



Wild Oat Control Study in Spring Wheat



086-0202-H-SWSW-E

Location:	McGregor Research Station	Seeding Date:	April 12, 2002
Rainfall (Ave.):	18 inch	Soil Texture:	Silt loam
Crop:	Spring wheat	% Organic Matter:	2.39
Variety:	Alpowa	pH:	5.6
Rotation:	2001 Spring wheat 2000 Winter wheat 1999 Chem fallow		

Application Conditions

Date Treated	May 20, 2002
Air Temperature	55°
Soil Temperature	57°
Weather	Overcast
Wind	3-5 mph
Gallons/ac	20
Pressure	24
Nozzle	8002
Stage of Growth	Wild oats 3 tillers Spring wheat 3 tillers

May	Weather		
	Max°	Min°	Precip
17	67	42	
18	64	40	0.08
19	72	45	
20	75	48	
21	56	44	0.01
22	58	42	T
23	49	36	0.20
24	59	39	
25	72	41	
26	74	50	
27	76	52	0.10
28	76	54	0.34

Treatments	Rate	% Wild Oat Control
1. Discover + DSV	3.2oz. + 10.2oz.	99
2. Achieve SC + Supercharge + AMS	7.75oz. + 0.5%v/v + 15 lbs/100gal.	90
3. Puma	0.67pt.	95
4. Everest + M-90	0.61oz. + 0.25%v/v	73
5. Assert + Avenge + M-90	0.75pt. + 2pt. + 0.25%v/v	53
6. CHECK	-----	--
7. Discover + DSV + Bronate Adv. + Harmony GT	3.2oz. + 10.2oz. + 13oz. + 0.4oz.	90
8. Discover + DSV + Bronate Adv. + Ally Extra	3.2oz. + 10.2oz. + 13oz. + 0.4oz.	64
9. Discover + DSV + Bronate Adv. + Peak	3.2oz. + 10.2oz. + 13oz. + 0.5oz.	94
10. Discover + DSV + Curtail M	3.2oz. + 10.2oz. + 1.75pt.	97
11. Achieve SC + Supercharge + Bronate Adv. + Harmony GT + 15lbs./100gal	7.75oz. + 0.5%v/v + 13oz. + 0.4oz. + 15 lbs./100gal.	76
12. Achieve SC + Supercharge + Bronate Adv. + Ally Extra + AMS	7.75oz. + 0.5%v/v + 13oz. + 0.4oz. + 15 lbs./100gal.	24
13. Achieve SC + Supercharge + Curtail M + AMS	7.75oz. + 0.5%v/v + 1.75pt. + 15 lbs./100gal.	76
14. CHECK	-----	--
15. Puma + Bronate Adv. + Harmony GT + M-90	0.67pt. + 13oz. + 0.4oz. + 0.25%v/v	69
16. Puma + Bronate Adv. + Ally Extra + M-90	0.67pt. + 13oz. + 0.4oz. + 0.25%v/v	49
17. Puma + Curtail M	0.67pt. + 1.75pt.	72
18. Everest + Bronate Adv. + M-90	0.61oz. + 13oz. + 0.25%v/v	56
19. Everest + 2-4,D + M-90	0.61oz. + 12oz. + 0.25%v/v	61
20. Everest + Curtail M + M-90	0.61oz. + 1.75pt. + 0.25%v/v	71

Comments:

This trial was initiated in cooperation with the Pacific Northwest Direct Seed Association to compare the activity of various labeled wild oat herbicides. The herbicides were also evaluated in combination with some broadleaf materials.

The previous crop at this site was Alpowas spring wheat (85 bu/ac). The stubble was lightly disced in the fall to initiate decomposition and promote the germination of volunteer. Roundup Ultra Max was applied in the spring, the site was fertilized with a high clearance Ripper-Shooter™, and seeded with a Great Plains minimum-till drill on April 12th. Immediately after sowing the crop, the site was over-seeded with native wild oats to ensure a uniform weed population for accuracy of evaluation. The over-all wild oat population in this study was very heavy due to a significant amount of oats coming from seed that was not planted. This resulted in amplifying any antagonism that occurred from herbicide tank-mixes.

