

Prohexadione calcium (Apogee) growth regulator effects in Peanut

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Introduction:

Excessive vine growth can be problematic when harvesting peanuts. This is due to the tractor operator not being able to see where to drive, thus causing losses by not keeping the digger aligned with planted rows. The growth habit of some peanut varieties is decumbent, which translates to a very flat, indistinguishable plant terminal in the late season. To help manage the issue, BASF registered a new growth regulator in 2008. In order to evaluate the efficacy of prohexadione calcium (Apogee) vine growth regulator in peanut (*Arachis hypogea*), field studies were initiated in 2009 at two locations on two peanut varieties in Worth county.

Materials and Methods:

Peanuts were planted by single row equipment on May 31 at both locations, and GA-03L peanuts were planted at location 1, and GA-07R were planted at location 2. Herbicide, fungicide, insecticide, and irrigation applications were made according to the normal practices of the farmer. Apogee was applied to peanuts at both locations at the rate of 7.25 ounces per acre, with the first spray occurring at 65 days after planting (DAP). The second spray was made at 80 days after planting. Vine growth was recorded at 95 DAP and at 120 DAP. Ten plants were pulled from the treated and untreated plots in each location and average length of plant terminals was recorded. Yields for treated and untreated plots were taken.

Results:

The effect of Apogee on vine growth was obvious to the naked eye. Measured data confirmed what the eye saw. At 95 DAP, vine growth was reduced by 10.4 centimeters at location 1, from 34.4 cm to 24.0 cm. At 95 DAP vine growth at location 2 was reduced by 8 cm from 31.0 cm to 23.0 cm. At 120 DAP growth was reduced by a total of 16.5 cm at location 1 and 13.0 cm at location 2. Yield was 5250 lb/ac for untreated plot location 1, and 5325 lb/ac treated plot location 1. Yield was 4365 lb/ac untreated plot location 2, and 4530 lb/ac treated plot location 2.

Conclusion:

Results of these studies indicate that Apogee does have very real benefits to growers of selected peanut varieties in Southwest Georgia. Future studies should be centered on varieties with a larger vine growth characteristic than the two used in this study. A farmer utilizing GA-02C without GPS guided RTK will potentially benefit from adopting Apogee into his program.

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