

Annual weed control with Dual II Magnum applied in the Fall and PRE in corn at Lamberton, MN in 2010.

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The objective of this study was to evaluate Dual II Magnum at two application timings: Fall and preemergence for annual grass and annual 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 soybeans in 2009 and was fall chiseled. The area was fertilized with 135 lbs nitrogen as anhydrous ammonia prior to fall herbicide application. On May 5, 2010, Dekalb 'DK 53-78' glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. The entire trail was field cultivated prior to planting. 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	Nov 23	May 6	June 2
Treatment	Fall	PRE	POST
Temperature (F)			
air	46	41	72
soil (4 inch)	42	46	70
Relative humidity (%)	87	66	31
Wind (mph)	S 8	N 7	N 10
Sky	cloudy	cloudy	clear
Soil moisture	dry	dry	dry
Corn			
leaf no.	-	-	V4
height (inch)	-	-	8
Yellow foxtail, Barnyardgrass			
leaf no.	-	-	2 to 4
height (inch)	-	-	2 to 4
no./ft ²	-	-	11
Common lambsquarters			
leaf no.	-	-	3 to 5
height (inch)	-	-	1 to 3
no./ft ²	-	-	1
Redroot pigweed			
leaf no.	-	-	1 to 3
height (inch)	-	-	1 to 3
no./ft ²	-	-	2
Rainfall after application (inch)			
1 week	0.33	1.79	0.75
2 week	0.09	0.00	2.55
3 week	0.19	0.20	1.44

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

Table. Annual weed control with Dual II Magnum applied in the Fall and PRE in corn at Lamberton, MN in 2010 (Getting).

Treatment ^a	Rate	Yellow foxtail				Common lambsquarters				Redroot pigweed				Yield ^b (bu/A)
		May 5	Jun 2	Jun 15	Aug 17	May 5	Jun 2	Jun 15	Aug 17	May 5	Jun 2	Jun 15	Aug 17	
Fall / POST (2 to 4-inch weeds)														
Dual II Magnum/	1.2 pt /					-----(% control)-----								
Halex GT + NIS + AMS	3.6 pt + 0.25% + 2.5%	84 a	88 b	99 a	97 bc	53 a	69 c	98 a	98 a	-	76 c	99 a	98 a	229 a
Dual II Magnum/	2 pt /													
Halex GT + NIS + AMS	3.6 pt + 0.25% + 2.5%	85 a	91 ab	99 a	98 a	48 a	73 c	99 a	98 a	-	86 b	99 a	98 a	228 a
PRE / POST (2 to 4-inch weeds)														
Dual II Magnum/	1.2 pt /													
Halex GT + NIS + AMS	3.6 pt + 0.25% + 2.5%	0 b	94 a	99 a	98 a	0 b	84 b	98 a	98 a	-	93 ab	99 a	98 a	229 a
Dual II Magnum/	2 pt /													
Halex GT + NIS + AMS	3.6 pt + 0.25% + 2.5%	0 b	94 a	99 a	97 ab	0 b	91 a	98 a	98 a	-	94 a	99 a	98 a	234 a
POST (2 to 4-inch weeds)														
Halex GT + NIS + AMS	3.6 pt + 0.25% + 2.5%	0 b	0 c	96 b	96 c	0 b	0 d	96 b	98 a	-	0 d	99 a	98 a	228 a
Checks														
Weedy check		0 b	0 c	0 c	0 d	0 b	0 d	0 c	0 b	-	0 d	0 b	0 b	172 b
	LSD (0.10)	3.4	4.7	0.8	1.5	10.4	7.3	2.0	ns	-	7.3	ns	ns	8.7

^a NIS = nonionic surfactant; AMS = liquid spray grade ammonium sulfate.

^b Yield adjusted to 15.5% moisture.