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## **Replicated Transgenic Cotton Variety Demonstration Under LEPA Irrigation (Field 5e)**

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**Objective:** The objective is to determine differences in cotton yield and net value of selected cotton varieties grown under LEPA irrigation in large field plots.

### **Methodology:**

Varieties: FiberMax 989RR, FiberMax 989BG/RR, Paymaster 2280BG/RR, Paymaster 2326BG/RR, Paymaster 2326RR, Paymaster 2200RR, Paymaster 2266 RR

Experimental design: Randomized complete block with 4 replications

Seeding rate: 15 lb seed/acre in 30-inch row spacing (John Deere Max Emerge II vacuum planter)

Plot size: 8 rows by variable length due to pivot pie (690-1320 feet long)

Irrigation and Rain: 9.41 inches seasonal irrigation by LEPA, 7.46 inches rainfall (Apr-Sept)

Other: Normal cultural practices were followed, pests controlled at standard thresholds

Economics: Ginning costs were based on \$1.55 per cwt. of bur cotton and \$100 per ton for seed value. Ginning cost does not include bagging, ties, and checkoff. Systems costs were determined by variety per acre using manufacturer's suggested retail prices for seed, and appropriate technology fees for Bollgard and/or Roundup Ready based on the 15 lb/acre seeding rate.

### **Results and Discussion:**

Lint turnout ranged from 23.4% to 26.5%. Lint yields varied from a low of 1143 lb/acre (Paymaster 2266RR) to a high of 1391 lb/acre (FiberMax 989RR). Lint loan values were generally high all across the varieties. After adding lint and seed value, total value for varieties ranged from a low of \$735.14 (Paymaster 2200RR) to a high of \$889.86 (FiberMax 989 BG/RR). When subtracting ginning and systems costs, the net value among varieties ranged from \$628.30 (Paymaster 2326 BG/RR) to \$768.78 (FiberMax 989RR), a difference of \$140.48. These data indicate that



substantial differences can be obtained in terms of net value/acre due to variety selection. It should be noted that no inclement weather was encountered in this trial prior to harvest. High intensity rainfall and/or high wind events were not experienced to potentially cause pre-harvest losses with the open boll picker-type varieties (FiberMax 989RR and FiberMax 989BG/RR). Producers should take note that the harvest period optimum encountered in 2001 is not

considered “normal” for most years in the Texas High Plains. Additional multi-site and multi-year applied research is needed to evaluate varieties across a series of environments.