Photo courtesy Colorado State University

Colorado rancher Carl Trick, Jr., built this pressure chamber to treat his cattle for "high altitude" disease.

HYPERBARIC TREATMENT FOR CATTLE HAS 70% SUCCESS RATE

Pressure Chamber Cures "High Altitude" Disease

If you raise cattle in a high elevation area, you may have had "brisket" or "high altitude" disease in your animals. Ranchers and researchers in Colorado have found that up to 70% of afflicted cattle can be saved by putting them in a structure called the "hyperbaric" or pressure chamber.

Brisket disease is characterized by accumulation of fluids and swelling in the brisket area. The disease occurs when cattle with high blood pressure are subjected to high-elevation stresses such as low atmospheric pressure, low oxygen availability and cold.

The problem usually peaks in early fall when the weather changes. The extra stress leads to heart and liver problems and, if not treated, death.

Common treatment is to ship afflicted cattle to lower elevations, but the survival rate generally is only about 50% and caretakers for sick animals commonly take half the market price for the animals they do save. Animals successfully treated in a hyperbaric chamber, on the other hand, can be sold at full market price by the owner.

A hyperbaric chamber artificially raises air pressure to that at sea level. More oxygen is available at this pressure.

Two chambers are available for public use at the Mountain Meadow Research Center in Gunnison, Colo., according to superintendent Dr. Eugene Seimer. The Center's steel chambers are 7 ft. in dia. and 14 ft. long. A 5 hp. rotary blower pushes 100 cfm of air into the chamber. The pressure reaches 14.7 psi, as opposed to 11.0 psi outdoors at 8,000 ft.

"We treated 168 animals in 1979 with a 72% success rate," Dr. Seimer told FARM SHOW. "Animals that survived averaged about two weeks in the chamber."

In treatment, an animal is pressurized 23 hours per day. It is released for about an hour each day to get feed and water. After treatment, the animal can be marketed. Treatment costs $2 per day.

Carl Trick, Jr., of Cowdrey, Colo. built his own hyperbaric chamber from a salvaged steel water tank. The tank is 12 ft. deep and 10 ft. in dia. It's laid on its side and has a door cut in one end for cattle to enter. Trick paid $1,300 for a high volume, low pressure pump and motor, and $200 for the tank.

"It paid for itself with the first three or four calves," notes Trick. He estimates a 95% survival rate for animals he treats in time. "Even so, it's strictly a salvage operation. Without treatment, the animals die or, if they do live, they have no market value. Treated, they can be sold at normal market price."

Trick also lets neighbors treat cattle in his chamber for $50 per head. He says not every rancher would need one, but several ranchers could get together and build one.

For more details, contact:

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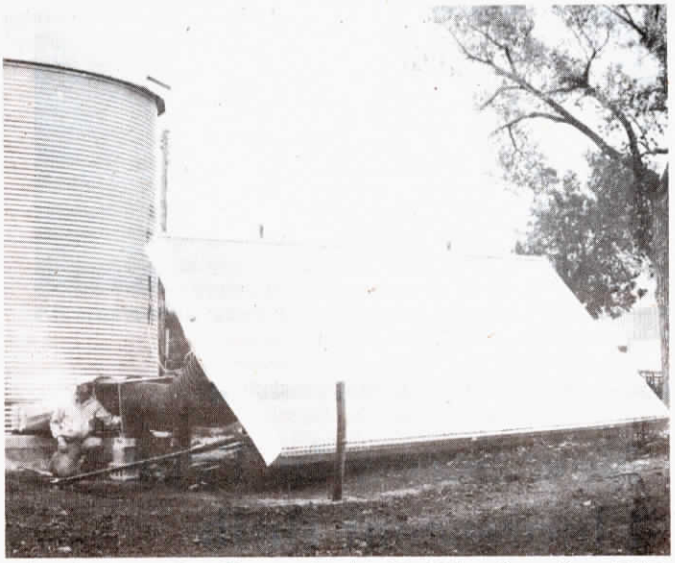
FARM SHOW Followup, Carl Trick, Jr., Box 53, Cowdrey, Colo. 80434 (ph 303 723-4925).



Nebraska farmer Gary Young solar dried 3,700 bu. of corn from 22% to 16% moisture at rate of 400 bu. per day.

VERSATILE SOLAR COLLECTOR IS PORTABLE, EASY TO BUILD

Build Yourself A Solar Collector

Here's a versatile, portable solar collector you can build yourself for drying grain, and for heating your home or livestock barns. Designed to be a "multi-use" system, it has it's own wheels for "go anywhere" portability.

The collector is built on a frame of 2 by 4's and measures 2 by 10 by 24 ft. Aluminum sheets painted black absorb the sun's rays. A clear fiberglass coating over the painted aluminum lets 90% of the rays through, yet prevents the heat from radiating back out.

Fiberglass insulation, 3½ in. thick, prevents heat from escaping out the back. Heated air is pulled out of the collector with a fan in the building to be heated or with standard dryer fans when drying corn.

"Anybody can build it," says Gary Young, a McLean, Neb. dairy farmer who built one over the winter of 1978. He estimates he spent about $1,300 to build his collector, not including some salvaged lumber, and a junked wagon running gear he used to make it portable.

The collector can produce up to 150,000 btu's per hour, according to Young. He notes that the temperature from the collector averaged 105°F last winter while heating his house. He was moving 550 cfm of air through the collector at the time. He recorded a high temperature of 189°F in direct summer sunlight once. Since temperatures that high may deteriorate some components, he stores the collector in a shed in the summer.

Young dried his entire corn crop with the solar collector last fall. He had about 3,700 bu. averaging 22% moisture which he dried to 16% at a rate of about 400 bu. per day.

Same solar collector helped cut Young's home heating bill in half last winter.

Last winter, Young figures he saved about 50% on his propane bills by heating his home with the solar collector. "Of course, last year we had a mild winter," Young explains, "but even in a normal winter, I think we could average a 40% savings."

In 1979-80, his savings amounted to 255 fewer gals. of propane for a total of $105, even though the collector was used only 4 months of the winter.

Young purchased plans for his home-built collector from the Small Farm Energy Project in Hartington, Neb. for $2.

For more information, contact: FARM SHOW Followup, Small Farm Energy Project, P.O. Box 736, Hartington, Neb. 68739 (ph 402 254-6893).