



Tractor Converted Into Self-Propelled Spreader

If you have a tractor and a pull-type commercial fertilizer spreader, and you want to increase your work rates, what do you do?

The answer, according to English farmer John Fearnley, of Denton, Norfolk, is to combine the two vehicles into one to create a self-propelled unit.

Here, courtesy of *Power Farming* magazine, is how Fearnley cut the chassis off his pull-type granular spreader and, after modifying his International 614 tractor, combined the two units into one self-propelled rig.

The spreader was a Spreadall. Fearnley separated the body from the chassis and fitted a drive shaft along its side. This enabled him to connect the existing drive, which was front-mounted, to the original pto of the tractor. A set of V-belts takes the drive from the pto to the new drive shaft.

These were the only modifi-

cations on the spreader, apart from putting on rubber flaps to protect the rear of the tractor. Modifications to the tractor, however, were more extensive.

In work, it was found that the extra weight applied to the tractor caused a problem with the kingpins on the original front axle. This was solved by installing a stronger axle, taken from a JCB excavator.

The front-mounted cab and spreader are both supported by beams of channel iron. Fearnley figured that, with the cab ahead of and above the engine, noise could be a problem so he lined it with extra sound-proofing material. He salvaged steering and other parts from Leyland and Ford tractors. Combining the two units into one has had an unexpected benefit: The new self-propelled machine can spread wider (about 27 ft.). It is also more maneuverable, according to Fearnley.

Hail-Damage Detectors

"They help eliminate guesswork when settling hail damage claims. I wouldn't try to farm without them," says Canadian grain farmer Harvey Aichele, of Yorkton, Sask., who uses home-made detectors, made from sheets of styrofoam, to monitor hail damage.

Aichele buys styrofoam (1 in. thick) in 2 ft. by 8 ft. sheets from the local lumber yard, then cuts each sheet into 16 1-ft. by 1-ft. squares. He clips or glues each styrofoam sheet to a piece of 3/4 in. plywood backing, then mounts each monitor on a wooden post, positioning it level and about a foot off the ground, with the styrofoam side facing up.

"Soon after the crop is up, I install three or four hail monitors per 160 acres of field area," explains Aichele. "As each hail stone strikes the monitor's surface, it leaves a tell-tale dent in the styrofoam, giving you a positive, accurate measure of how many hail

stones fell per square foot, their size, velocity and the direction from which they came. If you're away on vacation — or if you own farm land located a long ways from headquarters — you can tell simply by looking at the monitors if any hail has hit the crop.

"You can glue or clip the styrofoam sheets to the plywood. One advantage in using clips is that, after a light hail storm, you can flip the styrofoam sheets over and use the reverse side to monitor the next hail storm," Aichele points out.

If you decide to try his low-cost way to detect hail damage, he'd like to hear from you and hope the idea worked out. He'd also welcome inquiries from farmers interested in having the monitors, and mounting posts to go with them, custom built.

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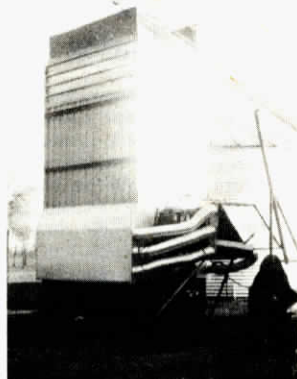
Continuous Flow Grain Dryer

"Lots of people come to see it and several have also built their own," says Walter Glynn, Delhi, Ontario, happy with his home-built continuous flow grain dryer.

Glynn decided to build his own dryer after pricing used dryers. Using all new parts, except for the fan and burner, he estimates his total cost at \$4,000.

The dryer combines features from commercial units with Glynn's own ideas. Corn is augered into the top of the unit and divided into two streams. The corn falls over perforated metal sections through which warm air is forced. Glynn explains that his dryer can dry 100 bu. of corn from 30% moisture down to 17% in one hour. He notes that larger capacity dryers could easily be built.

The bin is 17 ft. tall, and 5 ft. wide. The drying columns are each 8 ft. long, 1 ft. wide and 10 ft. tall. He built the sides of the drying columns from perforated metal that's commonly used in bulk kiln floors to cure tobacco.



One energy saving feature of the dryer is that air from the heating columns is recycled through flexible tubing back to the fan. The thermostat on the unit controls the unloading motor so corn can't be fed out until it has dried down to the proper moisture.

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Steam-Powered Tractor

Equipped with an engine off a deep sea tug and a home-built pipe boiler, Morley Frair's steam-powered tractor makes quite a sight when he takes it out for a spin in his hometown of Picton, Ontario.

The chassis, drive train and wheels on the built-from-scratch tractor come from a Massey-Harris 44 tractor. Frair says the Massey-Harris U-shaped chassis was ideal for mounting the steam engine and he said it was also easy to match up to the tractor's transmission.

Frair assembled the parts over a 5-year period and then put them all together last winter. He made the pipe boiler himself and plans to have it tested by government authorities so he can run it in

parades. He also plans to use the steam tractor to pull a mower on his edge-of-town acreage.

Frair figures the tractor has about 20 horsepower, or about half the power of the original gas tractor.

The boiler holds 10 to 15 gal. of water and has a 25 gal. reserve tank. The fire box, which is designed to burn wood, is 2 1/2 by 3 1/2 ft. in size. There is a wood carrier alongside the firebox. At the time Frair talked with FARM SHOW, he said he was not yet certain how often he would have to stoke the fire or refill with water but he says the boiler steams fast because of the pipe boiler design that uses a minimum amount of water.

Frair spent about \$1,000 total to build his tractor.