



Texas Agricultural Extension Service
The Texas A&M University System

Result Demonstration Report

Control of Field Bindweed in Grain Sorghum Using Paramount - 1999

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Summary

Three field studies were conducted to evaluate control of field bindweed using Paramount herbicide alone and in tank mixes with Clarity and 2,4-D amine. In all three studies Paramount alone and in the tank mixes provided excellent control of field bindweed at the late ratings. Paramount alone appeared to be somewhat slow in control early in the season but eventually provided nearly as good of control as the tank mixes. Tank mixing Paramount with 2,4-D or Clarity should improve control of annual weeds that Paramount alone will not control.

Introduction and Objectives

Field bindweed is a troublesome weed to control in any crop grown in the Texas Panhandle. Traditional herbicides such as 2,4-D provide good short-term control but regrowth often occurs. Therefore, these studies were conducted to evaluate Paramount a recently labeled product for bindweed control in sorghum.

Materials and Methods

In 1999 three studies were conducted, one in Moore Co. and two in Randall Co. Applications were made in Moore Co. to Pioneer 3205 milo at the 16 inch stage and to 10 inch bindweed. In Randall Co. test 1, applications were made to Warner 624-Y milo at the 4 inch stage and 10 inch bindweed. At Randall Co. test 2, applications were made to Novartis KS524 milo at the 18 inch stage and to 16 inch bindweed. Ratings were taken at 2, 4, and 8 weeks after treatment application (WAT) for crop injury and weed control on a 0 to 100% scale. 0 = no control or injury and 100 = complete control or kill. The 2,4-D used in the study was an amine formulation containing 4 lbs of active ingredient per gallon. All applications were made using a tractor mounted CO₂ sprayer at 3 mph and 10 gpa. Plot size was 15 by 25 feet and each treatment was replicated 4 times.

Results

See following table.

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Table 1. Bindweed control in sorghum with Paramount in Randall and Moore counties in 1999.

Treatment	Rate Prod./Ac	Randall Co. Test 1			Randall Co. Test 2			Moore Co.		
		2 WAT ¹⁾	4 WAT	8 WAT	2 WAT	4 WAT	8 WAT	2 WAT	4 WAT	8 WAT
		----- Percent Bindweed Control-----								
Paramount + COC	5.3 oz + 1 qt	63	84	86	34	76	80	45	59	93
Paramount + COC	8.1 oz + 1 qt	75	89	91	80	83	81	46	59	86
Paramount + Clarity + COC	5.3 oz + 4 oz + 1 qt	88	94	94	69	91	90	71	91	95
Paramount + Clarity + COC	8.1 oz + 4 oz + 1 qt	87	95	95	74	88	91	71	73	91
Paramount + 2,4-D + COC	5.3 oz + 8 oz + 1 qt	93	95	95	79	91	94	53	60	95
Paramount + 2,4-D + COC	8.1 oz + 8 oz + 1 qt	91	95	95	88	93	94	54	65	95
Clarity	8 oz	70	86	89	85	86	89	54	60	85
2,4-D amine	16 oz	93	95	93	84	93	89	68	78	89

¹⁾ WAT = Weeks After Treatment Application.

Conclusions

At the Randall Co. test 1 site, slight crop injury occurred from treatments containing 2,4-D (data not shown). Injury was mostly stunting and deformed brace roots. Sorghum was only 4 inches in height at the time of application. No injury occurred to sorghum in the other tests. Bindweed control was somewhat slow when Paramount was applied alone. When mixed with 2,4-D or Clarity good control was achieved earlier than when Paramount was used alone. However, Paramount applied alone had good control at the late ratings. No significant advantage was observed in late season control ratings between the 5.33 and 8.1 oz/Ac rates. At all locations the highest level of bindweed control was obtained from the tank mixes of Paramount plus 2,4-D or Clarity. Both 2,4-D and Clarity alone treatments provided similar control of bindweed compared to the Paramount treatments when evaluated 8 weeks after treatment application. However, long term studies have shown Paramount to give longer control of bindweed than either 2,4-D or Clarity. Paramount does not control many annual weeds that invade sorghum. Tank mixing Paramount with 2,4-D or Clarity should improve the control of other broadleaf weeds.