



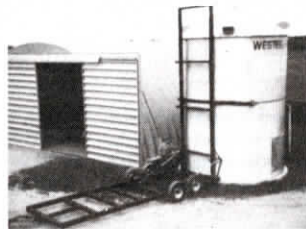
## Hydraulic-Operated Grain Bin Mover

Wayne Husak and his father Peter of Neepawa, Manitoba, built their own grain bin mover that handles bins up to 20 ft. high and 15 ft. in diameter.

The 21-ft. long, 6-ft. 8 in. wide bin mover is mounted on walking tandem axles and built from 4 by 6-in. steel tubing. The bin "cradle" is hinged at one end and raised vertically by a pair of 3-in. dia., 60-in. long hydraulic cylinders. A curved steel cradle that mounts at the center of the frame was fashioned out of old truck springs.

Husak hydraulically raises the bin mover to the vertical position, then backs up until the frame is tight against the bin. A wide nylon belt is wrapped around the bin and tied onto the end of each cradle arm. Then the hydraulic cylinders are retracted and the bin is lowered to a horizontal position.

"We use a long-handled wrench to ratchet the belt tight," says Husak. "The



cradle arms can be adjusted for varying bin diameters by changing the position of threaded bolts where they attach to the mover. When we're ready to lower the bin, we move the wheels out about 13 in. on each side so they won't rub against the bin. Each side of the axle telescopes out 2 ft."

Contact: FARM SHOW Followup, Wayne Husak, Box 1228, Neepawa, Manitoba, Canada R0J 1H0 (ph 204 476-3868).

## Hydraulic Power Unit Drives Grain Bin Augers

Steve Harms, Davenport, Neb., uses a portable hydraulic power unit to drive a pair of 8-in. dia. bin loading augers as well as all the other unloading augers and sweeps he uses in his grain handling setup.

A 6-cyl. Ford engine, mounted on a 2-wheel trailer, direct-drives a pair of 30 gpm hydraulic pumps. One pump powers a hydraulic motor mounted on a 25-ft. long auger that delivers grain out of a 600-bu. pit into an 68-ft. long auger. The 68-ft. auger, powered by another hydraulic motor, swivels to deliver grain into five bins arranged in a semi-circle. Unloading augers, each powered by a hydraulic motor, are used to unload corn from bins. Hydraulic motors are also used to drive sweep augers in each bin.

"Hydraulic power lets us vary the unloading auger speed out of each bin so we can more accurately blend wet corn with dry corn," says Harms. "We can vary auger speed from 0 to 500 rpm's per minute. Pto or electric-driven unloading augers have to run at a constant speed. I used the engine to power the pumps because my tractor doesn't have enough oil



capacity to handle both augers at the same time. Also, we have single phase electricity and I couldn't find an affordable electric motor that was big enough to operate both augers at the same time. I mounted oil pressure gauges and safety switches on the power units so if the pit runs empty or an auger plugs up, the engine will automatically shut off.

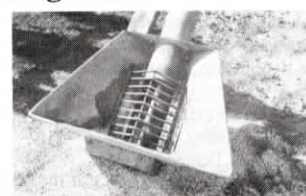
"We bought the pumps used which helped hold down the cost. When we're done using the augers we use the engine to pump water for our furrow irrigation system."

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## Easy-To-Make Auger Grill

An Illinois farmer says that if everyone covered their unloading augers with a grill the way he did, it would put an end to auger mishaps.

Charles Goodall, Sidell, Ill., used 1/2-in. dia. steel rods welded to angle iron that's bolted to the sides of the hopper. The rods form into an inverted "V" and are spaced about 1 1/2 in. apart.



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*Harold M. Johnson, Editorial Director*



## Flotation Applicator Injects Liquid Manure, Anhydrous, N-Serve

A wooden post dragged behind the injector knives on his 230-hp Big A flotation applicator allows Richard Ward, Crawfordsville, Ind., to seal a mixture of liquid hog manure, anhydrous ammonia, and N-Serve into the soil.

"This machine eliminates a trip and breaks up soil hardpan at the same time," says Ward.

The Big A's four shanks are spaced 24 in. apart. The wooden post chains the back of the two outside shanks. A vacuum pump sucks the manure-and-anhydrous mixture out of an 8,000-gal. trailer-mounted tank parked at the edge of the field into the Big A's 2,100-gal. tank.

Ward handles 2 1/2 million gal. of hog manure every year. "The hog manure

contains about 45 lbs. of nitrogen per 1,000 gal. of manure. I add enough anhydrous to bring the nitrogen content up to about 65 lbs. I apply about 3,200 gallons of manure per acre which, with the anhydrous mixed in, comes out to about 170 lbs. actual nitrogen per acre. N-Serve is applied at about one quart per acre. The spring-loaded shanks are mounted on an 8-in. sq. steel toolbar and the knives inject the manure and anhydrous 12 to 14 in. deep. Each shank pivots up to 30 degrees from side to side when turning at the end of the field."

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