

Earthbag Root Cellar Provides Lots Of Cold Storage

Sherry Rovig says the covered dirt mound in her backyard looks a little like a Hobbit House, but it's actually an amazing above ground cold storage root cellar that works great even in the below-freezing winter weather she experiences in Duluth, Minn.

The earthbag structure encloses a 10-ft. dia. room with 6-ft. walls topped by a wooden roof insulated over the top with styrofoam and dirt. During January's sub-zero temperatures, the cellar stays between 35 and 38 degrees and 90 to 96 percent moisture - perfect for the potatoes, apples, beets, Brussels sprouts, carrots and other produce from her large garden.

"We have a high water table and it's all clay, so we couldn't just dig it into the ground," Rovig says.

With the help of family and friends, Rovig created a raised tamped gravel pad and then built up walls using bags filled with dirt. She notes that earthbag construction is used by some people to build homes (www.earthbagbuilding.com). Sandbags are filled with damp soil that contains 5 to 30 percent clay and then stacked like bricks. Two rows

of 4-pronged barbed wire placed between the layers help stop the bags from slipping apart. The bags are firmly tamped down so when they dry they are rock-hard and fit tightly together, similar to adobe.

Road base with suitable clay content was used to fill the bags. The polypropylene bags fit over a bag stand positioned on top of the wall. The bags were filled in place on the wall and then slid into the desired position. Rovig used a large tin can to fill the bags.

Wooden cleats sandwiched between layers of bags create attachment points for the door and shelving. A wooden top plate was secured to the wall with 24-in. long pieces of rebar driven at opposing angles down into the walls. The roofing was attached with screws to a center ridge beam and top plate. Then a heavy rubber tarp was pulled over the top to provide a waterproof seal.

A loader tractor was used to cover the entire structure with dirt. The root cellar - which can also be used as a storm shelter - spreads out to about 30 ft. at the base with about 6 to 10 in. of soil on the top. Jute and straw covered it the first winter, but the goal is to sow a cover crop on the mound this year. Also, the tarp in front of the door will be replaced with a second door to create a buffered entry.

"We have vents in the door and an exhaust vent. And, we have electricity to it for a light and outlet," Rovig says. Carrots and leeks are in sand-filled totes on the floor, while shelves hold the other vegetables. Apples are at the top so the ethylene gasses they release go up and don't affect the other produce. Rovig notes that the environment isn't right for squash, so it is kept elsewhere. With a deep coat of snow, the root cellar was well insulated and stayed above freezing.

There are many resources for earthbag construction on the internet, and Rovig highly recommends the method as an economical building method.

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Sherry Rovig used earthbag construction to build this root cellar. The 10-ft. dia. room with 6-ft. walls is topped by a wooden roof insulated with dirt.



Rovig filled sandbags with dirt and then stacked them like bricks to form cellar's walls. Two rows of barbed wire between wall layers keep bags from slipping apart.



A raised tamped gravel pad was installed before walls were built (left). Cellar's roof plate is covered by a heavy rubber tarp to provide a watertight seal.



Vol. 44, No. 2, 2020

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FARM SHOW (ISSN #01634518) is published bi-monthly (6 times/year) for \$25.95 per year (\$29.95 in Canada) by Farm Show Publishing, Inc., 8500 210th St. W. Lakeville, Minn. 55044. Periodicals postage paid at Lakeville, Minn., and additional post offices. POSTMASTER: Send address changes to FARM SHOW, P.O. Box 1029, Lakeville, Minn. 55044 (ph 952 469-5572; fax 952 469-5575; email: circulation@farmshow.com; website: www.farmshow.com). Single copy price is \$5.95 (\$7.50 in Canada). Publication No. 469490.

In Canada:

Publications Mail Agreement No. 40032660, Return Undeliverable Canadian Addresses To: Dycorn Mail Svcs., 495 Berry St., Winnipeg, MB R3J 1N6; Email: circulation@farmshow.com

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March-April, 2020

"Carry & Cut" Big Bale Mover

Ackerman's Round Bale Knife lets you transport big round bales and then slice them in two. The combination carrier and cutter prepares bales for the TMR mixer or for fork-feeding by hand.

"The Round Bale Knife was developed by a local farmer for his own use, and now he makes them for us," says Joe Wingert, Ackerman's Equipment and Rental. "The knife works equally well on 4 by 4 and 4 by 5-ft. big round bales. It will cut any bale, dry or wet."

Wingert notes that cutting the bales in half saves wear and tear on the mixer and saves time too. Cut bales take less time to mix.

The carry and cut attachment comes with either a skid loader or 3-pt. hitch mount. The knife is 3 in. thick at the spine with a 10-in. wide blade. A 72-in. long, 1 1/2-in. dia. ram drives the blade through a 90-degree arc for a full cut through the bale.

Wingert suggests using a 75 hp. or larger tractor on the attachment. It is priced at \$2,989.

Contact: FARM SHOW Followup, Ackerman's Equipment & Rental, 8051 State Route 241, P.O. Box 126, Mt. Hope, Ohio 44660 (ph 330 674-0495; sales@ackermansequipt.com; www.ackermansequipt.com).



Combination carrier and cutter slices round bales in half for grinding by a TMR mixer.

A hydraulic cylinder drives a 10-in. wide blade through a 90-degree arc to cut bale.

