Evaluation of Gowan Products for Weed Control in Proso Millet

A field study was initiated at the High Plains Agricultural Laboratory near Sidney, NE to evaluate the efficacy of several Gowan herbicide products for use in proso millet. Proso millet 'Sunrise' was no-till seeded into winter wheat stubble on June 26, 2009 at the rate of 15 pounds/acre. The experimental design was a randomized complete block with four replications. Herbicide treatments were applied with an ATV-mounted sprayer set to deliver 12 gallons/acre at 3 miles/hour and 15 psi. The study was located on an Alliance silt loam soil with an organic matter content of 2.3% and a pH of 7.1. Postemergence (POST) treatments were applied on July 15 to proso millet that was in the 4- to 5-leaf stage and 4 to 6 inches in height. Weeds present at the time of the application were mostly redroot and tumble pigweed. The weeds were 1 to 4 inches in height at the time of herbicide application.

Treatments containing Vida™ caused visible crop injury. This injury consisted of leaf spotting and necrosis. Leaves that emerged after application showed no signs of injury and plants quickly grew out of the injury. Very good to excellent pigweed control four weeks after application was provided by TNT Broadleaf™ + Clarity® and GWN-9795. Vida alone provided poor control of pigweed and the other treatments provided only fair pigweed control. Weed control with Vida may have been improved by using a higher spray volume and/or higher spray pressure. The fairly large size of the pigweed at the time of treatment application may have resulted in less control than expected from all the treatments.

Vida injury in proso millet.

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Treatment[a]	Rate	Crop injury	Pigweed[b] control July 21	Pigweed[b] control August 11	Yield
	oz prod/A	%			bu/A
Nontreated check		0	0	0	33.3
Vida	0.75	15	58	30	42.7
Vida 2,4-D amine	0.75 16	20	78	81	37.5
GWN-9794	0.5	0	58	73	43.6
GWN-9795	1.75	0	78	89	39.8
TNT Broadleaf Clarity	0.5 4	0	81	96	43.5
Yukon	4	0	60	75	39.4
Peak Clarity	0.38 4	0	68	78	40.2
LSD (5%)		1	13	13	6.5

[a]All treatments included NIS at 0.25% v/v and UAN at 1% v/v.
[b]Pigweed species included both redroot and tumble pigweed.