



Simple "Aerator" Keeps Farm Pond Open At -40° F

"It'll easily keep a 60 by 120-ft. farm pond open with no ice at all," says Ernest Delmage, Minnedosa, Manitoba about his simple ¼-hp. one-bladed prop-type aerator that keeps ponds open even under the most frigid conditions.

Delmage first tried wind power to keep his pond open but says it was no good because on the coldest days when there was no wind, the pond would freeze over. His only other option was to purchase a commercial aerator costing thousands of dollars.

The aerator Delmage designed consists simply of a ¼-hp. electric motor geared down 10:1 that drives a long shaft fitted with a single, 20-in. long prop-type blade positioned 5 in. below the pond surface. The blade, which looks like a lawn mower blade except that it's got a slight cant to it like a propeller, pulls water up from 8 to 10 ft. down where temperatures stay at about 35°. It mixes this warmer water with cooler surface water.

"The electric motor runs at about 1,700 rpm's but we gear it down through a 10-in. pulley to about 185 rpm's. The driveshaft is enclosed in a pipe with a sealed bearing at either end and is half full of antifreeze to keep it from locking up if any water gets inside," explains Delmage.

The motor assembly, which is covered by a protective sheet metal shroud, floats freely on 3 floats anchored in place in the middle of the pond. Delmage had to run 250 ft. of 14/2 electric wire out to the ¼ hp. motor. He says it takes so little power to spin the blade that the electric wire doesn't even get warm enough to melt the snow around it.

Delmage uses his aerator to keep rainbow trout alive. "Fish will winter over, even in temperatures down to -40°. It also keeps vegetation alive."

The home-built pond aerator also works great to keep stock watering ponds open. Delmage says it clears ice up to the edges in a "stair step" fashion that makes it easy for cattle to get down to water.

In operation, Delmage generally lets the aerator run 24 hrs. a day, 7 days a week, but he says you could shut it down periodically. "Even if up to 4 in. of ice formed over the pond, the prop could still turn because the shaft is inside a pipe. It would melt off all the surface ice." Delmage made all components of the aerator together with the help of a relative who runs a machine shop.

Contact: FARM SHOW Followup, Ernest C. Delmage, Box 874, Minnedosa Manitoba ROJ 1E0 (ph 204 867-2866).

Made It Myself (Continued from previous page)



Variable Pto For Old Tractor

Lester Ginnow, Omro, Wis., uses a 7-ft. sickle mower on his Farmall A tractor. It works fine but when he changed to a larger set of tires on the back of the tractor, it gave him too much ground speed in heavy grass. He needed a way to adjust cutting speed to adapt to changing conditions.

"I put a platform on the back of the tractor and mounted an old air-cooled Sears and Roebuck engine on it that's rated at 5 hp. but is about the

size of a 16 hp. Briggs and Stratton engine.

"The engine is belted to the pto-powered belt pulley at the rear of the tractor. The engine starts the mower. I then shift the pto into neutral and the tractor can be shifted into any gear, or stopped and the mower will stay running, which helps get through tough hay."

Contact: FARM SHOW Followup, Lester Ginnow, 4843 Ginnow Rd., Omro, Wis. 54963 (ph 414 685-5227).

Do-It-Yourself Greasing Banks

Here's a do-it-yourself project you may want to tackle this winter in your farm workshop — equip your larger equipment with centralized greasing banks.

"They reduce greasing time more than half," says Larry Chamness, manager of Almo Farms, Wayne City, Ill., who teamed up with shop foremen Ron Barbee and Ray Lorange to design and build greasing banks for their tractors, combines, disks and other equipment.

The trio uses 1-in. square cold rolled steel to make the mounting frame for each bank of zerks. They drill holes through the

square bar, then thread them so zerks can be screwed into the front side, and compression fittings into the back side. Plastic brake line hose (about ¼ in. inside dia.) is run from the bank to each zerk site. The zerk serving each greasable bearing, bushing and so forth is removed and a compression fitting screwed in for connecting to plastic hose.

"We've run individual lines 15 to 20 ft. or more without any problems. They could probably be run even longer, if necessary," Ron told FARM SHOW. He notes that the plastic hose and compression fittings are readily available from auto sup-



ply stores since they're used for brake lines.

Here's how greasing banks save valuable time during planting or harvesting, when time is money:

Almo Farms has each of two Steiger Panther 325 tractors equipped with a central greasing bank. The operator services 8 zerks in one stop. The only other greasing stop he has to make is at the U-joint. That zerk spins with the shaft and can't be tied into the "bank" system.

Almo Farm's 42-ft. disk had four grease fittings on each of 8 pillow blocks, for a total of 32 zerks to grease. The job used to

take one man, working alone, 20 to 30 min. Now, thanks to 4 greasing banks mounted on the back of the disk, he does the entire job in about 5 min.

"It takes a lot of grease to load the lines initially. After that, you can service an entire bank with a hand gun," notes Ron. He suggests checking each bearing and bushing to make doubly sure it'll take grease before hooking up the plastic hose.

Contact: FARM SHOW Followup, Almo Farms, Rt. 1, Wayne City, Ill. (ph 618 648-2286).