

Written by Dan Zinkand, thanks to No-Till Farmer, March 18, 2011

Paxton, Nebraska, strip-tiller Jon Holzfaster says his fuel supplier hates this story, but it's true.

"After I converted the whole farm to strip-till 11 years ago, my fuel supplier called and said he'd like our business back," Holzfaster recalls. "I told him that he still had all of our business. We just weren't going through all the fuel that we had with conventional tillage.

We probably save 3 or more gallons of fuel per acre and 500 to 700 man-hours by strip-tilling compared to conventional tillage."

Two-Part Approach

Since he's started strip-tilling in southwest Nebraska, Holzfaster has learned it not only saves fuel and time, but also wear and tear on machinery.

The system reduces erosion and conserves moisture.

With RTK, Holzfaster employs two strategies for strip-tilling, which allows him to use three tractors instead of four.

He has two 325-horsepower Case IH Steigers and a Caterpillar MT 765. In late March, Holzfaster strip-tills the fields and applies liquid fertilizer with two 12-row Orthman 1tRIPr and a 12-row Krause Gladiator strip-till rig. He strip-tills about half his corn acres - almost all of it corn-on-corn.

Starting in late April, Holzfaster hooks up a 12-row John Deere planter behind each of the two Orthman 1tRIPr. He strip-tills and plants corn in one pass, pulling each of these rigs with a Steiger. The Cat MT 765 pulls a 24-row John Deere planter. All of his corn and soybeans are planted on 30-inch rows.

"When we strip-till early in the spring, we put down 80 to 160 pounds of nitrogen, about 10 inches deep," Holzfaster says. "Then, when we plant corn in the strip-tilled field, the starter will be 5 to 20 pounds of nitrogen per acre, along with 5 to 20 pounds each of phosphate and potash.

Prior to tassle, he "fertigates" through the pivot irrigation system with 30-60 pounds of nitrogen per acre.

"When we 'one-trip' - strip-till and plant the field in the same pass - the starter fertilizer is 50 pounds of nitrogen per acre, 50 pounds of phosphate and 15 pounds of potash," Holzfaster says. "We place this 3 to 6 inches below the seed. Later in the season, we fertigate with 100 to 150 pounds of nitrogen per acre."

Overall, Holzfaster says he's pleased with strip-till, but says it requires different management.

"Fewer field passes mean less opportunity to apply fertilizer, and pivot-track maintenance can get out of hand if it's not attended to."

Trying Something New

In the spring of 2010, Holzfaster demoed a Krause Gladiator strip-till rig.

"It was something new out there on the market," he says. "The Gladiator has a little bit of a different concept than the 1tRIPr because it has chains on the rolling baskets instead of rigid bars. We liked that.

"I'm a big believer in Orthman, though, and I'm not disappointed in the 1tRIPr. They pioneered the design for one-pass planting."

He's also making a switch this spring from anhydrous ammonia to liquid nitrogen.

"With precision ag, I recognize the value of anhydrous," Holzfaster says. "But it's a little more of a challenge to use anhy-

drous. It's easier to meter and to monitor liquid fertilizer than with anhydrous. I'm not afraid of anhydrous. We've got a good crew of employees and they can handle it safely.

"But you can run liquid fertilizer through your Redball system, which you can't do with anhydrous."

Conserving Soil Moisture

About 70% of the land Holzfaster farms is irrigated, and the rest is dryland. Of the irrigated cropland, about 90% is in continuous corn and about 10% is in soybeans. The dryland acres are in a 3-year rotation, divided equally between winter wheat, corn and fallow.

The climate in southwest Nebraska allows Holzfaster to grow continuous corn with less concern about insect pressure building up. The severity of the winter breaks most insect cycles that persist in milder climates.

"On our dryland corn, we'll strip-till corn into last year's wheat stubble. We use soybeans in the rotation in corn to clean up weeds or insect problems," he says.

Given the climate, saving moisture is important for Holzfaster. Strip-tilling and the residue of continuous corn create a friendly environment for capturing water in the fields in the fall and the winter.

"As an irrigator, I want to save moisture," he says. "With the residue in the fields and by only tilling part of the field, strip-till conserves moisture."

"If you have a soil profile full of water late in the season, you don't have to spoon-feed irrigated water to the crop. That's where the true savings is for the irrigated farmer in our region - with strip-till."

Time Savings Key

Fewer trips through the field with strip-till also mean that Holzfaster and his workers can concentrate on other things in the spring and summer.

"We focus on servicing the center pivots, or we've got time to truck corn if we need to, instead of discing, chisel plowing and field cultivating," he says. "It makes the springtime less hectic."

"I love doing tillage. It's in the farmer's genetics. But with all the benefits of strip-till, doing conventional tillage would be more for recreation. With strip-till, I'm aggressively tilling the strip, but not the whole field."

That said, Holzfaster says that strip-tilling his fields has reduced soil erosion and weed pressure.

"With a lot of residue on the surface, we've seen a lot of erosion-control benefits," he says.

"We strip-till at 40- to 45-degree angle to the previous year's row of corn. That tends to exaggerate the erosion protection. The cornstalks in last year's rows serves as a dam. It seems to work for us."

"Some folks might strip-till and plant between the old rows. By strip-tilling and planting at a 40- to 45-degree angle, we're giving up some of the benefits of planting into that sweet spot. There are different soil types and topographies and this seems to work for us."