

V. RESPONSE OF COTTON TO IN-FURROW FUNGICIDE (TAREC Research farm)

- A. PURPOSE: To compare the efficacy and benefits of in-furrow treatments for control of seedling disease
- B. EXPERIMENTAL DESIGN:
1. Four randomized complete blocks with 15-ft alleyways between blocks
 2. Two, 30-ft rows per plot with 36-in. spacing
 3. Seeding rate of three seed/row ft
- C. APPLICATION OF TREATMENTS: All treatments were applied to the seed furrow when planting. Liquid in-furrow treatments were mixed in water and applied at a volume of 5 gal/A through a microtube to the seed furrow. Granular in-furrow fungicides were delivered by a Noble-box applicator.
- D. TREATMENT AND RATE (per 1000 ft of row):
1. Untreated check
 2. Ridomil Gold PCGR 9.8 oz
 3. Rovral CF 0.5 fl oz + Reason 0.5 fl oz
 4. Rovral CF 0.5 fl oz + Ridomil Gold 0.15 fl oz
 5. Terraclor Super X 18.8G 6.6 oz
 6. Quadris 2.08SC 0.6 fl oz + Ridomil Gold 0.15 fl oz
- E. ADDITIONAL INFORMATION:
1. Location: Tidewater Research Farm, Suffolk, VA
 2. Crop history: Peanut 2004; Cotton 2003; Peanut 2002
 3. Land preparation: rip-strip tilled
 4. Planting date and cultivar: 3 May 2005, DP 449 BG/RR (Lot 2B4-E-4906-21A, cool germ 84%, warm germ 93%)
 5. Soil fertility report:

pH.....	6.4
Ca	327 ppm
Mg	37 ppm
P	29 ppm
K.....	42 ppm
Zn	0.4 ppm
Mn	2.0 ppm
Soil type	Kenansville loamy sand
 6. Herbicide: Cotoran 1 qt + Prowl 1 pt/A (19 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 (3 May)
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 (17 Apr)
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 14. Effect of in-furrow treatments on emergence and growth of cotton.

Treatment and in-furrow rate/1000 ft of row	Plants/ft of row*		Plant height (in.)** (Jul 5)
	May 17	May 31	
Untreated check	1.8	1.7	18.8
Ridomil Gold PCGR 9.8 oz.....	1.6	1.7	18.2
Rovral CF 0.5 fl oz + Reason 0.5 fl oz.....	1.3	1.3	16.4
Rovral CF 0.5 fl oz + Ridomil Gold 0.15 fl oz	1.3	1.4	16.6
Terraclor Super X 18.8G 6.6 oz	1.6	1.6	17.6
Quadris 2.08SC 0.6 fl oz + Ridomil Gold 0.15 fl oz	1.4	1.5	17.6
LSD	n.s.	n.s.	n.s.

* Determined from counts of two, 30-ft rows per plot.

** Data are measurements of six plants per plot.

Means followed by the same letter(s) in a column are not significantly different according to Fisher's Protected LSD test (P=0.05).

Table 15. Effect of in-furrow treatments on flowering and yield of cotton.

Treatment and in-furrow rate/1000 ft of row	Flowers/ 12 ft of row * (Aug 1)	Yield**	
		lb/A	bales/A
Untreated check	30.1	3718	3.18
Ridomil Gold PCGR 9.8 oz.....	29.8	3917	3.35
Rovral CF 0.5 fl oz + Reason 0.5 fl oz.....	25.8	3125	2.67
Rovral CF 0.5 fl oz + Ridomil Gold 0.15 fl oz	28.8	3285	2.81
Terraclor Super X 18.8G 6.6 oz	26.0	3691	3.15
Quadris 2.08SC 0.6 fl oz + Ridomil Gold 0.15 fl oz	29.5	3745	3.20
LSD	n.s.	n.s.	n.s.

* Total number of flowers in 6-ft section from each row.

** Weight (lb/A) includes lint + seed; bales/A are weight of lint only. One-pound samples were ginned and lint determined to be 41% of total weight and 480 lb/bale. Plots were harvested on 17 Oct 2005.

Means followed by the same letter(s) in a column are not significantly different according to Fisher's Protected LSD test (P=0.05).