

**2006 Cotton Research Summaries**  
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1. **Roundup Ready Flex Cotton weed control research study:**

Preliminary one year results indicated a burndown herbicide in mid-March followed by a 7 days before planting (May 5) application of Gramoxone Inteon + Caparol + surfactant at 24 oz + 19 oz/acre + 0.25% v/v followed by (Fb) Sequence at 40 oz/acre applied post-emergence (POT) to 2 to 4 leaf cotton 3 weeks after planting (WAP) Fb post-direct layby application with Touchdown Total + Suprend + Crop oil at 18 oz + 16 oz/acre + 1% v/v provided season long weed control with a lint yield of 1425 lb/acre. However, yields and weed control were not different from 3 POT Roundup applications or Sequence applied early POT + Fb Touchdown Total applied at layby. KI 485 + Roundup applied preemergence or early POT showed good weed control but KI 485 caused crop stunting with lower yield. A burndown herbicide application after planting with a planter equipped with inverted disk closing wheels that covered the small weeds with soil resulted in poor early season weed control. The soil coverage caused by the closing wheels eliminated contact with the burndown herbicide which resulted in these weeds emerging after planting and caused early season competition with reduced yield.

2. **Cotton 15 inch row pattern:** Four year (2003-2006) averaged over locations (Verona and Falkner) indicated the 15-inch solid rows produced 24 and 74 lb/acre higher lint yield than 30 and 38-inch rows, respectively; and 15 and 90 lb/acre more than 15-inch 2x1 and 15-inch 2x2 skip row patterns, respectively. Using 2006 input prices, whole farm analysis indicated the 15-inch 2x2 skip row pattern showed the highest whole farm total net revenue (management and overhead costs were not included) for both Falkner and Verona. The 15-inch solid showed the lowest total whole farm net revenue. Two-year (2004-2005) Delta (Clarksdale) data showed no yield difference between 15, 30, or 38-inch rows. Fiber quality was not affected by row patterns at all locations. The 60-inch solid and 38-inch 2x1 skip row pattern showed delayed maturity (% open at defoliation) with no maturity difference between 15-inch solid, 15-inch 2x1 skip, 15-inch 2x2 skip, 30-inch and 38-inch rows. The 38 inch row produced the highest total whole farm net revenue while 15 inch solid produced the lowest total whole farm net revenue.

3. **Cotton Variety Trials:** The 2006 early and mid-season cotton variety trials indicated lint yields ranged from 826 to 1437 lb lint/acre for the early maturity varieties and 834 to 1362 lb/acre for mid-maturity varieties. The new entry variety study yields ranged from 966 to 1373 lb/acre. The yield differences among varieties were as much as about 600 lb/acre. Therefore, variety selection for high fiber quality and yield is essential for successful cotton production. Data is available at [www.msucare.com](http://www.msucare.com).

4. **Cotton Reduced Tillage:** A 4-year tillage study (2003-2006) in a continuous controlled wheel track-traffic system was conducted on a silty clay loam soil (0.25% to 0.5% slope). All 4 years the one-pass spring (late March/early April) bed preparation with the Prepmaster® or the fall bed-roller tillage system produced yield equal to the continuous fall paratill deep under-row tillage plus bed-roller system. Averaged over years, these tillage systems had taller plants and produced 22% more yield, than continuous no-till cotton. The higher yields for the raised bed system is associated with improved surface drainage, plant population and early season cotton growth.