# Made It Myself

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## "Right Angle" Manure Pit Agitator

"Our 3-pt. manure pit agitator mounts at a right angle to the tractor. It lets us drive alongside our lagoon to stir manure without having to back up," says Daryl Beachy, Kalona, Iowa,

Beachy used 4-in. sq. steel beams to build three pivoting frames that overlay each other. The bottom frame hooks onto the lower arms of the 3-pt, hitch and has small caster wheels on back. The middle frame is clamped to the top frame, which supports the agitator.

The top frame is hinged, allowing a 4 by 8-in. hydraulic cylinder to move the agitator up or down. The middle frame is free to swivel on a pin that runs through it to the bottom frame, allowing the agitator to be rotated back behind the tractor for road

Beachy built the agitator itself from an 18-ft. long well casing pipe, mounting a 15-in. dia. propeller on one end. The propellor is bolted to a 1-in. dia. shaft that runs through the pipe and is connected to a 6-ft. long pto shaft and gearbox salvaged from an old Fox silage chopper.

"It works better than conventional rearmounted agitators and cost only \$1,200 to build compared to up to \$3,000 for conventional commercial agitators," says Beachy. "We tried using our neighbor's 12-ft. long rear-mounted agitator, but it couldn't reach in as far as we wanted and



it was hard to turn around on the steep, 8ft. wide bank alongside our lagoon.'

Beachy bolted the gearbox and agitator pipe to angle iron braces that he welded onto the top frame. A shaft runs down the center of the pipe and is supported by bearings at either end. Beachy mounted a 500-lb. weight on the front end of the top frame to counterbalance the weight of the

To position the agitator for transport, Beachy removes the pto shaft as well as the clamps from the bottom frame, then swings the top two frames back and clamps them to the bottom frame. He stores the pto shaft inside a bracket welded onto the

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## Lift-Up Remote Control Gate

An old pump jack makes a good "straight up" gate lifter, according to Minnesota farmer Myron Kvittem who used the idea to make a powered gate in his cattle yard that he can control from inside his barn.

The advantage of a lift up gate is that it's not affected by snow or mud when opening and also cattle can be crowded up against it on either side and it'll still

"I can open and close the gate from inside the barn by flipping an electric Lets me feed three different groups of cattle from one feeding station by letting them through one group at a time. With a little help from our dog, the cattle quickly learned when it was time to come and go so that I don't even have to leave the barn. They do it on their own," he says.

The base of the gate is hinged to a small cement slab. The pump jack and electric motor also mount on the slab. The only change Kvittem made to the pump jack was to add an extra pulley and belt to slow



down the speed of the unit. A long spring applies tension to the gate so it raises and lowers smoothly.

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### Feed Wagon Pulled, Powered By Pickup

"Converting an old pto-operated feed wagon to hydraulic power lets me operate the wagon with my pickup and move between scattered fields at highway speeds. It gives me most of the benefits of hauling feed with a truck but without paying for an extra truck license and insurance," says Mark Adams, Summer Shade, Kent., who pulls his modified feed wagon with a 1978 Chevrolet 4-WD 1/2ton shortbed pickup.

Adams removed the pto shaft from a 1956 Grade-O-Vator tandem axle wagon and mounted a hydraulic motor in its place. The motor is driven by a hydraulic pump that's belt-driven off the pickup engine's crankshaft. A pair of hydraulic hoses run from the pump to "quick couple" hose hookups under the pickup's rear bumper. A 10-gal, oil reservoir is mounted behind the seat. To unload the wagon, Adams flips a switch on the dash to engage or disengage an electric clutch mounted on the pump. He uses a lever mounted on the floor of the cab to operate a hydraulic control valve that lets him change direction of the conveyor apron if the wagon plugs up.

"It works great and was easy to set up," says Adams. "I have feedlots scattered out several miles apart so it really saves time. I spent only about \$600 to make the conversion. The 29 gpm pump has more capacity than most tractors I own. I use it to unload feed into bunks that I make from steel pipes. I can put the transmission in low gear and just let the pickup creep as smooth as silk down the feed bunks. I don't even have to put my foot on the accelerator."

Since FARM SHOW visited Adams, his original modified feed wagon (pictured) wore out so he removed the hydraulic motor and now uses it to power a new Schwartz feed wagon. The hydraulic motor mounts in the bed of the pickup and



is fitted with a 540 rpm pto shaft that can be hooked up to the standard pto shaft on the feed wagon. "With this arrangement, I can now use my pickup to power most any pto-powered equipment including silage wagons, grain augers, and so on.

To make the feed bunks, Adams bought about 200 ft. of 26-in. dia. steel pipe from a local salvage company. He used a cutting torch to split the pipe in half in lengths 14 to 20 ft. long, then used sheet metal to close off the ends. He also cut off short sections of pipe and welded them at a right angle to bottom of troughs to make "skid" legs. He lines the troughs up endto-end, then drives posts into the ground every 8 to 10 ft. with high-tensile electric wire above them to make a fenceline feeder. He also uses them as "stand alone" troughs in pastures. "Each trough weighs about 1,600 lbs. I use my front-end loader to move them," notes Adams.

He paid about \$15 per foot for the pipe so a 20-ft. long pipe makes two troughs at a cost of \$150 apiece.

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### Calf-Moving Sled

It's simple but it works, says Bill Lee, Camp Creek, Alberta, who came up with a nifty way to get calves home from the field along with their mothers.

Lee made a U-shaped sled out of 1-in. dia. steel tubing and stretched a sheet of canvas across the top with four holes cut in it. The calf sits on top with its legs through the holes, feet unable to reach the ground. It keeps the animal out in the open where its mother can smell it. A tow rope ties to the front crossbar on the sled.

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