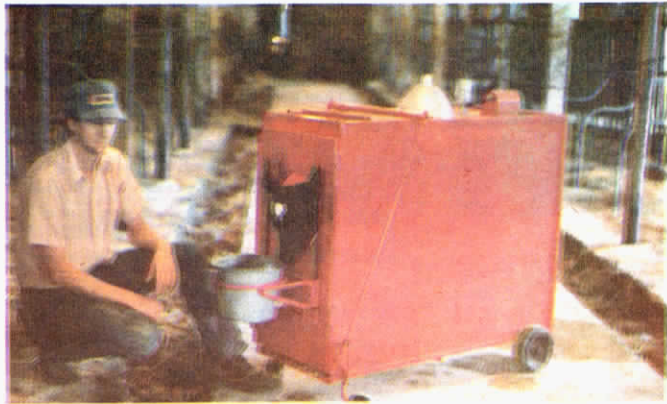




Apronless spreader features pusher blade driven by two-stage hydraulic cylinder.



Incubator chamber, heated by a thermostatically controlled light bulb, is kept at 70 to 80° F.

FIRST ALL-HYDRAULIC SPREADER OFFERED BY A FULL-LINE MANUFACTURER

Farmer-Inventor Sells His Spreader To Deere

Dan O'Reilly is one of those lucky farmers who, dissatisfied with a piece of machinery, changed it to his liking and then sold his idea to a major manufacturer. Last month, John Deere put O'Reilly's fully hydraulic, apronless manure spreader on the North American market.

O'Reilly and his "Orbit" spreader were first introduced to FARM SHOW readers during the summer of 1977 (Vol. 1, No. 4). At that time, the Red Wing, Minn., native was building and selling the Orbit himself for neighbors and other word-of-mouth customers. Since taking it over, Deere has "fine-tuned" the spreader, building at least three different prototypes and testing them under every conceivable manure-hauling condition.

"We worked with Deere engineers in the final development. Despite some streamlining, this is essentially our machine," says O'Reilly, who along with his father and co-inventor Joseph O'Reilly, will receive a royalty (no word on how much) for each machine sold. In addition, O'Reilly will continue to build his original Orbit version under a sub-licensing agreement with Deere.

Here's how the new "apronless" Deere 450 spreader, invented by O'Reilly, works:

A hydraulically-operated pusher ram moves all material in the loaded 225-bu. spreader to the beater at a uniform rate set by the operator. This pusher mechanism — replacing "at least 300 moving parts in a conventional apron spreader," according to O'Reilly — is powered by a two-stage hydraulic cylinder arrangement rather than the single ram on O'Reilly's original spreader. That means a shorter hitch and better maneuverability.

"The key to this machine is in the sliding false floor," says O'Reilly, explaining that when the spreader unloads, the front half of the floor slides



Manure can't stick or freeze to fiberglass liner inside box of Deere's new 450 Hydra-Push spreader. It's rated at 225 bu. capacity.

with the hydraulic ram, carrying half the manure with it towards the beater. "This prevents compacting of manure at the rear and overloading the beater. When the false floor reaches the beater, the ram slides on over it up to the beaters."

O'Reilly says that other hydraulic spreaders have been developed without the sliding floor. "They're suited only for sloppy or light manure, while this spreader will handle manure of any type."

To make it even more versatile, the spreader is lined with a low density "stick-proof" fiberglass material that manure won't freeze and stick to in winter, and that reduces friction year around. There is also an optional hydraulic endgate.

Only the 250-bu. model is now available but a Deere & Co. spokesman says the company is developing larger sizes. O'Reilly himself still offers four models, ranging from 180 bu. to 425 bu., at prices from \$3,000 to \$5,400.

For more information, contact: FARM SHOW Followup, Deere & Company, John Deere Road, Moline, Ill. 61265 (ph 309 752-4623); or Dan O'Reilly, Rt. 4, Red Wing, Minn. 55066 (ph 612 923-4508).

"WE HAVEN'T LOST A CALF IN THREE YEARS"

Incubating new-born calves may become as automatic an operation in cow herds as is early hospital care for human babies if a new treatment technique developed by two Minnesota dairy farmers catches on.

The father-son team, Donald Tellers and son Michael, of Chaska, say that except for breech births, they've completely eliminated calf loss in their 100-cow herd during the past three years that their home-built incubator has been in use.

"It creates a controlled environment. In the incubator, calves aren't left to fend for themselves on the cold ground or concrete floor, where temperatures are set for the cows' comfort. They can use all the energy they would have used to keep warm to gain weight and fight disease," explains Michael Tellers, noting that the incubator chamber is heated by a regular light bulb, thermostatically controlled, and normally kept at 70 to 80° F.

Since building the first one in 1976, the Tellers have been popping newborn calves into the incubator as soon as possible after birth. They keep them there for 3 to 7 days, at which point the incubated calves are as strong as other calves at 10 days or more, says Michael. "You can also save calves that are too small or otherwise defective that you might not normally bother with," he points out.

Feeding and care is also easier in the incubator. A sliding bucket holder in front of the "head-hole" makes feeding a snap. "When slid to the top, the nipple on the feeding bucket sticks right in the calf's face — and you can leave the bucket there while the calf sucks. When you want to wean the calf to pail feeding, simply drop the bucket and guide the calf to the milk. No more wrestling calves into corners to convince them you know what's best for them," Michael explains.

The incubator has greatly altered Tellers' use of antibiotics and drugs; they don't use them at all unless a calf is sick. "They're expensive and the more antibiotics you give an animal as preventative medicine, the less effective the drugs become if needed. We've found that by not administering regular antibiotics, we get a quicker response later if the animal does get sick," Michael explains.

Another advantage of the calf-saving incubator, he notes, is that farmers who make it a policy to sell bull calves at three days or so — before they get sick — find they can wait a week or two and still get a much better price for a "proven" calf. "Calves normally weigh substantially more and are healthier when they come off the incubator. In summer, we use the incubator only if calves are sickly or the weather cools off," says Michael.

The prototype incubator was built from 3/4-in. plywood and is 18 in. wide (not enough for most calves to turn around in), 36 in. high, and 4 ft. long. There are six 3/8-in. holes in the bottom for drainage. Calves are released once a day for exercise and at that time the Tellers scrape out the incubator bottom and add fresh straw. The unit is portable, a handy feature with particularly sick, weak calves, and in barns where space is a problem. The incubators will even keep a calf warm outside in the dead of a Minnesota winter, Michael points out.

The Tellers, while looking for a manufacturer, say they would build incubators for interested readers if demand is strong. They speculate that incubators could be mass-produced for around \$250 each.

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