

Doña Ana County Home to Fine Cotton, Flavorful Pecans and Five Kinds of Chile

Date: Apr. 18, 1996

Editor: D'Lyn Ford, (505) 646-6528, dlford@nmsu.edu

LAS CRUCES -- In the irrigated Mesilla Valley surrounded by desert, Doña Ana County leads New Mexico with 19,500 acres of cotton, 18,000 acres of pecans, and 8,200 acres of chile. Not bad for an area that receives only five to eight inches of rain each year.

"Cotton is making a comeback in the county because prices have been stronger recently," said Javier Vargas, Doña Ana County agricultural agent with New Mexico State University's Cooperative Extension Service. "Cotton also is desirable because it's not as labor-intensive as some other crops, so farmers don't have to face the liability issues involved in hiring manual labor."

The two major varieties of cotton grown in the valley are Upland and American Pima. Upland has higher yields, while Pima has higher quality fiber. Pima is generally a brighter white and has a glossy sheen.

Doña Ana farmers can produce approximately 1,100 pounds per acre of Upland cotton or 875 pounds per acre of Pima. "Most of our Pima cotton is exported to European textile mills," Vargas said. "They like the bright color and fiber strength."

Researchers at NMSU are combining the best traits of both varieties, trying to create an Upland cotton that has Pima quality.

"Acala 1517 cotton, developed at NMSU, is the highest quality Upland cotton grown in the U.S.," said Roy Cantrell, cotton breeder with NMSU's Agricultural Experiment Station. "But as the textile industry continues to demand higher quality fiber, we have to improve our varieties."

The textile industry uses a high-speed spinning process to make cloth out of cotton. Strong, fine fibers are needed for the spinning machines.

NMSU cotton breeders are identifying which genes and DNA markers determine fiber quality in cotton. Then they transfer these genes from other varieties, including Pima, into the Acala 1517 Upland variety. "The project is still in its early stages, but we're working to improve our Upland varieties to keep up with the demand for high-quality cotton," Cantrell said.

In addition to cotton research, NMSU scientists are studying the nutritional needs of transplanted pecan trees, a growing sector of the county's pecan industry.

With more pecan trees than people in Doña Ana County, crowding becomes a concern. Large transplanting equipment is used to dig mature trees from crowded orchards and

move them to new locations. As this practice becomes more popular, orchard managers have many questions about pruning, fertilizing and irrigating the transplanted trees, said Esteban Herrera, NMSU Extension horticulturist.

That's where NMSU scientists come in. "Growers wonder if they should prune transplants during the first or second year and how many branches should be trimmed," Herrera said. "We recommend waiting until after the second year to prune."

During the first two years, trees need foliage to manufacture carbohydrates to form new shoots and roots, he explained.

Researchers also are studying the effects of various levels of fertilizer applied to transplants at different times during the season. "The idea is to get the new transplants to produce a nut crop quickly, so growers won't lose production time," Herrera said.

Pecans, not native to New Mexico, were introduced into the state during the early 1900s. The oldest known planting of improved pecan varieties was done in 1915 at NMSU's Fabian Garcia Research Center in Mesilla Park. At the time, the four-acre plot was the largest pecan planting in New Mexico.

Today, there are approximately 18,000 acres of pecans in Doña Ana County producing more than 17 million pounds of nuts, the hands-down leader in the state. The second highest pecan-producing county is Chaves with only 3,000 acres.

There are five commercial pecan buyers and three custom shellers in the Mesilla Valley to serve local farmers, Herrera said. Most buyers look for pecans that have at least 55 percent kernel (meat) and a bright, golden color, he added. Common commercial pecan varieties grown in the area include Western Schley, Wichita and Ideal.

Pecan production in New Mexico and other Western states will continue to increase in importance, Herrera said. "Since we don't have the weather problems that the East has, we are able to have more constant production."

Another crop well-adapted to New Mexico's weather is chile. Five varieties of chile are grown in the Mesilla Valley: New Mexico green, New Mexico red, paprika, cayenne and jalepenos. As Americans find new ways to prepare these varieties, such as cheese-stuffed jalepeno poppers and cayenne-coated buffalo wings, new markets open up for New Mexico growers.

During the past five years, the county has averaged 8,400 acres of harvested chile per year. "Most of our chile is exported to other states and outside the U.S.," said Paul Bosland, chile breeder with NMSU's Agricultural Experiment Station.

As demand for chile increases, so does market competition. "The university's role is to keep our growers competitive," Bosland said.

NMSU employs more than 25 people dedicated to chile research, from breeding and genetic ancestry, to the study of diseases, weeds and insects. "Disease resistance to chile wilt is our number one research priority," Bosland said.

Other studies consider nutritional values of chile, how to retain red color in chiles being transported to Europe, and using a holistic approach to weed and pest control.

"We're seeing transplanting replace direct seeding in chile fields because seed costs are becoming quite high," Bosland said. Seed prices for new hybrids range from \$600 to \$700 per pound. Growers are able to grow more expensive varieties and spend less time thinning the crop by using transplants, he said.

New Mexico growers also are processing their chile further to increase their crop value by almost 700 percent, Bosland said. For instance, instead of sending raw cayenne peppers to Louisiana for mashing to make hot sauce, some growers are taking their crop one step further by processing the cayenne mash here.

"With the population growth in Doña Ana County, it's going to be difficult for us to remain number one in agricultural production," Bosland said. "Housing is a higher-value crop. And as more homes are built, agricultural acreage is lost."