

**Annual weed control with Instigate, Breakfree, Realm Q, and Abundit in corn at Lamberton, MN in 2012.**

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The objective of this study was to evaluate Instigate applied preemergence followed by Realm Q or Abundit for annual grass and annual broadleaf weed control in corn. This study was conducted on a Normania loam soil containing 4.1% organic matter, pH 5.6 and soil test P and K levels of 72 and 364 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 2011 and was fall chiseled. The area was fertilized with 150 lbs of nitrogen as urea. On May 15, 2012, 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 densities and sizes in the weedy check and rainfall data are listed below:

Date	May 16	June 12
Treatment	PRE	POST
Temperature (F)		
air	66	68
soil (4 inch)	68	80
Relative humidity (%)	32	33
Wind (mph)	calm	calm
Sky	clear	p. cloudy
Soil moisture	dry	dry
Corn		
leaf no.	-	V5
height (inch)	-	10
Yellow foxtail		
leaf no.	-	2 to 4
height (inch)	-	2 to 4
no./ft <sup>2</sup>	-	4
Common lambsquarters		
leaf no.	-	3 to 4
height (inch)	-	1 to 3
no./ft <sup>2</sup>	-	1
Tall waterhemp		
leaf no.	-	2 to 3
height (inch)	-	1 to 3
no./ft <sup>2</sup>	-	3
Rainfall after application (inch)		
1 week	0.53	0.27
2 week	4.52	0.53
3 week	0.47	0.00

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

**Table. Annual weed control with Instigate, Breakfree, Realm Q, and Abundit in corn at Lamberton, MN in 2012 (Getting).**

Treatment <sup>a</sup>	Rate	Yellow foxtail				Common lambsquarters				Tall waterhemp				Yield <sup>b</sup> (bu/A)	
		Jun 12	Jun 19	Jul 3	Aug 20	Jun 12	Jun 19	Jul 3	Aug 20	Jun 12	Jun 19	Jul 3	Aug 20		
<b>Preemergence/POST (5-collar corn)</b>	(oz/A, pt/A, qt/A, lb/A or %)	-----(% control)-----													
Instigate / Realm Q + Abundit + AMS	6 oz / 4 oz + 32 oz + 2 qt	93 bc	99 a	99 a	93 b	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	154 a
Instigate + Breakfree AZT Lite / Abundit + AMS	6 oz + 3 pt / 32 oz + 2 qt	92 c	99 a	99 a	98 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	161 a
Instigate + Breakfree AZT Lite / Abundit + AMS	6 oz + 4 pt / 32 oz + 2 qt	98 a	99 a	99 a	98 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	161 a
Instigate + Breakfree / Abundit + AMS	6 oz + 1.25 pt / 32 oz + 2 qt	97 a	99 a	98 a	97 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	154 a
Instigate + Breakfree / Abundit + AMS	6 oz + 2.5 pt / 32 oz + 2 qt	96 ab	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	157 a
Lumax / Abundit + AMS	2.5 qt / 32 oz + 2 qt	95 a-c	99 a	98 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	99 a	159 a
<b>Check</b>															
Weedy check		0 d	0 b	0 b	0 c	0 b	0 b	0 b	0 b	0 b	0 b	0 b	0 b	0 b	129 b
	LSD (0.10)	3.6	ns	1.3	2.1	ns	ns	ns	ns	ns	ns	ns	ns	ns	10.8

<sup>a</sup> AMS = liquid spray grade ammonium sulfate.

<sup>b</sup> Yield adjusted to 15.5% moisture.