Postemergence Weed Control in Corn with Laudis in Combination with Different Adjuvants.

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A field study was initiated near Scottsbluff, Nebraska to compare different adjuvants in combination with Laudis plus Atrazine for selective weed control in corn. The experimental design was a randomized complete block with four replications. Plots were 11 feet wide by 40 feet long and were located on a loamy sand soil with a pH of 7.9 and 0.8% organic matter. Corn 'Pioneer 38H72' was planted on May 11. Herbicides were applied postemergence on June 5 when corn was at the V3 growth stage and common lambsquarters was 7 inches tall and redroot pigweed was 2 inches tall. At the time of herbicide application, air temperature was 76 F, humidity was 50%, wind was out of the SE at 4 mph, and the time was 2:00 PM. Herbicides were applied with a tractor-mounted sprayer calibrated to deliver 20 gallons per acre at 32 psi-pressure using Spraying Systems 11002 VS nozzles.

Corn stand was reduced in nontreated plots because of weed competition that averaged 1145 common lambsquarters and 180 redroot pigweed plants per 92 sq ft (Table 1). This weed infestation resulted in a corn seed yield of 35 bu/acre. Laudis plus Atrazine did not cause significant corn injury or corn stand reduction. Average weed control of 98% and a corn yield of 194.6 bu/acre was achieved when Laudis plus Atrazine was combined with Loveland MSO at 1% per volume of carrier. Average weed control declined to 85% when Laudis plus Atrazine was combined with DYNE-AMIC at 0.5%.

Table 1. Postemergene Weed Control in Corn with Laudis in Combination with Different Adjuvants.

		Corn			Percent weed control 7/2[3]		
Treatment[1]	Rate	Visual injury[2] 6/17	Stand 7/2	Yield 12/1	Common lambsquarters	Redroot pigweed	Average
	(lb/acre)	(%)	(plants/acre)	(bu/acre)	---------- (%) ----------		
Nontreated	--	0	32908	35.2	0	0	0
Laudis + Atrazine + Loveland MSO 1% + AMS	0.123 + 0.5	2	35402	194.6	97	98	98
Laudis + Atrazine + Loveland MSO 0.75% + AMS	0.123 + 0.5	2	35878	199.6	98	88	93
Laudis + Atrazine + Loveland MSO 0.5% + AMS	0.123 + 0.5	0	34808	181.9	89	90	89
Laudis + Atrazine + Destiny HC 0.5% + AMS	0.123 + 0.5	0	36472	185.2	96	89	92
Laudis + Atrazine + DYNE-AMIC 0.5% + AMS	0.123 + 0.5	1	35521	190.7	92	78	85
Laudis + Atrazine + Sundane II 1.0% + AMS	0.123 + 0.5	3	35878	177.3	96	93	95
LSD at 5%	--	3	1912	21	7	25	14

[1]Herbicide treatments were applied on June 5 when corn was in the V3 growth stage and average weed height was 4.5 inches. Ammonium sulfate (AMS) was added to each treatment at 8.5 lb/100 gallons of solution.
[2]Visual crop injury evaluated on a scale from 0 to 100 with 0 equal to no injury and 100 equal to death of the plant.
[3]Percent weed control calculated from weed counts taken on July 2.