Wet, windy conditions in May prevented applications from being made at the optimum timing in terms of the growth stage of the wild oats. Treatments were applied when the spring wheat and oats had 3 tillers. The four days following application consisted of a cold front moving through which affected some of the herbicide materials.

Direct Comparisons:

WILD OAT MATERIALS ALONE

Treatments	Rate	% Wild Oat Control
1. Discover + DSV	3.2oz. + 10.2oz.	99
2. Achieve SC + Supercharge + AMS	7.75oz. + 0.5%v/v + 15 lbs/100gal.	90
3. Puma	0.67pt.	95
4. Everest + M-90	0.61oz. + 0.25%v/v	73
5. Assert + Avenge + M-90	0.75pt. + 2pt. + 0.25%v/v	53

The above table compares the commonly used postemergence wild oat materials. Discover, Achieve, and Puma provided very good control of the wild oats. Everest did a poor job under these conditions. The Assert/Avenge tank-mix was also very poor.

DISCOVER TANK-MIXES

Treatments	Rate	% Wild Oat Control
1. Discover + DSV	3.2oz. + 10.2oz.	99
7. Discover + DSV + Bronate Adv. + Harmony GT	3.2oz. + 10.2oz. + 13oz. + 0.4oz.	90
8. Discover + DSV + Bronate Adv. + Ally Extra	3.2oz. + 10.2oz. + 13oz. + 0.4oz.	64
9. Discover + DSV + Bronate Adv. + Peak	3.2oz. + 10.2oz. + 13oz. + 0.5oz.	94
10. Discover + DSV + Curtail M	3.2oz. + 10.2oz. + 1.75pt.	97

The above table illustrates well why Syngenta limits the broadleaf herbicides that can be tank-mixed with Discover. Neither Harmony GT nor Ally Extra can be applied with Bronate Advanced in combination with Discover due to unacceptable antagonism of wild oat control. The Peak tank-mix and the combination with Curtail M are labeled tank-mixes. As we see with most wild oat herbicides, best control is achieved when the materials are applied by themselves.

ACHIEVE TANK-MIXES

Treatments	Rate	% Wild Oat Control
2. Achieve SC + Supercharge + AMS	7.75oz. + 0.5%v/v + 15 lbs/100gal.	90
11. Achieve SC + Supercharge + Bronate Adv. + Harmony GT + 15lbs./100gal	7.75oz. + 0.5%v/v + 13oz. + 0.4oz. + 15 lbs./100gal.	76
12. Achieve SC + Supercharge + Bronate Adv. + Ally Extra + AMS	7.75oz. + 0.5%v/v + 13oz. + 0.4oz. + 15 lbs./100gal.	24
13. Achieve SC + Supercharge + Curtail M + AMS	7.75oz. + 0.5%v/v + 1.75pt. + 15 lbs./100gal.	76

The combination with Ally Extra, which is not a labeled tank-mix, was very antagonistic to wild oat control with Achieve. Even though the applications with Bronate Advanced + Harmony GT and the Curtail M are labeled tank-mixes, the control dropped off significantly, compared to Achieve applied by itself.

PUMA TANK-MIXES

Treatments	Rate	% Wild Oat Control
3. Puma	0.67pt.	95
15. Puma + Bronate Adv. + Harmony GT + M-90	0.67pt. + 13oz. + 0.4oz. + 0.25%v/v	69
16. Puma + Bronate Adv. + Ally Extra + M-90	0.67pt. + 13oz. + 0.4oz. + 0.25%v/v	49
17. Puma + Curtail M	0.67pt. + 1.75pt.	72

As seen with Discover and Achieve, Ally Extra was very antagonistic to the control with Puma. The Harmony GT tank-mix is a labeled treatment on winter wheat, but not spring wheat due to the differences in crop competition. The Curtail M tank-mix is labeled, however it too was quite antagonistic to control.

EVEREST TANK-MIXES

Treatments	Rate	% Wild Oat Control
4. Everest + M-90	0.61oz. + 0.25%v/v	73
18. Everest + Bronate Adv. + M-90	0.61oz. + 13oz. + 0.25%v/v	56
19. Everest + 2-4,D + M-90	0.61oz. + 12oz. + 0.25%v/v	61
20. Everest + Curtail M + M-90	0.61oz. + 1.75pt. + 0.25%v/v	71

Everest performed poorly in this trial, whether it was tank-mixed or not.