

Pre-Emergence Weed Control Evaluation

C. B. Godsey and J. Armstrong
Department of Plant and Soil Sciences

2009 progress made possible through OPC and NPB support

- Significant injury was observed with Spartan® and Balance® Flexx at the listed application rates.
- Prowl® H₂O and Parallel® (metalachlor) only gave 69 percent control, whereas, the inclusion of Valor® to this mix provided 96 percent control.

Introduction

Continued weed pressure in Oklahoma peanut production systems has reduced yields and acres of peanuts grown. Evaluating any potential new products is necessary to find new weed management options.

Methods

Plots were planted May 27 to Tamspan 90 at a seeding rate of four seeds/row foot. Treatments were applied

immediately after planting. Plots were 12 feet wide and 30 feet in length. Treatments applied are listed in Table 1. Weed counts and crop injury ratings were taken 20 days after treatment application. Spartan® (active ingredient: sulfentrazone) and Balance® Flexx (isoxaflutole + safener) are not labeled for use on peanut but were included because they have been observed to be effective on the pigweed species. Plots were not taken to yield and were terminated after early season weed ratings.

Table 1. Pre-emergence herbicide treatments and weed control observations made 20 days after application.

Treatments	Product	Rate	Control (%)	Injury (%)	Cost (\$/A)
1	Prowl® H ₂ O	3 pts/A	70	0	\$14.70
2	Parallel®	1.3 pts/A	65	3	\$7.50
3	Prowl® H ₂ O + Parallel®	1.5 pts/A + 0.85 pt/A	69	1	\$12.13
4	Spartan®	3 oz/A	96	15	\$12.80
5	Prowl® H ₂ O + Spartan®	1.5 oz/A + 3 oz/A	97	11	\$20.00
6	Balance® Flexx + Prowl® H ₂ O	3 oz/A + 1.5 oz/A	83	16	NA
7	Valor®	2 oz/A	86	1	\$7.28
8	Prowl® H ₂ O + Valor®	1.5 pts/A + 2 oz/A	88	1	\$14.63
9	Prowl® H ₂ O + Dual Magnum® + Valor®	1.5 pts/A + 1.33 pts/A + 2 oz/A	96	1	\$33.50
10	Untreated		0	0	
LSD <i>P</i> =0.05			29	4	

Results

Results for weed control and crop injury are given in Table 1. On the day of weed control ratings, morningglory and pigweed species were the most prevalent

weeds in the control plots. Significant injury was observed with Spartan[®] and Balance[®] Flexx at the listed application rates. Prowl[®] H₂O and Parallel[®] (metalachlor) only gave 69 percent control, whereas the inclusion of Valor[®] to this mix provided 96 percent control.