

Effect of adjuvants tank-mixed with Ignite 280 and Laudis on annual weed control in corn at Lamberton, MN in 2009.

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The objective of this study was to evaluate the effects of adjuvants tank-mixed with Ignite 280 and Laudis on annual grass and annual broadleaf weed control in corn. This study was conducted on a Ves loam soil containing 4.3% organic matter, pH 6.7 and soil test P and K levels of 38 and 390 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 2008 and was fall chiseled. The area was fertilized with 150 lbs of nitrogen. On May 6, 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	June 1
Treatment	POST
Temperature (F)	
air	73
soil (4 inch)	72
Relative humidity (%)	31
Wind (mph)	NE 6
Sky	clear
Soil moisture	dry
Corn	
leaf no.	V3
height (inch)	5
Green foxtail	
leaf no.	2 to 4
height (inch)	3 to 5
no./ft ²	25
Common lambsquarters	
leaf no.	4 to 6
height (inch)	2 to 4
no./ft ²	7
Tall waterhemp	
leaf no.	3 to 4
height (inch)	2 to 4
no./ft ²	12
Rainfall after application (inch)	
1 week	1.36
2 week	0.13
3 week	1.22

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

Table. Effect of adjuvants tank-mixed with Ignite 280 and Laudis on annual weed control in corn at Lamberton, MN in 2009 (Getting).

Treatment ^a	Rate (oz/A, pt/A, qt/A, or %)	Green foxtail				Common lambsquarters				Tall waterhemp				Yield ^c (bu/A)
		Jun 9	Jun 16	Jun 24	Aug 18	Jun 9	Jun 16	Jun 24	Aug 18	Jun 9	Jun 16	Jun 24	Aug 18	
		-----(% control)-----												
POST (3 to 5-inch weeds)														
Ignite 280 + AMS	22 oz + 1.5 lb	95 a	95 b	89 b	81 a	81 e	83 c	74 b	70 b	96 a	92 c	85 c	81 c	188 a
Laudis + MSO + AMS	2 oz + 1 pt + 1.5 lb	63 b	71 c	71 c	66 b	48 f	91 b	97 a	96 a	71 b	95 b	95 b	92 b	189 a
Ignite 280 + Laudis + AMS	22 oz + 2 oz + 1.5 lb	95 a	99 a	91 a	85 a	95 ab	99 a	98 a	95 a	97 a	99 a	95 b	94 ab	193 a
Ignite 280 + Laudis + WeatherGuard Complete	22 oz + 2 oz + 2 qt/100 gal	95 a	99 a	91 a	85 a	85 de	99 a	99 a	95 a	96 a	99 a	95 b	94 ab	200 a
Ignite 280 + Laudis + Array	22 oz + 2 oz + 9 lb/100 gal	96 a	99 a	91 a	84 a	96 a	99 a	99 a	95 a	97 a	99 a	97 ab	95 a	203 a
Ignite 280 + Laudis + Class Act + Interlock	22 oz + 2 oz + 5 qt/100 gal + 4 oz	96 a	99 a	91 a	83 a	90 c-d	99 a	98 a	95 a	97 a	99 a	96 ab	95 a	194 a
Ignite 280 + Laudis + Guardian Plus	22 oz + 2 oz + 2.5 gal/100 gal	96 a	99 a	91 a	84 a	93 ab	99 a	97 a	94 a	97 a	99 a	95 b	95 a	197 a
Ignite 280 + Laudis + Hel-Fire + Grounded	22 oz + 2 oz + 2 pt/100 gal + 1 gal/100 gal	94 a	98 a	90 ab	81 a	81 e	99 a	97 a	95 a	97 a	99 a	97 ab	95 a	194 a
Ignite 280 + Laudis + DoubleDowr	22 oz + 2 oz + 2.5 gal/100 gal	96 a	99 a	90 ab	83	95 ab	99 a	98 a	95 a	97 a	99 a	97 ab	95 a	197 a
Ignite 280 + Laudis + Border Xtra 8L	22 oz + 2 oz + 2.5 gal/100 gal	95 a	98 a	90 ab	85 a	91 a-c	99 a	98 a	95 a	97 a	99 a	95 b	95 a	192 a
Ignite 280 + Laudis + Bronc Max EDT	22 oz + 2 oz + 2 qt/100 gal	94 a	99 a	91 ab	83 a	91 a-c	99 a	98 a	95 a	97 a	99 a	98 a	95 a	199 a
Ignite 280 + Laudis + Request + Grounded	22 oz + 2 oz + 2 qt/100 gal + 1 gal/100 gal	94 a	98 a	91 ab	83 a	86 c-e	99 a	98 a	95 a	97 a	99 a	97 ab	95 a	197 a
Checks														
Weedy check	-	0 c	0 d	0 d	0 c	0 g	0 d	0 c	0 c	0 c	0 d	0 d	0 d	49 b
	LSD (0.10)	4.6	1.7	2.0	4.2	6.1	2.2	2.0	4.0	3.3	1.8	2.5	2.9	22.8

^a MSO = methylated seed oil; AMS = spray grade ammonium sulfate.

^b Yield adjusted to 15.5% moisture.