

Affinity BroadSpec Tank Mixes with Starane NXT

A field study was conducted to evaluate weed control of Affinity BroadSpec herbicide when tank mixed with Starane NXT. The study was conducted in winter wheat at the High Plains Agricultural Laboratory located 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 11 gallons/acre at 3 miles/hour and 20 psi. Winter wheat ('Millenium') was no-till seeded into pea stubble on September 20, 2006 at a rate of 55 pounds/acre. The study was located on an Alliance silt loam soil with an organic matter content of 2.4% and a pH of 7.6. Herbicide treatments were applied on April 27, 2007 to winter wheat plants that had 3 to 4 tillers. Kochia and Russian thistle plants were about 2 inches in height at the time of first application. The second application was made on May 8, 2007 when kochia and Russian thistle plants were about 4 inches in height. Winter wheat was jointed at the time of the second application, with the head being 2 to 3 inches above the soil surface.

When applied to 2-inch weeds, Starane NXT at all rates provided good to excellent control of kochia and Russian thistle at all rating dates. The addition of Affinity BroadSpec (Harmony GT + Express) to Starane NXT at any rate did not improve weed control. When applied to 4-inch weeds, Starane NXT at all rates provided good to excellent control of kochia and Russian thistle for the first 4 weeks after treatment (4 WAT); however, by 6 weeks after treatment (6 WAT), control of kochia and Russian thistle declined at the 8 and 12 oz/A rates. Apparently, some of these plants were not completely killed with the lower rates of Starane NXT and were starting to recover. The addition of Affinity BroadSpec to Starane NXT at 12 oz/A, maintained weed control 6 WAT. Affinity BroadSpec did not maintain weed control 6 WAT when added to just 8 oz/A of Starane NXT.

The kochia and Russian thistle in this field contained about 50% SU-resistant kochia and Russian thistle populations. This undoubtedly affected the efficacy of Affinity BroadSpec as a tank mix partner in this study. Excellent spring moisture resulted in excellent winter wheat growth, which was very competitive with weeds. No yield differences were observed (data not shown).

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Treatment	Rate	Weed height in.	2 WAT ^a		4 WAT		6 WAT	
			Kochia	R. thistle	Kochia	R. thistle	Kochia	R. thistle
			%					
Harmony GT Express Starane NXT NIS	0.25 oz/a 0.25 oz/a 8 oz/a 0.25 % v/v	2	90	90	75	82	75	82
Harmony GT Express Starane NXT NIS	0.25 oz/a 0.25 oz/a 12 oz/a 0.25 % v/v	2	93	97	95	95	95	95
Harmony GT Express Starane NXT NIS	0.25 oz/a 0.25 oz/a 16 oz/a 0.25 % v/v	2	93	97	88	95	88	95
Starane NXT NIS	8 oz/a 0.25 % v/v	2	93	87	87	88	87	87
Starane NXT NIS	12 oz/a 0.25 % v/v	2	93	93	93	95	93	95
Starane NXT	16 oz/a 0.25 % v/v	2	95	97	93	95	95	95
Harmony GT Express Starane NXT NIS	0.25 oz/a 0.25 oz/a 8 oz/a 0.25 % v/v	4	80	90	83	90	78	78
Harmony GT Express Starane NXT NIS	0.25 oz/a 0.25 oz/a 12 oz/a 0.25 % v/v	4	90	97	92	97	88	90
Harmony GT Express Starane NXT NIS	0.25 oz/a 0.25 oz/a 16 oz/a 0.25 % v/v	4	93	95	93	95	97	97
Starane NXT NIS	8 oz/a 0.25 % v/v	4	88	85	85	85	77	82
Starane NXT NIS	12 oz/a 0.25 % v/v	4	90	93	90	95	77	77
Starane NXT	16 oz/a 0.25 % v/v	4	95	97	95	97	95	95
Check			0	0	0	0	0	0
LSD (5%)			7	8	8	27	8	10

^aWAT = weeks after treatment.