

Rotary Hoe Gauge Wheels Support 60-Ft. Precision Sprayer

By C.F. Marley

There are two ways to cover a lot of ground when spraying crops: 1) Go slow with a wide spray boom, and 2) Go fast with a small boom.

Teddy and T.J. Shambaugh, Oakley, Ill., decided they wanted the advantages of both methods so they came up with a 24-row crop sprayer with a gauge wheel on every row. They made the wheels by cutting off the teeth on rotary hoe wheels and then welding a flat band of steel around the stubs that were left.

One hoe wheel runs down the center of each row. A double spray nozzle - with

one nozzle pointing to either side - clamps to each shank just above the wheel.

Key to success is that the rotary hoe wheels mount on their original spring-loaded shanks. When pressured by uneven terrain, clods, or other obstacles, the shanks and wheels flex backwards without affecting the rest of the boom.

The 3-pt. mounted spray boom tows a trailing spray tank and is used to spray both corn and soybeans.

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Tractor Built From Combine, Car Parts

"It makes a handy chore tractor. I spent only \$3,000 to build it," says Gerald Kenner, Devils Lake, N. Dak., who built his own front-wheel drive loader tractor from old combine and car parts, including the drive wheels and 6-speed transmission off an old Oliver combine and the 265 hp 8-cyl. gas engine and 3-speed transmission out of a 1969 Buick Electra car.

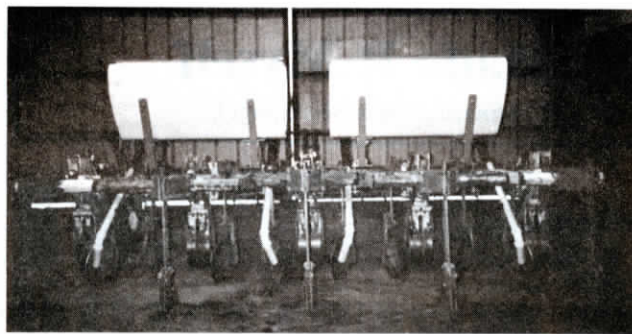
Kenner bought the car for \$305 and got the combine free from a neighbor. He used 8-in. channel iron to build a frame and mounted the combine's 24-in. high drive wheels and axle up front. The combine transmission connects directly to the car transmission. The rear wheels came off a Chevrolet 3/4-ton pickup. He used sheet metal to build the cab and installed doors salvaged from a Deere tractor cab. He narrowed up an old DuAl loader and mounted it in front. The loader is equipped with a 7 1/2-ft. wide bucket built from 3/16-in. sheet metal.

"It has great traction, especially when

I'm hauling a load," says Kenner, who operates a welding and repair shop. "All the weight is on the big drive wheels instead of on small wheels like with a conventional tractor. The bucket is handy for moving snow or hauling firewood or heavy sheets of steel. I can replace it with forks for hauling trees, pipe, etc.

"There are three forward speeds and one reverse speed. The combine transmission was part of the combine axle so I have to get out of the cab and shift a lever on the combine transmission to shift into higher gear for road transport. It'll go about 25 mph. A 2-section hydraulic pump that runs off the engine is used to operate both the power steering and the loader. The loader has four cylinders - two to raise the bucket and two to tilt it. The seat is from a Versatile tractor and the steering system from an old Case combine."

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Cultivator-Mounted Fertilizer Applicator

"My 4-row Buffalo planter doesn't have a fertilizer attachment. The cost of adding the equipment was \$2,500 so I decided to build my own applicator that would let me combine fertilization with cultivation," says Greg Plassman, Waldron, Mich.

"I mounted two used fertilizer boxes off a #56 IH corn planter on the frame of my Buffalo 4-row ridge-till cultivator. I had read in a recent issue of FARM SHOW about a farmer who mounted fertilizer boxes on his cultivator and ran the metering auger with a hydraulic motor. I thought that was a good idea, but I wasn't sure how easy it would be to control the rate of flow, especially if you're changing ground speed. I thought a ground-drive would work better so that you wouldn't have to bother with hydraulics when the tractor speeds up, slows down, or stops.

"I bolted together a frame to hold the IH fertilizer boxes out of 2-in. angle iron and 2-in. sq. tubing. The drive wheel assembly came off a junked Deere 694 corn planter. I used angle iron to make a bracket to attach the drive wheel on the cultivator toolbar. I had a 1-in. dia. steel shaft welded to one end of the fertilizer metering auger. That's where I mount different size sprockets for different rates of fertilizer. The shaft runs inside a

bearing - mounted on a 3/8-in. thick steel plate that bolts to the side of the box - to take wear off the auger and the fertilizer box bottom. I have three drive sprockets for different application rates - 150, 200, and 250 lbs. per acre.

"The drive wheel assembly is spring-loaded to keep constant pressure on the ground. I ran #40 roller chain between the drive wheel sprocket and the sprocket on the fertilizer shaft. Rubber hoses run out the bottom of the fertilizer boxes to lengths of 2-in. dia. PVC pipe that are angled to place fertilizer directly behind the disc hillers on the cultivator.

"I spent a total of \$250 to build this applicator, including new sprockets and hubs, new bearing and flange, and new nuts and bolts. Everything else was bought used. I had help from my father Loren, brother Barry, and neighbor Phil Dunn. We've used it one season with good results. For corn, I applied 200-lbs. of 10-26-26 with the first cultivation and 200 lbs. of 45-0-0 with the second cultivation. For soybeans, I applied 150 lbs. of 0-15-40 with the first cultivation."

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Cattle Hauler Made From Old Manure Spreader

"My brother Paul and I made a low-cost cattle hauler out of an old 16-ft. long Roorda manure spreader. We use it to haul up to six cattle at a time between farms," says Delbert Veldkamp, Canton, S. Dak.

The Veldkamps removed all the beaters in back, then welded steel cattle gates on both sides and gates that they made from old well pipe on front and back. A plywood door slides up or down inside the back gate. They used sheet metal and steel pipe to make a narrow ramp on back

with a wooden floor. The ramp ties up against the back of trailer for transport.

"We use it to haul 500-lb. feeder calves between feedlots," says Delbert. "If we need to haul more than six head we use our truck. The side gates stand about 7 ft. high above the spreader floor. We bought the cattle gates for \$70 apiece and spent a total of about \$150. Small commercial livestock trailers sell for \$800 to \$900."

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