Pat Lunemann punches holes in tires used to hold down plastic on silage piles. There are 4 holes per side, which leaves the tires dry with almost no smell or mess.

A hydraulic-operated, 3-in. dia. rod is used to punch holes through the rubber.

Hydraulic Punch Makes "Holey" Tires

A tour highlighting Twin Eagle Dairy's automated calf feeding system, composted manure for bedding and other modern practices was impressive, but the holey tires holding down plastic-covered silage piles grabbed our attention. FARM SHOW loves to discover inexpensive, common sense ideas that solve problems.

When Pat Lunemann decided to add on to his freestall barn in 2000, his Clarissa, Minn., neighbors had concerns about the mosquitoes that would flourish in the water-holding tires on his silage piles. Planning and zoning commissioners required Lunemann to come up with a solution before he could add on.

"I went to our local blacksmith, and he came up with a wood splitter concept using the hydraulics on a tractor," Lunemann says. "It works like a paper punch."

Place the tire over the round receiver end, push the hydraulic lever, and a 3-in. rod punches a hole through the rubber. Spin the tire a quarter turn and repeat to punch 4 holes in a side. Flip the tire and punch holes in the other side. The round rubber pieces that fall out can be recycled.

"We tried to do both sides at once, but it doesn't work," Lunemann says, noting that it takes less than 2 min. per tire, even with turning the tire. "We stay away from heavy tires and stick to light truck and car tires."

With holes in each direction, most of the water drains. What little is left evaporates quickly, he says.

"The tires are dry with almost no smell or mess," Lunemann says.

Punching holes, rather than purchasing heavy tire sidewalls has saved a lot of money over the years. Whenever he needs more tires it doesn't take long to get them for free from local dealers. Lunemann estimates he has about 10,000 tires with holes. The solid rod has been rebuilt a few times to maintain a tight fit in the hole for easier cutting.

It's not hard work, he says, but it's monotonous and a good test to see if an employee is a hard worker.

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Containers can be used as walls, offices, interior storage rooms, etc.

Builder Incorporates Shipping Containers Into Its Designs

Used shipping containers can be used as walls, offices, or interior storage rooms with custom designs from SteelMaster, a builder of curved steel structures. While lots of FARM SHOW readers have found novel uses for steel containers, SteelMaster's turnkey roofing systems make conversion easier than ever. Options are nearly unlimited depending on the number of containers used.

"Our first customer had two containers on each side that he wanted to use for offices with an enclosed, secure work space in between," says Michelle Wickum, SteelMaster. "Since then we've come up with lots of different ways to use shipping containers."

SteelMaster treats each job as a custom design due to different snow and wind loads in different areas. Gary Parker, a designer with SteelMaster, says that while costs start at $1/sq. ft., those variables and the size of the area to be covered will affect pricing.

"Our biggest job so far was double stacked containers that were 30 ft. tall. The area to be covered was 60 ft. wide," says Parker. "We can do spans of up to 150 ft. in ideal conditions."

Parker says the cover edges can be attached directly to a container with lag bolts or welded to an I-beam attached to the container. Cover edges can be attached to either the inside or outside edges of a container wall. Front and rear wall areas are also available from SteelMaster to match the covers.

The covers are maintenance-free and come with complete blueprint assembly plans. The container covers, like other SteelMaster buildings, are assembled on site with individual panels light enough to lift and place by hand.

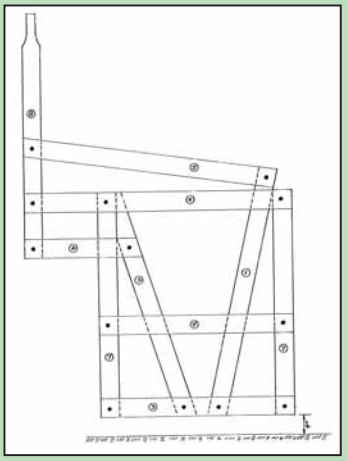
"The buildings are considered temporary or portable," notes Wickum. "They can be dismantled and moved as easily as they were installed."

"In most areas, this also means they are property tax free," adds Parker.

Contact: FARM SHOW Followup, SteelMaster Buildings, 1023 Laskin Rd., Suite 109, Virginia Beach, Va. 23451 (ph 757 422-6800; toll free 800 341-7007; www.SteelMasterusa.com).

SteelMaster Buildings custom-designs used shipping containers into its turnkey roofing systems.

Chuck Laughbaum patterned this wooden headgate after one his dad and uncle built in 1950 and used for nearly 40 years. It opens and shuts using a scissoring action.



Wooden Headgate Simple, Quiet

Chuck Laughbaum grew up using a wooden headgate and still uses one today. He patterned it after one his dad Earl and uncle Howard built in 1950 and used for nearly 40 years.

"I remember as a boy pulling the rope to shut the headgate on a cow as my dad pushed her down the chute," says Laughbaum. "I would hold the chute shut till my dad could insert a steel pin to lock it."

The headgate is a simple affair of 2 by 4's that operate on a scissoring action. It works well with a chute design that has a swing gate to its side for cattle to exit the chute once freed from the headgate.

"The headgate has an overall width of 42 in. and a height of 70 in." says Laughbaum. "It's made from rough-cut hardwood 2 by 4's and 1/2-in. bolts. It probably wouldn't cost more than $75 in wood at a sawmill."

The headgate consists of 2 uprights, 3 single crossbars and 2 pairs of crossbars. It's mounted to posts sunk in the ground at the end of the chute. Mounting carriage bolts extend through the uprights, crossbars and the posts.

The first crossbar is mounted at the top of the frame, and the second is 11 1/2 in. lower. A pair of crossbars is mounted 14 1/2 in. below the second crossbar with a second pair mounted 22 in. lower, providing room for the animal's head. This pair is 56 in. long and extends past the right upright of the headgate to serve as a mount and pivot point for the headgate control bar. The final crossbar is mounted 14 1/2 in. lower at the bottom of the uprights.

The sliding bars that close around the animal's head ride between the two crossbar pairs. When open, they form a V with their bottom ends bolted to the lowest crossbar on the headgate frame and 14 1/2 in. from either upright.

Laughbaum stresses that the geometry of the sliding bar and the control bar is important. When the control bar is vertical, the headgate is open. When it leans away from the headgate, the headgate is closed.

"Initially, the lock pin hole was in wood," says Laughbaum. "My dad added a 4-in. wide steel plate when the hole in the wood got worn and loose. The plate has 5 holes in it to adjust to different size cattle."

Today, Laughbaum uses his headgate for a small herd on his hobby farm. "Our veterinarians really like it," he says. "They say it's quieter than steel headgates and doesn't spook the cattle."

Laughbaum says his father first saw similar headgates while working on a government ranch in Idaho during WWII.

Plans are currently available online at http://msucares.com/pubs/plans/5778a.pdf.

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