He Built The "Cadillac" Of Spraying Equipment

A Minnesota farmer who didn't like the sprayers he saw on the market built his own "Cadillac" 90-ft. heavy-duty sprayer equipped with rear tractor tires.

Allan Scott, who farms near Sargeant, used 2 by 6-in. 3/8-in. thick steel tubing to build the main frame and 4 by 4-in. steel tubing to build the cross members, then mounted a 1,000-gal. tank over an old semi truck axle. The tank and booms are carried by a pair of 38-in. tractor tires and six 6.7 by 15 in. gauge wheels.

"I built it because I wanted a wide heavy duty sprayer that could spray accurately," says Scott. "Many commercial 90 ft. sprayers have erratic spray patterns because they either have no gauge wheels, or gauge wheels that are too small, causing the boom to bounce. The 15-in. gauge wheels roll smoothly over rough terrain and always keep the boom at a uniform height. The gauge wheels line up with the axle so they don't shift to the side during turns. I don't like castor wheels because they can easily get twisted when you try to back up in loose soil."

Scott bought the used semi axle for $25. He cut out the center and removed the brake drums, then clamped the "stub axles" to opposite ends of a length of 6 by 6-in. steel tubing. He clamped a home-made axle to top of 2 by 6-in. steel beams. "I can loosen the clamp and slide the axle forward or backward to distribute sprayer's weight," says Scott. "I usually carry two thirds of the sprayer's weight on the axle and one third on the tractor."Het built his own wheels by welding tractor tire rims onto heavy duty centers that are bolted to a 10-bolt truck hub.

A switch mounted on the spray boom lets Scott check for plugged nozzles without having to walk back to the tractor cab.

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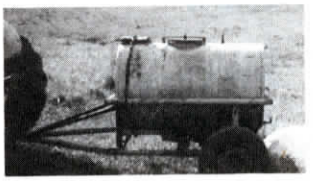
"Pumpless" Liquid Manure Spreader

A gravity-filled, gravity-unloaded liquid manure spreader lets Bill Patterson, West Baden, Ind., empty the manure pit outside his hog building with little expense or maintenance.

Patterson paid $100 for a galvanized 300-gal. tank and mounted it on a home-built pipe frame that rides on a Volkswagen axle. He ran a 4-in. dia., 60-ft. long PVC pipe out of the bottom of the 1,500-gal. pit down to a 3-ft. deep, 6-ft. wide trench that he dug into the side of the hill. Patterson backs the manure spreader into the trench and manure flows by gravity through the pipe and into the fill hole on top of the spreader.

"I built it because I needed a faster way to empty my manure pit without spending a lot of money," says Patterson, a high school student who started his operation on a shoe string. "My gravity-based system lets me unload the pit in only two hours and requires no maintenance because there's no pump. I checked out the



prices of liquid manure pumping systems, but found that the cheapest one cost $3,000. I spent less than $200 to build my pumpless system. It would work on a larger hog operation if a larger tank was used."

To unload manure from the spreader, Patterson opens a valve at the rear of the tank. Manure flows from an outlet pipe, hits a steel plate, and fans outward. A chain is used to secure the tank to the pipe frame.

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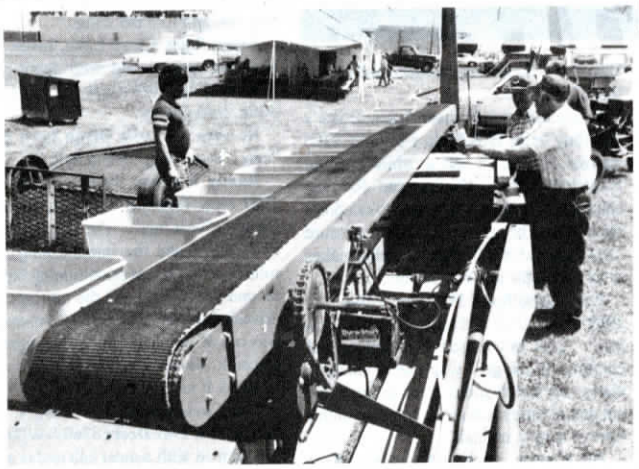

Seed Bag Conveyor

"I'm 72 years old so I need all the help I can get," says Einar Oftedal, Cottonwood, Minn., who made it easy to fill seed boxes on his 12-row Deere Max-Emerge planter by mounting a seed bag conveyor across the front of the rig.

Oftedal got the 20-ft. conveyor from a feed plant where it had been used to handle feed sacks. It mounts 6 in. above and 6 in. ahead of the seed boxes, about where dry fertilizer boxes would normally mount, and is battery-driven by a starter motor that's geared down to run the conveyor at a "slow creep" of about 1/2 revolution every two minutes.

"With a 12-row planter, you normally have to carry a bag to each box so even if you park your pickup in the center, you still have to carry bags 15 ft. to either end," says Oftedal. Now he parks at one end of the planter, starts the conveyor with a switch he can reach from the back of the pickup, and sets the bags on the belt one by one. The belt turns so slowly he doesn't have to hurry. To load seed into boxes, he just walks along the planter, turns the bags 1/4 turn and tears them open, then pours them into the boxes without ever lifting the bags.

The conveyor adds only about 400 lbs. to the planter. Since it's only 20 ft. long and the planter is 30 ft., Oftedal mounted metal slides on each end of the conveyor to get sacks to two rows on either end.

"It works so well I don't know how I got along without it. Takes a lot of the work out of planting. Carrying seed sacks is tiring, especially on loose-tilled ground. Wish I had gotten this idea years ago," says Oftedal. He hopes to find a manufacturer to put his conveyor idea on the market.

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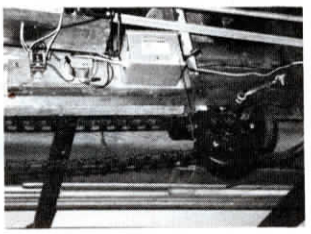
Automatic Garage Door Opener

Arnold Feiler, Cudahy, Wis., used a collection of old machinery parts to build an automatic garage door opener 35 years ago and it's been working trouble-free ever since.

"During all that time the opener has required no maintenance and has never failed. It doesn't have the safety switches that are on modern commercial openers, but the V-belt drive is loose enough to slip if anything should get caught under the door," says Feiler.

He attached a gearbox removed from an old Maytag washing machine to the rafters 10 ft. from the door. An electric motor drives the gearbox. A 6-in. sprocket removed from a corn binder is used as the driving wheel. The opener can be operated by radio control from the car, or by a 3-way switch next to the door leading into the house. Another 3-way switch mounted between the gearbox and the top of the closed door controls an automatic stop for both open and closed door positions. A small eye bolt is screwed into the switch lever. A 10-in. spring runs from the eye bolt to a 4-ft. long chain which is attached to a pitman rod that runs from the drive chain to the top of the door. The drive chain was salvaged from an old Deering grain binder and lengthened to fit the opener system. The pitman lift rod attaches directly to one link of the chain. The chain wraps around a 12-in. dia. sprocket (from an old IH baler) that's mounted on an adjustable bracket. Moving the sprocket tightens the chain and lets him adjust door travel.



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