

## Bunker Silo Built From Railroad Ties

Using old railroad ties and steel I-beams, Andrew Barclay built a solid bunker silo for a cost of just \$6,400.

The Calmar, Alberta farmer remembered seeing a similar silo in his native Scotland before he moved to Canada several years ago and put the simply designed silo together almost entirely by himself.

The silo is 22 by 70 ft. with 12-ft. high walls and holds 350 tons of silage. It has a 4½-in. thick concrete floor over a sand base. Key to the construction is the use of steel I-beams and railroad ties.

Barclay paid about \$7.50 a running foot for I-beams and \$5 apiece for the ties. "Ties are the hardest thing to find. When you find them, make sure they're not rotten inside. I took along a hammer and could tell if they were solid or not by hitting them with it."

The I-beams are spaced 94 in. apart and sunk 5 ft. deep in large concrete footings that are tied with reinforcing rod into the concrete floor of the silo. Once the beams were in, it was simply a matter of sliding the railroad ties into the channels on the beams, forming a solid wall.

"The ties were not all the same length and some of them were rounded on the ends so I cut them all off to a uniform 94 in.," says Barclay. "They fit quite tightly together so the walls are virtually airtight, although there was a little spoilage on the south side where the sun warmed the walls. We lined the inside of that wall with plastic. The entire silo can be lined with plastic — or plywood — if air gaps or creosoted-ties are a problem."

Some of the ties had tar or creosote buildup along one or more sides so he made an effort



to put the cleanest side inward.

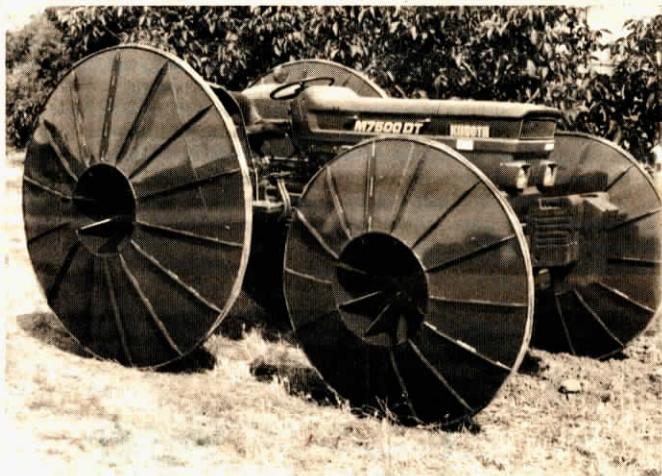
"It'll take a lot of abuse if you bump it with a tractor loader or other equipment. If you do break a tie, you can easily slide it out and replace it," notes Barclay.

Another advantage of the design is that the silo could easily be turned into a building. "If I ever decide to get out of dairying, I can put a roof over it and use it for other purposes. With an upright silo, you're stuck, since there really aren't any

other practical uses for it."

In the corners, where two I-beams meet at right angles, Barclay welded scrap iron across them for extra support and to form a ladder which makes it handy to get on top to put on a plastic cover or to take a sample. He plans to build a second railroad tie bunker silo this summer.

Contact: FARM SHOW Followup, Andrew Barclay, Calmar, Alberta, (ph 403 985-3218).



## Thin Steel Wheels For Narrow Rows

Thin steel wheels, originally designed for moving tractors through muddy rice fields, helped Mississippi farmers Charles Burt Darden and his son Charlie negotiate their narrow row soybean fields last year when wet weather caused a late-season problem with Johnsongrass.

The Dardens couldn't get through their narrow-row beans with regular tractor tires without damaging the beans so they replaced the standard tires with the 2-in. wide steel wheels manufactured by Sweco Products, Sutter, Calif. "They work great in muddy fields — primarily rice fields — because they cut right through the mud without wallowing in it like rubber tires," William Ziegenmeyer, of Sweco, told FARM SHOW.

Ziegenmeyer says the thin steel wheels will also work well on dry-land, not only for late-season work in narrow row beans but also for

double-cropping — such as seeding soybeans into wheat — without damaging the standing crop.

Sweco makes the narrow wheels in standard sizes ranging from 3½ ft. to 7 ft. in diameter. They're 2 in. wide at the outer edge and expand to 6 to 7 in. wide at the hub. During the manufacturing process, the wheels are packed tightly with a hard foam that deadens the inside and helps provide support. Ziegenmeyer says the wheels can be fitted to most any tractor and can be taken over the road at slow speeds. Sweco custom-builds thin steel wheels up to 10 ft. in diameter.

A 7-ft. dia. steel wheel made of 12 ga. steel sells for \$850.

For more information, contact: FARM SHOW Followup, Sweco Products, Inc., 2455 Palm Street, Sutter, Calif., 95982 (ph 916 755-0521).

## Mouse Killer Protects Round Bales

Alan Schaefer, Bloomsdale, Mo., developed a unique mouse killer for use around big bag silage or big round bales wrapped in plastic. Before he came up with a way to control mice, rats, and other small rodents, he says he had continual damage to bags causing spoilage.

Schaefer cuts 18-in. lengths off the heavy-duty 3-in. dia. cardboard rollers that his big bale plastic comes wrapped on. He then shrink-wraps plastic around the outside of the rollers and tucks the loose ends inside the tube. In the center of the tube he places a generous dosage of zinc phosphide mouse poison with a wad of newspaper on either side.

"The mice are attracted by the paper and are surprised to find food inside. Zinc phosphide is a hot bait

that kills mice almost instantly, unlike other anti-coagulant poisons that take time to kill. When killing mice around big bales you've got to kill them right away so they don't have time to damage the plastic," says Schaefer.

The traps should be placed in a perimeter around the bales, from 6 to 20 ft. away and spaced 15 to 20 ft. apart. A few should also be tucked in among the bales or bags. Schaefer says the plastic-wrapped tubes should last several years.

Zinc phosphide is a restricted use bait that also kills rats and other small rodents. It sells for 87 cents/lb. and is available from Hopkins House Ag Products, Box 7532, Madison, Wis. 53707 (ph 608 221-6211).

## Electric Appliance Lock

Herbert A. Harmison, Jr., an engineering professor at Iowa State University, came up with a way to lock up cords on electrical tools and appliances, both as a way to keep youngsters from using them and to discourage adults from using electrical tools and other equipment without permission.

Harmison says other such devices on the market are extremely complicated. His first model consisted simply of a metal pin welded to a steel washer. The pin slips through the holes in the end of the prongs on the plug and the washer slips over the shank on the lock, making it impossible to use the plug. Harmison has patented the lock and hopes to find a market for it through the Iowa State University Research Foundation.

