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NATIONAL PEANUT BOARD/SOUTHEAST PEANUT
RESEARCH INITIATIVE
PROJECT EXTENSION REQUEST FOR WORK
DONE UNDER RESEARCH AGREEMENT

Final Report

September 30, 2007

INSTITUTION: University of Georgia

PROJECT TITLE: Influence of Gramoxone Timing on Early, Mid and Late-Season
Peanut Cultivars

RES. AGR. NO.:
GACCP Control NO.:

PROJECT LEADER: Dr. Eric Prostko

EXPIRATION DATE: December 31, 2007 NPB CONTACT:
NPB Control NO.:

Final Report

Two field trials were established at the UGA Ponder Research Farm located near Tifton, GA in May 2007 to evaluate the influence of paraquat on peanut variety tolerance. Results from the field trials are as follows:

Test 1 (GA-03L)

1) FOR TSWV, NO INTERACTION BETWEEN HERBICIDE AND TIMING WAS OBSERVED. HERBICIDE HAD NO EFFECT ON TSWV ($P=0.251$). WHEN AVERAGED OVER ALL HERBICIDE TREATMENTS. APPLICATIONS MADE AT 21 DAC HAD HIGHER LEVELS OF TSWV THAN THE OTHER TIMINGS.

2) FOR BLACK AND BROWN HULLS, NO INTERACTION BETWEEN HERBICIDE AND TIMING WERE OBSERVED. NEITHER HERBICIDE NOR TIMING HAD AN EFFECT ON THE PERCENTAGE OF BLACK + BROWN HULLS.

3) FOR OTHER HULLS, A SIGNIFICANT HERBICIDE x TIMING INTERACTION WAS DETECTED ($P=0.0991$).

A) WHEN GRAMOXONE INTEON WAS APPLIED AT 6 DAC, THERE WAS AN INCREASE IN OTHER HULLS COMPARED TO THE NTC.

B) WHEN GRAMOXONE WAS APPLIED AT 14 OR 29 DAC, THERE WERE NO DIFFERENCES IN OTHER HULL COLOR.

C) WHEN APPLIED AT 21 DAC, GRAMOXONE + BASAGRAN HAD LESS OTHER HULLS THAN THE GRAMOXONE ALONE TREATMENT.

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4) FOR PEANUT YIELD, THERE WAS NO INTERACTION BETWEEN HERBICIDE AND TIMING. TIMING HAD NO EFFECT ON PEANUT YIELD ($P=0.3517$). WHEN AVERAGED OVER ALL TIMINGS, GRAMOXONE INTEON (8 OZ/A) AND GRAMOXONE INTEON (12 OZ/A) + BASAGRAN (8 OZ/A) CAUSED SIGNIFICANT PEANUT YIELD REDUCTIONS (9.0-11.5%). THERE WAS NO DIFFERENCE IN YIELD BETWEEN GRAMOXONE AND GRAMOXONE + BASAGRAN TREATMENTS.

Test 2 (GA-02C)

1) FOR TSWV, THERE WAS NO INTERACTION BETWEEN HERBICIDE TREATMENT AND TIME OF APPLICATION. WHEN AVERAGED OVER TIMING, PLOTS TREATED WITH GRAMOXONE OR GRAMOXONE + BASAGRAN HAD LESS TSWV THAN THE NTC. WHEN AVERAGED OVER TREATMENT, TIMING HAD NO EFFECT ON TSWV.

2) FOR POD COLOR, THERE WAS NO INTERACTION BETWEEN HERBICIDE AND TIME OF APPLICATION. NEITHER HERBICIDE NOR TIME OF APPLICATION HAD AN EFFECT ON PEANUT HULL COLOR (I.E. MATURITY).

3) FOR YIELD, THERE WAS A SIGNIFICANT INTERACTION BETWEEN HERBICIDE AND TIME OF APPLICATION.

4) GRAMOXONE INTEON + BASAGRAN CAUSED SIGNIFICANT YIELD LOSSES WHEN APPLIED AT 8, 15, AND 29 DAC. YIELD LOSSES WERE AS FOLLOWS: 8 DAC = 9.2%; 15 DAC = 10.7%; 29 DAC = 8.4%.

5) WHEN GRAMOXONE INTEON + BASAGRAN WERE APPLIED AT 23 DAC, A SIGNIFICANT YIELD INCREASE WAS OBSERVED (10%).

6) GRAMOXONE ALONE APPLIED AT 15 DAC CAUSED A SIGNIFICANT YIELD REDUCTION (9.9%).