

### III. NATIONAL COTTON SEED TREATMENT TEST (TAREC Research farm)

- A. PURPOSE: To determine the value of seed treatment fungicides for control of pre-and post-emergence damping-off diseases of cotton
- B. EXPERIMENTAL DESIGN:
1. Four replications in randomized complete block
  2. Two, 30-ft rows per plot with 36-in. row spacing
  3. Fifteen-ft alleyways between blocks
- C. APPLICATION OF TREATMENTS: Seed treatments were applied at the University of Arkansas under the direction of Dr. Craig Rothrock who is program coordinator for National Cottonseed Treatment Trials. Rates are product per cwt seed.
- D. TREATMENT AND RATE:
1. RTU Baytan Thiram 3.0 oz + Allegiance FL 0.75 oz/cwt
  2. RTU Baytan Thiram 3.0 oz + Trilex FL 0.64 oz + Allegiance FL 0.75 oz/cwt
  3. L0037 0.5 oz + L1226 0.64 oz + L0020 0.75 oz +L1028 0.086 oz/cwt
  4. Baytan 30 0.5 oz + Argent 30 1.5 oz + Allegiance FL 0.75 oz/cwt
  5. L1480 1.7 oz + L0020 0.75 oz + L1028 0.086 oz/cwt
  6. RTU Baytan Thiram 3.0 oz + Allegiance FL 0.75 oz + Dynasty CST 3.95 oz + Systhane 40 WP 0.84 oz/cwt
  7. RTU Baytan Thiram 3.0 oz + Allegiance FL 0.75 oz + Dynasty CST 3.95 oz/cwt + Syn214D 6 g a.i./100 kg seed
  8. RTU Baytan Thiram 3.0 oz + Allegiance FL 0.75 oz + Dynasty CST 3.95 oz/cwt + Syn214T 10 g a.i./100 kg seed
  9. Apron XL 0.32 oz + WECO 0257 0.65 oz + Nu-Flow M 2.5 oz + Nu-Flow ND 8.0 oz/cwt
  10. Apron XL 0.32 oz + WECO 0257 0.65 oz + Nu-Flow ND 8.0 oz/cwt
  11. Apron XL 0.32 oz + Nu-Flow ND 14.5 oz + Nu-Flow M 2.5 oz/cwt
  12. WECO 4004 0.6 oz + WECO 0257 0.7 oz +Nu-Flow ND 8.0 oz/cwt
  13. Vitavax-PCNB 6.0 oz + Allegiance 0.75 oz/cwt
  14. RTU-PCNB 14.5 oz.cwt
  15. Allegiance 1.5 oz/cwt
  16. Untreated check
- E. ADDITIONAL INFORMATION:
1. Location: Tidewater Research Farm, Hare Rd., Suffolk
  2. Crop history: corn 2004
  3. Land preparation: rip-strip tilled
  4. Planting date and cultivar: 18 Apr; DP 451B/RR
  5. Soil fertility report (Dec 2004):
 

pH.....	5.9
Ca .....	209 ppm
Mg .....	23 ppm
P .....	31 ppm
K.....	34 ppm
Zn .....	0.5 ppm
Mn .....	2.2 ppm
Soil type .....	Kenansville loamy sand

**13**

6. Herbicide: Cotoran 1 qt + Prowl 1 pt/A (7 Apr)  
Roundup Ultra Max 22 fl oz/A (2 May, 27 May, 14 Jun)  
MSMA 1 qt + Envoke 0.15 oz + Caparol 1.5 pt/A directed spray (12 Jul)
7. Insecticide: Temik 15G 5 lb/A in furrow (18 Apr)  
Orthene 97S 6 oz/A (27 May, 14 Jun)  
Baythroid 2E 2 fl oz/A (5 Aug, 11 Aug)
8. Growth regulator: Pentia 8 fl oz/A (7 Jul, 22 Jul)  
Pix Plus 8 fl oz/A (5 Aug)
9. Defoliant/Boll opener: Finish 1 qt + Def 6 oz + Dropp 0.1 lb/A (22 Sep)
10. Fertilization: 9-15-36 330 lb/A (31 Mar)  
Liquid boron 1 qt/A (21 Jun, 5 Jul)  
32% N 30 lb/A (21 Jun, 5 Jul)
11. Harvest date: 17 Oct 2005

Table 12. Effect of seed treatment on emergence and yield of cotton.

Treatment and rate	Plants/ft* (May 16)	Yield**	
		lb/A	bales/A
RTU Baytan Thiram 3.0 oz + Allegiance FL 0.75 oz/cwt..	0.90 ab	2874 ab	2.38 ab
RTU Baytan Thiram 3.0 oz + Trilex FL 0.64 oz + Allegiance FL 0.75 oz/cwt.....	1.08 ab	3261 ab	2.70 ab
L0037 0.5 oz + L1226 0.64 oz + L0020 0.75 oz + L1028 0.086 oz/cwt.....	0.89 ab	2592 ab	2.15 ab
Baytan 30 0.5 oz + Argent 30 1.5 oz + Allegiance FL 0.75 oz/cwt .....	0.89 ab	2983 ab	2.47 ab
L1480 1.7 oz + L0020 0.75 oz + L1028 0.086 oz/cwt.....	1.25 ab	3461 ab	2.87 ab
RTU Baytan Thiram 3.0 oz + Allegiance FL 0.75 oz + Dynasty CST 3.95 oz + Systhane 40 WP 0.84 oz/cwt ....	1.04 ab	3306 ab	2.74 ab
RTU Baytan Thiram 3.0 oz + Allegiance FL 0.75 oz + Dynasty CST 3.95 oz/cwt + Syn214D 6 g a.i./100 kg seed .....	0.93 ab	3276 ab	2.72 ab
RTU Baytan Thiram 3.0 oz + Allegiance FL 0.75 oz + Dynasty CST 3.95 oz/cwt + Syn214T 10 g a.i./100 kg seed .....	0.86 ab	3128 ab	2.59 ab
Apron XL 0.32 oz + WECO 0257 0.65 oz + Nu-Flow M 2.5 oz + Nu-Flow ND 8.0 oz/cwt .....	1.04 ab	2589 ab	2.15 ab
Apron XL 0.32 oz + WECO 0257 0.65 oz + Nu-Flow ND 8.0 oz/cwt.....	1.34 a	3700 a	3.07 a
Apron XL 0.32 oz + Nu-Flow ND 14.5 oz + Nu-Flow M 2.5 oz/cwt .....	0.77 b	3086 ab	2.56 ab
WECO 4004 0.6 oz + WECO 0257 0.7 oz + Nu-Flow ND 8.0 oz/cwt.....	1.14 ab	3303 ab	2.74 ab
Vitavax-PCNB 6.0 oz + Allegiance 0.75 oz/cwt .....	1.06 ab	3412 ab	2.83 ab
RTU-PCNB 14.5 oz/cwt.....	1.04 ab	3162 ab	2.62 ab
Allegiance 1.5 oz/cwt.....	0.99 ab	3040 ab	2.52 ab
Untreated check .....	0.97 ab	2323 b	1.93 b

\* Data are counts in two, 30-ft rows per plot.

\*\*Weight (lb/A) includes lint + seed; bales/A are lint only. Lint was 39.8% of seed cotton according to ginned 1 lb samples (1 bale of lint=480 lb). Plots were harvested on 17 Oct 2005.

Means followed by the same letter(s) in a column are not significantly different according to Student-Newman-Keuls test (P=0.05).