

Annual weed control with Corvus, Balance Flexx and Capreno in corn at Lamberton, MN in 2009.

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The objective of this study was to evaluate Corvus, Balance Flexx and Capreno for annual grass and annual broadleaf weed control in corn. This study was conducted on a Normania loam soil containing 4.2% organic matter, pH 6.1 and soil test P and K levels of 68 and 376 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 2008 and was fall chiseled. The area was fertilized with 170-60-60. On May 11, 2009, Pioneer '35F44' 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 11	May 28	June 2
Treatment	PRE	POST I	POST II
Temperature (F)			
air	68	48	59
soil (4 inch)	62	58	64
Relative humidity (%)	28	71	55
Wind (mph)	S 10	SW 5	N 8
Sky	clear	clear	cloudy
Soil moisture	dry	dry	dry
Corn			
leaf no.	-	V1	V3
height (inch)	-	3	5
Yellow foxtail			
leaf no.	-	1 to 2	2 to 4
height (inch)	-	0.5 to 2	2 to 5
no./ft ²	-	47	50
Common lambsquarters			
leaf no.	-	1	2 to 5
height (inch)	-	0.5 to 1.0	2 to 4
no./ft ²	-	5	4
Tall waterhemp			
leaf no.	-	1	1 to 3
height (inch)	-	0.25 to 0.5	1 to 2
no./ft ²	-	6	4
Rainfall after application (inch)			
1 week	0.01	0.05	1.38
2 week	0.34	1.40	1.03
3 week	0.16	1.02	0.39

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

Table. Annual weed control with Corvus, Balance Flexx and Capreno in corn at Lamberton, MN in 2009 (Getting).

Treatment ^a	Rate (oz/A, pt/A, lb/A or %)	Injury	Yellow foxtail				Common lambsquarters				Tall waterhemp				Yield ^b (bu/A)
		Jun 2 (%)	Jun 2	Jun 12	Jun 24	Aug 18	Jun 2	Jun 12	Jun 24	Aug 18	Jun 2	Jun 12	Jun 24	Aug 18	
Preemergence															
Corvus	5.6 oz	0 c	45 c	40 c	33 c	28 d	50 bc	40 b	33 b	25 c	70 b	55 b	45 c	40 c	155 b
Balance Flexx	6 oz	0 c	43 c	28 d	20 d	30 d	53 b	38 b	38 b	25 c	65 b	48 c	53 b	38 c	144 b
POST I (1-collar corn)															
Corvus + atrazine + NIS	5.6 oz + 1 pt + 0.25%	4 b	94 a	98 a	94 a	90 ab	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	219 a
Balance Flexx + atrazine + NIS	6 oz + 1 pt + 0.25%	8 a	93 a	86 b	88 b	88 b	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	213 a
Capreno + atrazine + COC + AMS	3 oz + 1 pt + 1% + 1.5 lb	0 c	98 a	97 a	86 b	80 c	99 a	99 a	97 a	90 b	99 a	99 a	92 a	84 b	221 a
Preemergence/POST II (3-collar corn)															
Corvus / Laudis + atrazine + MSO + AMS	3 oz / 3 oz + 1 pt + 1% + 1.5 lb	0 c	28 d	98 a	96 a	91 ab	35 de	99 a	99 a	98 a	35 de	99 a	99 a	97 a	221 a
Balance Flexx / Laudis + atrazine + MSO + AMS	3 oz / 3 oz + 1 pt + 1% + 1.5 lb	0 c	23 d	98 a	97 a	90 ab	38 de	99 a	99 a	99 a	30 ef	99 a	99 a	99 a	216 a
Corvus / Ignite 280 + Laudis + AMS	3 oz / 22 oz + 2 oz + 1.5 lb	0 c	25 d	97 a	95 a	90 ab	28 e	99 a	99 a	99 a	43 d	99 a	99 a	98 a	218 a
Balance Flexx / Ignite 280 + Laudis + AMS	3 oz / 22 oz + 2 oz + 1.5 lb	0 c	30 d	98 a	96 a	89 ab	35 de	99 a	99 a	99 a	30 ef	99 a	99 a	98 a	226 a
Corvus / Capreno + atrazine + COC + AMS	3 oz / 3 oz + 1 pt + 1% + 1.5 lb	0 c	25 d	98 a	97 a	94 a	30 de	99 a	99 a	99 a	23 f	99 a	99 a	99 a	224 a
Balance Flexx / Capreno + atrazine + COC + AMS	3 oz / 3 oz + 1 pt + 1% + 1.5 lb	0 c	23 d	98 a	96 a	92 ab	35 de	99 a	99 a	99 a	28 ef	99 a	99 a	99 a	214 a
Harness / Roundup Weathermax + AMS	1.25 pt / 22 oz + 1.5 lb	0 c	58 b	97 a	96 a	91 ab	40 cc	97 a	99 a	97 a	55 c	99 a	99 a	97 a	219 a
Checks															
Weedy check	-	0 c	0 e	0 e	0 e	0 e	0 f	0 c	0 c	0 d	0 g	0 d	0 d	0 d	89 c
	LSD (0.10)	1.1	8.4	3.4	5.1	5.2	10.2	7.6	5.2	5.4	9.7	6.6	6.9	4.6	13.4

^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.