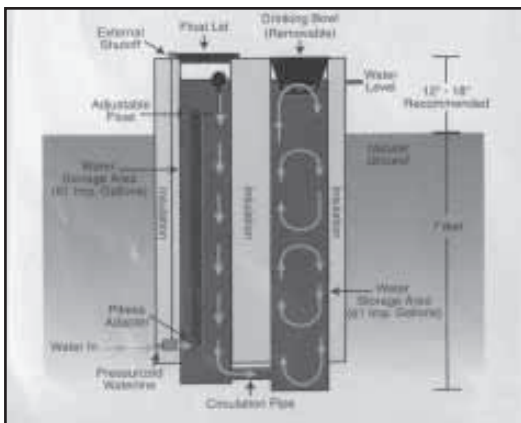


Thermo Sink uses only heat from the earth to keep waterers from freezing.



## “Earth Heat” Keeps Waterer From Freezing

Frozen livestock waterers haven't been a problem for Deerfield Colony, Louistown, Montana since the Hutterite Community started using the Thermo-Sink Livestock Watering System.

The waterers use only heat from the earth to keep waterers from freezing. Deerfield Colony was one of the first cattle operations to install the waterers after they were developed several years ago. They worked so well the colony began selling them for the manufacturer.

Eli Stahl, who oversees waterer sales for Deerfield Colony, says that even in the coldest winter in recent years, waterers sold to cattlemen in Manitoba, Saskatchewan, North Dakota and Montana remained ice-free.

Since the Thermo-Sink waterer uses no electricity or other power, most people find they save hundreds of dollars a year in energy costs.

The waterer consists of two lengths of heavy polyethylene pipe buried side-by-side vertically at a depth of 7 ft. Both pipes, which act as reservoirs, are well insulated with urethane. One is topped with a removable drinking bowl. The other is plumbed to the water pressure line and contains a float valve to control water flow into the system. Both vertical pipes are plumbed together at the bottom. Each holds 61 gallons as shipped. Warmer water rises to the surface while cooler water settles back to the bottom of the pipe, where it is warmed again. This creates enough circulation to keep water tempera-

tures at the surface above freezing.

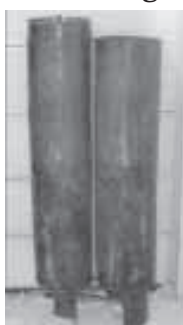
The single bowl system handles up to 100 cattle. A double bowl waterer, with three vertical pipes in the ground, will easily handle 200 cattle. Stahl says the waterers work for cattle, sheep, horses, hogs, buffalo and any type of poultry.

For areas with a warmer climate than the northern plains (and thus where frost doesn't go as deep during the winter), a Thermo-Sink waterer with shorter pipes is available.

“To install the waterer, all you need is a backhoe and a waterline,” Stahl says. “If the waterline is in and the hole is dug, it only takes about an hour to install the waterer.”

Price for the cold climate single waterer is about \$900. The cold weather double waterer sells for \$1,200. The warmer climate version is available as a double waterer only. It sells for \$1,000. Stahl says volume discounts are available.

Contact: FARM SHOW Followup, Thermo Sink Watering Systems, Eli Stahl, Deerfield Colony, Rt. 3, Box 140, Louistown, Montana 59457 (ph 406 538-7824).



Two lengths of heavy polyethylene pipe are buried side-by-side.

## Feed Wagon “Customized”

Keith Schole uses only one tractor to do all of the chores and fieldwork necessary on his Pickardville, Alberta cow-calf operation. Because of this, it was awkward in spring when he needed to put his duals on for fieldwork, since the unloading spout on his Schuler 175BF feed wagon no longer reached the feed bunks.

To solve the problem, he decided to build a spout extension. He ordered three feet of 11-in. left hand auger flighting from his feed wagon dealer. Schole then had three feet of trough extension built from 3/16-in. thick galvanized sheet metal to match the existing wagon spout. He had a removable coupler machined to fit the auger flighting. It can be unbolted when no longer needed. Then he mounted the new trough extension by bolting angle iron on the length of the trough.

