

TITLE:

Peanut Tolerance to Strongarm Applied Postemergence at AG-CARES, Lamesa, TX 2002.

AUTHORS:

Trent Murphree, Peter Dotray, Wayne Keeling, Graduate Research Assistant, Associate Professor, Professor

MATERIALS AND METHODS:

Plot Size:	4 rows by 50 ft.
Soil Type:	Amarillo fine sandy loam
Planting Date:	May 2, 2002
Irrigation:	15.5 inches total growing season
Application dates:	POST May 30, 2002
Harvest Date:	October 16, 2002

RESULTS AND DISCUSSION:

Strongarm received a full registration label before the 2000-growing season. Research prior to registration indicated that Strongarm had good activity on pigweed, devil's-claw, morningglory, and nutsedge. In addition, good crop tolerance was reported. During the 2000 growing season, it was reported that Strongarm caused stunting, stand loss and chlorosis to the peanut canopy when applied preplant incorporated and preemergence. A supplemental label was issued in 2001 for Texas, Oklahoma, and New Mexico, which restricted applications to soils with a pH of 7.2 or greater. The cause of crop injury is unknown. Therefore, the purpose of this study was to observe peanut growth and yield following Strongarm applied postemergence at different rates. Two different varieties of peanut were studied. The rates of Strongarm used in this study were 0.008, 0.016, 0.023, 0.031, and 0.046 lb ai/A. The normal soil applied rate of Strongarm was 0.024 lb ai/A. Cadre at 0.063 lb ai/A was also applied postemergence for comparison purposes. The peanut varieties used included Flavor Runner 458, which is a common runner variety grown by most producers on the Texas Southern High Plains, and the Olin variety, which is a new Spanish high oleic variety that was released in 2002. All treatments contained non-ionic surfactant at 0.25% v/v. All plots were maintained weed-free throughout the growing season so herbicide injury could be accurately assessed.

Less than 5% injury was observed from 0.031 and 0.046 lb ai/A rates of Strongarm throughout the growing in both varieties of peanut. No injury was observed following Strongarm rates as high as 0.024 lb ai/A. The Cadre treatment caused less than 5% injury to both varieties at the initial rating date. Peanut yields ranged from 2950 to 3300 lb/A for the Olin variety and 3000 to 3400 lb/A for the Flavor Runner variety. Yield was not affected by postemergence applications of Strongarm. These results indicate that Strongarm could be safely used in peanut when applied postemergence (not currently labeled). Studies were conducted in 2002 evaluating weed control when Strongarm was applied postemergence.

Table 1. Peanut injury and yield in variety as affected by herbicide treatments.

Variety	Treatment	Rate (lb ai/A)	Application	Peanut Injury (%)			Yield (lb/A)
				6/13	7/11	8/8	
Olin	Strongarm	0.008	POST	0	0	0	2953
	Strongarm	0.016	POST	0	0	0	3273
	Strongarm	0.023	POST	0	0 0	3061	
	Strongarm	0.031	POST	0	0 3	3111	
	Strongarm	0.046	POST	3	0 3	3218	
	Cadre	0.063	POST	3	0 0	3208	
	Untreated	--	--	0	0 0	3027	
	LSD			NS	NS	NS	452
Flv Runner 458	Strongarm	0.008	POST	0	0	0	3100
	Strongarm	0.016	POST	0	0	0	3427
	Strongarm	0.023	POST	0	0 0	3148	
	Strongarm	0.031	POST	0	0 0	3107	
	Strongarm	0.046	POST	0	0 3	3128	
	Cadre	0.063	POST	3	0 0	3007	
	Untreated	--	--	0	0 0	3205	
	LSD			NS	NS	NS	384