

Wild oats control with MKH 6562 at Crookston, MN - 1998. Durgan, Beverly R. and Jim Cameron. This experiment was designed to evaluate wild oat control and wheat / barley injury with MKH 6562 alone and various tank mixes with broadleaf herbicides. The experiment was conducted at Crookston, MN on a Donaldson and Wheaton loam soil. Following weedy fallow, the experimental area received 100 lb/A of N and was fall plowed. In the spring the experimental area was disked and harrowed. '2375' hard red spring wheat and 'Stander' Barley were seeded on April 28 at 1.5 and 1.75 Bu/A respectively. All herbicide treatments were applied with a backpack type sprayer delivering 10 gpa at 30 psi using 80015 flat fan nozzles. The experimental design was a randomized complete block with three replications and plot size was 10 by 16 ft. Application data and environmental conditions are listed below. Crop injury and wild oats control were visually rated on June 29 and July 9. Wheat yields were measured. All data are presented in Tables 1 and 2 for barley and wheat, respectively.

Treatment Date	May 29
Target weed or crop stage	3-5 leaf Wioa
Soil Moisture	dry
Sky	clear
Wind	10 N
Air Temperature (°F)	46
Rainfall before Application	
Week 1 (inch)	0.00
Rainfall after Application	
Week 1 (inch)	0.29
Week 2 (inch)	0.93
Wioa density (#/ft ²)	>300

MKH 6562 caused moderate injury to barley and slight injury to wheat at the early rating date. Barley injury symptoms generally seemed to be greatest when MKH 6562 was applied without a broadleaf herbicide component. Injury was the least when tank-mixed with 2-4-D ester for both barley and wheat.

Wild oats control was only fair in all the MKH 6562 treatments and no antagonism was observed as a result of the broadleaf herbicide component. No difference in control was observed as a result of additive. MKH 6562 did not totally kill the wild oats, however, while the wild oats remained green and stunted, they did not head out and produce seed. HOE 1170 resulted in significantly greater and imazamethabenz significantly less wild oats control compared to the rest of the treatments.

Barley yields did not differ significantly. While yield differences occurred in wheat, those differences did not reflect differences in wild oats control.

Table 1. Wild oat control with MKH 6562 in barley at Crookston, MN - 1998 (Durgan and Cameron).

Treatment	Rate (lb ai/A)	Barley Injury		Wioa Control		Barley Yield Bu/A
		6/29	7/9	6/29	7/9	
MKH 6562 + NIS ¹	0.027 + 0.25%	32	7	86	88	52
MKH 6562 + NIS + 28%N ⁶	0.027 + 0.25% + 5%	43	0	84	87	58
MKH 6562 + COC	0.027 + 2.5%	43	7	83	82	50
MKH 6562 + 2,4-D diethylamine + NIS	0.027 + 0.5 + 0.25%	22	0	83	81	57
MKH 6562 + 2,4-D butoxyethyl ester + NIS	0.027 + 0.5 + 0.25%	7	0	85	83	62
MKH 6562 + thifensulfuron & tribenuron ² + 2,4-D butoxyethyl ester + NIS	0.027 + 0.011 & 0.005 + 0.25 + 0.25%	22	0	85	84	59
MKH 6562 + thifensulfuron & tribenuron + NIS	0.027 + 0.011 & 0.005 + 0.25%	42	10	82	84	49
MKH 6562 + bromoxynil + MCPA ester	0.027 + 0.25 + 0.25	28	0	80	86	52
MKH 6562 + bromoxynil & MCPA ester ⁷ + NIS	0.027 + 0.25 & 0.25 + 0.25%	27	13	83	84	55
Imazamethabenz ³ + NIS + COC ⁴	0.096 + 0.25% + 2.5%	0	0	67	17	49
Fenoxaprop & safener ⁵	0.104	10	0	99	98	47
Tralkoxydim + TF8035 COC + AMS ⁸	0.18 + 0.5% + 1.5	10	0	90	77	68
Weedy check		0	0	--	--	50
LSD (P=.05)		16	ns	6	12	ns

¹ NIS = Class Preference nonionic surfactant.² Premix = Harmony Extra 75DF.³ Assert LC 2.5E.⁴ COC = Class Crop Oil Concentrate.⁵ HOE 1170.⁶ 28%N = 28% UAN fertilizer solution.⁷ Premix = Bronate 4E.⁸ AMS = Spray grade ammonium sulfate. Rate is pounds product per acre.**Table 2. Wild oat control with MKH 6562 in hard red spring wheat at Crookston, MN - 1998 (Durgan and Cameron).**

Treatment	Rate (lb ai/A)	Wheat Injury		Wioa Control		Wheat Yield Bu/A
		6/29	7/9	6/29	7/9	
MKH 6562 + NIS ¹	0.027 + 0.25%	7	0	82	77	35
MKH 6562 + NIS + 28%N ⁶	0.027 + 0.25% + 5%	10	0	81	83	28
MKH 6562 + COC	0.027 + 2.5%	17	0	80	78	24
MKH 6562 + 2,4-D diethylamine + NIS	0.027 + 0.5 + 0.25%	10	0	78	77	29
MKH 6562 + 2,4-D butoxyethyl ester + NIS	0.027 + 0.5 + 0.25%	3	0	78	73	27
MKH 6562 + thifensulfuron & tribenuron ² + 2,4-D butoxyethyl ester + NIS	0.027 + 0.011 & 0.005 + 0.25 + 0.25%	7	0	77	78	29
MKH 6562 + thifensulfuron & tribenuron + NIS	0.027 + 0.011 & 0.005 + 0.25%	13	0	80	77	33
MKH 6562 + bromoxynil + MCPA ester	0.027 + 0.25 + 0.25	7	0	78	75	35
MKH 6562 + bromoxynil & MCPA ester ⁷ + NIS	0.027 + 0.25 & 0.25 + 0.25%	10	0	77	75	25
Imazamethabenz ³ + NIS + COC ⁴	0.09 + 0.25% + 2.5%	0	0	62	13	30
Fenoxaprop & safener ⁵	0.104	0	0	98	96	37
Tralkoxydim + TF8035 COC + AMS ⁸	0.18 + 0.5% + 1.5	3	0	84	79	31
Weedy check		0	0	--	--	20
LSD (P=.05)		9	ns	10	12	7

¹ NIS = Class Preference nonionic surfactant.² Premix = Harmony Extra 75DF.³ Assert LC 2.5E.⁴ COC = Class Crop Oil Concentrate.⁵ HOE 1170.⁶ 28%N = 28% UAN fertilizer solution.⁷ Premix = Bronate 4E.⁸ AMS = Spray grade ammonium sulfate. Rate is pounds product per acre.