

Project Title: Evaluation of Clearmax and Tank Mix Partners for Crop Injury and Yield in Clearfield Spring Wheat

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Objective: To compare crop selectivity to various tank mix partners of Clearmax herbicide in Clearfield spring wheat

Results:

Clearmax herbicide (a combination of Beyond and MCPA) and its tank mix partners were evaluated for crop injury and yield in Clearfield spring wheat. Clearfield spring wheat (cv. Gunner 2-gene) was planted on April 21, 2006 at a seeding rate of 85 lb/ac in 6" rows to a depth of 1.5 inches. Herbicide treatments included Beyond and Clearmax applied alone and mixed with various broadleaf herbicides. The herbicides were applied on May 19, 2006 using a backpack sprayer with Teejet XR11002 nozzles in 20 GPA. The environmental conditions were ideal at application (clear sky, no wind, and 74°F air and soil temperatures) and the crop was at the 3-5 main-stem-leaf stage with 1-2 tillers.

In general, no crop injury was observed when Beyond and Clearmax were applied alone or mixed with various broadleaf partners except for treatments containing Clarity. Crop injury with Clarity was significant (34-36%) at 10 days after application; however, seven weeks after application the injury was minimal. Applications of Beyond and Clearmax, as well as and their tank mix partners did not affect yield.

Summary:

Clearfield spring wheat had excellent tolerance to Clearmax and its tank mix partners in 2006. However, crop injury occurred early in the season when Clearmax was mixed with Clarity.

Table 1. Effects of Clearmax herbicide and its tank mix partners on crop injury and yield in Clearfield spring wheat in 2006 season at Kalispell, MT.

Trt No.	Treatment Name	Rate lb ai/ac	Crop injury (%)			Chlorosis (%)			Stunt (%)			Yield bu/ac 8/10/06
			5/30/06	6/12/06	7/11/06	5/30/06	6/12/06	7/11/06	5/30/06	6/12/06	7/11/06	
1	Check		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.7
2	Beyond	0.0625	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	81.7
3	Beyond Rhonox	0.0625 0.4620	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.5
4	Beyond Rhonox Starane	0.0625 0.4620 0.0937	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.1
5	Beyond Rhonox Starane	0.0625 0.4620 0.1875	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	85.6
6	Beyond Rhonox Buctril 2EC	0.0625 0.4620 0.2500	2.5	1.3	0.0	2.5	0.0	0.0	0.0	1.3	0.0	83.9
7	Beyond Rhonox Buctril 2EC	0.0625 0.4620 0.5000	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	90.8
8	Beyond Rhonox Clarity	0.0625 0.4620 0.0625	33.8	1.3	1.3	25.0	0.0	0.0	8.8	1.3	1.3	82.7

Table 1. (continued) Effects of Clearmax herbicide and its tank mix partners on crop injury and yield in Clearfield spring wheat in 2006 season at Kalispell, MT.

Trt No.	Treatment Name	Rate lb ai/ac	Crop injury (%)			Chlorosis (%)			Stunt (%)			Yield bu/ac 8/10/06
			5/30/06	6/12/06	7/11/06	5/30/06	6/12/06	7/11/06	5/30/06	6/12/06	7/11/06	
9	Beyond Rhonox Clarity	0.0625 0.4620 0.1250	36.3	7.5	0.0	26.3	0.0	0.0	10.0	7.5	0.0	78.4
10	Beyond Rhonox Weedar 64	0.0625 0.4620 0.1250	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.4
11	Beyond Rhonox Weedar 64	0.0625 0.4620 0.2500	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	2.5	82.9
	LSD (P=0.05)		3.86	2.74	1.61	2.93	0	0	2.01	2.74	1.61	11.00
	CV		40.60	208.67	327.96	41.58	0	0	81.54	208.67	327.96	9.07
	Treatment F		110.71	5.59	2.09	102.47	0	0	29.94	5.59	2.09	0.73
	Treatment Prob(F)		0.0001	0.0001	0.058	0.0001	1	1	0.0001	0.0001	0.058	0.6896