



"I haven't purchased or applied any commercial nitrogen fertilizer in 20 years."

**Ray Styer, farmer
Rockingham County, NC**

The Challenge

Ray Styer farms 155 acres in Rockingham County, NC. He switched from conventional to no-till in 1970 and added mixed cover-crops over the years. Before switching, Ray was spending \$212/acre, half of which was the N-cost. He felt he was spending "far too much time" working the soils and soil quality was still declining.

Discovery

As Ray realized the huge time-savings of utilizing no-till, he had more time to experiment with cover-crops. He started with Annual Rye and then added Crimson Clover, Radish, and Vetch - eventually all combined together. The soil improvements were noticeable.

Results

Ray's soils were clearly in good shape. The Solvita CO2-burst ranged from 57 ppm to 72 ppm. Ray's subsoils were 18 and 22 ppm - better than the top-soils of neighboring farms at 9-16 ppm. The Solvita SLAN was where the real benefit was seen with 178 ppm. It's clear that Ray has maintained and improved his soil quality.

WHY RAY CHOSE

SOLVITA SOIL TESTING

After years of tending his soil, Ray wanted to see if the impact could be measured. Ray asked NRCS to arrange to have his soils tested for Soil Health and Solvita by Woods End Labs. He wanted to see how his topsoil and subsoils were faring. He also had a few neighboring (conventional) soils tested.

Ray Styer has documented a savings of \$108/acre largely due to reduced need for nitrogen.



Ray's rolling-crimping system is a 40 year old cultipacker.



Ray's Solvita Tests – two pairs of topsoil / subsoil samples from two fields

Ray Styer and his wife Sara have been farming the same piece of land since 1958. When he first took over the land, it has been mined from generations of tobacco farming. He runs a small cattle operation, grows silage corn, and hay. He has been no-till cover cropping since 1970.