



Specially designed tri-axle gooseneck trailer hauls pump, engine, and 200-gal. fuel tank.

Trailer-Mounted Pumps Drain Manure Lagoons

Dennis Katterheinrich of New Knoxville, Ohio, has been custom building equipment for more than 30 years. Recently, he has built several portable, trailer-mounted pumps for draining manure lagoons and pumping to a tractor-mounted drag hose injector.

He starts with a special-built tri-axle gooseneck trailer that's designed to keep all controls and components positioned near the ground. Aused Cummins diesel engine from a semi truck provides the power. The engine connects to an overdrive truck transmission, which drives the main pump at the rear of the trailer. A second pump is driven by hydraulics from the front of the engine.

The manure pump itself hangs from a cable winch at the end of a boom, which swings and telescopes also by means of hydraulic controls. Stabilizers on both sides of the trailer keep everything level. A 200-gal. fuel tank allows the unit to operate for extended hours. All engine functions are monitored with gauges and are shut-down equipped for temperature, oil pressure, and hydraulic oil level. Optional equipment includes a large air compressor for cleaning the hose at the end of the day. The entire unit is designed to run continuously, pumping about 1,500 gal. per minute to a drag hose behind an injector toolbar. The process eliminates soil compaction caused by heavy tanks and spreaders and allows work to be done in less than perfect conditions.



Manure pump hangs from cable at end of boom.

Similar types of units have been mounted on straight trucks. Another option is a gearbox that allows the truck's engine to drive the pumps. By flipping a switch you can go back to driving the truck on the road. The pump can also be used to quickly fill tanks.

Price is highly variable depending on length of boom, type of compressor, optional equipment used, etc., and ranges from \$30,000 to \$90,000.

Contact: FARM SHOW Followup, Bambauer Equipment, LLC, 19151 Kettlersville Rd., New Knoxville, Ohio 45871 (ph 419 753-2275).

Manure Mat Sucks Up Odor

Hog producers can clean up a lot of odor and maybe some bad feelings between neighbors with a new product call Zeomat. As a bonus, they may get a higher quality fertilizer for their fields and not have to pump lagoons as often.

In North Carolina trials, a Zeomat cover reduced ammonia released into the atmosphere by over 80 percent and totally removed the odor from a hog manure lagoon simply by covering the surface with a roll-out fabric mat and a thin layer of a mineral called Zeolite.

"The foam-backed fabric is rolled out over the surface and then a thin layer of zeolite, like a fine grade of sand, is spread over the fabric with a lawn fertilizer spreader," explains Danny Campbell, specialty markets manager for Huesker, Inc.

Zeolite is a volcanic mineral that absorbs gases. A pound of it has the surface area of 3 1/2 football fields and only 1/4 to 1/2 lb. is needed per square foot of fabric cover. It absorbs ammonia and hydrogen sulfide gases until they're broken down and consumed by bacteria that live in the foam and fabric.

The test lagoon has been monitored by North Carolina State University, USDA, EPA and Duke and Oregon State Universities. The researchers have found that over time the stabilized nitrogen levels in the initial test lagoon have risen. Liquid levels continue to fall, and manure solids break down.

The North Carolina hog farmer says that while he hasn't had to clean out the covered lagoon, three neighboring lagoons have had to be pumped. He reports that the cover, which has been in place for four years, has survived five hurricanes and more than five tropical storms. It was unaffected even when Hurricane Ivan blew the roof off one of his hog barns.

"The geosynthetic fabric resists UV and tearing," says Campbell. "It comes in rolls 15 ft. wide and 100 ft long. The edge of each roll has a flap that can be sewed to the edge of the next roll. Once they are field sewn and the zeolite spread, they can be pulled across the lagoon surface."

The zeolite absorbs moisture and, once damp, absorbs the gases. It is photoregenerative. As sun hits the zeolite, the



The first step is to roll Zeomat out across top of lagoon.



Then a thin layer of Zeolite, a volcanic mineral that absorbs gases, is spread on top of Zeomat with a lawn fertilizer spreader.

gases are broken down into nitrogen, hydrogen and water and released. As it is slowly released, the nitrogen is eaten by the lagoon bacteria. Another benefit of the foam is that it insulates the lagoon surface, keeping it a more uniform temperature, which is good for bacterial efficiency. Because foam and the felted fabric are porous, rain passes through as does snow as it melts.

Zeomat sells for around \$2 per sq. ft. The material has a life expectancy of between five and ten years, though Campbell expects it to last even longer.

"This is a simple system," he says. "My competition for odor control is anaerobic generators, and they require a lot of technology, maintenance and labor. With Zeomat, there is no labor after it has been installed."

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"PosiFeed Roller" Improves Feeder Chain Drum

"It feeds the crop in more smoothly without overloading the machine, which results in a more consistent feed," says Rob Heinrichs, Loewen Mfg., about the company's new PosiFeed roller.

The new drum simply bolts on in place of the combine's original feeder drum at the front part of the feederhouse. The original drum consists of a steel cylinder with a completely round shape. However, on the PosiFeed roller, part of the drum has been cut away, leaving openings so the crop can feed through more easily. Also, the drum has raised edges which are designed to do a better job of pushing material back into the feeder chain.

"It was designed in Australia and we're now manufacturing it. We've tested it in small grains, corn, and soybeans and found that it works great in all crops," says Heinrichs.

Models are available for Case-IH, Deere, Gleaner, and New Holland combine models.

Contact: FARM SHOW Followup, Loewen Mfg., 432 Railway Street South, Box 820, Altona, Manitoba, Canada R0G 0B0 (ph 800 667-5082 or 204 324-8621; fax 204 324-1288; email: info@loewenmfg.com; website: www.loewenmfg.com).



"PosiFeed Roller" replaces combine's original feeder drum. Part of drum is cut away, leaving openings so the crop feeds through more easily.



Photo shows how painted parts of pads and bike show up in the dark. Glo Paint glows for 24 hours after exposure to light for 15 minutes, says Kohnen.

Glow-In-The Dark Paint

Mike Kohnen couldn't see the tip of his fishing rod when fishing at night. "That's where I got the idea for Glo Paint," he says, about his glow-in-the dark fluorescent paint that shines bright for 24 hrs. after being exposed to light for just 15 min.

"It's not a one-time glow," he says, noting that there are similar products on the market that don't last as long.

During the day, the paint is relatively clear although multiple coats and a white base paint will make it shine brighter at night.

The number of uses for Glo Paint keeps increasing. "I invented it for fishing, but there are so many different applications for it," he says.

Timber men use it to mark trees so they can cut them down at night.

Ranchers put it on fences so cattle don't get caught at night when they're running. Farmers paint it on slow moving vehicles.



Glo Paint is available in aerosol cans and 1-gal. paint cans.



Others spray holiday greetings on windows. Glo Paint comes in aerosol cans as well as 1-qt. and gallon cans.

It's sold at more than 350 retail outlets and is also available online. A small aerosol can sells for \$8.95 plus S&H.

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