

STRONGARM PERFORMANCE IN TEXAS HIGH PLAINS PEANUT. J.R. Karnei, P.A. Dotray, J.W. Keeling, and T.A. Baughman. Texas Agricultural Experiment Station and Texas Tech University, Lubbock and Texas Agricultural Extension Service, Vernon.

ABSTRACT

Field studies were conducted in 2000 to evaluate weed control and peanut response to Strongarm. Trials were established in Brownfield and Union, TX to evaluate purple nutsedge (*Cyperus rotundus* L.), golden crownbeard (*Verbesina encelioides* L.), and shining tickseed (*Corispermum nitidum* L.) control with Strongarm. Strongarm applied PPI and PRE at 0.016, 0.024, or 0.048 lb ai/A and Cadre was applied POST at 0.063 lbs ai/A at all locations. The Union location had a blanket application of Prowl at 0.62 lb ai/A, PPI and an additional PRE treatment of Valor at 0.094 lb ai/A.

Strongarm at 0.048 lb ai/A applied PPI or PRE controlled purple nutsedge 70-72% 21 days after planting (DAP). Strongarm PPI or PRE at 0.024 lb ai/A controlled purple nutsedge 57% 21 DAP. Mid and late season control with Cadre was at least 90%. Strongarm applied PRE at 0.016, 0.024, and 0.048 lb/A controlled purple nutsedge 50, 70, and 80%, respectively. Late season control by Strongarm applied PPI increased from 28 to 80% as rate increased.

Strongarm controlled golden crownbeard and shining tickseed > 88% 53 and 83 DAP. Late season control of golden crownbeard was 100% by Valor and 88-95% by Strongarm applied PRE. Strongarm applied at 0.016, 0.024, and 0.048 lb ai/A provided 50, 60, and 86% golden crownbeard control late season. Shining tickseed was controlled 100% late season by Cadre and Valor. PPI treatments of Strongarm controlled shining tickseed 60-70% late season.

Peanut growth and yield response to Strongarm was observed at Lamesa, TX. Strongarm was applied PPI and PRE at 0.016, 0.024, and 0.048 lb ai/A. Cadre, Valor, and an untreated were used for comparison. All plots were kept weed-free season long. At 14 DAP, 0.048 lb ai/A Strongarm applied PPI or PRE injured peanut 50%. Strongarm at 0.024 lb ai/A PPI or PRE injured peanut 28% and Strongarm at 0.016 lb ai/A PRE and PPI injured peanut 10-12%. No peanut injury was recorded from Valor PRE at 0.094 lb ai/A. Peanut injury was 35% and 45% from Strongarm at 0.048 lb ai/A applied PRE and PPI, respectively, and 10% and 20% from Strongarm at 0.024 applied PRE and PPI at 85 DAP. Cadre injured peanut 7% 85 DAP. At the end of the season, 8% to 10% peanut injury was observed from Strongarm at 0.048 lb ai/A. All other Strongarm treatments had < 3% injury at the end of season. Yields were taken from the Union and Lamesa locations. At Union no Strongarm treatment yielded higher than the Prowl only check. The Strongarm PPI treatment showed a yield decrease of 480 lb/A when the 0.048 lb ai/A rate was compared to the 0.016 lb ai/A rate. Peanut yield from both Valor and the untreated control plot yielded >3100 lb/A. Strongarm applied 0.024 lb ai/A PPI produced 2400 lb/A, while the 0.024 lb ai/A PRE yielded 2600 lb/A.