

Making Corn Growers More Productive

The Need: If American farmers are to compete successfully with farmers in parts of the world where the cost of labor is dramatically lower than in the U.S., they must use research and technology to become more productive.

Serving the Need: Research by Dr. Ron Heiniger in the College of Agriculture and Life Sciences had identified key components of a corn cropping system that increases yield by increasing plant populations and using starter fertilizer and uniform plant spacing. Three research projects conducted at nine sites in 2006 were used to identify and refine key recommendations on factors such as how many seeds to plant and how much starter fertilizer to use. This research indicated that corn growers could increase yield by 22 to 27 bushels per acre using this system compared to previous corn management practices. Guidelines for using this information were developed and presentations made to growers at meetings and field tours. More than 800 growers were reached in this manner. At the same time, North Carolina Cooperative Extension bulletins were used to reach those who did not attend local meetings.

Impact beyond North Carolina: The number of growers using high-population corn systems has increased dramatically since 2005. Corn growers in North Carolina produced record yields in 2006, with over 200 documented cases of corn yields above 200 bushels per acre. Yield trends show a yearly increase of 3.5 bushels per acre over the past four years. More than half of this increase can be attributed to the adoption of better corn management practices, particularly higher seeding rates and the use of starter fertilizer. Based on the success of corn systems over the past four years and the increasing price of corn, experts project a 20 to 25 percent increase in corn acres grown in North Carolina in 2007. Given the yield increases experienced by growers in 2006 and a corn price of \$3.50 per bushel, this research and extension project has produced an economic gain of \$3,150,000 in 2006.

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