

**Evaluation of the performance of KIH-485 for weed control in field corn at Rochester, MN in 2004.**

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The objective of this trial was to evaluate the performance of KIH-485 for weed control in field corn in southeastern Minnesota. The research site was a Lawler loam series containing 2.7% organic matter with a pH of 6.5 and soil test P and K levels of 74 ppm and 185 ppm, respectively. The area was fertilized in the spring with 122 lb/A of nitrogen, 23 lb/A of phosphorus, 120 lb/A of potash, 23 lb/A of sulfur and 3 T/A of lime. The area was also top dressed with an additional 40lb/A of nitrogen on June 15. The previous crop was soybean. The field was disked and field cultivated once prior to planting. The corn hybrid, DeKalb DKC 47-10, was planted on April 29, 2004 at a depth of 1.5 inches in 30-inch rows at 32,000 seeds/A. A randomized complete block design with four replications was used. Preemergence (PRE) and postemergence (POST) treatments were applied with a tractor-mounted sprayer, delivering 20 gpa at 32 psi using Turbo Tee 11002 nozzles. Evaluations of the plots were taken on May 18, June 2, and July 9. Application dates, environmental conditions, and crop and weed stages are listed below.

Date	April 29	June 2
Treatment	PRE	POST
Temperature (F)		
air	61	70
Relative humidity (%)	51	46
Wind (mph)	12	10
Soil moisture	adequate	adequate
Corn		
stage	seeded	3-collar
height (inches)	--	4.75
Woolly cupgrass		
weed density	--	moderate
height (inch)	--	1.3
Giant ragweed		
weed density	--	heavy
height (inch)	--	3.0
Common lambsquarters		
weed density	--	light
height (inch)	--	0.8
Common waterhemp		
weed density	--	moderate
height (inch)	--	0.7
Rainfall after application (inch)		
week 1	0.01	0.20
week 2	1.44	5.46
week 3	1.02	1.92

Significantly lower woolly cupgrass control was achieved when using the two Bicep Lite II Magnum premixes than with Dual II Magnum and KIH-485 alone, and the KIH-485 & atrazine premixes. The 8 oz/A rate of KIH-485 provided better control of woolly cupgrass than the 1.33 pt/A rate of Dual II Magnum. KIH-485 provided better giant ragweed suppression than Dual II Magnum (May 18 rating). The June 2 rating for giant ragweed showed minimal suppression with KIH-485 at the 4 oz/A rate and Dual II Magnum at both rates. A progressive rate response

was observed with KIH-485 for giant ragweed control, with a significant improvement in control from the 4 oz/A to 8 oz/A rate. KIH-485 & atrazine, and Bicep Lite II Magnum premixes provided better control of giant ragweed than KIH-485 and Dual II Magnum alone. The low rate of Bicep Lite II Magnum provided less control of giant ragweed than the high rate of the KIH-485 & atrazine premix. KIH-485 (all rates) provided significantly superior common lambsquarters control than Dual II Magnum alone (May 18 and June 2 ratings). Premixes of KIH-485 & atrazine, Bicep Lite II Magnum, and the two high rates of KIH-485 provided the best common lambsquarters control, (University of Minnesota Extension Service, Regional Center, Rochester, MN).

**Table. Performance of KIH-485 for weed control in corn on May 18, June 2, and July 9 at Rochester, MN in 2004 (Breitenbach, Behnken, Lewis, and White).**

Treatment	Rate	Woolly cupgrass control			Giant ragweed control			Common lambsquarters control			Common waterhemp control			Corn yield (bu/A)
		5/18	6/2	7/9	5/18	6/2	7/9	5/18	6/2	7/9	5/18	6/2	7/9	
	(rate/A)	(%)			(%)			(%)			(%)			
<b>Preemergence / Postemergence</b>														
KIH-485 / Clarity	4 oz / 16 oz	82	91	80	29	3	93	61	83	83	100	100	88	164
KIH-485 / Clarity	5 oz / 16 oz	92	97	85	49	23	95	71	88	84	100	100	93	172
KIH-485 / Clarity	6 oz / 16 oz	90	93	82	64	44	93	90	96	80	100	100	92	157
KIH-485 / Clarity	8 oz / 16 oz	96	99	88	63	60	92	97	99	83	100	100	92	162
Dual II Magnum / Clarity	1.33 pts / 16 oz	81	94	78	5	1	95	0	23	84	100	91	87	164
Dual II Magnum / Clarity	2.66 pts / 16 oz	88	100	87	10	5	95	30	63	85	100	98	85	166
KIH-485 & atrazine / Clarity	19 oz / 16 oz	91	94	81	85	74	94	100	100	84	100	100	90	178
KIH-485 & atrazine / Clarity	30.5 oz / 16 oz	91	92	80	89	79	95	100	100	85	100	100	87	173
Bicep Lite II Magnum / Clarity	29 oz / 16 oz	81	85	46	70	68	95	100	98	84	100	99	84	146
Bicep Lite II Magnum / Clarity	35.5 oz / 16 oz	84	88	58	88	74	96	100	100	83	100	98	86	167
<b>Postemergence</b>														
Clarity	16 oz	0	0	0	0	0	98	0	0	98	0	0	98	41
Untreated		0	0	0	0	0	0	0	0	0	0	0	0	3
<b>LSD (0.10)</b>		5	5	8	8	7	4	11	11	4	0	3	5	27