

Peanut Tolerance to Valor Herbicide Applied Preemergence at Seminole, TX, 2009

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MATERIALS AND METHODS:

| | |
|-------------------|-------------------------------------|
| Plot Size: | 24 rows by 200 feet, 4 replications |
| Soil type: | Sandy loam |
| Planting Date: | April 29 |
| Variety: | Flavorrinner 458 |
| Application Date: | Preemergence, May 5 |
| Digging Date: | October 6 |
| Harvest Date: | October 28 |

RESULTS AND DISCUSSION:

Valor SX was registered for use in peanut in 2001. According to the Valor SX label, weeds controlled include kochia, common lambsquarter, several pigweed species including Palmer amaranth, golden crownbeard, and several annual morningglory species including ivyleaf morningglory. Valor SX may be applied prior to planting or preemergence. Preemergence applications must be made within 48 hours after planting and prior to peanut emergence. Applications made after plants have begun to crack or after they have emerged may result in severe injury. Splashing from heavy rains or cool conditions at or near emergence may also result in injury and even delayed maturity and yield loss. In 2009, several studies were conducted across the High Plains to gain experience and confidence with this relatively new peanut herbicide. At this location in west Gaines County (Mr. Chuck Rowland), Flavorrinner 458 was planted on April 29, and Valor SX at 3 ounces per acre (oz/A) was applied on May 5. Irrigation totaling 1 inch was applied (0.5 inches followed by 0.5 inches) immediately after the herbicide application. An untreated control was used for comparison purposes. Plant stand and peanut injury was evaluated on May 21 (16 days after application) and no difference was observed between the non-treated control and the Valor-treated plots (Table 1). Peanut canopy width was recorded on May 21, June 3, June 22, and September 9. No canopy width differences were noted between the Valor-treated and the non-treated control (Table 1). Peanuts were dug on October 6 and harvested with a small-plot peanut thrasher on October 28. Peanut yield following Valor SX at 3 oz/A was 6174 lb/A and was not different from the non-treated control (6367 lb/A). Grade was also evaluated and there was no difference when the Valor-treated were compared to the non-treated control. Results from this study and several others across the High Plains suggest that Valor is a safe option to peanut producers in our region. Although peanut injury has been observed in other states and in the High Plains when rates exceeded labeled recommendations, we feel that this herbicide is a good option for peanut growers for early-season weed control (4 to 6 weeks of soil residual activity).

Table 1. Peanut injury and yield as affected by Valor applied preemergence in Seminole, TX, 2009^a.

| Treatment | Rate | Prod. | Timing | Stand | Peanut Injury | Peanut Canopy Width | | | | Yield | Grade |
|-----------------------|---------|-------|--------|-------------|---------------|---------------------|--------|--------|--------|--------|--------|
| | | | | May 21 | May 21 | May 21 | Jun 3 | Jun 22 | Sep 9 | | |
| | lb ai/A | oz/A | | Plants/3ft. | % | -----inches----- | | | | lb/A | |
| Non-treated | --- | --- | --- | 10.2 | 0 | 4.5 | 5.6 | 15.9 | 39 | 6367 | 76 |
| Valor SX | 0.096 | 3 | PRE | 10.5 | 0 | 4.3 | 5.3 | 15.3 | 39.9 | 6174 | 76 |
| CV | | | | 1.79 | 0.0 | 4.81 | 4.35 | 6.58 | 6.06 | 5.31 | 1.71 |
| pValue | | | | 0.1273 | 1.0000 | 0.3004 | 0.1703 | 0.4500 | 0.6112 | 0.4715 | 1.0000 |
| LSD _(0.10) | | | | NS | NS | NS | NS | NS | NS | NS | NS |

^aAbbreviations: NS, non-significant; PRE, preemergence