



# Farm Talk

Jerry Webb

If you're at all interested in things mechanical, particularly as they pertain to farming, you'll love a publication called Farm Show. It's a monthly tabloid with pages and pages of gadgets, do-it-yourself projects, and new machinery information.

Somehow my name got added to the list and so I received a copy recently. The lead story had to do with a fellow from Minnesota who couldn't see any sense in spending \$50,000 for a tractor he would have to pay for with \$2 corn, so he built his own.

It's a 250 horsepower, two-wheel-drive rig that has just about everything the commercial counterparts have and a home-built price tag of about \$10,000. This grain farmer relied heavily on old truck parts to assemble what appears to be a good-looking functional farm tractor.

The engine is a Cummings diesel. The frame is made up from White and Dodge trucks. The rear end is from a Mack truck, and the ten-speed transmission is a Fuller.

The builder has no plans to produce this rig commercially, but he says if there's enough interest, plans will be available for \$5 a copy.

Want to know more? Write to Farm Show follow-up, Stan Friesen, Route 1, Box 91, Mountain Lake, MN 56159. Tell him you want to know more about his farm-built tractor.

And if you're not into building your own tractor,

Farm Show has lots of other gadgets like a kit for converting an engine from gasoline to alcohol, a kit for making your own alcohol, do-it-yourself plans and information for converting an old silo into a manure pit, building a hog feeder and improving a variety of commercial farm implements.

One section of the magazine covers comments from farmers on what they like and don't like about new equipment. They tell it like it is, nominating the best and the worst of the commercially available stuff they're using.

A feature story in Farm Show talks about how farmers save money by buying used tractor parts. There are a handful of tractor salvage yards around the country, including one in nearby Myerstown, Pa., where a farmer can find just about anything he needs in the way of replacement parts.

The story quotes David Dyke, president of Worthington Tractor Salvage, Worthington, Minnesota, who keeps two tractor-trailer rigs on the road at all times scouring the country for good farm junkers. His inventory ranges from a 1939 Farmall H to a two-year-old International 1086.

When these machines arrive in his yard, Dykes says they're torn down, the parts cleaned, sorted and stocked in a large warehouse. He claims that 75 percent of the time he can tell within 60 seconds of a phone call whether a particular part is in stock. The

**NORRISTOWN** — Centrifugal pumps are becoming very popular on farm weed sprayers according to Montgomery County Agent Joseph H. Way.

rest of the time, he says, they can find it in two or three minutes by checking the inventory.

Other subjects in the current Farm Show—rubber horseshoes that prevent lameness, a better mousetrap that uses glue, a machine that unrolls big round bales, a fancy new pickup package for long-distance travel comfort, a home-built rig that is half truck, half tractor, and experimental data on a pipeline hog house.

Feature stories tell about a monkey that sleeps with pigs, an orchardist who grows pears in a bottle, a nurseryman who uses tiger manure to scare away predators, and a farmer who has his own bowling alley in his barn.

Farm Show is a fascinating magazine for the mechanically inclined. You can get a free sample copy by writing to the Farm Show Magazine, Box 704, Lakeville, MN 55044.

## Centrifugal pumps for sprayers explained

Centrifugal pumps are long lived, even with wettable powders, and they produce a relatively high volume of flow; this makes them a logical choice with a jet tank agitator. Although centrifugal pumps are classes as low-pressure (100 psi or less) pumps, their pressure is more than adequate for herbicide application.

The only moving parts of the centrifugal pump are the shaft and impeller. The impeller is usually designed to operate between 2000 and 3000 rpm; therefore, pto powered pumps must use a speed increaser in the drive to obtain the high speed.

The impeller must operate at a rated speed to give rated performance. A 10 percent drop from rated speed will result in a 10 percent decrease in volume and a 19 percent decrease in the maximum working pressure.

PTO rated speed must be maintained requiring high engine rpm's; this can waste fuel on a light load such as spraying since ground speed must be controlled with the transmission, not engine speed.

A solution to this problem is to use a pump powered by a hydraulic motor connected

to the tractor hydraulic system. This also permits the pump to be mounted on the sprayer.

Centrifugal pumps are good replacements for roller pumps on old sprayers. However, several plumbing changes are necessary. The inlet to a centrifugal pump should have no restrictions.

Remove the suction screen and install an in-line strainer

in the pressure line from the pump. Use the same size suction hose as the pump is threaded to accept; don't use bushings or reducers.

A low-resistance cut-off valve is the only item that should be in the suction hose. Also, no by-pass valve is used; pressure and flow are controlled by two valves, one in the line to the boom and one in the agitator line.

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