

**Study Name:** Wild oat control in barley with pinoxaden

**Study Number:** 0520

- Objectives:**
1. Evaluate pinoxaden performance on key annual grass weeds in wheat and barley.
  2. Evaluate pinoxaden in tank mix combinations with dicot herbicides.
  3. Compare pinoxaden performance to competitor grass herbicide standards.
  4. Evaluate pinoxaden crop tolerance on wheat and barley and compare to competitor standards.

**Results:**

'Robust' barley was seeded April 21 at 80 lb/A into 7.5-inch rows. Herbicide treatments were applied postemergence (POST) on May 24 and one week later on May 31. On May 24, barley and wild oat were both at the 3-3.5 leaf stage. Wild oat density was approximately 50-100 plants/ft<sup>2</sup>. Individual plots were 10 x 30 ft and replicated three times.

Pinoxaden is a new grass herbicide that may be available in 2006 for wild oat control in barley and wheat. The trade name for pinoxaden will be "Axial". The objective of this study was to compare pinoxaden to Puma and Everest. We included Everest in the trial for comparison even though it is not labeled for use in barley. At the August evaluation, pinoxaden alone provided 93% wild oat control, but slightly less control when tankmixed with Bronate or Harmony Extra. Puma applied alone provided 85% wild oat control, but was reduced to 66% when tankmixed with Bronate. Everest applied alone or with Bronate or Harmony Extra provided 76-78% wild oat control. Pinoxaden and Puma treatments caused some initial crop injury, but by June 15 injury was no longer visible. As would be expected with barley, Everest caused severe crop injury.

Table. Wild oat control in barley with pinoxaden.

Treatment <sup>a</sup>	Rate	Barley				Wild oat			Yield TW	
		May 31	Jun 15	Jun 28	Aug 5	Jun 15	Jun 28	Aug 5	Aug 19	Aug 19
		— % injury —				— % control —			bu/A	lb/bu
Untreated		0	0	0	0	0	0	0	23	46.3
Pinoxaden + Adjuvant <sup>b</sup>	0.86 oz ai + 0.6 pt	8	0	0	0	96	94	93	58	45.9
Pinoxaden + Adjuvant + Bronate Adv	0.86 oz ai + 0.6 pt + 0.8 pt	15	0	0	0	94	90	87	46	44.9
Pinoxaden + Adjuvant + Harm Ex	0.86 oz ai + 0.6 pt + 0.4 oz	8	0	0	0	92	90	90	51	45.7
Puma <sup>b</sup>	0.67 pt	19	0	0	0	91	85	85	53	46.1
Puma + Bronate	0.67 pt + 0.8 pt	20	0	0	0	69	69	66	47	45.9
Puma + Harm Ex + NIS	0.67 pt + 0.4 oz + 0.25% v/v	11	0	0	0	81	79	79	44	45.9
Everest + NIS <sup>b</sup>	0.45 oz + 0.25% v/v	48	63	48	15	79	81	78	42	46.0
Everest + Bronate Adv	0.45 oz + 0.8 pt	48	63	45	15	78	83	76	46	45.5
Everest + Harm Ex + NIS	0.45 oz + 0.4 oz + 0.125% v/v	50	63	47	15	79	80	76	44	46.1
LSD (0.05)		4	3	5	—	6	8	8	14	1.5
CV		10	8	22	0	5	6	7	18	1.8

<sup>a</sup>Harm Ex = Harmony Extra XP.

<sup>b</sup>Bronate Advanced was applied 7-days later to control broadleaf weeds.