Project Title: Downy Brome Control

Objective: To evaluate herbicides for the control of downy brome in winter wheat.

Material and Methods:

Yellowstone hard red winter wheat was planted 2 inches deep, on 7 inch row spacing's, at a rate of 80 lb/A on September 24, 2009. The study was established under dry-land conditions, using conventional tillage, with the land being fallowed during the 2009 growing season. Downy brome was planted in the center of each plot on October 5. Herbicide treatments were applied on April 21, 2010 with a CO_2 backpack sprayer in 20 GPA of water using 11002 flat fan nozzles. Winter wheat and downy brome were 4 and 2 inches tall, respectively. The experiment was established as a completely randomized design with three replications, with each plot measuring 10 by 15 feet.

Results:

All treatments resulted in minor crop injury symptoms which dissipated by 4 weeks after application (Table 1). There were no statistical differences in downy brome control among the herbicides evaluated. That is, Atlantis provided downy brome control comparable to Osprey, Olympus and Powerflex.

Table 1. Effect of downy brome herbicides on crop tolerance and efficacy.

Treatment	Rate		Crop Injury		Downy Brome Control	
			5/2/2010	5/18/2010	5/18/2010	6/1/2010
Untreated			0	0	0	0
Atlantis	52.5	g ai/ha	10	0	73	77
MSO	1.17	l/ha				
Atlantis	52.5	g ai/ha	10	0	78	83
MSO	1.754	l/ha				
Atlantis	52.5	g ai/ha	10	0	72	75
NIS	0.5	% v/v				
UAN	4.68	l/ha				
Atlantis	61.8	g ai/ha	10	0	85	92
NIS	0.5	% v/v				
UAN	4.68	l/ha				
Atlantis	52.5	g ai/ha	10	0	73	86
MSO	1.17	l/ha				
Huskie	206.5	g ai/ha				
Osprey	45	g ai/ha	10	0	78	82
NIS	0.5	% v/v				
UAN	4.68	l/ha				
Powerflex	18.39	g ai/ha	10	0	83	83
NIS	0.25	% v/v				
Olympus Flex	49.65	g ai/ha	8	0	83	90
MSO	1.52	l/ha				
MIN			0	0	0	0
MAX			10	0	85	92
MEAN			9	0	70	74
LSD (P=.05)			1.65	0	16.51	18.2
CV			11.06	0	13.82	14.31
Treatment Prob(F)			0.0001	1	0.0001	0.0001