

Evaluation of Rage™ D-Tech for Wild Buckwheat Control in Winter Wheat

A field study was conducted to evaluate the efficacy of Rage D-Tech herbicide in winter wheat. The study was conducted on the Ray Franzen farm, adjacent to the High Plains Agricultural Laboratory near Sidney, NE. The experimental design was a randomized complete block with three replications. Plots were 10 feet wide by 40 feet long. Herbicide treatments were applied with an ATV-mounted sprayer set to deliver 12 gallons/acre at 3 miles/hour and 15 psi. Winter wheat was seeded into fallow ground in late September 2008 at a rate of 60 pounds/acre. The study was located on a Duroc loam soil with an organic matter content of 3.3% and a pH of 6.7. Herbicide treatments were applied on May 6, 2009 to winter wheat plants that were in the 5 to 6 leaf stage, 1 to 3 tillers, and were 6 to 8 inches in height. Winter wheat was jointed at the time of treatment applications with the second node visible above the ground. Wild buckwheat was 1 to 2 inches in height at time of application.

On May 13, one week after the treatments were applied, most Rage D-Tech treatments provided very good to excellent control of emerged wild buckwheat plants. The only exception to this was Rage D-Tech applied alone at the 8 ounce/acre rate, which provided only fair control of wild buckwheat. Wild buckwheat control with 2,4-D or Rave® was only fair at this time. By the next rating date, about three weeks after treatment applications were made, some new wild buckwheat seedlings had emerged. These new seedlings were not controlled by any treatment except Rave. In addition to the better control of newly emerged seedlings with Rave, many of the wild buckwheat plants that were emerged at the time of treatment application were succumbing to the Rave treatment by May 25. The continued germination and emergence of wild buckwheat resulted in the poor performance of Rage D-Tech treatments in this study. Rage D-Tech lacked the soil residual activity needed to control these later emerging seedlings. Only Rave, with the residual soil control provided by triasulfuron (Amber), provided commercially acceptable control of wild buckwheat in this study. No significant yield differences were observed among the treatments.

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Treatment	Rate	Crop injury	Wild buckwheat control		Yield
			May 13	June 25	
	oz prod/A	—————	%	—————	bu/A
Rage D-Tech NIS	8 0.25% v/v	10	78	37	38.4
Rage D-Tech NIS	12 0.25% v/v	15	88	63	33.9
Rage D-Tech Banvel NIS	8 3 0.25% v/v	13	95	65	33.4
Rage D-Tech Banvel NIS	12 3 0.25% v/v	15	92	65	37.7
2,4-D ester	12	0	73	63	35.8
Rave NIS	3 0.25% v/v	0	73	93	36.2
Nontreated check		0	0	0	38.3
LSD (5%)		14	9	13	6.2