

Annual weed control with SYN 18263, Harness, Surestart, and Verdict in corn at Lamberton, MN in 2011.

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The objective of this study was to evaluate SYN 18263, Harness, Surestart, and Verdict applied preemergence 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 9	June 28
Treatment	PRE	POST I	POST II
Temperature (F)			
air	52	57	68
soil (4 inch)	60	72	76
Relative humidity (%)	35	63	60
Wind (mph)	SE 5	NE 12	NW 6
Sky	clear	cloudy	clear
Soil moisture	dry	dry	dry
Corn			
leaf no.	-	V4	V7
height (inch)	-	7	22
Yellow foxtail			
leaf no.	-	2 to 4	2 to 4
height (inch)	-	2 to 4	3 to 5
no./ft ²	-	28	2
Common lambsquarters			
leaf no.	-	3 to 5	3 to 5
height (inch)	-	1 to 3	2 to 4
no./ft ²	-	5	< 1
Tall waterhemp			
leaf no.	-	3 to 5	2 to 4
height (inch)	-	1 to 3	1 to 3
no./ft ²	-	14	1
Rainfall after application (inch)			
1 week	1.84	5.04	0.48
2 week	0.91	2.94	1.15
3 week	0.00	0.46	1.09

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

Table. Annual weed control with SYN 18263, Harness, Surestart, and Verdict in corn at Lamberton, MN in 2011 (Getting).

Treatment ^a	Rate	Yellow foxtail				Common lambsquarters				Tall waterhemp				Yield ^b (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 II (3 to 5-inch weeds)	(oz/A, pt/A, qt/A)	-----(% control)-----												
SYN 18263 / Touchdown Total + AMS	2.4 pt / 24 oz + 3 qt	93 b	89 b	98 a	98 a	97 ab	97 ab	98 a	98 a	98 a	98 a	98 a	98 a	198 a
SYN 18263 / Touchdown Total + AMS	3.2 pt / 24 oz + 3 qt	93 b	91 b	98 a	98 a	98 a	97 a	98 a	98 a	98 a	98 a	98 a	98 a	197 a
Harness / Roundup Powermax + AMS	1.33 pt / 22 oz + 3 qt	95 a	90 b	98 a	98 a	95 b	93 b	98 a	98 a	98 a	97 ab	98 a	98 a	201 a
Surestart / Durango DMA + AMS	1.75 pt / 24 oz + 3 qt	93 b	89 b	98 a	98 a	97 ab	96 ab	98 a	98 a	95 b	95 c	98 a	98 a	202 a
Verdict / Roundup Powermax + AMS	16 oz / 22 oz + 3 qt	95 a	93 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	98 a	197 a
POST I (2 to 4-inch weeds)														
Roundup Powermax + AMS	22 oz + 2 qt	-	86 c	78 b	74 b	-	85 c	84 b	81 b	-	95 bc	78 b	75 b	192 a
Check														
Weedy check	LSD (0.10)	0 c	0 d	0 c	0 c	0 c	0 d	0 c	0 c	0 c	0 d	0 c	0 c	84 b
		2.0	2.3	3.0	2.2	2.3	3.5	2.2	1.2	1.9	2.3	3.0	2.7	10.8

^a AMS = liquid spray grade ammonium sulfate.

^b Yield adjusted to 15.5% moisture.