

Evaluation of weed control with KIH-485. Li, Jianmei, Jimmy D. Wait, and Kevin W. Bradley. The objective of this study was to evaluate crop phytotoxicity and weed control with KIH-485 in corn. This study was conducted at the Greenley Memorial Research Center near Novelty, MO. The soil was a Putnam silt loam with a pH of 6.2 and 2.7% organic matter. 'DKC-60-19' glyphosate-resistant corn was planted 1.5 inch deep on April 29 in 30 inch rows. Treatments were arranged in a randomized complete block design with four replications. Individual plots were 10 feet wide by 35 feet long. Herbicide applications were made with a CO<sub>2</sub> backpack sprayer equipped with XR8002 flat fan nozzles calibrated to deliver 15 GPA at 24 PSI.

Application data are listed below:

Date	May 4
Treatment	PRE
Temperature (C)	
air	9
soil	12
Soil moisture	damp
Wind (mph)	3
Cloud cover (%)	100
Relative humidity (%)	75
Precipitation after application	
week 1 (inch)	0.97
week 2 (inch)	0.40

Crop injury was minimal 15 days after application and reduced to zero by 28 days after application. Giant foxtail control was greater than 90% with all treatments at all evaluation timings. Greater control of Pennsylvania smartweed, morningglory species, common ragweed, and velvetleaf was achieved when higher rates of KIH-485 (0.22, 0.37 lb ai/A) were used or when atrazine was added to KIH-485 at 0.19 lb ai/A 15 days after application. Similar trends were observed at 28 and 56 days after application. Control of morningglory species was less than 70% with all treatments 56 days after application. All rates of KIH-485 provided significantly higher levels of common ragweed and velvetleaf control than s-metolachlor at all evaluation timings. (Department of Agronomy, University of Missouri-Columbia)

Table. Weed control with KIH-485 in corn (Li, Wait and Bradley).

Application	Rate	Corn injury			Weed control																	
		5-19	6-1	6-29	SETFA			POLPY			IPOSS			AMBEL			ABUTH					
	(lb/A)	5-19	6-1	6-29	5-19	6-1	6-29	5-19	6-1	6-29	5-19	6-1	6-29	5-19	6-1	6-29	5-19	6-1	6-29			
Untreated		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
KIH-485	0.19	5	0	0	96	96	90	71	69	0	54	38	0	87	98	60	87	78	63			
KIH-485	0.22	1	0	0	97	100	96	78	90	15	63	90	8	85	87	83	87	100	100			
KIH-485	0.37	6	0	0	99	100	98	88	96	31	78	94	34	95	100	93	95	100	96			
s-Metolachlor	1.6	0	0	0	98	96	93	64	53	0	43	0	0	60	3	5	57	5	0			
s-Metolachlor	3.2	1	0	0	100	100	100	77	93	8	52	3	0	69	30	5	63	8	0			
KIH-485+ Atrazine	0.19+ 0.75	4	0	0	100	100	94	100	100	83	95	95	45	100	100	100	99	100	96			
KIH-485+ Atrazine	0.19+ 1.2	5	0	0	100	100	98	99	100	97	89	96	54	100	100	98	100	100	94			
KIH-485+ Atrazine	0.19+ 1.6	0	0	0	100	100	95	100	100	93	94	99	68	100	100	99	100	100	91			
Atrazine+ s-metolachlor	1.63+ 1.25	2	0	0	100	100	95	97	100	84	80	91	26	100	100	100	99	94	31			
LSD(0.05)		5	0	0	3	3	8	11	17	23	13	15	23	16	24	26	17	21	25			