Annual weed control with Halex GT, glyphosate + Laudis, glyphosate + Capreno, glyphosate + Status and glyphosate + Surestart in corn at Lamberton, MN in 2010.

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The objective of this study was to evaluate tank-mix combinations with glyphosate 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. 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. 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 3	June 18
Treatment	POST I	POST II (regrowth)
Temperature (F)		
air	73	72
soil (4 inch)	72	68
Relative humidity (%)	38	50
Wind (mph)	S 10	S 5
Sky	clear	p. cloudy
Soil moisture	dry	dry
Corn		
leaf no.	V4	V6
height (inch)	8	22
Yellow foxtail		
leaf no.	2 to 4	1 to 3
height (inch)	2 to 4	1 to 3
no./ft^2	21	5
Common lambsquarters		
leaf no.	3 to 5	2 to 3
height (inch)	1 to 3	1 to 3
no./ft^2	2	1
Tall waterhemp		
leaf no.	2 to 4	2 to 3
height (inch)	1 to 4	1 to 3
no./ft^2	4	<1
Wild buckwheat		
leaf no.	1 to 2	-
height (inch)	1 to 2	-
no./ft^2	1	-
Rainfall after application (inch)		
1 week	0.75	1.45
2 week	2.55	2.22
3 week	1.45	0.70

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

Table. Annual weed control with Halex GT, glyphosate + Laudis, glyphosate + Capreno, glyphosate + Status and glyphosate + Surestart in corn at Lamberton, MN in 2010 (Getting).

Treatment[a]	Rate	Yellow foxtail			Common lambsquarters			Tall waterhemp			Wild buckwheat			Yield[b]
		Jun 14	Jun 22	Aug 17	Jun 14	Jun 22	Aug 17	Jun 14	Jun 22	Aug 17	Jun 14	Jun 22	Aug 17	
	(oz/A, pt/A, qt/A, lb/A or %)	----------(% control)----------												(bu/A)
POST I (2 to 4-inch weeds)														
Halex GT + NIS + AMS	3.6 pt + 0.25% + 3 qt	83 b	93 c	88 c	89 cd	99 a	98 a	93 c	99 a	98 a	75 c	94 b	93 c	221 ab
Halex GT + Aatrex + NIS + AMS	3.6 pt + 1 pt + 0.25% + 3 qt	89 a	96 ab	96 a	98 a	99 a	98 a	98 a	99 a	98 a	98 a	99 a	98 a	230 a
Roundup Powermax + Aatrex + Laudis + AMS	22 oz + 1 pt + 2 oz + 2.5%	89 a	97 a	88 c	97 ab	99 a	98 a	98 a	99 a	98 a	97 a	99 a	97 ab	231 a
Surestart + Durango + AMS	1.75 pt + 24 oz + 2.5%	85 ab	95 a-c	93 a	94 ab	99 a	98 a	96 a-c	99 a	97 a	86 b	99 a	96 a-c	226 ab
Roundup Powermax + Aatrex + Capreno + AMS	22 oz + 1 pt + 3 oz + 2.5%	85 ab	97 a	93 ab	97 ab	99 a	98 a	97 a-c	99 a	98 a	97 a	99 a	98 a	233 a
Roundup Powermax + Status + AMS	22 oz + 2.5 oz + 2.5%	85 ab	93 c	89 bc	93 bc	99 a	98 a	97 ab	99 a	97 a	94 a	98 a	97 ab	230 a
Roundup Powermax + AMS	22 oz + 2.5%	86 ab	94 bc	86 c	85 d	95 b	95 b	93 c	95 b	88 b	84 b	98 a	95 bc	216 b
POSTI (2 to 4-inch weeds)/POST II (regrowth)														
Roundup Weathermax + AMS / Roundup Weathermax + AMS	22 oz + 3 qt / 22 oz + 3 qt	85 ab	96 ab	93	85 d	97 a	98 a	95 bc	98 a	98 a	84 b	97 a	98 a	228 ab
Checks														
Weedy check	-	0 c	0 d	0 d	0 e	0 c	0 c	0 d	0 c	0 c	0 d	0 c	0 d	158 c
	LSD (0.10)	5.6	2.6	3.9	4.5	2.3	1.5	3.5	2.2	2.2	7.7	2.9	2.6	13.5

[a] NIS = nonionic surfactant; AMS = liquid spray grade ammonium sulfate.
[b] Yield adjusted to 15.5% moisture.