The outside three rows on the planter fold up above center six rows. Planter boxes are held in a vertical position to keep seed from spilling out of boxes.

Buening uses a sled to slide implements underneath the bridge hitch to mount on the front 3-pt.

BRIDGE HITCH SUPPORTS 3-PT. MOUNTED 12-ROW CULTIVATOR, PLANTER

4-WD "Ridge Tractor" Built From N6 Gleaner Combine

The Goodykes extended the rear frame of the tractor 5 ft., at the same time lengthening the driveshaft. Sheilds on spray boom prevent spray drift.

Indiana farmer Al Buening, of Glenwood, turned an Allis-Chalmers N6 Gleaner combine into one of the slickest 4-WD "ridge tractors" we've ever seen.

The 25-ft. long tractor features a front-mounted "bridge hitch" equipped with a 3-pt. hitch which carries a 12-row planter or cultivator. Buening, who ridge tills all his land, built the tractor because he wanted better visibility and more control to keep his planter and cultivator on the ridges.

"I planted and cultivated 1,300 acres with the tractor this year and it worked beautifully," says Buening, who built the tractor 1 1/2 years ago.

Buening completely disassembled the combine, which had been used as a cutaway display model by Allis-Chalmers at farm shows. He built a new frame to support the cab and the 440 cu. in. engine which he moved to the rear of the machine and covered with black metal shielding. An L-shaped stainless-steel tank, divided into two 475-gal. compartments, is mounted beneath and behind the cab and in front of the engine.

Buening used 12 by 12-in. tubing with 1/2-in. thick sidewall to build the bridge hitch and built his own 3-pt. hitch for it. He uses the combine header's two hydraulic cylinders to control the 3-pt. hitch. He used the combine's front axle as the tractor's rear axle. The original front tires wouldn't have fit between the 30-in. rows so Buening installed narrower 18.4 by 38 tires, welding different rims to the wheels. He used the rear axle from a different model Allis-Chalmers combine as the tractor's front axle. Its 14.9 by 26 tires are equipped with front wheel drive assist. He widened both axles to straddle four 30-in. rows.

The planter units are hydraulically driven. Buening uses a population monitor on the planter which compensates for speed changes to keep a constant seeding rate. The monitor also allows him to change the seeding rate on-the-go from the cab according to soil types. A sprayer controller automatically compensates for speed changes in the field. Buening applies starter fertilizer while planting and band sprays herbicides while cultivating. One part of the stainless steel tank carries liquid fertilizer and the other carries herbicides. The top of the portion of the tank, behind the cab, lifts like a car hood for filling.

The outside three rows on both sides of the planter and cultivator fold up above the remaining six center rows. The kit's parallel linkage raises the outside three seed boxes on each side of the planter and slides them inward over the top of the six center seed boxes. It keeps the planter's seed boxes in a vertical position to keep seed from spilling out. Buening uses a "sled" to slide implements underneath the bridge hitch for mounting. "To remove the planter and then mount the cultivator, we drive the bridge hitch over the sled, drop the planter on the sled, and pull the sled out with another tractor. We then place the cultivator on the sled. We then use another tractor to pull the sled under the hitch."

Buening says he plans to install an automatic guidance system which will sense the row and tie into the tractor steering system to automatically steer the tractor back and forth and keep equipment on the row. "It will relieve me of the need to manually keep equipment on the row, reducing stress and doing a faster, better job with less damage to crops," says Buening.

He says he spent about $12,000 to build the tractor.

For more information, contact: FARM SHOW Followup, Al Buening, Rt. 1, Box 29, Glenwood, Ind. 46133 (ph 317 679-5142).

120-Ft. Wide Sprayer Built From 4-WD Tractor

"It's a great all-purpose postemergence sprayer," say brothers Richard and Dennis Goodyke, Crookston, Minn., who built a 120-ft. wide pressure sprayer out of a 1975 Massey Ferguson 1805 4-WD tractor.

The sprayer, which carries a 1,000 gal. stainless-steel tank, can cover 100 acres per hour at 8 mph. The boom, which mounts on the tractor's 3-pt. hitch, is protected by plastic shields that reduce spray drift. The sprayer is also illuminated for night spraying. The Goodykes mounted the tractor's rear lights on either side of the tank to illuminate the boom.

"We wanted a high-volume sprayer with multiple uses, but we didn't want to spend the money on a commercial sprayer," says Richard, who farms 4,000 acres of soybeans, wheat and barley along with Dennis and uncle, John. "We spent about $20,000 to build the sprayer. It has already paid for itself, especially when you consider the cost of a comparable-capacity sprayer or custom aerial spraying. We use it to apply herbicides to wild oats and pigeongrass, as well as to apply foliar fertilizer and fungicides. As we spray, we follow the tracks left by the drill. We had been using a 50-ft. wide 4-WD pickup sprayer, but it was too slow and made ruts in the field. The tires were too small for the weight of the sprayer. The tires on this sprayer are much larger and roll along without sinking or slipping. They cause almost no crop damage. The shields deflect the wind, making it possible to spray in 25 mph winds with no problems."

The Goodykes extended the tractor's rear frame 5 ft., then extended the driveshaft and bolted the tank to the frame behind the cab. They cut an oblong hole in the bottom of the spray tank and added a lower chamber beneath it. They use the chamber as a bottom sump which drains the last of the liquid from the tank for easier cleaning.

The Goodykes installed the fill spout in the tank at a 45° angle to the sprayer frame to avoid kinks that can occur when a fill hose is connected to a 90° angle spout. To guard against nozzle plugging, they put an 80-mesh filter on the suction side of the pump and a 100-mesh filter on the high-pressure side of the pump. Nozzles are spaced 10 in. apart to improve the spray pattern. "If one nozzle plugs, there's still enough overlap from the other nozzles for good coverage," notes Richard. Four caster wheels, each riding on shock absorbers, support the boom. The two inside wheels, which carry more weight than the outside wheels, each are equipped with two 80-lb. shock absorbers. Each of the outside wheels has one 80-lb. shock absorber. The boom wings are hinged to avoid getting hung up in drainage ditches.

The Goodykes spray fungicides at high pressure to get good coverage. Running the high-pressure sprayer with an orbit motor could have caused the hydraulic oil to get too hot and burn out the pump, so they modified the hydraulic system. New oil flows from the pump to an oil cooler, mounted in front of the radiator, and then flows back to the reservoir.

Anyone considering building a sprayer from a tractor should look carefully at the frame, says Richard. "You need a tractor with a frame that can be lengthened. For example, Deere tractors won't work because the transmission case is part of the frame."

Sprayer is designed so that if one nozzle plugs, there's enough overlap from the other nozzles for good coverage. Caster wheels on shock absorbers support the boom.

Contact: FARM SHOW Followup, Richard Goodyke, Rt. 2, Crookston, Minn. 56716 (ph 218 281-5683).

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