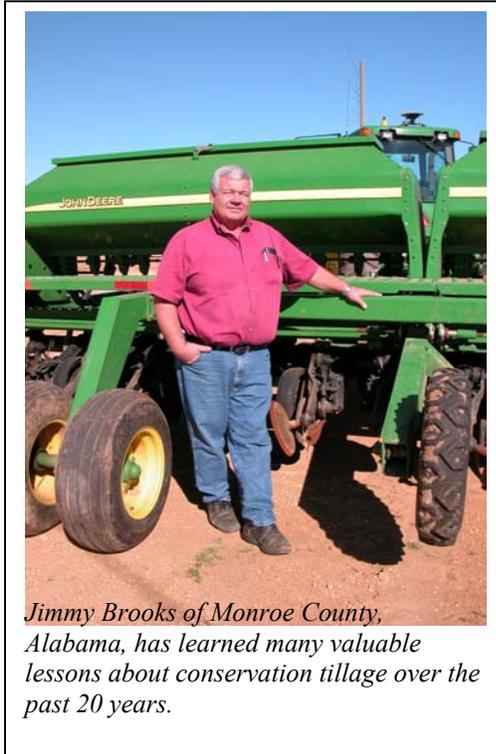


Lessons Learned with Conservation Tillage

by Julie A. Best, Public Affairs Specialist, USDA-NRCS, Auburn, AL

Jimmy Brooks of Monroe County, Alabama, has been farming all his life. “As far back as I know, there have been farmers in the family. I’ve been farming ever since I got out of



Jimmy Brooks of Monroe County, Alabama, has learned many valuable lessons about conservation tillage over the past 20 years.

college. This is all I know to do.” And, since he’s done a lot of it, he has learned some valuable lessons along the way.

Brooks farms about 2,000 acres, planted in a rotation of cotton and peanuts. For approximately 20 years, he has used some form of conservation tillage.

“I’ve been growing strip-till cotton for several years.

And, I’ve been using cover crops for many years. This past year, we did 100 percent strip-till in high residue.

We had some good experiences, and some that didn’t work so well for us.” That’s where the lessons learned

come into play.

Brooks explains the progression of conservation tillage on his farm. “In the beginning, we were no-tilling. We just took the planter and planted into the residue. We have a hard pan in this area, and this was hurting us. We needed to subsoil. So, I went from no-till to strip till and this system really didn’t move any soil on top of the ground to amount to anything. We wound up with a tilled area of about 12 inches that we worked up to plant in. With the high residue, we are using a strip till system too, but we’re not tearing up any ground. We’re just slitting a place big enough for the subsoiler to go in the ground and then pinching it back together. You can’t

even tell we've been through the field. That's where we are right now, and I've learned a few lessons along the way."

Lesson #1 – I like the results of high residue on my cotton crop. The technical literature lists the benefits of conservation tillage as increased soil quality, reduced erosion, and conserved moisture. Brooks has personally experienced these benefits. "I farm a rotation of cotton and



High residue conservation tillage worked well in the cotton grown on Brooks' Monroe County, Alabama, farm. The practice helps improve soil quality, control erosion, and retain moisture.

peanuts. From my experience, I like the results of high residue on my cotton," says Brooks.

"The main thing with high residue planting, I like not having the field wash away. I've got a lot of ground that has terraces. When I do high residue, I don't have to farm on the contour. As long as I have the residue out there, there will be no problem with the field washing." Because the residue holds the moisture in the ground, Brooks has no problem planting, even in dry years.

Lesson #2 – You need a good, heavy cover crop. "In order to get the most benefit from the high residue, you need a good, heavy cover crop. You can't just plant a cover crop and terminate it early and get any benefits. You have to let the cover crop mature to get the full benefit. You are just wasting your money planting the crop and then terminating it early. It doesn't last long enough to do any good," says Brooks. Brooks adds that in the past, he didn't

know enough about high residue to manage it properly. Sometimes he would terminate the crop before it matured.

Lesson #3 – High residue didn't work so well with the peanut crop. Brooks explains, "Peanuts haven't been grown in this area too long—probably five years at the most. However, now about a third of the row cropped land is in peanuts. We didn't grow peanuts basically because we thought the soil was too clayey. We found we can grow peanuts; we just have to carefully manage the digging process." High residue caused the soil to retain moisture, and that created a problem when it came time to dig the crop. "The ground just wouldn't dry quickly enough between rains for us to get in the field and dig the crop," says Brooks.

"I'm probably going to do more with a stale bed with the peanuts," says Brooks. Growers need to produce peanuts on a bed. That makes them easier to dig. Brooks explains that he could use a stale seedbed system and get the advantages of planting on a bed with significantly less tillage. A stale bed system involves throwing a bed in cotton rows in the fall and then strip-tilling peanuts in the spring. "We need to disturb the soil as little as possible, do what we can to build the organic matter at the same time, and yet be able to get the peanuts out of the ground in the fall," says Brooks.

Lesson # 4 – Time is critical with peanuts. "This year, I learned a lot," says Brooks. "I learned that time is more critical with peanuts than probably with any other crop. Fungicides have to be applied on time, and then getting the peanuts out of the ground on time is critical. There is just a short window of opportunity to get the best grade and the majority of the peanuts out of the ground. If you dig them just a little too early, you lose because the grade is not high enough. If you dig too late, then the peanuts are going to pull off and leave a portion of the crop

in the ground. So, you have to keep on top of it and get the peanuts out of the ground when they are ready.”

Brooks says, “I’ve learned a lot about farming with conservation tillage, and I’m still learning. I’ve learned from what other folks have done. There is no use in making mistakes that someone else has made. You learn from past experiences. That’s what farming is all about. Nothing is ever the same. You just play the game and each situation as it comes. You don’t have to worry about doing next year what you did this year, because the opportunity probably won’t come around again, even if you wanted it to. You learn from the past, and move on with what’s happening right now. Based on my experience, I’ll continue to rotate cotton and peanuts, and I’ll do high residue every other year. We’ll still build organic matter, but it won’t be as fast as I had hoped.”

Ben Moore, Agronomist with the USDA Natural Resources Conservation Service (NRCS) applauds the progression of conservation tillage on Mr. Brooks’ farm. Moore states, “Mr. Brooks is a very good farmer and has become a leader for conservation tillage. The soil types on Mr. Brooks’ farm are heavier clay soils (loams) than the soil in much of the peanut producing areas of Alabama. The heavier soils, even in conventional peanut row crop systems, present problems at harvest time if the ground is too wet or too dry. Many farms in Alabama, where soils are not as clayey, are having great success with high residue conservation tillage systems for peanut production. Once the organic matter levels on Mr. Brooks’ farm have become higher, he may be able to increase the residue level for his peanut fields. Because of the soil type, however, he may never be able to use as much residue as do farmers in areas where the soils contain more sand. This is a prime example of each farm and operator finding the system that is

workable and profitable for them. What works for one field, farm, or operation may have a different affect on another field or farm operation.”

Brooks has learned a great deal about farming with conservation tillage. In fact, he learned enough to be awarded the Alabama Association of Conservation District Conservation Farmer of the Year award in 2004. “I’m fine tuning the conservation tillage system on my farm, and I’ll continue to fine tune the practice. I’ve been doing it long enough to know that it works,” says Brooks.

For more information about conservation tillage practices, contact your local USDA-Natural Resources Conservation Service office.

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