Weed control and tolerance with KIH-485 in soybean. Urbana, Illinois, 2005. Moody, James L., Douglas J. Maxwell, Joshua T. Kunkel, and F. William Simmons. The objective of this research was to evaluate KIH-485 for weed control and crop tolerance in soybean. The study was established at the Crop Sciences Research and Education Center, Urbana, IL. The soil was a Drummer silty-clay loam with a pH of 6.6 and 4.7% organic matter. Asgrow 3305 soybean was planted 1.5 inches deep on May 11 in 30 inch rows. Treatments were arranged in randomized complete blocks with three replications of plots 7.5 by 30 feet. Herbicides were applied with a CO_2 backpack sprayer delivering 20 gpa and equipped with 80025 air induction nozzles. Application information is listed below:

Date	May 11	June 13	June 20	June 30
Application	pre	post	lpost	vlpost
Temperature (F)				
Air	81	89	78	88
Soil	72	78	73	82
Soil Moisture	dry	moist	dry	dry
Wind (mph)	3-SW	10-S	0	3-S
Sky Cover (%)	50	0	0	0
Precip. after application				
Week 1 (inch)	0.01	1.57	0.00	0.07
Week 2 (inch)	0.76	0.00	0.37	1.41
Relative humidity (%)	55	52	51	55
Soybean				
Leaf no.	-	3-trif	4-trif	6-trif
Height (inch)	-	6	8	16
Giant foxtail				
Leaf no.	-	3	4	6
Height (inch)	-	4	5	8
Common lambsquarters				
Leaf no.	-	>9	>9	>9
Height (inch)	-	2	4	6
Velvetleaf				
Leaf no.	-	3	5	8
Height (inch)	-	3	5	7
Tall morningglory				
Leaf no.	-	7	>9	>9
Height (inch)	-	2	4	5

There was no soybean injury for any preemergence treatment. Postemergence applications of KIH-485 plus glyphosate resulted in minimal injury to soybean with a maximum phytotoxicity rating of 11% 4 days after treatment (DAT). The highest postemergent rate of KIH-485 (0.28 lb/A) alone resulted in the next highest injury 10 DAT (7%). The final phytotoxicity ratings showed that all soybean had completely recovered from all injury symptoms. Injury symptoms consisted of leaf crinkling and puckering around the leaf margins. New leaves that emerged after postemergence applications did not demonstrate any injury symptoms. Weed control from preemergence applications of KIH-485 was similar to S-metolachlor for giant foxtail and common lambsquarters and provided better control of velvetleaf and tall morningglory. Soybean yields were not significantly different from any of the postemergence treatments (tank mix or sequential) of KIH-485. (Dept. of Crop Sciences, University of Illinois, Urbana).

Table 1. Weed control and tolerance with KIH-485 in soybean. Urbana, Illinois, 2005. (Moody, Maxwell, Kunkel, and Simmons)

Treatment	Appl Rate	Time	Glxma 6-17	Glxma 6-23	Setfa 6-23	Cheal 6-23	Abuth 6-23	Phbpu 6-23
	(lb/A)		% inj	----------% control ----------				
KIH-485	0.15	pre	0	0	70	72	50	33
KIH-485	0.19	pre	0	0	77	78	52	42
KIH-485	0.28	pre	0	0	89	87	78	50
S-metolachlor&benoxacor[1]	1.59	pre	0	0	76	72	30	20
S-metolachlor&benoxacor[1]	3.19	pre	0	0	91	94	35	23
KIH-485	0.15	post	6	5	0	23	25	38
+glyphosate[2]+N-Pak AMS[3]	0.75	vlpost						
KIH-485	0.28	post	6	7	0	23	38	47
+glyphosate[2]+N-Pak AMS[3]	0.75	vlpost						
KIH-485	0.15	pre	0	0	99	99	99	85
+glyphosate[2]+N-Pak AMS[3]	0.75	lpost						
Check	-	-	0	0	0	0	0	0
KIH-485+flumioxazin	0.15+0.063	pre	0	0	99	99	99	85
+glyphosate[2]+N-Pak AMS[3]	0.75	lpost						
KIH-485	0.15	post	11	5	99	99	99	97
+glyphosate[2]+N-Pak AMS[3]	0.75							
S-metolachlor&benoxacor[1]	1.59	post	13	10	99	99	99	93
+glyphosate[2]+N-Pak AMS[3]	0.75							
LSD (0.05)			2	1	7	9	10	15

[1] Dual II Magnum; [2] Weathermax; [3] N-PaK AMS is an ammonium sulfate solution from Agriliance LLC.

Table 2. Weed control and tolerance with KIH-485 in soybean. Urbana, Illinois, 2005. (Moody, Maxwell, Kunkel, and Simmons)

Treatment	Appl Rate	Time	Glxma 7-19	Setfa 7-19	Cheal 7-19	Abuth 7-19	Phbpu 7-19	Yield 10-17
	(lb/A)		% inj	----------% control ----------				Bu/A
KIH-485	0.15	pre	0	52	65	33	23	26.4
KIH-485	0.19	pre	0	63	75	40	27	23.7
KIH-485	0.28	pre	0	77	90	60	40	26.1
S-metolachlor&benoxacor[1]	1.59	pre	0	47	52	23	20	25.1
S-metolachlor&benoxacor[1]	3.19	pre	0	82	89	30	23	26.5
KIH-485	0.15	post	0	99	99	99	91	34.6
+glyphosate[2]+N-Pak AMS[3]	0.75	vlpost						
KIH-485	0.28	post	0	99	99	99	97	38.3
+glyphosate[2]+N-Pak AMS[3]	0.75	vlpost						
KIH-485	0.15	pre	0	99	99	99	93	40.7
+glyphosate[2]+N-Pak AMS[3]	0.75	lpost						
Check	-	-	0	0	0	0	0	11.4
KIH-485+flumioxazin	0.15+0.063	pre	0	99	99	99	93	41.3
+glyphosate[2]+N-Pak AMS[3]	0.75	lpost						
KIH-485	0.15	post	0	96	99	96	78	41.5
+glyphosate[2]+N-Pak AMS[3]	0.75							
S-metolachlor&benoxacor[1]	1.59	post	0	97	99	95	72	35.7
+glyphosate[2]+N-Pak AMS[3]	0.75							
LSD (0.05)			0	8	12	13	7	6

[1] Dual II Magnum; [2] Weathermax; [3] N-PaK AMS is an ammonium sulfate solution from Agriliance LLC.