



Roof rides on railroad rails mounted on walls of 40-ft. wide bunk silo.

KEEPS COWS DRY AS THEY SELF-FEED

Rolling Roof Protects Feed In Bunker Silo

"It was a lot cheaper than covering the entire bunk with a roof," says John Van Esch, Chilliwack, B.C., about the rolling roof he put over his bunker silo to keep the exposed silage dry along with the cows who feed directly from the bunker.

"My Dad and I got the idea because we're in a rainy area and it wasn't much fun working in the bunk in the rain and cows didn't like the wet feed. We didn't want to build walls and a roof, which would have been too costly to justify.

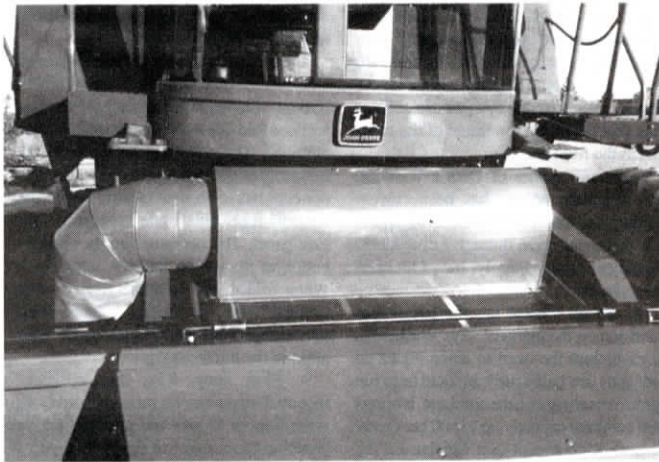
"The 40-ft. span roof consists of 4 trusses - for a width of 16 ft. - that ride on railroad rails mounted on top of the bunk's cement walls. The trusses ride on wheels - two on each side. I also made a clamps for each side that grab the rails - the more pressure ap-

plied to the room, the tighter they hang on. In three years of use, the roof has always stayed put, even in 60 mph winds."

To fill the silo, Van Esch rolls the roof to the front and fills the back first. Then he rolls the roof to the back, and fills the front. He covers the silage tightly with plastic and tires (which he slices in half so they won't fill with water) and can be stacked easier). Cows feed directly from the stack through a stock panel that moves along with the roof.

"The roof does a great job. Cows are out there feeding even in pouring rain. I've never seen anything like it anywhere," says Van Esch.

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Diverter mounts in place of feederhouse inspection covers. Blows dust onto ground directly behind header.

DOESN'T AFFECT REEL OPERATION

Feederhouse Dust Vacuum

"My new feederhouse dust vacuum collects dust and discharges it right behind the header in front of the drive tires, away from the windows and cab. It tremendously improves operator vision," says Dave Eid, inventor.

The dust vacuum mounts on the feederhouse throat and is powered by the combine's 12-volt battery. You simply remove the feederhouse inspection covers and use six self-tapping screws to mount the vacuum

housing. The fan is wired to a toggle switch in the cab.

"It works especially well on a bean header when you're cutting soybeans close to the ground and raising a lot of dust. It also helps you see better at dusk and at night," says Eid. "It works better than other feederhouse dust vacuums on the market because the fan is battery-powered. It automatically goes on whenever you operate the header. It



Calmer used parts from three 8-row IH 400 air planters to build innovative rig.

SPACES SEEDS 6 IN. APART IN 6-IN. ROWS

24-Row "Equidistant" Soybean Air Planter

You'll like this home-built soybean air planter that combines the narrow-row benefits of a drill with the seed metering accuracy of a planter to space seeds 6 in. apart in 6-in. rows.

The 24-row "equidistant" air planter, built by Marion Calmer, Alpha, Ill., uses parts from three 8-row, 30-in. International 400 air planters.

"As far as I know it's the only planter that can plant in 6-in. wide rows and also space seeds 6 in. apart inside the row," says Calmer, who built his planter 1 1/2 years ago. "If I wanted to plant soybeans more accurately, I'd have to plant them by hand. Equidistant seed spacing gives each plant more growing area. I'm still testing to see if near-perfect seed spacing results in significantly higher soybean yields. Even if equidistant seed spacing doesn't prove out yield-wise, I know that my planter's seed metering system is more accurate and easier to calibrate than the metering system on any drill, and depth control is just as good."

Calmer welded two planter frames together - one ahead of the other - with a 5 by 7-in. toolbar (salvaged from an old IH 500 planter) in between for extra strength. A drop axle, equipped with dual wheels on each end and mounted under the two frames, hydraulically raises and lowers the planter. Each planter frame carries 12 row units salvaged from the IH 400 planters. The row units are spaced 12 in. apart and staggered to create 6-in. rows. Calmer narrowed the stabilizing arches at the rear of the row units from 30 to 12 in. and welded them back together. The three seed hoppers and blowers are bolted to the three IH 400 transmissions which Calmer welded on top of the planter frame.

According to Calmer, the key to equidistant spacing on his planter is that each blower has to service only 4 ft. of planter width (8 row units). As a result, seed drops

almost straight down through the seed tubes and can be blown with about half as much air pressure. "On a conventional 8-row 30-in. planter the blower is 10 ft. from the outside row units and the seed tubes run in a more diagonal fashion," says Calmer. "The higher air speed that's required causes seed to bounce off the sides of the seed tube which results in uneven spacing.

"One drawback to my system is that I can only get near-perfect equidistant spacing when I travel at about 1 3/4 mph. Part of the reason is that seed drum rotation isn't very smooth on old IH planters. However, even when I plant at 6 mph I can place seed much more accurately than I could with a conventional drill. I hope to improve seed spacing precision at higher travel speeds by replacing the round seed tube manifolds with square ones and smoothing the rotation of the drum. The three hoppers hold a total of 40 bu. of seed and let me plant 35 acres per fill. It takes about six hours to empty the planter once I load up."

The planter weighs 10,000 lbs. when filled with seed. Calmer mounted a length of 1/2-in. thick flat steel under the tongue (removed from one of the IH 400 planters) to absorb some of the weight and also beefed up the hitch. A support chain leading from the hitch to the tractor 3-pt. also helps absorb the weight.

The three blowers are pto-driven. An 8-ft. long pto shaft direct-drives the center blower and belt-drives the other two blowers. "A single hydraulic pump wouldn't have enough capacity to operate all three blowers," says Calmer. "We decided not to use hydraulic drive because we would have needed two pumps and also it would have been more difficult to slow down the air speed."

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draws only nine amps which is the equivalent of only two Halogen light bulbs.

"Other systems are powered by the combine's reel hydraulic system. However, reel operation may be affected because the automatic reel speed adjustment on some combines is geared to combine speed. When you slow the combine down, the reel speed slows down proportionately. Under these conditions, some combines may not have enough hydraulic capacity to operate both

the reel and the fan. Another big advantage of our system is that it blows dust right out the back of the vacuum rather than blowing it through a hose to the back of the combine which reduces fan capacity."

Sells for \$968.

For more information, contact: FARM SHOW Followup, KRP Enterprises, 667 Prentice St., Granite Falls, Minn. 56241 (ph 612 564-2299 or toll-free 1 800 279-3461).