



ALABAMA CHAMPION OF soil health

Roy "Shep" Morris

Macon County

3,000 acres

Crops: cotton, corn, wheat, sesame,
pecans, and trees

Cover: rye



Saving energy while conserving and protecting soil

Roy "Shep" Morris of Morris and Morris Farms, in Macon County, Alabama, farms intentionally to save energy on his operation, and to help the environment. He does things a little different than most farmers. By closely tracking his inputs on his own cropping systems and the experience offered from others, he has made decisions that have helped him become more productive using less money and less energy.

Shep cultivates about 1,300 acres of cotton, 1,300 acres of corn, 400 acres of wheat and 400 acres of sesame. He also grows about 500 acres of trees and 100 acres of pecans. He plants Round-up ready corn, but prefers to plant conventional cotton varieties.

He sacrifices a little of his time, because the cotton requires a multifaceted weed control program, but he feels the quality and yields of the cotton makes it worthwhile. He also realizes another savings with the conventional cotton varieties, he reduced his nitrogen from 100 units to 50 units, growing shorter more efficient plants.

"Our cotton farming system is different from most farms. After having disappointing yields when we first started, we threw away the book and started from scratch. Using past experiences, we focused on driving down costs. We had to if we wanted to stay in business," said Shep.

Along the way he also discovered an increase in organic matter from using cover crops, crop rotation, and local chicken litter as fertilizer. He plants corn because it leaves large amounts of residue after harvest which increases soil organic matter, improves soil health, and the overall function of the soil. "By

bedding the corn stubble, nitrogen and potash are built up. Planting corn also helps minimize labor and equipment needs," Shep says. "Because of the timing in planting corn and cotton, we can use the same planter to plant both crops. The harvest equipment is different, but we use the same labor."

Morris, a supervisor with the Macon County Soil and Water Conservation District, also depends on crop rotation to help build soil health. Planting corn, cotton, and wheat each year spreads out the workload, making efficient use of labor and machinery. By spreading the cost value, you reduce the input costs to all crops.

Shep likes as much residue on the soil surface as possible. He improves his soil tilth and soil health by using a conservation tillage. He saves a lot of energy by making less trips across the field. After the corn harvest, he uses an implement called a "one-trip plow." It builds a raised bed to plant cotton,

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and allows him to plant the corn without additional tillage." Any corn left in the field after harvest will sprout back, further protecting the soil and adding to the crop residue.

His cotton harvesting equipment also offers him a great savings. He uses a stripper harvester that operates a lot cheaper than pickers and it harvests as much as his previous 2-row and 4-row pickers. The implement strips off more cotton from the stalk, thus increasing yield. It also takes about \$50 a day less to run. "The stripper is cheaper," he says, "because it takes less horsepower to run and has less moving parts." These strippers are lightweight and fast and protect soil health by reducing soil compaction.



Cotton stripper harvester picks more cotton and takes less horsepower than conventional equipment.

Shep has an unusual management tool that keeps the soil from compacting by making fewer trips over the fields with machinery when applying inputs. He applies herbicide, defoliant, and other applications using his own airplane. His fields get fewer ruts that can reduce infiltration causing erosion during heavy rain events. In the fall he also uses the airplane to seed his rye cover crops on all of his fields. This valuable cover crop residue builds soil organic matter needed to improve soil health.

Shep realizes significant savings in time and transportation costs by marketing his crops locally. He helped open a nearby cotton gin, and he markets his corn locally to poultry producers. He also saves on fertilizer costs by using poultry litter on his crop fields.

Shep Morris is very open to using new technology and is in the early stages of using precision agriculture components on his farm. He has a yield monitor on the combine to collect data and crop performance.

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