3 qt / 22 oz + 3 qt	84 b	98 a	89 a-c	88 b-f	95 a	98 a	98 a	98 a	98 a	98 a	97 ab	96 a-c	164 e-g
Lumax / Lumax + NIS	1.5 qt / 1.5 qt + 0.25%	54 c	91 f	78 gh	76 j	95 a	98 a	98 a	97 bc	93 ab	98 a	96 a-c	94 a-d	171 b-f
POST I (1-collar corn)														
Balance Flexx + Aatrex	5 oz + 1 pt	89 ab	95 b-d	89 a-c	90 b-d	98 a	98 a	98 a	98 a	98 a	98 a	98 a	97 ab	173 a-f
Balance Flexx + Aatrex	6 oz + 1 pt	90 ab	93 d-f	89 a-c	90 b-d	98 a	98 a	98 a	98 a	98 a	98 a	98 a	97 a-c	169 b-g
Corvus + Aatrex	4.5 oz + 1 pt	93 ab	95 b-d	90 a-c	92 ab	97 a	98 a	98 a	98 a	97 ab	98 a	98 a	98 a	154 d-g
Corvus + Aatrex	5.6 oz + 1 pt	93 ab	95 a-d	88 a-d	90 bc	97 a	98 a	98 a	97 ab	97 ab	98 a	98 a	97 ab	147 g
Lumax + NIS	2.5 qt + 0.25%	94 a	95 a-d	85 c-f	85 e-h	98 a	98 a	98 a	97 ab	98 a	98 a	95 a-c	93 c-e	150 fg
POST II (2 to 4-inch weeds)														
Laudis + Ignite 280 + Aatrex + AMS	2 oz + 22 oz + 1 pt + 3 qt	0 e	97 a-c	76 h	79 ij	0 d	98 a	98 a	97 bc	0 d	98 a	95 a-c	93 b-e	178 a-d
Laudis + Aatrex + Roundup Powermax + AMS	3 oz + 1 pt + 11 oz + 3 qt	0 e	98 a	85 c-f	84 f-h	0 d	98 a	98 a	97 bc	0 d	98 a	96 a-c	93 b-e	177 a-e
Laudis + Aatrex + MSO + 28%N	3 oz + 1 pt + 1% + 1.5 qt	0 e	97 ab	81 fg	82 hi	0 d	98 a	98 a	97 bc	0 d	98 a	93 c	90 e	168 b-g
Capreno + Aatrex + COC + 28%N	3 oz + 1 pt + 1% + 1.5 qt	0 e	91 ef	84 d-f	84 f-h	0 d	98 a	98 a	97 ab	0 d	98 a	97 ab	95 a-c	185 a
Capreno + Aatrex + MSO + 28%N	3 oz + 1 pt + 1% + 1.5 qt	0 e	94 c-e	81 fg	83 g-i	0 d	98 a	98 a	96 c	0 d	98 a	93 c	90 e	169 b-g
Capreno + Ignite 280 + AMS	3 oz + 22 oz + 3 qt	0 e	95 a-d	83 ef	85 e-h	0 d	98 a	98 a	96 c	0 d	98 a	94 bc	91 de	180 a-c
Capreno + Ignite 280 + Aatrex + AMS	3 oz + 22 oz + 1 pt + 3 qt	0 e	97 ab	86 b-e	86 c-g	0 d	98 a	98 a	97 bc	0 d	98 a	96 a-c	94 a-d	175 a-e
Capreno + Roundup Powermax + AMS	3 oz + 22 oz + 3 qt	0 e	97 ab	91 ab	90 bc	0 d	98 a	98 a	97 bc	0 d	98 a	94 b-c	93 c-e	179 a-c
Halex GT + NIS + AMS	3.6 qt + 0.25% + 3 qt	0 e	98 a	92 a	94 a	0 d	98 a	98 a	98 a	0 d	98 a	97 ab	97 a-c	181 ab
Check														
Weedy check	-	0 e	0 g	0 i	0 k	0 d	0 b	0 b	0 d	0 d	0 b	0 d	0 f	96 h
	LSD (0.10)	9.2	2.9	4.7	4.1	5.8	ns	ns	1.3	5.2	ns	3.5	4.3	13.2

^a COC = crop oil concentrate; MSO = methylated seed oil; NIS = nonionic surfactant; 28%N = an aqueous solution of urea and ammonium nitrate; AMS = liquid spray grade ammonium sulfate.

^b Yield adjusted to 15.5% moisture.