

North Carolina's Technology

By David High*

From *Tar Heel Junior Historian* 46:1 (fall 2006). Images may differ from those in the original article.

Technology has played an important role in industry and in the history of North Carolina. From its agricultural roots to the futuristic work being done in Research Triangle Park, the state has relied on technology to lead it forward and to meet challenges. Agriculture and textiles have been two of the staple industries in our state. Technology—the practical application of knowledge and science to solve problems or make life better—has driven both [the agriculture and textile industries] from the past, to the present, and on to the future.

In the earliest years of present-day North Carolina, American Indians and European settlers raised crops and animals. First, people farmed for survival. They grew crops and raised animals for food and other products. Later, the crops and animals were used for trade. Those early days marked the rise of family farms.

The slow agricultural lifestyle changed dramatically in the 1790s with the invention of the cotton gin. A crop that had been grown on the family farm for the family's use would lead to the development of North Carolina's first major manufacturing industry: textiles. The textile industry began to migrate from the Northeast to North Carolina more and more in the early 1900s, due to the availability of workers. People moved from farms to cities and mill villages to work in factories and textile businesses. Technology changed lifestyles.

North Carolina experienced an industrial boom in the early 1900s. The tobacco industry was growing, and the textile industry was expanding. While both agriculture and textiles have experienced dramatic changes in recent years, they continue to be driving forces in our state. Family farms have largely disappeared, but in their place are giant corporations growing soybeans, corn, and cotton, and raising thousands of hogs for the pork industry. In the 1960s one farmer could produce enough food to feed only 60 people. With technological advances enabling farmers to increase yields and become more efficient, some people estimate that today one farmer can produce enough food to feed 165 people.

With foreign competition, the textile industry also has been forced to adapt. Once limited to natural fibers such as cotton and wool, textile products here have developed to include manufactured fibers such as rayon and polyester. As jobs have been lost to other countries, textile leaders try to use technology to survive and adapt.

Agricultural and textile technology development paints a bright future. North Carolina State University in Raleigh, for example, houses research facilities dedicated to both industries. As tobacco fades in importance as a crop for North Carolina, the agriculture

industry replaces it by developing new and better products and programs. From seedless watermelons to agritourism efforts such as a Transylvania County corn maze, agriculture is relying on technology. Technology has given us biobased fabrics and biodegradable plastics. Research being done at North Carolina State University’s College of Textiles is developing the next generation of firefighting protective equipment, including chemical and biological weapons protection.

The next fifty years in North Carolina probably will bring even more changes than those we have seen in the past fifty. We can expect to see farming processes changed to bring us “clean” hog farming, and cars and trucks using biodiesel fuels to reduce our dependence on oil.

While most of these changes are good, there have been negative effects. Family farms have all but disappeared, changing people’s lives forever when children cannot continue farming as their parents did. The machines that technology has given us have even cut out the jobs of some people. The “megafarms” have used more and more chemicals, which have run off into our streams and rivers; however, it may be that new technology will bring us new processes to reduce chemical pollution.

We do not often think about the roots of our modern-day industries. But without tremendous technological advances, we might all still be living on small farms, using only those things that we could grow or raise ourselves. We would still be wearing only scratchy wool instead of fabrics such as soft ultrasuede. We would not have strawberries in winter or fresh pork in summer. Technology—together with hard work and determination—has taken North Carolina from its respected past, through its thriving present, to its future as a leader in research that may make the lives of its citizens and those of the whole world better.



**David High (second from left) won first place in the secondary division in the 2006 Tar Heel Junior Historian Essay Contest. He was an eighth-grader and a member of the Tar Heel Junior Historians at Forest Hills Middle School, Wilson, Carol Brugh, adviser. The contest asked students to write about how technology has changed over the years and impacted North Carolina in positive and negative ways.*