

PEANUT RESPONSE TO REVITON™ (TIAFENACIL)

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INTRODUCTION

Reviton™ (tiafenacil) is a new, non-selective, burndown herbicide labeled for use in various crops. Tiafenacil is a member of the N-phenyl-imide family and a PPO-inhibitor (WSSA MOA #14). Current label restrictions prohibit peanut planting for 120 to 180 days after application depending upon rate. Little information is known about the response of peanut to preemergence (PRE) or postemergence (POST) applications. Therefore, the objective of this research was to determine the effects of Reviton™ applied PRE or POST on peanut growth and yield.

MATERIALS AND METHODS

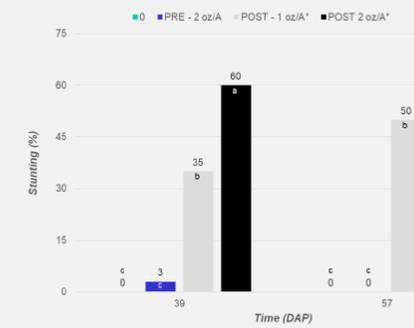
An irrigated, small-plot field trial was conducted in 2021 at the UGA Ponder Research Farm near Ty Ty, Georgia. The soil type at this location was a Tifton sand (0.91% OM, 94% sand, 0% silt, 6% clay, 6.0 pH, and 3.6 CEC). Twin-row 'GA-06G' peanuts were planted on May 3, 2021. Herbicide treatments included Reviton™ 2.83SC applied PRE @ 2 oz/A or POST (30 DAP, R1 stage) @ 1.0 oz/A or 2.0 oz/A. POST applications included Induce @ 0.25 v/v. Treatments were arranged in a randomized complete block design with a 3 replications. PRE treatments were activated by a 1.15" rainfall event the day of application. Herbicides were applied with a CO₂-powered backpack sprayer calibrated to deliver 15 GPA (38 PSI, 3.5 mph, 11002AIXR nozzles). The plot area was maintained weed-free using a combination of labeled herbicides and hand-weeding. Data collected included peanut injury (leaf necrosis/stunting), canopy height/width, and yield. All data were subjected to ANOVA and means separated using Tukey's HSD (P = 0.10).

Figure 3. Peanut Leaf Necrosis (32 DAP) As Influenced By Reviton™.



*Applied 30 DAP and included Induce @ 0.25% v/v

Figure 4. Peanut Stunting As Influenced By Reviton™.



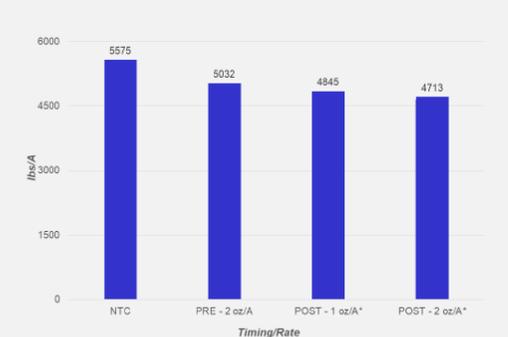
*Applied 30 DAP and included Induce @ 0.25% v/v

Figure 5. Peanut Height/Width (84 DAP) As Influenced By Reviton™.



*Applied 30 DAP and included Induce @ 0.25% v/v

Figure 6. Peanut Yield As Influenced By Reviton™.



P = 0.2037

RESULTS AND DISCUSSION

- 1) PRE applications of Reviton™ had no effect on peanut leaf necrosis, visual stunting, and canopy height/width (Figures 1-5).
- 2) POST applications Reviton™ caused significant leaf necrosis, visual stunting, and canopy height/width reductions (Figures 1-5).
- 3) Reviton™ had no effect on peanut yield ($P = 0.2037$) (Figure 6).

CONCLUSIONS

- 1) Since this is only 1 year of data, additional research is needed to confirm peanut tolerance to PRE and POST applications of Reviton™.
- 2) Current crop rotation restrictions for peanut following Reviton™ could potentially be reduced.

Figure 1. Peanut Response to Reviton™ (32 DAP).

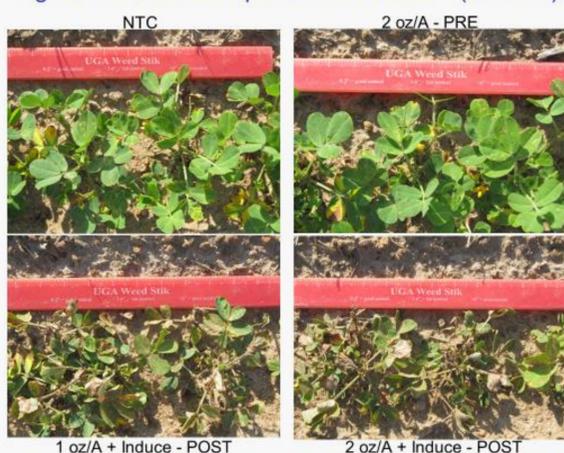


Figure 2. Peanut Response to Reviton™ (84 DAP).

