

# 13-Row Strip-Till Rig Saves Big Money

By Lorn Manthey

Tim Renger and his father, Bucky, of Bancroft, Iowa know the benefits of building things themselves. Over the years they've saved time and money by converting a hog building to a seed storage warehouse and office; fashioned their own liquid fertilizer storage and distribution system; built their own portable grain cleaning system; and created numerous labor-saving devices around their farm and shop.

All of those jobs were good practice for their most recent project: building a 13-row strip-till rig and fertilizer applicator from used cultivator toolbars, spare tillage coulters, assorted scrap steel and a selection of new parts.

"I looked at the cost of a new rig this size and, with the options I wanted, it would've set me back \$80,000 to \$90,000," said Renger. "To me that really defeated the purpose of saving money. It would take me 7 or 8 years to pay for that machine."

Instead, Renger headed off to farm shows to look at machines already on the market and get ideas for building his own. He developed a plan, then enlisted the help of strip-till specialist Kevin Kimberly to build his own machine.

"I wanted to build the machine strong enough to do primary zone tillage in the fall to a depth of 8 to 10 in. and apply liquid fertilizer, then come back over those same zones in the spring with a shallow pass and apply liquid nitrogen," Renger said. "We had to have a rugged frame, enough clearance for residue and large tillage coulters, and the strength to handle a 350 hp tractor."

Renger located two 3-point Hiniker 5000 cultivator bars and contracted with a local welding shop to build the frame. The two bars are spaced 34 in. apart with 7 by 7-in. tubing welded between them. Outside rows fold for transport and storage.

On the front bar for each row Renger mounted free-floating Yetter Shark Tooth row

cleaners followed by a 20-in. Great Plains Turbo Till Coulter. The row cleaners clear trash in corn stalks or bean stubble while the large coulters till-strips on 30-in. centers. A 5 by 7-in. bar between the main frames carries two ripple coulters for added tillage and residue sizing. They follow the main coulters and are mounted 5 in. to each side. Coulters can be changed out to achieve more or less tillage, depending on soil conditions.

The rear bar carries a modified mole knife to inject fertilizer for each row followed by two closing coulters that fold soil into a nice berm. The rig is lifted and transported by a caddy cart built by Elk Creek Manufacturing.

Working in the fall, Renger carries 500 gal. of liquid fertilizer in stainless saddle tanks on the front of his tractor. In the spring, he pulls an 1,800-gal. Bourgault liquid tank that allows him to cover almost 40 acres between fills. "It's a real efficient machine that's saving us a lot on tillage and fertilizer application," says Renger.

He figures the cost to build his rig was about \$30,000, including his labor. "We bought the used toolbars for practically nothing, bought the ripple coulters and turbo coulters new, used a lot of spare steel, hired a first class welder to frame it all up, and assembled it ourselves."

Their savings extend beyond the cost of building the machine. Renger, who farms 1,100 acres with his father, is now able to do his fall tillage and fertilizer application in one pass, which saves him several thousand dollars a year. Similar savings are realized in the spring when he goes over the same strips to fluff the zones and apply nitrogen before planting, again in one pass. Renger says with these efficiencies "The machine will pay for itself in 2 to 3 years."

Zone-on-zone coverage in the fall and spring is easy because Renger invested in an



Tim Renger and his father, Bucky, built this 13-row strip-till rig and fertilizer applicator from used cultivator toolbars.

RTK guidance system with sub-inch accuracy. "Guidance is a necessary part of this system," Renger says. "I'm placing fertilizer in the bottom of the zone in the fall, in the middle of the zone in the spring, and planting corn and beans exactly on top of that fertilizer. My yield tests have shown a 10 bu. an acre advantage when corn seed is exactly over the fertilizer compared to 4 in. off the row. On 550 acres of corn, I paid for the guidance system in 2 years with that advantage," Renger says.

Farmers who've seen the machine like the job it does, but always ask "why 13 rows?" The base unit is 6 rows wide, with 3 rows folding up on one side and 4 on the other. "When someone asks that question I always tell them it has 13 rows because 13 is my

lucky number," Renger says with a wry smile. He quickly adds that row number 13 is the guess row on every pass across the field, helping to minimize side-to-side draft. Fertilizer is applied full rate on 12 rows, but half rate on each pass with the 13th row.

"With the high cost of machinery and fertilizer nowadays, it's all about economizing," says Renger. "I'm real satisfied with this machine because it works across all of our field and residue conditions. My yields have been as good or better than with conventional tillage."

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Heavy-duty implement breaks up manure piles and spreads the material over pasture.

## "Manure Mower" Cleans Up Pasture

"It works better than a conventional harrow because it breaks up manure in pastures without clogging up," says Larry Wright, Hempstead, Texas, about his company's new "Manure Mower" that's designed to be pulled behind small tractors, ATVs, or skid loaders.

It's made from a series of heavy angle iron "buster bars" that attach to a pair of chains and are spaced about 2 ft. apart. Each bar has a different design which results in a maximum amount of breakup and distribution as you drag it over the pasture.

"It's built heavy and is maintenance-free,"

says Wright. "I came up with the idea because I have a small cow calf operation and got tired of watching my drag harrow get clogged up with weeds, tree branches and leaves. I wanted something where I wouldn't always have to get off the tractor to take care of a problem."

The company offers three different models for tractors ranging from 20 to 90 hp. Prices start at \$399.95.

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Easy access to entire truck bed is provided by the Canopy Lift System, which turns any truck topper into a pop-up cover.

## Lift System For Pickup Toppers

Keith Hebron's patented Canopy Lift System turns any truck topper into a pop-up cover that allows you to open the canopy 90 degrees from the side for easy access to the entire truck bed.

The lift system is available with either electric, hydraulic, or electric-hydraulic power, but a simple hand crank can also be used.

"With toppers, it's sometimes difficult to reach cargo and they also present a challenge when loading and unloading big items or unusual cargo. Now you can have the best of both worlds," Hebron says. "It's a very simple, effective system that requires minimum modification to install. With a flick of the toggle switch, you have access to your

entire box."

The kit's hardware weighs only about 25 lbs., and is capable of lifting 300-lb. toppers. The main kit is designed to fit most cab-high canopies for 1/2 to 1-ton vehicles, and can be adapted to fit any truck box and canopy.

The basic kit price (hardware) is \$289 (Can.), and power packs range from \$100 to \$350.

Hebron owns both Canadian and U.S. patents, which he's now offering for sale or lease.

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