



ALABAMA CHAMPION OF soil health

Stan Usery, Jr.

Limestone County

760 acres

Crops: wheat, corn, cotton, and
soybeans (poultry)

Planting: conservation tillage

Cover: rye (if unable to rotate into a high residue crop)



Improving soil with a conservation system and precision placement of litter

Stan Usery, Jr. and his father share day-to-day management of their 760 acre farm in Limestone County. They have 9 (40' x 400') poultry houses that produce over 5.5 million pounds of meat annually, and an abundance of chicken litter. With all that manure, the family began row-cropping on 700 no-till acres of cotton, wheat, corn, and soybeans to apply the chicken litter as fertilizer.

"Cotton is our major crop because it provides the most consistent performance under our climate and environmental conditions," Usery said. He rotates cotton with wheat and double crops soybeans. He uses corn in his rotation on limited acres. "Generally crops are rotated every year. We limit monocropping

unless weather prohibits planting due to excessive wetness or dryness," he said.

The Userys practice conservation tillage on their farm. They are strictly no-till, because it works best in their area. Some of the benefits they have received from using conservation tillage include using less fuel and labor, maintaining a better soil structure with better water infiltration, having improved organic matter, and harvesting better yields. Stan said he believes that his long term no-till fields can tolerate droughts better than traditional tillage fields.

Planting rye for heavy cover crops helps the Userys build organic matter, reduce erosion, and improve their overall soil health. They use chemicals to burn them down. Usery feels that cover crops pay a return on his investment, especially when cotton is not rotated and monocropped.

Usery feels that investing in soil health is important to a sustained farming operation with improved yields



Farmer uses precision application to spread the right amount of chicken litter from his nine chicken houses, at the right time.

as the main benefit. He said that using conservation tillage, coupled with rotating high residue crops, has dramatically improved his soil health.

To compete with larger operations, Usery knew that as small farmer he would need to maximize each acre and manage it to its fullest potential. He

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- Stanley Usery, Jr.

looked to new advances in farm technology and precision agriculture (ag) to help him do this. New planter attachments have improved their ability to consistently manage and plant in high residue.

Precision farming with the Global Positioning System (GPS) has made their operation more efficient. They use guidance and auto-steering on the manure spreader, planter, and sprayer. They have a section control on the planter and sprayer, variable rate capabilities on the spreader, and a yield monitor on the combine.

Precision placement of chemicals and nutrients has saved the farm money by helping them limit over application. The Usery's poultry litter is a valuable resource to them as fertilizer. They have come to depend on precision placement to help them apply it at a controlled and uniform rate. GPS technology on their spinner spreader gives them auto steering, swath, and rate control. This component allows them to apply litter where it is intended, reduce overlaps and skips, and improve record keeping through the field documentation data provided by the technology.



Conservation tillage helps build organic matter and protects the soil.

They adjust application rates for nitrogen and phosphorus by basing decisions on soil testing, cropping history, topography, and yield maps. They take soil samples every year to ensure soil health. They also soil sample on a grid system every 2 or 3 years and apply lime, if needed, and commercial fertilizer based on grid sample results.

Usery is using his knowledge to help other producers. He received a B.S. degree from Auburn University in 2003 in Agronomy and a master's degree in Plant Pathology in 2005. He constructed a soil lab on his family's farm to test for nematodes. He has earned a good reputation among his peers for this set-up. Seed companies recommend that their customers send samples to his lab for testing. "Much of my satisfaction in this endeavor," Usery says, "comes from assisting farmers in my local area."

Joyce Lane, Natural Resources Conservation Service
District Conservationist in Limestone County

said, "Stan Usery is a great example of a farmer maximizing the use of his farm to produce the highest yield while protecting the health of his soil."

Usery takes soil health seriously. "I feel that improving soil health is a long term commitment that requires discipline and patience," he said. "Organic matter and soil structure take years to develop, but can be destroyed instantly with one tillage pass. Crop rotation with high residue crops such as wheat, double crop beans, and corn provides us the opportunity to build organic matter when growing a low residue crop like cotton."

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