



Finnish design allows feed bunks to be filled from outside of barns.



Hydraulic cylinders tip up the building's outside wall to expose the bunk.

“Tilt Wall” Bunk Lowers Feeding Costs

A Finnish dairy barn design is catching on fast because it saves dairy producers money in multiple ways. Architect Jouni Pitkäranta's design with its “turning outside wall” cuts construction costs, upkeep costs, and feed costs.

“The feeding alley in a conventional barn is a waste of space and just more area to be cooled in the summer,” explains Kevin Kraemer, Advanced Dairy Systems Ltd. He is the first North American dairy building designer to introduce the concept. “A dairy farmer with a 60-cow robotic milker, wall and bunk system can save \$40,000 or more just on construction costs. Later, he will need fewer fans and less power to cool the herd.”

Pitkäranta says feeding costs are also affected. Because feed is delivered to a bunk instead of the flat floor, cows can't simply push away less desirable feed. When they try, it simply rolls back into place.

Feed bunks are built along the outside walls

of loafing barns. To feed, hydraulic cylinders turn or tilt the upper outside wall to expose the bunk. After the feed cart has passed by, the wall is lowered back into place, protecting the bunk and the cows.

“Unlike in a feeding alley, you don't have mud and manure from tractor and feed wagon wheels dropping into the feeding area,” says Pitkäranta. “You also eliminate having to clean out the feeding alley. If you simply feed a bit less every so often the cows will clean it out.”

Pitkäranta explains that while many producers believe cows need to be fed to the point of feed refusal, his customers feed only once every 24 hrs. with the goal of the bunk being empty for an hour a day.

“One farmer purposefully overfed, but when he compared it to limited feeding, it produced no extra milk,” says Pitkäranta. “Even if new feed is placed over old feed, it's not a problem in the stainless steel bunk.”

In the 12 years since it was introduced, 140 barns have been built with Outside Feeding systems in Finland. The system has also been introduced in Sweden, Denmark and elsewhere. Now it's being introduced to North America.

Pitkäranta has modified the original design, making it more robust and yet simple. The new system can be fitted with bird netting and can be opened in the summer for additional ventilation.

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Tire jack uses a pair of adjustable arms to quickly and easily remove large tractor tires, and also move them around the shop or yard.



“One-Man” Tractor Tire Jack

“Our new one-man tire jack allows one person to quickly and easily remove large tractor tires, and also move them around your shop or yard,” says Ashley Royals, Riverside Fabrication, Sterling, Colo.

The RT Tractor Tire Jack rides on 4 heavy-duty steel wheels and comes with a 6-ton, 2-stage jack. It can handle tires weighing up to 6,000 lbs. A pair of adjustable arms, one set about 5 ft. high and the other 2 ft., fit into brackets on either side of the main frame. The arms can be moved in or out by changing the position of a pair of pins. The tire sits on a free-spinning rollbar at each side of the frame. Vertical uprights that support both the arms and rollbars ride up or down on pipes at each side of the frame.

To remove a tire, you lower the rollbars close to the ground and slide the unit forward until the arms contact the tire. Then raise the jack, unbolt the tire and pull it off.

“It eliminates the need for someone to stabilize the tire and is safe to use because the weight of the tire is always supported by the jack, and the tire is kept close to the ground,” says Royals. “The adjustable arms can be used to remove big dual wheels that weigh up to 6,000 lbs.”

Sells for \$2,100 plus S&H. Contact: FARM SHOW Followup, Ashley Royals, Riverside Fabrication, 150 Edward Ave., Sterling, Colo. 80751 (ph 970 522-8703; aroyals@lcsigroup.net; www.lcsigroup.net/riverside).



Tom Hutchinson turns worn-out shovels into heavy duty “chopping hoes”, heating the metal neck with a torch and then bending it to about an 85-degree angle.

“Chopping Hoe” Made From Old Shovel

“My grandfather came up with the idea about 50 years ago, and I'm still using it. It's a great tool for all kinds of jobs,” says Tom Hutchinson of Madera, Calif., who turns worn-out shovels into heavy duty “chopping hoes”.

Hutchinson makes his chopping hoes the same way his grandfather did.

“When my grandfather wore the end off his shovels, he would heat the metal neck with a torch until it glowed red. Then he bent the neck to about an 85-degree angle and placed the shovel in a bucket of cold water to cool it off,” says Hutchinson.

The chopping hoe works great for cutting down overgrown weeds as well as taking out tall grasses and chopping them down to compost size, says Hutchinson. “It's a heavy duty hoe that makes quick work out of clearing a lot and also works great for pulling together compost piles. I don't have to jump on the shovel with one foot to penetrate the soil. I just swing it at the ground. The weight of the shovel translates into a pendulum motion that easily scalps the ground without straining your muscles.”



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