

**EFFECT OF IN-FURROW TREATMENTS AT  
PLANTING UPON EARLY SEASON VIGOR**  
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**Abstract**

In a short season environment, it is essential that the crop get off to a fast start in order to mature properly. There were two planting dates, May 9 and May 23, Temik at four pounds per acre in-furrow and Gaucho seed treatment were used and both were found to control thrips. Boll opening was earlier in the late planted plots with the Temik and Gaucho treatments. In the late planted trial the yields were significantly higher in the Gaucho plots, however, lint percent was lowered with either treatment. In the Temik treated plots, Ridomil at 8.5 pounds per acre, PGRIV at 1 oz per acre and 11-37-0 starter fertilizer at 10 gallons per acre were tried in all combinations. Significant differences in yield were not found, however, fiber length was significantly longer with the use of starter fertilizer. No significant differences were found in seedling disease control, except the starter fertilizer plots had more soreshin.

**Introduction**

At planting time, cotton is very vulnerable to attack by insects and seedling diseases, especially when temperatures are low and rainfall occurs. Low temperatures will retard growth and development. Therefore application of chemical treatments to protect against insects and seedling diseases should be beneficial. A starter fertilizer and a growth regulator should enhance early season growth.

**Materials and Methods**

Two planting dates, May 9 and May 23 were used with four replications at Portageville, Missouri. The variety was D&PL 50 with the standard seed treatment, with Gaucho added at 8 ounces per 100 pounds of seed and Temik at 4 pounds per acre in furrow. The trial was divided into 2 parts with the first containing the insecticides. The second part had all plots treated with Temik. The treatments were Ridomil at 8.5 pounds per acre, PGRIV at 1 ounce per acre, and a starter fertilizer (11-37-0) at 11 pounds of nitrogen and 37 pounds of phosphorus per acre. These treatments were used in all combinations.

**Results and Discussion**

The Temik and Gaucho both demonstrated effective thrips control when compared to the check. Cutworm damage

was not found to be significantly different among treatments. In the first planting date Temik showed better root color than the check indicating some activity against seedling diseases. Nodes above cracked boll on September 18 were less on the Gaucho and Temik treated plots. The number of fruiting branches below cracked boll were greater on the treated plots. Boll opening was earlier on the treated plots indicating the treatments helped earliness by controlling thrips. In the early planted trial yields were not significantly different. In the late planted trial the Gaucho significantly improved yields. Although not significant, Temik appeared to improve yields over the check. The lint percent in the second planting date was reduced by the treatments, especially with Temik. Fiber length was shortened slightly by the use of Gaucho.

In the treatments using Ridomil, PGRIV, and starter fertilizer, few differences were found. Yields were enhanced by each treatment but were not significantly different.

**Conclusion**

These results suggest that Temik or Gaucho are both effective in controlling early season thrips. Little advantage was found in the use of Ridomil, PGRIV, or starter fertilizer based on the results of this test.

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Table 1. Seedling Appearance

	Planting Dates			
	May 9		May 23	
	Root Color	Soreshin	Root Color	Soreshin
Control	4.5 a	3.1 a	3.6 a	3.2 a
Temik	3.8 a	3.0 a	3.4 a	3.7 a
Gaucho	3.9 a	3.2 a	4.3 a	3.7 a

Table 2. Seedling Damage

	Planting Dates			
	May 9		May 23	
	Thrips	Worm	Thrips	Worm
Control	8.4 a	5.2 a	5.7 a	5.8 a
Temik	5.2 b	4.7 a	4.0 b	5.2 a
Gaucho	3.8 b	3.9 a	4.4 b	5.9 a

Table 3. Plant Maps

	Planting Dates			
	May 9		May 23	
	Height	Fruiting Nodes	Height	Fruiting Nodes
	7/27	7/27	7/27	7/27
Control	27 a	7.1 a	23 b	8.5 a
Temik	30 a	6.9 a	26 a	7.6 ab
Gaucho	29 a	6.9 a	25 a	7.2 b

Table 4. Plant Maps

	Planting Dates			
	May 9		May 23	
	Nodes Above Cracked Boll 9/18	Fruiting Branch Below Cracked Boll 9/18	Nodes Above Cracked Boll 9/18	Fruiting Branch Below Cracked Boll 9/18
Control	10.5 a	3.7 b	12.6 a	2.1 a
Temik	9.0 b	4.8 a	10.0 b	2.9 a
Gaicho	9.2 b	4.6 ab	9.9 b	3.1 a

Table 5. Percent Open Bolls

	Planting Dates					
	May 9			May 23		
	9/21	9/30	10/6	9/21	9/30	10/6
Control	70 a	90 a	95 a	20 b	51 c	63 b
Temik	76 a	90 a	95 a	48 a	64 b	66 ab
Gaicho	73 a	90 a	95 a	58 a	76 a	71 a

Table 6. Yield

	Planting Dates					
	May 9			May 23		
	Seed Cotton	Lint %	Yield	Seed Cotton	Lint %	Yield
Control	2257 a	35.9 a	810 a	1664 c	37.3 a	621 b
Temik	2463 a	35.1 a	864 a	1814 bc	34.7 c	630 b
Gaicho	2485 a	34.9 a	868 a	2157 a	36.1 b	780 a

Table 7. Fiber Properties

	Planting Dates	
	May 9	May 23
	Length	Length
Control	1.13 a	1.13 a
Temik	1.12 ab	1.12 ab
Gaicho	1.10 b	1.10 b