

Annual weed control with Realm Q tank mixed with Abundit, Ignite, or atrazine in corn at Lamberton, MN in 2011.

Getting, Jodie K.

The objective of this study was to evaluate Realm Q tank mix combinations for annual grass and annual broadleaf weed control in corn. This study was conducted on a Normania loam soil containing 4.3% organic matter, pH 6.3 and soil test P and K levels of 60 and 306 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 2010 and was fall chiseled. The area was fertilized with 150-60-60. On May 17, 2011, Dekalb 'DK 48-12' glufosinate resistant/glyphosate resistant field corn was planted in 30-inch rows at a seeding rate of 36,000 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 18	June 6	June 28
Treatment	PRE	POST I	POST II
Temperature (F)			
air	45	82	68
soil (4 inch)	58	78	76
Relative humidity (%)	40	58	60
Wind (mph)	calm	NW 5	NW 6
Sky	clear	clear	clear
Soil moisture	dry	dry	dry
Corn			
leaf no.	-	V3	V7
height (inch)	-	6	23
Yellow foxtail			
leaf no.	-	2 to 3	2 to 4
height (inch)	-	1 to 2	3 to 5
no./ft ²	-	33	5
Common lambsquarters			
leaf no.	-	1 to 3	-
height (inch)	-	0.5 to 1.0	-
no./ft ²	-	3	-
Tall waterhemp			
leaf no.	-	1 to 2	2 to 4
height (inch)	-	0.25 to 1.0	1 to 3
no./ft ²	-	10	< 1
Rainfall after application (inch)			
1 week	1.84	0.29	0.48
2 week	0.91	4.75	1.15
3 week	0.00	3.40	1.09

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

Table. Annual weed control with Realm Q tank mixed with Abundit, Ignite, or atrazine in corn at Lamberton, MN in 2011 (Getting).

Treatment ^a	Rate	Yellow foxtail				Common lambsquarters				Tall waterhemp				Yield ^d (bu/A)	
		Jun 13	Jun 27	Jul 26	Sep 9	Jun 13	Jun 27	Jul 26	Sep 9	Jun 13	Jun 27	Jul 26	Sep 9		
PRE/POST I (3-collar corn)		-----(% control)-----													
Breakfree / Realm Q + Abundit S + AMS	1 pt /4 oz + 32 oz + 3.4 lb	98 a	97 a	89 cc	89 bc	98 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	202 a
Breakfree / Abundit S + AMS	1 pt / 32 oz + 3.4 lb	98 a	97 a	86 de	85 cc	98 a	98 a	97 b	97 b	98 a	98 a	95 c	97 b	196 a	
POST I (3-collar corn)															
Realm Q + Abundit S + AMS	4 oz + 32 oz + 3.4 lb	98 a	97 a	84 ef	84 cc	98 a	98 a	97 b	97 b	98 a	98 a	97 ab	97 b	201 a	
Realm Q + Ignite + AMS	4 oz + 22 oz + 3.4 lb	96 b	92 c	80 f	78 e	98 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	194 a	
Breakfree + Realm Q + Abundit S + AMS	1 pt + 4 oz + 32 oz + 3.4 lb	97 ab	98 a	94 ab	94 ab	98 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	197 a	
Realm Q + Abundit S + Atrazine + AMS	4 oz + 32 oz + 1 pt + 3.4 lb	98 a	94 b	83 ef	83 de	98 a	98 a	97 ab	97 ab	98 a	98 a	96 bc	97 ab	194 a	
Halex GT + Atrazine + NIS	3.6 pt + 1 pt + 0.25%	98 a	98 a	93 bc	93 ab	98 a	98 a	98 a	98 a	98 a	98 a	97 ab	98 a	191 a	
POST I (3-collar corn)/ POST II (regrowth)															
Realm Q + COC + AMS / Abundit S + AMS	4 oz + 1% + 3.4 lb / 32 oz + 3.4 lb	93 c	94 b	98 a	98 a	97 b	98 a	98 a	98 a	98 a	98 a	98 a	98 a	202 a	
Checks															
Weedy check	-	0 d	0 d	0 g	0 f	0 c	0 b	0 c	0 c	0 b	0 b	0 d	0 c	134 b	
	LSD (0.10)	1.9	2.0	4.7	5.2	0.6	ns	1.1	1.1	ns	ns	2.0	1.0	13.4	

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

^d Yield adjusted to 15.5% moisture.