

## Tolerance of Winter Wheat to CleanWave

A field study was initiated at the High Plains Agricultural Laboratory near Sidney, NE to evaluate the tolerance of winter wheat to CleanWave herbicide. CleanWave is a premix of aminopyralid and fluroxypyr. Winter wheat ('Millenium') was no-till seeded into pea stubble on September 20, 2006 at a rate of 55 pounds/acre. Herbicide treatments were applied with an ATV-mounted sprayer set to deliver 11 gallons/acre at 3 miles/hour and 20 psi. The study was located on an Alliance silt loam soil with an organic matter content of 2.6% and a pH of 6.8. Herbicide applications were applied April 17, 2007 at BBCH 29 (end of tillering) and on May 1, 2007 at BBCH 32 (node 2 at least 2 cm above node 1).

Wheat treated at BBCH29 with CleanWave at a rate of 27.4 oz/A, CleanWave at a rate of 13.7 oz/A plus 2,4-D, or Ally plus 2,4-D plus Clarity showed symptoms of crop injury. The major symptom observed 1 week after treatment (1 WAT) was prostrate growth and some slight leaf discoloration. These are classic symptoms caused by synthetic auxin herbicides like 2,4-D and dicamba. It was unusual that these symptoms were observed with the treatments applied before jointing (BBCH29) and not the later treatments, but cold weather just prior to application of the BBCH29 treatments may have contributed to this. The low temperature on April 12 was 18 F, on April 14 was 25 F, and on April 17, the morning of application, was 30 F. Although similar injury was not observed with treatments applied at BBCH32, this application timing did result in increased head trapping 3 weeks after treatment (3 WAT) for all herbicide treatments except the Starane plus 2,4-D treatment. Head trapping was also observed 5 weeks after treatment (5 WAT) in treatments applied at BBCH29, but was significantly different from the check only in the treatment receiving 27.4 oz/A of CleanWave.

CleanWave applied at the recommended rate of 14 oz/A appears to pose only a slight potential for crop injury. To minimize the risk, CleanWave should be applied prior to jointing. This recommendation is similar to our recommendations for 2,4-D and dicamba.

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Treatment	Rate	Timing	Crop injury		
			1 WAT <sup>a</sup>	3 WAT	5 WAT
			%		
CleanWave	13.7 oz/A	BBCH29	3	0	5
CleanWave	13.7 oz/A	BBCH32	0	10	3
CleanWave 2,4-D ester	13.7 oz/A 5.7 oz/A	BBCH29	6	0	5
CleanWave 2,4-D ester	13.7 oz/A 5.7 oz/A	BBCH32	0	8	3
CleanWave	27.4 oz/A	BBCH29	15	5	8
CleanWave	27.4 oz/A	BBCH32	3	10	5
Ally 2,4-D ester Clarity NIS	0.1 oz/A 5.7 oz/A 2 oz/A 0.25% v/v	BBCH29	6	3	3
Ally 2,4-D ester Clarity NIS	0.1 oz/A 5.7 oz/A 2 oz/A 0.25 % v/v	BBCH32	0	10	3
Starane 2,4-D ester	8 oz/A 8.55 oz/A	BBCH29	1	0	3
Starane 2,4-D ester	8 oz/A 8.55 oz/A	BBCH32	0	3	0
Check		BBCH29	0	0	0
Check		BBCH32	0	0	0
LSD (5%)			4	4	6

<sup>a</sup>WAT = weeks after treatment.