



Spreader is backed down into pit until propeller is completely under manure. To load, you open a hydraulically-controlled gate on back and start the propeller.

## PTO-DRIVEN PROPELLER USED TO LOAD, UNLOAD

# Self-Loading Spreader Fills From The Back

There's no need for expensive pumps and agitators with this "self-loading" liquid manure spreader designed for lagoons, says Big-Foot, Inc., Union Mills, Ind.

The "Captain" is an agitator and spreader built into one unit. It's equipped with an 18-in. dia. pto-driven propeller on back that agitates and loads manure at the same time and is also used to spread. You actually back the spreader down into the pit until the propeller is completely under manure, then open a hydraulically-controlled gate on back and start the propeller. Once the tank is full you close the gate. To spread manure, you simply open the gate and start the propeller up again. It turns in the same direction whether loading or spreading.

"It fits in with the growing trend of using lagoons instead of above-ground manure storage or pits under barns," says E. Paul Johnson, sales manager. "This unique spreader has been marketed since 1967 primarily to large dairy farms on the West Coast. Conventional vacuum spreaders designed for underground pits don't work as well in lagoons because they plug up with leaves, sticks, and other debris.

"The propeller on this spreader breaks up solids and draws manure into the tank at the

same time. An overflow pipe on the side of the spreader lets you know when the tank is full. The propeller shaft runs along the bottom of the tank and has flighting spaced along it at intervals to help push manure back against the propeller when unloading. Spreading thickness is regulated by how far the gate is opened and by ground speed. It spreads manure over a 50-ft. swath so you can apply a very thin layer without damaging hay crops.

"The spreader requires a ramp into the lagoon that drops 1 ft. for every 6 ft. of length, allowing the pto shaft to stay out of the manure. The ramp should be at least 20 ft. wide and 48 ft. long and should be grooved for improved traction.

"The spreader tank has a hydraulically-controlled door on top so that you can also load it with a pump."

Comes in seven models with capacities from 1,500 to 4,000 gal. Sells for \$13,200 to \$23,500.

Contact: FARM SHOW Followup, Big-Foot, Inc., 3641 West 900 South, Union Mills, Ind. 46382 (ph 800 428-5174) or Jerry's Iron Works, Inc., Box 334, Duvall, Wash. 98019 (ph 206 788-1467)



The 18-in. dia. propeller turns in the same direction whether loading or spreading.



The 3,000-gal. portable canvas holding tank keeps both semi tanker truck and applicator busy with almost no down time.

## Portable Liquid Manure Holding Tank

A portable canvas holding tank with a capacity of 3,000 gal. speeds up hog manure handling for Dan Lahrman, Mulberry, Ind.

Up to 6,000 gal. of liquid manure are hauled to the field in a semi tanker truck. About half the load is pumped directly into a 3,350 gal. applicator. The rest is dumped into the holding tank, which can be easily moved from field to field. While the tanker truck goes back to the farm for another load, the applicator spreads its load and also what's in the canvas tank.

"It keeps both the tanker and the applicator busy with almost no down time," says Lahrman. "We got the idea because we haul

manure to fields up to four miles away from our farm. We bought the canvas tank from a fire department supplier for about \$750. It's 14 ft. square and mounts on a hinged steel frame. Two men can fold it flat and lay it in a pickup for hauling from field to field. We usually rinse the manure off with a garden hose before we fold it.

"We use a 24-ft. dia., 36-in. high steel grain bin ring as a 13,000-gal. permanent holding tank on another farm. It has a capacity of 13,000 gal. We paid \$400 for it."

Contact: FARM SHOW Followup, Dan Lahrman, Rt. 1, Box 80, Mulberry, Ind. 46058 (ph 317 296-3596).

## Row Cleaner Down Pressure Regulated By Air Cylinders

An Ontario farmer thinks row cleaners are a good idea but that they don't work well enough under all planting conditions. He's come up with a "super row cleaning system" to run ahead of his Deere 6-row planter that uses air cylinders to apply down pressure to row cleaners, allowing him to adjust how aggressively they move trash aside and work the soil.

Steven Dennis, who farms near Walton, used steel tubing to make his own hitch and double toolbar frame for the planter, mounting the row units on back. The planter frame mounts on a semi trailer axle equipped with 22 1/2-in. tires. Rawson 12-wave coulters mount on the front toolbar and are followed by his home-built row cleaners which mount on parallel linkages. Downpressure on each pair of row cleaners is provided by a 2 1/2-in. dia., 8-in. long air cylinder. A pair of 8-wave coulters, spaced 8 in. apart, follow behind.

"It lets me regulate downpressure on the row cleaners on-the-go right from the tractor cab," says Dennis, who patterned his home-built row cleaners after Martin units. "The more air pressure, the more aggressively the row cleaners work. Air is supplied by a truck compressor mounted on the tractor. In soft soil, conventional row cleaners move too much dirt out and make a ridge between rows that leaves the field in rough shape. I can raise my row cleaners on-the-go without having to get out of the cab and adjust them.

"Another advantage of my planter is that the hydraulic-lift toolbars have depth stops so the coulters always return to the same depth after I turn on headlands. Also, the planter will lift row units up to 4 ft. off the ground, making them easy to service. Dry fertilizer boxes equipped with extensions and a 700-gal. fertilizer tank mount on top of the frame. Dry fertilizer is dribbled to the



Down pressure on each pair of row cleaners is provided by a 2 1/2-in. dia., 8-in. long air cylinder.

side of one coulters and 28% liquid nitrogen is injected behind the other. Dry fertilizer capacity is 7,000 lbs. We can apply 200 lbs. per acre of dry fertilizer and 150 lbs. of nitrogen and plant more than 10 acres before we have to refill. The liquid fertilizer tank mounts about 2 ft. behind the axle so its weight is transferred onto the coulters without the axle having to bear the entire load. The planter weighs 1 ton per row empty. I pull it with my Deere 4230 tractor.

"A set of Deere trash cleaners mount in front of the planter row units to provide rock protection. A bank of hydraulic valves to operate the planter mount behind the 28% tank and are controlled by air valves that I run from the cab.

"We used a notched, 20-in. dia. deep dish disk blade mounted on coulters hubs to make our own row markers which leave an easy-to-see mark. A 4-in. wide, 12-in. high rubber gauge wheel keeps the marker from going too deep. I can change the angle of the disk by adjusting the position of a pin. The markers are set to make the furrow 30 in. from the center of the planter."

Dennis used 3 by 6 by 3/8 steel tubing to build the hitch and toolbars. He lengthened the track axle to 120 in. to straddle four 30-in. rows.