

Annie and Mike Dee
 Aliceville, Ala.
 Dee River Ranch
 Products Raised or Grown: Cattle, corn, soybeans and wheat
 Size of Operation: 10,000 acres
 In Business Since: 1989
 Farm Credit Partner: Alabama Ag Credit
 Working with Farm Credit Since: 2011



You could say water is the whole reason the Dee family is in Alabama. In the late 1980s, Roy and Mary Ann Dee were ready to sell their 8,000 acre Dee River Ranch to the State of Florida under a program to conserve land near waterways and wetlands. Through a lucky phone call, they learned about 10,000 acres available in Alabama and jumped at the opportunity.

Now managed by their children Annie and Mike Dee, one feature the property **didn't have was irrigation**, so the Dees built up the organic matter in the soil, their best way to increase its water-holding capacity and make nutrients available to plants. Their extensive use of cover crops, no-till farming, rotational grazing and other practices that improve soil and water quality and reduce erosion have won them **recognition for their stewardship**. "Sustainability is such a buzz word these days, but that's how we've lived," Mike says. "We have to keep improving the soil. It's our bank. It's our factory. It's the key to our whole operation. We have to utilize it to its potential."

But even the best soil and practices need water to be successful, a lesson that hit home when the rain stopped falling about six years ago. In the years since, precipitation has dropped by as much as half, and **so have the Dees' corn, soybean and wheat yields**. **Collecting surplus surface water to use during the growing cycle was the optimal solution**. The Dees started small last year, irrigating 424 acres with rainwater runoff collected in a new 25-acre reservoir and in an existing cow pond. They were astonished at the difference in yields. Irrigated areas produced up to seven times as much corn and up to 2½ times as many soybeans. "We decided to hurry up and build a bigger reservoir," Annie says.

With financing from Alabama Ag Credit, the result is a 110-acre reservoir that averages 17 feet deep, supplied by runoff from about 500 acres of pasture, and held back by a berm more than four stories tall and almost half a mile long. The integrated irrigation system incorporates GPS technology to track pivot position, and an automated program applies water and nutrients in a pattern customized for the variable soils. Sensors monitor soil moisture and temperature, indicating the best times to plant and irrigate.

The Dees' sustainable practices have won the ranch numerous accolades in the past five years, including the USDA's national Excellence in Conservation Award, a regional award in the Environmental Stewardship Award Program, and the Alabama Governor's Conservation Achievement Award for Soil Conservationist of the Year.