

Cover Crop Research: Creating Better Soil and Bigger Yields

By: Tim Thornberry, Kentucky Farm Bureau News

Chris Pierce doesn't really see himself as a research scientist even though the results of his work with cover crops have brought forth many new discoveries.

The no-till grain producer from Pulaski County has spent the last five years planting a variety of cover crop blends that have ultimately benefited him during the normal planting season.

"I think we are changing the characteristics of the soil and improving the soil structure, just from what we're seeing," he said. "We're also lowering our chemical applications. We're using less

residual herbicides and we're not doing any blanket applications of insecticides anymore. Only when we find the pest in the field are we really making the applications of insecticides."

The idea of spending input dollars on crop that will never be sold in the marketplace might not be appealing to some farmers, especially at a time when many row crop prices have dropped. But Pierce has found that he can better manage things like soil erosion, fertility and moisture retention which ultimately mean higher crop yields. He thinks the investment is paying off.

"When I hear from people right now, where budgets are tight, most don't want to spend money on a crop they are not harvesting, and without seeing those benefits firsthand, it's a leap of faith in adopting these type of methods," he said.

So far the leap Pierce has taken is paying dividends. Water infiltration has been one of the most noticeable benefits Pierce has seen so far. During recent snows and rains, he noticed that water runoff that was present was that of clear water, an indication he's not losing any soil.

"We're always experimenting with new blends of cover crops, and everyone's goals will vary but for us, moisture conservation was our number one goal," he said. "Now, as we move forward, we're looking at weed control and fertility."

Pierce pointed out that just because the cover crops have helped with fertility, doesn't mean he won't have to use fertilizer and in the case of a drought, it doesn't mean his soil moisture will be sufficient to get through a huge dry spell. But the results have been very promising, at this point in time.

One other thing Pierce credits as giving him an advantage when it comes to getting the most out of his crops is the fact that he does his own scouting. Crop scouting is an important part of the growing season allowing a farmer to get an up-close look

at his or her crops but often it is done by a scouting service or is now being done through the use of technologies that include drones.

Pierce would rather make his evaluation by seeing things for himself.

"I'm not an agronomist; I'm just out there every day paying attention and asking a lot of questions to my extension specialists and industry agronomists," he said. "An old farmer told me that your footprints are the best fertilizer you can put in your field."

Being attentive to his land is something Pierce has grown up with having learned from the past three generations of family farmers; it's second nature to him. With that in mind, his entire family is going through a soil nutrient survey this year to get an exact picture of where that 4,000 acres stands from a soil health perspective.

"With the price prospects of the market, we're looking at lowering our input costs. If there are places we can lower our applications of chemical fertilizers without giving up yield, we're going to try and manage our costs that way," said Pierce.

From a purely agricultural sense, he said his use of cover crops has allowed him to be more flexible in his crop rotations and to better follow the crop markets.

"By having this cover crop in place to break up my rotations, we can go corn on corn or bean on bean and be much more flexible according to current markets," said Pierce.

But there is more to this practice than just making a farm more profitable.

"I feel like I'm approaching this as being a necessity. Living in a world that is detached from agriculture, we do this to be good stewards and to be educational to a public that doesn't understand and is critical of our vocation at times," he said. "I'm just being a good neighbor and community minded. I want this land to be farmed by future generations."



Chris Pierce regularly checks soil samples on his Pulaski County farm to monitor conditions based on his cover crop research.