



Result Demonstration/Applied Research Report

ROUNDUP READY® COTTON VARIETY DEMONSTRATION

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SUMMARY

Eleven cotton varieties were compared under similar field conditions. Deltapine 488 BR, Phytogen 310R and Deltapine 434R were the highest yielding varieties. A Deltapine experimental had the highest loan value of 57.65 cents per pound. Deltapine 488 BR is the only Bollgard® variety in the test. Worm numbers were high and the test was sprayed several times.

PROBLEMS

Area cotton producers are continually searching for a cotton variety that will increase net profits through increased yield and fiber qualities. Higher strength and longer staple are the primary characteristics they are looking for.

OBJECTIVE

To find a cotton variety that will increase net profit with an increase in yields and fiber qualities. These varieties must also fit the limited irrigation of the St. Lawrence cotton growing region.

MATERIALS AND METHODS

The field used for this test was drip irrigated and received 3.5 inches of pre-irrigation and 180 lbs of 20-10-05 fertilizer knifed pre-plant. The varieties were planted in 8 row plots to a solid pattern on 40" spacing on May 25th. The field had Direx[®] and Treflan[®] banded at planting and Roundup UltraMax[®] applied for weed control. The plots received 3.2 inches of summer irrigation. The plots were fertilized with 55 units of Nitrogen per acre during the season. The field received 2 pyrethroid treatments for worms and Intruder[®] for aphids. It also received 2 application of Mepiquat Chloride (1 pt). The plots were defoliated with Gramoxone Max[®] (3 oz.) & Prep[®] (1.5 pt.) and desiccated by a freeze. They were stripper harvested on November 21st and weighed in a boll buggy. Samples were ginned and fiber samples were sent off for classing.

RESULTS, DISCUSSION AND ECONOMIC ANALYSIS

As seen in Table 1, the yields in this plot ranged from 987 lb/acre to 1376 lb/acre. The higher yielding varieties were Deltapine 488 BR, PhytoGen 310 R and Deltapine 434 R. Loan values ranged from 54.30 cents to 57.65 cents per pound with Deltapine Experimental being the highest.

Bollworm activity was high in this field so the Bollgard[®] variety yielded higher than the Roundup Ready[®] varieties alone.

ACKNOWLEDGMENTS

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TABLE 1: YIELD QUALITY AND ECONOMIC DATA FOR STANDARD VARIETY TEST,
SCOTTY HALFMANN FARM 2005.

Planted 5-25-05
Harvested 11-21-05

| VARIETY | YIELD | % LINT | GRADE | LEAF | STAPLE | MIC | STRENGTH | UNIFORMITY | LOAN VALUE | VALUE/ ACRE |
|--------------------|-------|--------|-------|------|--------|-----|----------|------------|------------|-------------|
| Deltapine 488 BR | 1376 | 33.7 | 31 | 2 | 35 | 3.9 | 26.4 | 79.8 | 56.35 | 775.38 |
| Phytogen 310R | 1293 | 33.7 | 31 | 1 | 35 | 4.1 | 28.2 | 82.1 | 56.35 | 728.61 |
| Deltapine 434R | 1278 | 33.1 | 31 | 1 | 34 | 3.9 | 25.8 | 79.5 | 54.30 | 693.95 |
| Deltapine 494R | 1188 | 32.0 | 31 | 1 | 35 | 4.0 | 29.7 | 82.3 | 56.60 | 672.41 |
| FiberMax 960R | 1181 | 31.4 | 31 | 1 | 36 | 3.5 | 29.1 | 81.7 | 56.90 | 671.99 |
| Deltapine X03X179R | 1180 | 33.8 | 31 | 1 | 36 | 4.1 | 29.5 | 83.0 | 57.65 | 680.27 |
| Stoneville ST4686R | 1129 | 33.3 | 31 | 2 | 33 | 4.0 | 25.0 | 79.5 | 50.95 | 575.23 |
| Stoneville ST6848R | 1117 | 30.9 | 31 | 1 | 37 | 4.5 | 29.2 | 83.3 | 57.35 | 640.60 |
| FiberMax 800R | 1065 | 32.1 | 31 | 1 | 36 | 4.1 | 27.4 | 83.1 | 57.40 | 611.31 |
| Deltapine 432R | 1033 | 29.8 | 31 | 1 | 35 | 3.9 | 28.7 | 82.3 | 56.35 | 582.10 |
| Deltapine 5415R | 987 | 31.9 | 31 | 1 | 34 | 4.0 | 26.3 | 81.1 | 54.30 | 535.94 |

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