TITLE:

Cotton Recrop Tolerance to Strongarm and Cadre Applied Postemergence in Peanuts in 2002 at AG-CARES, Lamesa, TX 2003

AUTHORS:

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MATERIALS AND METHODS:

Plot Size:	4 rows by 50 feet, 6 replications
Soil Type:	Amarillo fine sandy loam
Application dates:	Applied postemergence in peanuts on May 30, 2002
Planting Date (cotton):	June 11, 2003
Irrigation in 2002:	15.5 inches in the 2002 growing season
Rainfall total in 2002:	14.1 inches
Harvest Date:	October 29, 2003

RESULTS AND DISCUSSION:

Strongarm received a full registration label in 2000 for use preemergence in peanuts. In 2000, Strongarm caused stunting, stand loss and chlorosis in peanuts 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 peanut variety used in 2000 (Flavor Runner 458) is believed to be a part of the reason for the injury observed since studies have shown that this variety of more susceptible to Strongarm injury. Studies in 2001 and 2002 examined peanut tolerance to Strongarm applied postemergence (POST). Currently, there is no POST option for Strongarm, but label changes may occur in the future. The purpose of this study was to observe cotton recrop injury and yield following Strongarm applied POST in peanuts in the previous year. The rates of Strongarm used in this study were 0.008 (0.15 oz), 0.016 (0.3 oz), 0.023 (0.45 oz), 0.031 (0.6 oz), and 0.046 (0.9 oz) lb ai/A. The normal soil applied rate of Strongarm preemergence is 0.45 oz, but the proposed rate POST may be 0.3 oz/A. Cadre at 0.063 lb ai/A (1.44 oz) was also applied POST for comparison purposes. All treatments contained a non-ionic surfactant at 0.25% v/v. Plots were maintained weed-free in 2002 and peanuts were dug and harvested. Cotton was planted in May, 2003 and plots were maintained weed-free so any herbicide injury and cotton yield reduction could be attributed to herbicide carryover and not weed competition. No cotton injury was observed on June 23 (12 days after planting). On July 24, injury was observed in the Cadre-treated plot (8%), but no was observed from any Strongarm-treated plot. No injury was observed from any treatment on October 1. No reduction in cotton yield was observed from any treatment, but numerical reductions were apparent as Strongarm rate increased and in the Cadre-treated plot. Cotton lint yield in the untreated plot was 1115 lb/A. Yield ranged from 1040 to 1200 lb/A in Strongarm-treated plots, and 1007 lb/A in the Cadre-treated plots. The plant-back restriction to cotton following a Cadre (and Pursuit) application is 18 months. The proposed Strongarm postemergence label may have a plant-back restriction to cotton of 10 months.

Table 1. Cotton injury and yield in 2003 as affected by Strongarm and Cadre applied postemergence to peanut in 2002 at AG-CARES in Lamesa, TX.

Herbicide Treatment	Rate (lb ai/A)	Rate (oz prod./A)	Cotton Injury (%)			Lint Yield (lb/A)
			June 23	July 24	October 1	
Strongarm + NIS	0.008	0.15	0	0	0	1200
Strongarm + NIS	0.016	0.30	0	0	0	1185
Strongarm + NIS	0.024	0.45	0	0	0	1097
Strongarm + NIS	0.032	0.60	0	0	0	1017
Strongarm + NIS	0.046	0.90	0	0	0	1040
Cadre + NIS	0.063	1.44	0	8	0	1007
Untreated	-----	-----	0	0	0	1115
CV						14.33
$LSD_{(0.05)}$		---	NS	2	NS	263