

**Wild oat control with Assert and Puma in hard red spring wheat and barley at Crookston, MN - 2000.** Durgan, Beverly R., Jim Cameron and Douglas W. Miller. The objective of the this experiment was to evaluate wild oat control with Assert (imazamethabenz) and Puma (fenoxaprop & safener) in combination with several 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 'Robust' Barley were seeded on April 29 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 9 and June 27 Yields were measured. All data are presented in Tables 1 and 2 for barley and wheat, respectively.

Treatment Date	May 19
Target weed or crop stage	2-3 leaf Wioa
Rainfall before Application	
Week 1 (inch)	0.02
Rainfall after Application	
Week 1 (inch)	0.21
Week 2 (inch)	0.43

**Table 1. Wild oat control with Assert and Puma in barley at Crookston, MN - 2000 (Durgan, Cameron, and Miller).**

Treatment	Rate (lb ai/A)	Barley Injury		Wioa Control		Barley Yield Bu/A
		6/9	6/27	6/9	6/27	
Imazamethabenz + bromoxynil + NIS <sup>1</sup>	0.31 + 0.25 + 0.25%	0	0	53	67	32
Imazamethabenz + fenoxaprop & safener + bromoxynil + NIS	0.28 + 0.041 + 0.25 + 0.25%	0	0	53	73	35
Imazamethabenz + fenoxaprop & safener + bromoxynil & MCPA ester <sup>2</sup> + NIS	0.28 + 0.041 + 0.25 & 0.25 + 0.25%	0	0	57	77	34
Imazamethabenz + fenoxaprop & safener + fluroxypyr + NIS	0.28 + 0.041 + 0.125 + 0.25%	0	0	57	82	34
Imazamethabenz + fenoxaprop & safener + thifensulfuron + MCPA ester + NIS <sup>3</sup>	0.28 + 0.041 + 0.014 + 0.25 + 0.25%	0	0	50	87	46
Fenoxaprop & safener + bromoxynil & MCPA ester	0.083 + 0.25 & 0.25	0	0	95	90	49
Fenoxaprop & safener + thifensulfuron & tribenuron <sup>3</sup> + NIS	0.083 + 0.011 & 0.005 + 0.25%	0	0	95	95	51
Fenoxaprop & safener + carfentrazone + NIS	0.083 + 0.008 + 0.25%	0	0	95	95	48
Fenoxaprop & safener + thifensulfuron + NIS	0.083 + 0.016 + 0.25%	0	0	95	95	53
Fenoxaprop & safener + fluroxypyr + thifensulfuron + NIS	0.083 + 0.125 + 0.014 + 0.25%	0	0	95	96	53
Fenoxaprop & safener + fluroxypyr + MCPA ester	0.083 + 0.125 + 0.25	0	0	95	93	51
Weedy check		0	0	--	--	14
LSD (P=.05)		ns	ns	10	6	7

<sup>1</sup> NIS = Class Preference nonionic surfactant.

<sup>2</sup> Premix = Bronate 4E.

<sup>3</sup> Premix = Harmony Extra 75DF.

**Table 2. Wild oat control with Assert and Puma in hard red spring wheat at Crookston, MN - 2000 (Durgan, Cameron, and Miller).**

Treatment	Rate (lb ai/A)	Wheat Injury		Wioa Control		Wheat Yield Bu/A
		6/9	6/27	6/9	6/27	
Imazamethabenz + bromoxynil + NIS <sup>1</sup>	0.31 + 0.25 + 0.25%	0	0	53	63	19
Imazamethabenz + fenoxaprop & safener + bromoxynil + NIS	0.28 + 0.041 + 0.25 + 0.25%	0	0	53	70	31
Imazamethabenz + fenoxaprop & safener + bromoxynil & MCPA ester <sup>2</sup> + NIS	0.28 + 0.041 + 0.25 & 0.25 + 0.25%	0	0	57	72	30
Imazamethabenz + fenoxaprop & safener + fluroxypyr + NIS	0.28 + 0.041 + 0.125 + 0.25%	0	0	57	78	32
Imazamethabenz + fenoxaprop & safener + thifensulfuron + MCPA ester + NIS <sup>3</sup>	0.28 + 0.041 + 0.014 + 0.25 + 0.25%	0	0	50	82	32
Fenoxaprop & safener + bromoxynil & MCPA ester	0.083 + 0.25 & 0.25	0	0	95	98	41
Fenoxaprop & safener + thifensulfuron & tribenuron <sup>3</sup> + NIS	0.083 + 0.011 & 0.005 + 0.25%	0	0	95	95	46
Fenoxaprop & safener + carfentrazone + NIS	0.083 + 0.008 + 0.25%	0	0	95	95	44
Fenoxaprop & safener + thifensulfuron + NIS	0.083 + 0.016 + 0.25%	0	0	95	93	42
Fenoxaprop & safener + fluroxypyr + thifensulfuron + NIS	0.083 + 0.125 + 0.014 + 0.25%	0	0	95	92	47
Fenoxaprop & safener + fluroxypyr + MCPA ester	0.083 + 0.125 + 0.25	0	0	95	93	47
Weedy check		0	0	--	--	6
LSD (P=.05)		ns	ns	10	10	8

<sup>1</sup> NIS = Class Preference nonionic surfactant.

<sup>2</sup> Premix = Bronate 4E.

<sup>3</sup> Premix = Harmony Extra 75DF.