

**Replicated Chaperone Plant Growth Regulator Demonstration Under LEPA Irrigation**  
(Field 5A)

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**Objective:** The objective of this LEPA irrigated large plot demonstration was to determine response of cotton yield, gin turnout, fiber quality, and net value to varying rates of Chaperone plant growth regulator.

**Methodology:** Stoneville 2448R was planted on May 6 in 30-inch rows at a rate of 3 seed/row-ft using a John Deere Max Emerge II vacuum planter. Location of the demonstration was in a pivot pie with varying plot lengths. Average plot lengths were ~650 ft. Eight rows were sprayed with Chaperone plant growth regulator (PGR) at 5, 10, and 20 oz product/acre. An untreated check was included which resulted in four total treatments in a randomized complete block design with three replications. Applications of Chaperone PGR were made using a Lee Spider applicator using 15 gallons/acre total spray volume on July 14 when cotton plants were in the early bloom stage. Normal cultural practices were followed and pests were controlled at standard thresholds. 8.05 in. of LEPA irrigation was applied during the growing season, and rainfall was 20.6 in. between April 1 and Sept.30, 2004. The demonstration was harvested on December 1 using a John Deere 7445 commercial stripper, and plot weights were captured with a Crust Buster weigh wagon equipped with integral digital scales. Grab samples were taken by plot and ginned at the Texas A&M Research and Extension Center at Lubbock to determine gin turnouts. Lint samples were submitted to the International Textile Center at Texas Tech University for HVI analyses, and USDA loan values were determined for each plot. Ginning costs were based on \$2.25 per cwt. of bur cotton and seed value/acre was based on \$125/ton. The net value was determined by subtracting gin and chemical costs (\$0.86/oz Chaperone plus \$3.50/acre application cost) from the total value.



Fig. 1. Stripping the Chaperone rate trial at Helms, 2004.

**Results:** When compared to the untreated check, results indicate that Chaperone PGR had no statistically significant effects on lint turnout, lint yield, CCC lint loan value, or net value/acre (Table 1).

Table 1. Cotton response to Chaperone PGR in the replicated Chaperone plant growth regulator demonstration at Helms Farm, Halfway, TX, 2004.

Chaperone PGR rate (oz/acre)	Lint turnout (%)	Lint yield (lb/acre)	Lint loan value (\$/lb)	Chemical cost (\$/acre)	Net value (\$/acre)
0	23.4	1227	0.5085	0.00	646.22
5	22.9	1203	0.5055	7.80	624.87
10	23.5	1233	0.5082	12.09	638.08
20	23.5	1252	0.4865	20.69	614.78
Pr > F	0.8119	0.8507	0.6255	--	0.7776
CV, %	4.3	5.5	4.6	--	6.3
LSD 0.05	NS	NS	NS	--	NS