“I built the extension a little longer than necessary to accommodate any size duals,” he says. “Now I can use a fairly wide tractor and still reach the feed bunks. The only disadvantage is that you need about 16 1/2 feet of clearance through field gates and feeding pens, plus, more care is needed generally to move the unit in the yard.”

The project cost Schole \$200 (flighting - \$100, trough - \$45, trough lining - \$30.00 and machined flighting link plug - \$25.00)



Keith Schole lengthened the auger and spout on his Schuler feed wagon. “Now I can use a fairly wide tractor and still reach my feed bunks,” he says.

Schole made another modification to the feed wagon. The unit was originally geared for unloading with a 540 PTO in the tractor and he didn't want to switch stub shafts on his Deere 4450 tractor between using his feed wagon and his bale shredder, which required a 1,000 pto drive.

“The feed wagon had an 11-in. belt drive pulley and turned the wagon gears much too fast on a 1000 PTO stub shaft, which would lead to excessive wear, even when the tractor was idled down,” Schole explains. “To solve this problem, I sized the 11-in. pulley down to a 5 1/2-in. pulley.”

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Schweppe converted this silo blower - equipped with an 11-ft. conveyor - into a “feed thrower” by removing blower and moving wheels and axle under center of conveyor.

## Old Silo Blower Turned Into “Feed Thrower”

“We use it to throw feed for storage into a lean-to alongside our free-stall barn,” says dairyman Glen Schweppe, Syracuse, Neb., who converted an old Allis-Chalmers silo blower - equipped with an 11-ft. long conveyor - into a “feed thrower”.

Schweppe's lean-to is located at one end of his barn. He uses a skid steer loader to scoop feed out of the lean-to and dump it into bunks inside the barn. The problem was that he recently bought a Schuler vertical mixer wagon to replace his older Ryan feed wagon, which was equipped with an endless conveyor and had been used to dump feed into the lean-to. However, the new wagon is too tall to fit inside the barn.

“We back the mixer up to our feed thrower conveyor and use tractor hydraulics to power a hydraulic motor that we installed on it. We can make the pile as big as we want by using a crank to change the angle of the conveyor. It'll throw feed up to 10 ft.,” says Schweppe.

He bought the silo blower at a farm sale for \$22. He removed the blower and narrowed up the wheels and axle, then moved them under the center of the conveyor. He also built an undercarriage for the conveyor and added a crank-operated cable so that he can change the angle of the conveyor. He



Tractor hydraulics are used to power a hydraulic motor installed on back of conveyor.

mounted a hydraulic motor at one end of the conveyor and a hitch at the other end, allowing him to pull the unit behind his tractor or 4-wheeler.

“We built it last winter and started using it this spring with no problems,” says Schweppe. “The conveyor was originally equipped with a flat belt which wasn't able to move enough feed at the angle we used the conveyor. We replaced the flat belt with a new diamond belt which we bought for \$300. The conveyor is so well balanced that we can pick it up and move it around by hand.”

“The feed that we deliver into the lean-to is a mix of corn and hay silage and dry hay.”

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Dave Elmquist used sq. steel tubing and 1-in. dia. pipe to make a removable barbed wire roller for his Honda 4-wheeler. Hooks catch on ATV rack (right).



## Wire Roller Mounts On ATV

Using square steel tubing and 1-in. dia. pipe, Dave Elmquist, Mayerthorpe, Alberta, built a low-cost, removable barbed wire roller for his Honda 450 ATV.

“It works great for putting up fences on land that has been recently cleared of trees,” says Elmquist. “I place the wire roll vertically onto the unroller and it spins like a top as I drive forward.”

The roller consists of a welded-together steel bracket equipped with two 1-in. dia. pipes that lie horizontally over the ATV's rear rack and slide over a pair of steel rods with hooks on the end that catch on the rack. Holes drilled into both the pipes and rods allow them to be pinned together.

“When I stop the ATV, the wire stops, thus avoiding tangling the wire,” says Elmquist. “I hang a big hammer and other tools in metal loops that I welded onto the bracket. It takes only about 10 seconds to remove the roller.”

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Bracket that holds barbed wire roll can be quickly unpinned from hooks.