

Weed control with soil applied KIH-485, Dual II Magnum, Stalwart, Harness, Surpass, Define, Axiom and Outlook in corn at Lamberton, MN in 2004. Getting, Jodie K. and Bruce D. Potter. The objective of this study was to evaluate soil applied corn herbicides for annual grass and annual broadleaf weed control in corn. This study was conducted on a Normania loam soil containing 4.2% organic matter, pH 6.5 and soil test P and K levels of 60 and 316 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 oats in 2003 and was fall chiseled. The area was fertilized with 180 lb/A of nitrogen as urea. On May 3, 2004, Northrup King 'N45A6' glufosinate resistant field corn was planted in 30-inch rows at a seeding rate of 33,000 seeds/A. Cyfluthrin + tebupirimphos (Aztec 2.1G) was applied at 6.7 oz/1000 row feet in a T-band for the control of northern corn rootworm larvae. 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 date, environmental conditions, weed density in the weedy check four weeks after planting and rainfall data are listed below:

Date	May 4
Treatment	PRE
Temperature (F)	
air	45
soil (4 inch)	50
Relative humidity (%)	53
Wind (mph)	NW 10
Sky	clear
Soil moisture	dry
Yellow foxtail	
no./ft ²	82
Common lambsquarters	
no./ft ²	2
Redroot pigweed	
no./ft ²	1
Rainfall after application (inch)	
1 week	0.07
2 week	1.29
3 week	2.95

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

Table. Weed control with soil applied KIH-485, Dual II Magnum, Stalwart, Harness, Surpass, Define, Axiom and Outlook in corn at Lamberton, MN in 2004. (Getting and Potter).

Treatment	Rate	Yellow foxtail				Common lambsquarters				Redroot pigweed				Yield
		6/2	6/14	6/25	9/9	6/2	6/14	6/25	9/9	6/2	6/14	6/25	9/9	
<u>Preemergence</u>	(oz/A or pt/A)	-----(% control)-----												(bu/A) ^a
KIH-485	6 oz	93	84	81	74	97	85	83	78	98	94	93	88	206
KIH-485	7.2 oz	93	86	83	76	95	86	79	75	97	96	94	88	207
KIH-485	8.3 oz	94	90	85	79	95	89	84	78	98	94	93	90	207
Dual II Magnum	2 pt	93	86	81	75	93	78	68	56	97	89	83	79	195
Harness	2.25 pt	97	94	90	79	96	85	79	74	98	95	93	88	211
Surpass	2.5 pt	96	89	85	76	97	81	78	75	98	96	93	88	215
Outlook	20 oz	94	86	80	70	94	74	70	65	97	85	84	74	192
Axiom	23 oz	97	86	73	73	97	83	80	76	98	92	90	83	203
Stalwart C	2 pt	91	81	76	70	94	76	68	60	97	79	68	71	195
Define	25 oz	94	93	88	83	96	83	73	65	98	90	89	88	192
<u>Checks</u>														
Weedy check		0	0	0	0	0	0	0	0	0	0	0	0	148
Weed-free		93	100	100	100	93	100	100	100	93	100	100	100	221
	LSD (0.10)	2.8	4.4	5.4	6.4	3.6	7.9	10.7	15.0	1.8	7.1	8.3	7.6	10.2

^a Yield adjusted to 15.5% moisture.