Evaluation of the performance of KIH-485 for weed control in corn at Potsdam, MN in 2003. Breitenbach, Fritz. R, Lisa M. Behnken, Courtney L. Soderholm and Kevin R. Griffin. The objective of this trial was to evaluate and compare the performance of KIH-485 at different rates to s-metolachlor &CGA-154281 for weed control in corn in southeastern Minnesota. The research site was a Port Byron silt loam containing 3.2% organic matter with a pH of 6.7 and soil test P and K levels of 66 and 376 ppm, respectively. The previous crop was soybean. The area was fertilized in the spring with 160 and 120 lb/A of nitrogen and potassium, respectively. Spring tillage consisted of one pass with a disk and a field cultivator. The corn hybrid, Syngenta NK45-A6, was planted on May 20, 2003 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 a pressure of 32 psi using TurboTee 11002 nozzles. Evaluations of the plot were taken on June 5 and 16, and July 3, 2003. Application dates, environmental conditions, and crop and weed stages are listed below.

Date	May 22	June 18
Treatment	PRE	POST
Temperature (F)		
air	62	80
soil	---	---
Relative humidity (%)	45	56
Wind (mph)	10	14
Soil moisture	adequate	adequate
Corn		
stage	---	3-collar
height (inch)	---	9
Common lambsquarters		
weed density/ ft^2	---	3.5
height (inch)	---	13
Velvetleaf		
weed density/ft^2	---	35
height (inch)	---	3.5
Wild-proso millet		
weed density/ ft^2	---	1
height (inch)	---	3
Redroot pigweed		
weed density/ft^2	---	10
height (inch)	---	3
Rainfall after application (inch)		
week 1	0.01	1.62
week 2	0.05	0.65
week 3	2.45	0.55

No yield differences were detected between treatments other than the untreated check. KIH-485 at the 0.223, and the 0.268 lb/a rate provide better control of wild proso millet on the July rating date than the s-metolchlor comparison rate. KIH-485 provided greater control of redroot pigweed at all rates compared to the s-metolchlor comparison rates. The addition of atrazine to both KIH-485 and s-metolachlor greatly enhanced common lambsquarters control. (Southeast District, University of Minnesota Extension Service, Rochester).

Table. Performance of KIH-485 for weed control in corn on June 5, 6, and July 3 at Potsdam, MN in 2003 (Breitenbach, Behnken, Sodernolm and Griffin).

Treatment	Rate	-----CHEAL----- control			-----PANMI----- control			AMARE control	Corn injury	Corn yield
		6/5	6/16	7/3	6/5	6/16	7/3	7/3		
	(lb/A)	(%)			(%)				(%)	(bu/A)
Preemergence / Postemergence										
KIH-485 / dicamba	0.112 /0.375	9	0	76	71	53	52	62	0	143
KIH-485 / dicamba	0.186/0.375	8	20	80	79	61	59	76	0	147
KIH-485 / dicamba	0.223/0.375	11	21	78	79	69	70	90	0	147
KIH-485 / dicamba	0.268/0.375	12	25	81	81	73	77	90	0	148
S-metolachlor & CGA-154281 / dicamba	0.955/0.375	6	0	69	78	49	52	48	0	142
S-metolachlor &CGA-154281 / dicamba	1.6/0.375	8	0	75	80	56	55	50	0	143
S-metolachlor &CGA-154281 / dicamba	1.91/0.375	11	0	75	83	64	57	50	0	145
S-metolachlor &CGA-154281 / dicamba	2.3/0.375	13	0	84	83	67	64	95	0	142
KIH-485 + atrazine / dicamba	0.223+1.47/ 0.375	94	20	99	79	66	68	96	0	155
S-metolachlor & atrazine & CGA-154281/ dicamba	3.3/0.375	94	99	99	75	59	60	99	0	151
Postemergence										
Dicamba	0.375	0	0	79	0	0	0	46	0	108
Untreated		0	0	0	0	0	0	0	0	84
LSD (0.10)		4	3	7	4	7	6	13	0	15