



Big 20,000-gal. vertical tank provides 36 hrs. of milk storage, at about two thirds the cost of barrel-shaped tanks.

“Milk Silo” Backs Up Conventional Tanks

When a dairy farm has more than 4,000 cows, storing the milk production in two barrel-shaped milk tanks that hold 6,500 gals. each requires daily pickups at a minimum. And when that farm is located in an area of South Dakota that may be snowed in so bulk trucks can't move, the operation needs a backup plan. For Hammink Dairy, that backup is a 20,000-gal. milk “silo”.

Wim Hammink says the big vertical tank gives them 36 hrs. of storage at about 2/3rds the cost of horizontal tanks. He and his sons didn't have any second thoughts about installing the silo in January, 2019 because milk processing plants have used them for years.

The Hammink's silo rests on a 6-ft. thick concrete pad outside their South facility where they milk 3,000 Jersey and Jersey crossbred cows. Three months after the installation it was filled to the brim during an April, 2019 snowstorm when milk trucks couldn't reach their farm. Hammink says after roads were cleared the dairy had 7 semi loads of milk ready to be hauled. They had to dump one semi load, but without the new silo they would've had to purge 4 loads. Hammink

says those 3 saved loads made the silo investment worthwhile.

Milk from Hammink cows travels through two chillers and reaches 38 degrees before it is stored in either the horizontal tanks or the milk silo. Milk temperature is monitored by a computer system and text, or email alerts are sent if fluid temperature rises above 40 degrees. An exterior chiller on the silo maintains milk at 38 degrees. During extremely warm weather, milk from the horizontal tanks can be pumped into the silo to cool down.

Hammink says the silo is an excellent addition to the operation and is easier to clean and sanitize than horizontal tanks. A wash system sprays hot water and sanitizer around the top and it flows by gravity to the bottom. Hoses are cleaned and sanitized every time they're used, even if the silo isn't emptied. Hammink says the system works great and if he were to install it again, the only thing he'd change would be to put up a larger one.

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Low Cost Cordwood Buildings Built To Last

Richard Flatau built his cordwood home over 40 years ago and has helped thousands build with cordwood ever since. The low-cost building method has been used for saunas, homes, barns, chapels and more. Flatau has produced books, videos and led workshops across the country. Now in his mid 70's, he has seen cordwood construction change dramatically over the years.

“When we built our house 41 years ago, cordwood construction was a free-for-all, using any wood, any mortar and any foundation,” says Flatau.

Built right, cordwood construction can last, as his house has. Flatau points to the many cordwood barns built in the Upper Peninsula of Michigan in the 1930's. Unfortunately, many didn't last.

“Over time we've identified 16 best practices to follow to come out with the best end result,” he says. “I've seen horror stories related to not following the rules.”

Flatau emphasizes the need for a solid, conventional foundation, one that holds at least 500 lbs. per linear ft.

A second basic rule is to put up a framework and a roof before beginning to build walls. This makes it possible to put on temporary siding and move all materials under cover and work on the walls from the inside, regardless of the weather.

“Without a framework, we had to use the

strongest mortar we could, one that set up fast,” says Flatau. “With a framework, we can use weaker mortar that sets up slower and smoother.”

Another big change was an evolution from a standard 6-in. dia. cordwood. Today wood of all sizes and multiple species, with the addition of bottles and other objects, is encouraged as a way to make the building more interesting and personalized.

One limiting, but important, factor is the use of softwood logs instead of hardwood. Flatau explains that the softwood has larger, more open cells that can handle moisture without swelling.

“Hardwood, with its small, dense cells, swells when it absorbs moisture, cracks the mortar and tips walls out of plumb,” he says. “In our area, they used to crack granite slabs by drilling a hole in the granite, driving in a piece of hardwood and soaking it. As the wood expanded, it cracked the granite.”

“On our Cordwood Construction Facebook page, people have posted pictures of cordwood tables, floors and buildings of all kinds,” says Flatau. “We also have an Instagram account, a YouTube channel, and a website. All of these are good sources of information on building with cordwood.”

Flatau notes that his e-book and a DVD of workshops are on sale through the end of the year. “People can get all the information



Pyramid-shaped gooseneck hitch comes with a latching mechanism that hooks onto ball in pickup bed quickly and easily.

Gooseneck Hook-Up Made Easy

The Ultimate 5th Wheel Connection from Andersen Hitches turns the hassles of a fifth wheel hitch into a fast, easy and stable hook-up. One person can install or remove the base in less than a minute, and it works in short, standard and long bed trucks. Full installation takes less than 5 min.

“Company owner Ryan Andersen is an RV enthusiast. He wanted to find a solution to heavy and difficult-to-install fifth wheel adaptors,” says Brooks McFadden, Andersen Hitches. “He adopted the pyramid shape with its extreme strength. It allowed him to avoid the heavy, fifth wheel systems that take up so much space in a truck bed.”

The aluminum hitch weighs only 35 lbs. The ball rides inside a greaseless coupler. Because the coupler rides on a ball, it has more swivel in every direction than other 5th wheel hitches. That also allows the trailer to be coupled or uncoupled in uneven terrain.

“The latching mechanism for the base hooks onto the ball in the bed of the truck quickly and easily,” says McFadden.

The base is set over the gooseneck ball in the bed of the truck. Loosen 2 front bolts and adjust the square tube with the top bolt. Raise or lower the tube so the bottom holes in the tube are below the ball. Slip in the pin

and lock it in place. Adjust the top bolt with a 50-lb. torque wrench to lock the tube to the ball. Tighten the front bolts with the same wrench, and it's ready to go.

The specially designed ball-funnel installs quickly on the trailer hitch. It ensures a fast hookup even if the hitch is up to 3 in. off the ball center. A remote cable attached to the coupler makes it easy to latch or disconnect the hitch.

Andersen Hitches makes a lowered version for use in flatbed trucks with recessed balls. It's also available with an offset base, allowing it to be installed next to a large fuel tank or toolbox. A 40-lb. rail mount version is available as well.

The Ultimate 5th Wheel Connection models are available online from the company or from their dealer network. “We have dealers in every state and in Canada, even one in Australia,” says McFadden. “The base price starts at \$789 now, but we anticipate an increase in January.”

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Paul Klassy uses old hog feeders to make metal racks that haul firewood.

Firewood Racks Made Out Of Hog Feeders

Paul Klassy, New Glarus, Wis., recently sent FARM SHOW photos of how he makes handy firewood racks out of old hog feeders. Makes the wood easy to handle and keeps it off the ground.

Klassy salvaged 2 old hog feeders with rusted-out bottoms, which yielded 6 rings from which he made 3 double ring racks. “I built 3 pallets on which the racks sit,” says Klassy. “I fill the racks with firewood, and if I want can stack them 3 high. Thanks, dad, for never throwing anything away.”

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Richard Flatau is an expert at developing low-cost methods for building with cordwood.

they need in digital form for under \$30,” he says. “Cordwood construction is labor intensive and takes longer than conventional construction. If FARM SHOW readers are going to do it, it is good to be armed with the correct information.”

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