

Valor performance in West Texas Peanut – 2008.

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Although Valor SX has been registered for use in peanut since 2001, many growers have little or no experience with this herbicide. Valor has exceptional activity on annual morningglories and sunflowers, and according to the label, other weeds controlled include kochia, common lambsquarter, and several pigweed species including Palmer amaranth (carelessweed). 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 2008, several studies were conducted across the High Plains to gain experience with this relatively unused peanut herbicide. Most of these studies were done in grower fields and plot size ranged from four to eight rows by 75 to 1200 feet. The soil type and irrigation/rainfall after application varied by location, so the results cover a wide range of environmental conditions. Weed control observations were not made at these locations because the primary focus was crop response. Effective weed control was achieved at all locations because additional weed control inputs were made over the entire test area.

AG-CARES. At this Texas AgriLIFE research facility in Dawson County, Flavorrinner 458 was planted on April 30 and Valor at 3 ounces per acre (oz/A) was applied on May 1. On May 2, 0.5 inches of irrigation was used to activate the herbicide. Peanut stand was recorded on May 25 and no difference was observed when the Valor-treated plots were compared to the untreated plots. Peanut injury was evaluated throughout the season and with the exception of the July 8 observation, where up to 3% injury was noted, no visual injury was observed. Peanut canopy width was recorded on these evaluation dates and no differences were observed between the treated and non-treated plots. Peanuts were dug on Oct 27 and harvested on Nov 5. Yield ranged from 4656 to 4710 lb/A and no differences were noted between the treated and untreated plots (Table 1).

Brownfield. At this location in Terry County, Flavorrinner 458 was planted on May 10 and Valor at 3 oz/A was applied on May 12. An untreated control was used for comparison purposes. Peanut stand and height were recorded on May 30, which was 18 days after application. No difference in peanut stand was observed between the control plots and the Valor-treated plots. Peanut height was slightly reduced in the Valor-treated plots relative to the non-treated control. Peanuts were dug, allowed to air dry on the soil surface, and were harvested with a small-plot peanut thrasher on Nov 12. Peanut yield from the Valor-treated plots was 4069 lb/A, which was not different from the non-treated control (3867 lb/A) (Table 1).

Lamesa. At this location in Dawson County, Tamrun OL02 was planted on May 13. Valor SX at 0, 2, and 3 oz/A was applied immediately after planting. On May 27, this location received approximately 2 inches of rainfall and damaging wind and hail. Peanut stand was recorded on May 27 (2 weeks after planting) prior to the hail event, and again Jun 16. No difference in stand was observed between the non-treated control and the Valor treatments. Visual injury and peanut canopy width were recorded throughout the season. Slight injury (up to 2%) was observed following Valor at 3 oz/A prior to the hail

event. After this event, 22 and 30% injury was observed following Valor at 2 and 3 oz/A, respectively. Peanut recovery was slower in the Valor-treated soil when compared to the non-treated soil, and injury was still apparent late-season (Sep 19). Peanut canopy width was reduced on Jun 16 and Jul 8 when compared to the non-treated control, but no canopy width reduction was observed late-season. Peanuts were dug on Nov 7 and harvested with a small-plot peanut thrasher on Nov 14. Peanut yield from the Valor-treated plots ranged from 4159 to 4185 lb/A, and were not different from the non-treated control (4357 lb/A) although a trend towards reduced yield was apparent (Table 1).

Levelland. At this location in Hockley County, Flavorrunner 458 was planted on May 3 and Valor at 3 oz/A was applied on May 5. An untreated control was used for comparison purposes. Several rainfall events occurred within approximately 48 hours after application that totaled 3.63 inches. No difference in peanut stand was observed between the control plots and the Valor-treated plots. Peanuts were dug, allowed to air dry on the soil surface, and were harvested with a small-plot peanut thrasher on Oct 24. Peanut yield from the Valor-treated plots was 4298 lb/A, which was not different from the non-treated control (4327 lb/A) (Table 1).

Seminole (1). At this location in west Gaines County, Flavorrunner 458 was planted on May 3 and Valor at 2 and 3 oz/A was applied on May 5 (within 48 hours of planting). An untreated control was used for comparison purposes. A rainfall event occurred on May 6, which delivered approximately 1.0 inches. No difference in peanut stand was observed between the control plots and the Valor-treated plots. Visual injury and peanut canopy width was recorded throughout the season and neither injury (greater than 1%) nor canopy width differences were noted between the Valor treatments and the non-treated control. Peanuts were dug on Oct 10 and harvested with a small-plot peanut thrasher on Oct 31. Peanut yield from the Valor-treated plots ranged from 5796 to 5938 lb/A and were not different from the non-treated control (5630 lb/A) (Table 1).

Seminole (2). At this location in west Gaines County, adjacent to the location above, Flavorrunner 458 was planted on May 3. The initial study was treated on May 5, which was a true preemergence application (within 48 hours of planting), but in this study applications were made on May 13 to peanuts that started to crack the soil 3 to 5 days earlier. According to the Valor label, this application timing exceeded label requirements. Valor was applied at 0, 2, or 3 oz/A. Rainfall May 13 to 15 totaled 0.3 inches. Peanut stand was recorded on May 27 (3 weeks after planting) and no difference in stand was observed between the non-treated control and the Valor-treated plots. Visual injury and peanut canopy width was recorded throughout the season and neither injury (greater than 1%) nor canopy width differences were noted between the Valor treatments and the non-treated control. Plants were dug on Oct 10 and harvested with a small-plot peanut thrasher on Oct 31. Peanut yield from the Valor-treated plots ranged from 6097 to 6364 lb/A, which were not less than the non-treated control (5849 lb/A).

Results from these studies 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 and when a significant hail event occurred early season, we feel that this herbicide, when used according to label requirements, is a good option for peanut growers for early-season weed control (4 to 6 weeks of soil residual activity). Consult the Valor label, Valent

Corporation, or Texas *Agri*Life Research and Extension personnel for more information regarding this herbicide. Similar tests will be conducted in the 2009 growing season, thanks to the support from the Texas Peanut Producers Board!

Table 1. Peanut yield as affected by Valor in 2008.

Treatment	Rate lb ai/A	Prod. oz/A	Peanut Yield (lb/A)					
			AG-CARES	Brownfield	Lamesa	Levelland	Seminole 1	Seminole 2
Non-treated	---	---	4656	3867	4357	4327	5630	5849
Valor SX	0.064	2	---	---	4185	---	5938	6364
Valor SX	0.096	3	4710	4069	4159	4298	5796	6097
LSD _(0.10)			NS	NS	NS	NS	NS	16.52