



Datisman's "second generation" grain vacuum will be self-contained, with the blower/vacuum mounted directly on the front of the wagon.

Grain Vacuum

(Continued from cover page)

forated flooring across the top and built a 1-ft. high plywood extension above the flooring. He then sealed the wagon shut with a sheet of plywood across the top, cutting an 8-in. dia. hole in one end of the plywood sheet and another the same size in the side of the wagon below the perforated floor.

"I built the vacuum itself out of an old Allis Chalmers silo blower with a barrel mounted in the back of it —

where the silage intake opening was located — to act as a suction chamber. An 8-in. metal duct runs from the barrel up to the hole in the top of the wagon. A length of flexible tubing with a large metal "nozzle" is attached to the hole in the side of the wagon. When the blower is turned on, suction is created, pulling grain up the flexible tube and into the wagon below the perforated floor. Once corn is in the wagon, the floor keeps it from going up into the vacuum tube at the top of the wagon," explains Datisman.

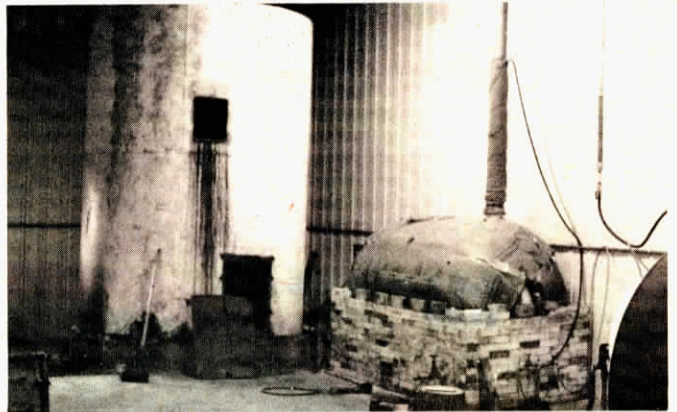
He tripled the speed of the 540 rpm pto-driven blower/vacuum with a large drive pulley. The blower is mounted on its own trailer and powered by a separate tractor. Datisman says he plans to buy a better quality blower and mount it on the front of the wagon so the vacuum will be self-contained and require only one tractor to transport.

The unique grain vacuum sucks up 250 bu. of corn an hour. Datisman figures that, by sealing up the wagon and tubing, and obtaining a stronger blower, he should be able to easily boost capacity to more than 500 bu. per hour. To transfer grain from one bin to another, the operator simply fills the wagon, turns off the vacuum, dumps the grain into a transfer auger, then fills the wagon again.

Datisman, who has experimented with various lengths of flexible tubing on the vacuum, says the suction is so strong he can use up to 50 ft. of tubing if needed. He doesn't shut the system off until the wagon is full and the tube starts filling up. He notes that it's important to make air holes in the nozzle so it can be placed directly into the grain without "choking".

"It works much better than sweep augers for cleanout and is handy for getting into corners. It's especially good for grain stored in hard to get at spots, such as the grain I store in my old dairy barn. And, the vacuum can be converted back to a conventional grain hauling wagon in 10 min. or less," he notes.

For more information, contact: FARM SHOW Followup, Roger Datisman, Rt. 1, Sherrill, Iowa 50073 (ph 319 552-1787).



Spereslage figures that, by burning alcohol made in his still, he cuts his fuel costs by "at least 40%".

HE BUILT HIS OWN STILL AND ENGINE CONVERSION SYSTEMS

This Iowa Farm Still Makes, Burns Alcohol

Long after gas prices stopped rising and most farmers cooled in their search for alternative fuels, an Iowa farmer continues to brew and burn alcohol on his farm.

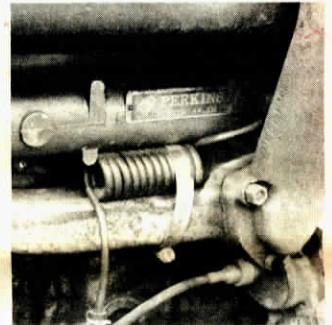
Robert Spereslage, Greeley, spent some \$30,000 a couple years ago to build his still, which he designed after attending seminars on alcohol fuel production and talking with other farm alcohol brewers. Since then he has continued to burn alcohol on his farm, even though there's no longer much information available or interest in doing so. In order to burn the alcohol — he uses 100 proof — he had to convert his vehicles himself.

"We didn't want to make a lot of modifications and felt commercial conversion systems on the market were too complicated," says Spereslage. He made two systems, one for gas engines and the other for diesels.

The alcohol converter in his Ford F-150 6 cyl. pickup consists of a Lasso chemical can mounted horizontally near the front of the engine compartment under the hood. An air pipe runs from outside the top of the can to near the bottom of the can. A small tube runs out the top of the can, through a simple turn-on valve and to the air intake valve below the carburetor. When the turn-on valve — operated from the driver's seat — is open, air is pulled through the small tube from the can where it has been pulled down through the alcohol and back up again, picking up alcohol vapors. As soon as the valve is opened, and the alcohol vapors start entering the engine, Spereslage says the engine quickly increases its speed by 700 rpm's.

The truck alcohol system burns 2 gal. of alcohol for every 20-gal. tank of gas and boosts mpg 20 to 25%. He notes that the can is filled with metal shavings so the alcohol won't splash around. The entire system costs just \$5 for the water turn-on valve. He replaces the Lasso can occasionally due to rust.

To power his Massey Ferguson 175



Heat from the exhaust manifold warms the copper tubing and pulls the alcohol from the can into the intake manifold.

diesel-powered 63 hp. tractor, Spereslage simply mounts a small tank on the driver's platform, runs the alcohol through a filter, and then up to a tight copper coil which he strapped to the exhaust manifold. The heat from the manifold heats up the coil, which pulls alcohol up from the can and passes it up out of the coil to an inlet in the intake manifold just above. In order to distribute the alcohol vapors evenly to the cylinders on the tractor, he inserted a small copper pipe "manifold" inside the engine manifold housing. The pipe has a small pin prick hole by each of the cylinders so the vapor is released by each cylinder and is therefore burned evenly by each.

Spereslage says the tractor now uses 1 gal. of alcohol for every 2 gal. of diesel fuel. He says total fuel usage was cut from 3 gal. per hour to 2 gal. per hour and the engine horsepower was boosted 4 hp.

Spereslage makes alcohol in his still for about 40 cents a gallon. Figuring diesel fuel at \$1.00 a gal., he figures he cut his fuel costs on his diesel by 40% or more. "And I get 4 extra horsepower," he says.

For more information, contact: FARM SHOW Followup, Robert Spereslage, Box 27, Greeley, Iowa, 52050 (ph 319 925-2627).

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