

Photos by Bruce Winning, Calgary Herald

The roof of Leussink's straw hog barn is made of pine poles covered with 6 mil plastic, 3 ft. of baled straw, another sheet of plastic and a foot of loose straw on the top.

"BALES MAKE GREAT BUILDING BLOCKS"

Hog Barn Built With Straw Bales

By Doug Sorenson

"Straw bales make great building blocks," says Canadian hog farmer George Leussink, of Sundre, Alberta, who houses about 3,500 head in a farrow-to-finish barn built of straw, a low-cost by-product of his grain farming operation.

Leussink used right at 1,000 square bales (4 by 4 by 7 ft.) made with a Hesston big baler to build this 430 ft. by 40 ft. barn and a 36 by 100 ft. annex. Individual bales were compressed with 2,500 lbs. of pressure and tied with six strands of twine.

The T-shaped structure, with about 20,000 total sq. ft. of floor space, houses his entire breeding, farrowing, and finishing operation. He markets about 7,000 hogs a year.

Side walls of the barn are two bales high (8 ft.) and 4 ft. thick. Inside the barn, pens are built of poured concrete 3 in. thick and 42 in. high, which keeps the pigs completely out of contact with the straw walls. The concrete pen walls also provide a support on which to bolt roof supports.

Pine poles are placed over the steel roof supports, then covered with 6 mil plastic. Over this is a 3 ft. slice from a big straw bale, another sheet of plastic, and a foot of loose straw.

Leussink thinks the roof will have to be replaced in five years but the walls "will last forever".

"The building sheds water and the walls never stay wet," he says. "Temperature stays up around 70° in winter, and there's never any moisture on the inside walls and ceiling in cold weather."

The building is ventilated by six thermostatically-controlled fans that are fitted into steel cages set in the straw wall. All the lighting and electrical wires are hung from the ceiling completely clear of the walls and ceiling.

Leussink says there is no combustible material near the electrical wiring, and he doesn't consider the barn to be a fire hazard, but he can't get it insured. "My old conventional hog barn is more vulnerable to fire than this one," he notes.

He built the whole set-up for less than \$80,000, and about \$30,000 of that is for the feeding systems alone. The concrete work was \$18,000. A comparable size conventional hog barn would have cost 10 to 12 times as much, says Leussink.

He grew up in the Netherlands where straw thatched roofs are still found, so he knows the good points about them. He had to make a lot of modifications and had to come up with some inventive ideas. The roof supports and concrete pens are his own ideas. So is the manure handling system, which works by gravity.

The straw barn is so successful that another one is being built by Leussink, and still another by his son. The Leussinks are learning by experience how to improve this kind of building.

"Flax straw is probably the best all-around for building, and rye straw is the toughest," says Leussink. The straw walls harbor mice but the rodent problem has been no worse than with a conventional barn, he points out.

"The big advantage of the straw barn is the good shelter it provides at low, low cost. It's the way to go if you want to make a few bucks on your livestock operation," Leussink concludes. "If a straw bale starts rotting for any reason, it can be removed and a new one put in its place."

For more information, contact: FARM SHOW Followup, George Leussink, Box 451, Sundre, Alberta (ph 403 638-3863).



Spring-loaded traction lugs ride in the "retracted" position when not needed.

SPRING LOADED LUGS MOUNT ON WHEELS

New Way to "Unstuck" Tractors, Combines

It may make your tractor look like an iron wheeled machine of the past, but the new Be-Po Traction Aid is the latest means for providing added traction and a new method of getting "unstuck" in mud or snow.

Made of molded steel, the Traction Aid is a series of spring-loaded arms that fit across the tire tread, providing extra traction and biting power. The device bolts onto the wheel rims of combines, trucks, and tractors, including 4-wheel drives.

Manufactured in Italy, the Traction Aid is distributed in North America by Drummond Manu-Rep, Drummondville, Quebec. According to the company, the new device provides better traction under wet or sandy conditions, reduces soil compaction, and prolongs tire life by reducing the wear and tear from slipping.

The traction lugs are a series of spring loaded arms which ride in the "retracted" position when not needed. When needed, they flip over, by hand, fitting across the tire tread to provide the extra gripping action. You can flip any number of the lugs over at one time. The lugs extend about 4 in. over the tire and reach a little over half way across the tread.



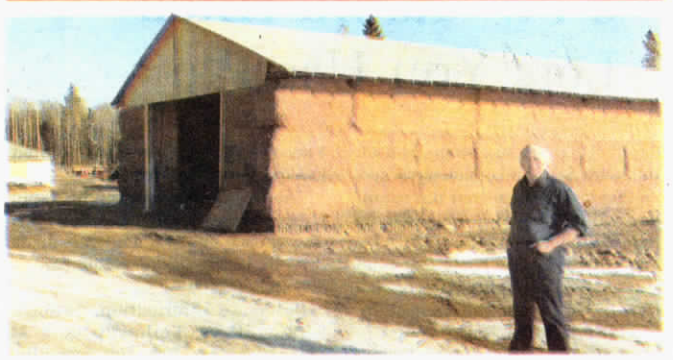
When needed, the spring-loaded lugs are flipped over across the tire tread by hand.

When not needed, such as on pavement, or in normal field conditions, the arms can be flipped back out of the way.

Sizes are available for 14, 15, 16, 20, 24, 28, 30, 34, and 38 in. dia. rims. A traction aid for a 14 in. by 30 in. tire, for example, weighs right at 475 lbs.

The 14 in. model sells for about \$700 for a set of two, and the 38 in. model for right at \$3,000 per set. Freight costs are extra.

For more information, contact: FARM SHOW Followup, Drummond Manu-Rep, P.O. Box 711, Drummondville, Quebec, Canada J2B 6W6 (ph 819 477-9069).



Except for some weathering of the bales, a 40 by 100 ft. machinery shed which Leussink built four years ago out of straw bales is as sound as the day it went up.