TITLE:

Peanut Tolerance to Valor Applied PPI and PRE

AUTHORS:

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MATERIALS AND METHODS:

Plot Size:	4 rows by 30 feet
Soil Type:	Brownfield loamy fine sand
Planting Date:	April 30, 2002
Variety:	Flavor Runner 458
Irrigation:	In-season - 30.48 inches
Application Date:	PPI – April 22, 2002
	PRE – April 30, 2002
Harvest Date:	November 8, 2002

RESULTS AND DISCUSSION:

Flumioxazin (Valor) received a Federal label for use in peanut in 2001. Valor can be applied preplant incorporated (PPI) or preemergence (PRE) and controls a variety of annual broadleaf weeds including morninglories. Peanut injury from Valor was reported in 2001 in Oklahoma, Georgia, and North Carolina. Some injury was even observed in west Texas. The cause of this injury has not been fully proven, but many believe this injury occurred as a result of heavy, driving rains as the peanuts were emerging. Peanut injury is best described as a "Caparol-splash" type of injury that we frequently observed in cotton following a heavy rain from emergence to the seedling stage of growth. We tried to simulate peanut injury in 2001 but were not successful. The objective of this experiment was to evaluate peanut tolerance to Valor applied at different rates and at different application timings.

No peanut injury was observed following Valor applied at 0.094 or 0.188 lb ai/A either PPI or PRE. The normal use rate is 0.063 to 0.094 lb ai/A (or 2 to 3 ounces of product per acre). No reduction in peanut yield was observed at the end of the season. These results, and others conducted in 2001 and 2002, suggest that peanut tolerance to Valor is excellent. However, in light of the injury reported in 2001, we will continue to test what conditions most likely cause peanut leaf burn after a PPI or PRE application.

Table 1. Peanut response to Valor applied at different rates and application timings at the Western Peanut Growers Research Farm in 2002.

Treatment	Rate	Application Timing	--------- Peanut Injury (%) ---------					Yield (lb/A)
			5/20	5/28	6/12	8/6	9/4	11/8
Untreated	---		0	0	0	0	0	4947
Valor 51 WP	0.094	PPI	0	0	0	0	0	5269
Valor 51 WP	0.188	PPI	0	2	0	0	0	4803
Valor 51 WP	0.094	PRE	0	0	0	0	0	5136
Valor 51 WP	0.188	PRE	0	0	0	0	0	5335
$LSD_{(0.05)}$			NS	NS	NS	NS	NS	NS