

Revolutionary New "Precision" Manure Handling Equipment

Revolutionary new "precision application" liquid manure handling equipment is catching on fast in Europe and Canada, where tough water pollution regulations are prompting manufacturers to develop new equipment to manage manure better. Now some of the same technology appears headed for the U.S. The newest idea is to side dress liquid manure on corn which saves nutrients and reduces odors by covering manure with soil as soon as it's spread. (Bill Gergen, Associate Editor)



Front and rear axles are connected by closed circuit hydraulic system that allows giant spreader to turn on corners and headlands without damaging crop.

"Articulated" Liquid Manure Spreader

A new 6-wheel "articulated" liquid manure spreader equipped with toolbar won the gold medal for innovation at the recent International Salon of Farm Machinery in Montreal, Quebec.

Wic Inc., Wickham, Quebec, introduced the high-tech tank whose two rear wheels are turned automatically by a "closed circuit" hydraulic steering system that consists of a cylinder mounted on the front hitch that's connected to a cylinder on the rear axle. The steerable rear wheels prevent damage to crops on headlands or contours by the big tank. All three pairs of wheels have independent suspension and the tank can be equipped with a rear-mounted toolbar that's hydraulically raised or lowered. A series of 3-in. dia. hoses run from the tank to the toolbar, which can be equipped with either shanks or discs for sidedressing corn.

"Sidedressing liquid manure makes manure available to plants when they need it the most," says Claude Rivard, president. "It also extends the manure application season so you can apply manure when you're not as busy and lets you control weeds while applying nutrients. The toolbar has three shanks per row. The front shank digs a groove for the manure, and the rear two shanks cover it with 2 to 3 in. of soil. Manure application depth is shown on a gauge (optional) on front of the tank. The distribution boom between the tank and toolbar ensures even spreading between all rows.

"An optional computer and dosing pump can be used to automatically apply the exact

gallons of manure needed per acre. A speed sensor installed on one of the spreader wheels allows the system to automatically adjust for changes in tractor speed and keeps application rate constant. Application speed is generally 2 1/2 to 5 mph. A series of digital display and indicator lights shows you vehicle speed, gal. per acre, acres covered, gal. applied, etc. The dosing pump can be equipped with an optional dry matter gauge that ensures the proper application of nitrogen, phosphorus, and potassium during spreading," says Rivard, noting that computer can also be used by itself without dosing pump as a flow monitor.

The company's new "Quantofix Volumeter" kit lets you periodically measure the manure's nitrogen content so you have a better idea of how much manure to apply per acre. It reads the volume of nitrogen from a chemical reaction between a manure sample and a reagent.

Tank can be easily removed from trailer frame, allowing you to mount a wagon box or flatbed on it for other uses. A pto-driven impeller at the front of the tank can be opened for fast cleaning in case it plugs up.

The distribution boom and toolbar is available in 4 or 6-row models and can be adapted to other tank brands. Wic tanks range from 1,800 to 6,000 gal. The company also offers distributing booms for use on small grain crops, grassland, and non-cultivated fields.

Contact: FARM SHOW Followup, Wic Inc., Wickham, Quebec Canada J0C 1S0 (ph 819 398-6822).



Hose-fed, low level surface spread toolbar mounts on tractor.



Manure flows from rear-mounted distribution tank to injection tines mounted behind coulters. Tines create furrows that are closed by a pair of spring-loaded press wheels.

Manure Injector For Pastures

This new liquid manure injector, imported from Holland, lets you inject manure in a shallow layer into the root zone in pastures without damaging the grass, making nutrients immediately available to roots.

Manure flows from a rear-mounted distribution tank to injection tines mounted behind coulters. The tines create furrows that are closed by a pair of spring-loaded press wheels.

"It lets you apply heavier rates of manure because it buries it in the soil 2 to 4 in. deep and seals it instead of leaving it on top where it can burn the grass," says Percy Mockler, noting that in Holland laws now require farmers to inject all manure. No surface application is allowed. "It greatly reduces

odors and doesn't ruin the flavor of the grass, allowing livestock to return to the field immediately after injection. It's so odor-free we've even used it on golf courses."

The tines' narrow openings are continuously cleaned by an ejector system that forces any impurities in the manure, such as clumps of silage, through injection tubes. Shutoff valves seal the injection tines as soon as they're lifted out of the soil to prevent spillage on headlands.

For more information, contact: FARM SHOW Followup, Valley Sales & Service Ltd., Box 919, Rt. 6, T.C.H., Grand Falls, New Brunswick, Canada E0J 1M0 (ph 506 473-3439).

Low-Level "Surface Spread" Toolbars

"Our low-level surface spreading toolbars evenly apply liquid manure on top of the soil, eliminating spray drift and reducing odors," says Gilles Hebert, U.S. field manager, Houle Inc., Drummondville, Quebec.

The company also offers liquid manure side dressing and injection equipment.

The toolbars are mounted about 1 ft. above the ground and range from 20 to 25 ft. wide. Low pressure discharge hoses spaced about 5 ft. apart feed manure to deflectors that spread manure evenly in a fan-shaped pattern.

"Low level surface spreading virtually eliminates spray drift and lets you spread manure evenly on hay or pasture crops without damaging them," says Hebert. "We also offer a hose-fed, low level surface spread toolbar that 3-pt. mounts on your tractor. A 600-ft. long hose drags behind the toolbar. Two manifolds supply ten low pressure discharge hoses that spread manure in a 50-ft. wide pattern. It works 25% faster than an irrigation gun and results in 75% less odor. It also spreads manure much more uniformly."

Application rate is controlled at the pump discharge in front of the tank.

The toolbar sells for \$4,100 to \$5,300 depending on size.

The company offers toolbars equipped

with S-tine shanks or 16-in. discs for side dressing corn. The discs are mounted on flexible leaf springs that clamp onto the toolbar. The discs cover manure with about 2 in. of soil.

A heavier set of 20-in. discs can be set 36 in. apart and used in the fall to bury manure in a shallow layer in the soil in no-till conditions without any runoff, nutrient loss, or odor problems. "The discs pull easier than a toolbar equipped with injector sweeps and allow increased tractor speed, reducing soil compaction," says Hebert.

Disc and shank side dressing equipment sells for \$5,000 to \$6,550, depending on toolbar type and size.

The company also offers a toolbar equipped with 22 1/2-in. wide sweeps fed by injection hoses. The sweeps bury a wide, thin layer of manure under the top layer of soil. Depth is controlled by two adjustable gauge wheels.

An optional 20-in. spring-loaded coulter wheel cuts a path through sod or residue ahead of the injector.

For more information, contact: FARM SHOW Followup, J. Houle & Fils Inc., 4591 Rte. 143, CP: 370, Drummondville, Quebec Canada J2B 6W3 (ph 819 477-7444).