



The Reeds' row unit setup includes Deere fertilizer coulters followed by Yetter fertilizer knives, row cleaning wheels, gauge wheels equipped with Case-IH rubber, Martin spader wheels, and a drag chain.

“Rebuilt” No-Till Planter Solves Wet Soil Problems

By Mick Lane

If you plant no-till and are looking for a way to get a better stand and higher yields, you'll want to take a look at how Paul, Nick, Kevin, and Ken Reed of Washington, Iowa, modified the row units on their Deere and Kinze planters.

The Reeds plant all their corn no-till and in the past were often kept out of fields by excess soil moisture. “We'd see conventional tillers out in the field, and our soils would still be too wet for our no-till planter to do a good job,” says Nick.

So they took a closer look at their planter, from the no-till coulters up front to the press wheels in back, and came up with a “hybrid” row unit system that can handle wetter soils. They originally developed the system for their Deere 7000 planter and now use it on their Kinze twinline planter.

“One problem with many planters is that they're equipped with heavy-duty down pressure springs. Springs on the row units can cause total row unit weight to exceed 800 lbs., all concentrated on 4 to 5 sq. in.”

The Reeds kept some of the row unit components and replaced others. Their system starts with a single disc fertilizer opener that slices through residue with very little soil disruption. The stationary openers help stabilize the planter and are equipped with a wiper wheel that controls depth. Yetter fertilizer knives mount behind the openers to place fertilizer 1 in. to the side and 2 in. deep. “The Yetter knives are narrower than most other fertilizer knives on the market so they don't smear the sidewall,” says Nick. Row cleaners then sweep aside residue without removing soil. “Removing the soil can lower the row and make it more prone to erosion,” says Paul.

The Reeds kept the planter's original double disc openers, which leave a V-shaped seed trench. However, they replaced the rubber on the gauge wheels with the rubber off Case-IH planter gauge wheels. “The rubber on Deere and Kinze gauge wheels is smooth and runs right next to the opener discs where it concentrates the weight and compacts the soil even if it's just a little wet,” says Paul. “The rubber on Case-IH gauge wheels has a groove on the inside edge which allows the soil to expand and leaves it crumbly over the row. It also allows the disc openers to lift the soil higher which reduces compaction.”

Keeton seed firmers are used to press seed



Martin spader wheels and drag chain. The wheels run shallow enough to stay over the seed but still break up any compaction the openers may have left in the seed furrow sidewalls.

gently into the soil. The Reeds use fertilizer tubes on the seed firmers to add pop-up fertilizer in the seed furrow.

They replaced the planter's closing wheels with Martin spader wheels. “The Martin wheels run shallow enough to stay over the seed, but they still break up any compaction the openers may have left in the seed furrow side-walls,” says Paul. “The slender fingers on the wheels firm the soil over the seed but leave the surface loose and aerated, even if the ground is wet. With the residue removed, this loose soil warms quicker which allows seed to germinate earlier.”

A drag chain finishes off the system. “The chain drags loose soil and fills in cracks so that all the seed gets covered no matter how wet the soil is,” says Nick.

Drag chains are available from Deere, but you can also make your own. “It has to be heavy, twisted-link chain,” says Nick. “Chains that have straight links tend to bounce or roll and get knotted. They just don't do the job.”

What does it cost to set up a planter this way? If you start with a Kinze or Deere planter with fertilizer attachments, you'll need the Yetter fertilizer knife (\$50), Case-IH rubber (\$40), a good set of residue wheels (\$250), spader wheels (\$150), Keeton Seed Firmer (with fertilizer tube, \$35), and drag chain (\$35 purchased, \$10 to \$20 if made on the farm). Total cost for all that comes to less than \$600 per row.

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Broaddus's 52-ft. long drop deck semi trailer carries everything he needs for planting and spraying. The bed is lower than a standard flatbed so it's easier to get up on.

Drop Deck Semi Trailer Planter Loading System

By C.F. Marley

Used “drop deck” flatbed semi trailers make great supply rigs for planting and spraying, but they are in high demand and therefore expensive. Bill Broaddus, Raymond, Ill., considered himself lucky when he got the opportunity to buy one cheap from an Illinois company that was going out of business.

He uses his Deere 4020 tractor to pull it.

“It carries everything needed for planting and spraying and really keeps me moving,” says Broaddus. “The bed is lower than the ground than a standard flatbed. It's easier to get up on, and I don't have to do as much lifting.”

The trailer is 52 ft. long and has a 12-ft. long upper deck in front and a 40-ft. lower deck at the back that's 18 in. lower. The lower deck carries a pair of modified 200-bu. gravity boxes which carry seed, a 2,600-gal. water tank, a 400-gal. mixing tank, a mixing cone, and a 110-gal. tank holding Roundup. The upper deck carries a portable 25-gal. gas tank operated by an electric pump, and a “Bean Hustler” pneumatic conveyor that delivers soybean seed from the gravity boxes to the row units on his 12-row Deere planter. The pneumatic conveyor is powered by an 18 hp Briggs & Stratton gas engine.

Broaddus mounted a “swing arm” on his planter that's equipped with a cone-type decelerator. It swings across the full width of the planter, making it easy to fill.

The gravity boxes are turned sideways so the unloading doors face each other. He welded the doors shut and cut a hole into the bottom of each one where he welded in a steel tube at an upright angle. To suck out seed with the “Bean Hustler” he simply sticks the nozzle in the tube.

The wagons originally were flat on top. He used sheet metal to add a curved top to each wagon and he designed a roll tarp that can be pulled over the entire trailer.



A “Bean Hustler” pneumatic conveyor is used to deliver soybean seed from gravity boxes on the trailer to row units on Broaddus's 12-row Deere planter.

“We have 1,000 acres which we plant half to corn and half to soybeans. It takes about 4 minutes to fill the planter. We band Dual Broadstrike herbicide over the row for corn. We only apply postemergence herbicides to our soybeans,” says Broaddus.

“The trailer was originally used by a company to haul backhoes. I was able to buy it for only \$3,500. Normally, used drop deck semi trailers like this sell for \$12,000 to 15,000. It's very maneuverable so I can back it up fast. I had been loading my planting supplies on wagons or on a 2-ton truck, but I didn't like having to put the tank on and off every year. Now after I'm done planting I don't have to take anything off the trailer.

“I built the planter by combining parts from our Deere 7000 planter with new 7200 vacuum units and Hiniker ridge till units equipped with Rawson double wave coulters.” To pull the trailer with a tractor, Broaddus, with the help of Dave Co., built a tandem axle dolly that mounts under the front part of the trailer.

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Broaddus mounted a “swing arm” on the planter that's equipped with a cone-type decelerator. It swings across the full width of planter, making it easy to fill.