Trench Silo Turned Into Earth-Sheltered Shop

After he quit milking cows and switched to cash crops, William Benson built a 30 by 60-ft. earth-sheltered shop with a 14-ft. high door inside his old concrete trench silo. His friend and mechanic Steve Dionne recently sent FARM SHOW photos of the building, which the men built entirely by hand.

The entire shop is contained inside the walls of the old silo and is earth-sheltered on 3 sides. "The silo was originally dug into a hillside and had slanted-out walls with concrete supports," says Steve.

"The shop remains at an ideal year-round temperature of 60 degrees regardless of the outside temperature. We can't believe how nice it stays in the dead of winter. Even with a windchill of 30 below it'll still be warm and cozy inside the shop. A propane heater mounted on the ceiling is hooked to a 100-gal. propane tank, but we don't use it very often. The shop is built so tight we could probably use it as a tornado shelter."

The trench silo originally had 12-ft. high walls, but the men added 4 ft. to support the shop's 16-ft. high joists.

"Over the years the pilasters that support the walls had cracked so we installed 8-in. channel irons over them," says Steve. "The I-beams are bolted vertically to the silo walls and spaced to match the supports behind the walls. We welded shorter lengths of channel irons together on top to form hooks that run up and over the supports. The vertical I-beams go 3 ft. down in the ground."

The men ordered wood trusses to fit from a local lumber yard and used 1/4-in. lag bolts to attach the trusses to the silo's concrete walls.

The shop is set up for welding and has running water, 220-volt electricity, and an electric/hydraulic lift to work on cars. "We can use the lift to raise 4-wheeled trailers and replace wheel bearings and remove transmissions," says Steve. "There are two air compressors inside, with black steel pipes along the walls serving as air compressor lines.

"The silo's floor slopes down toward the front, away from the shop so if we use water to wash something off it'll run off toward the front apron. We even have a TV antenna mounted on top of the roof so we can watch Green Bay Packer football games," he notes.

William Benson built this 30 by 60-ft. earth-sheltered shop inside his old concrete trench silo. The silo was dug into a hillside and had slanted-out walls with concrete supports.

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Oil Well Pipe Used To Build Solid, Inexpensive Shed

Sonny Barcus is proud of the 24 by 24-ft. workshop he built for less than $3,000. On the outside it looks like a typical metal shed with an overhead door. The inside framing reveals how he saved money.

"I used 1 1/2-in. oil well pipe that I bought for 20 cents/ft.," Barcus says. "And I split an I-beam from an old house trailer to weld pieces to screw boards to."

He built the walls flat on the ground, welding pipe studs 4 ft. apart. He did the same for the rafters. Then, using a tractor, ropes and bracing to lift and hold the walls in place he welded the sections together.

The 1/2-in. plywood on the wall was recycled from pallets. Barcus "decorated" with calendar pictures of cars and tractors. The windows came from an old school bus - appropriate because he was a tour bus driver.

"I'm happy as heck with it," Barcus says, noting he spends a lot of time in the building working on a variety of woodwork and fixit projects. With 13-ft. walls, he can bring in tall equipment to work on.

Sonny Barcus welded the building's walls together on the ground and then lifted them into place with a tractor.

Since he built it, the price of steel has come up he notes, so his timing was good, as was his talent for finding materials to recycle. Also key to keeping costs down were his friends Jeff Watson, "Buckwheat" Fortney, Mark Frick and Brian Babcock who poured the concrete in exchange for a good meal.

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Center Pivot "Cleats" Boost Traction

You'll never have to worry about your center pivot getting stuck if you attach these new steel "cleats" over the tires, says Nebraska inventor John Hladky.

The cleats consist of 3-in. high, 3/8-in. thick sickle section-type points welded onto a steel plate that covers the width of the tire. The plate is hinged to a pair of 6-in. deep side plates that bolt on through existing slots in the pivot wheel rim.

Three models are available for different tire sizes.

"They cost a lot less than tracks that cover the entire circumference of the tire," says Hladky. "I came up with the idea because I got tired of having to use my tractor to pull out stuck center pivots. The cleats really help in heavy, slick clay soil because once the tire's lugs get full of clay they start spinning. As the tire goes forward the entire weight of the center pivot squeezes down on the cleats, forcing them into the clay to move the tower forward. In real severe situations you could install two cleats per tire."

The cleats come off with two bolts so they're easy to remove. And they don't add much weight to the tire so there's no danger of twisting the shaft on the center pivot's gearbox, says Hladky.

"Install these pivot cleats on your center pivot's tires and it'll walk right through wet areas," says Nebraska inventor John Hladky.

Pivot cleats sell for $155 apiece.

Contact: FARM SHOW Followup, Hipke Welding, LLC, 90077 Park St., Spencer, Neb. 68777 (ph 402 589-1501 or 866 791-6456; www.eagledesigns.net).

A steerable wooden sled with thin metal runners is used to make straight, evenly spaced furrows in Darwin Keiper's garden.

Sled Makes Perfect Garden Rows

"I always try to work smarter in my garden, not harder," says Darwin Keiper of Pocono Lake, Penn. "I wanted to make straight, evenly spaced furrows at the correct depth for optimal growth. I looked for anything around my garage that could help. Finally it came to me - my childhood Flexible Flyer. It's a steerable wooden sled with thin metal runners, and I use them to make the furrows."

Keiper sets rows of wooden boards down the length of his garden for use as walkways and to suppress weeds, planting into garden beds between the boards.

"I start out by rototilling and raking the planting beds until they're even," says Keiper. "Then I place the sled at the far end of the bed, tie a rope to the top of the sled, run the rope to the other end of the bed, and pull the sled toward me. It results in perfectly straight, evenly placed rows."

To make deeper furrows, Keiper places a 5-gal. bucket with some dirt in it on top of the sled. "The more dirt I add to the bucket, the deeper the furrows. After a little trial and error I was able to get the desired depth for the kind of seed I was planting," he notes.

"I stand at one end of the garden and use a rope to pull the sled toward me," says Keiper.

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