

**MAXIMIZING SEEDLING RATES AND
FUNGICIDE TREATMENTS TO OBTAIN A
STAND OF TRANSGENIC COTTON**

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BXN 57 seed was provided by the Stoneville division of
Calgene Inc.

Abstract

In the past, cotton farmers have adjusted seeding rates to partially compensate for stand losses due to seedling diseases. With the emergence of several transgenic cottons and the probable high seed costs this may no longer be possible. Therefore, we evaluated various seeding rates and fungicide combinations to determine which ones would give an acceptable stand and seed cotton yields using the lowest seeding rate and/or fungicide rate possible.

Four seeding rates of the transgenic cotton 'BXN 57' (3,5,7,10 seed per foot) and four fungicide treatments (None, the hopper-box treatment DeltaCoat, 11.75 oz/CWT, and the in-furrow treatments Terraclor Super X (TSX), 12.5 G, at 8 and 15 lb/A) were evaluated. Plots were inoculated with *Rhizoctonia solani* and *Pythium* Spp. to increase seedling disease. Increasing the seeding rate increased the number of seedlings per foot numerically and some times significantly across all the fungicide treatments. In the plots receiving no fungicide treatments, only the ten seed per foot had significantly higher seed cotton yields over the other three seeding rates. In the plots receiving the hopper-box treatment DeltaCoat, the seeding rate of 3 seed per foot yielded significantly lower than the other three seeding rates. The 3 and 5 seed per foot had the highest yields in the plots receiving TSX, 12.5 G at the 8 lb/A rate. The 10 and 3 seed per foot yielded significantly lower. There were no significant differences in seed cotton yield due to seeding rate in the plots receiving 15 lb/A of TSX.

Highest seed cotton yields were obtained from the 3 and 7 seed per foot seeding rate when either rate of the in-furrow fungicide TSX was used. The 5 seed per foot yielded highest when TSX was applied at 15 lb/A. Seed cotton yields were about the same regardless of fungicide treatment at the 10 seed per foot seeding.

Therefore, it appears that the addition of hopper-box and in-furrow fungicides can increase seed cotton yields at the lower 3, 5 and 7 seed per foot seeding rate, and that these treatments did not consistently significantly improve yields at the 10 seed per foot seeding rate. In no fungicides were used, the 10 seed per foot rate yielded significantly higher than the other three seeding rates.