

The antifreeze mixture transfers from the barn to the house through 1 in. underground pipes.

“DAIRY-AIRE” CAPTURES BODY HEAT GIVEN OFF BY COWS

They're Using “Cow Power” To Heat Homes

Del Lussenden, a Surge dairy equipment dealer in Owen, Wis., has come up with a new “cow power” system that captures body heat given off by dairy cows to heat farm homes and other buildings. In the summer, the system reverses itself to act as an air conditioner.

“One cow gives off 4,400 btu's per hour. Our Dairy-Aire system recovers 2,500 btu's. A 60-cow herd will easily heat and cool the average 1,500 to 2,000 sq. ft. home,” Lussenden told FARM SHOW, noting that the system can also be installed in high capacity hog, poultry and other confinement buildings.

The Dairy-Aire system also serves as the exhaust system for the barn, using a large filter that scrubs the inside air clean.

“Another company developed a similar system several years ago. We feel that our system is superior because it uses just one compressor instead of two, and uses water and antifreeze to transfer heat to the house rather than freon, which is much more expensive. Our system is cheaper initially and is much cheaper to run once installed,” says Lussenden. “Instead of spending money on exhaust fans to exhaust heat outside the building, you're recovering heat for another use. The system also provides a cleaner environment by constantly filtering the air and removing excess moisture.”

From inside the barn, all you'll see of the Dairy-Aire system is the large filter hanging on the wall. Air is pulled through the filter and through the wall to a large unit mounted on the wall outside the building. Heat from the cows is pulled through the unit and a heat pump compressor either heats or cools the anti-freeze mixture that runs underground through pipes to the house or other farm buildings. Inside the house, a heat exchanger is installed in the existing furnace to maintain the heating or air conditioning comfort

level as determined by the thermostat setting.

The system is sized to the house and is designed to put out about 128° of heat, compared to the normal gas furnace output of 120 to 140°. A water pump moves the antifreeze through 1-in. pipe to the home which can be located up to 600 ft. away. In addition to the 1-in. pipe, six control wires run from the house to the barn.

“It draws only 28 amps while operating. Even during a hot summer like the one just past, it cost only about \$2 a day to cool an average size home,” says Lussenden.

The Dairy-Aire system sells for \$8,000.

For more information, contact: FARM SHOW Followup, Lussenden Industries, Inc., 901 E. Orchard Ave., P.O. Box 413, Mundelein, Ill. 60060 (ph 312 949-6403).



“A 60 cow herd will easily heat and cool the average 1,500 to 2,000 sq. ft. home,” says Lussenden.

RAKES YOUR LAWN THREE TIMES FASTER

“Backward” Rake Rides On Wheels

A real eye catcher at a recent farm show was the “Ken-Rake”, a “backwards” rake on wheels that you push — rather than pull — through the lawn, clearing a 5 ft. swath.

The innovative rake was designed by Phil Lambert, Zimmerman, Minn., and is being marketed by K & K Sales Inc., of Tracy, Minn.

“The main advantage of the Ken-Rake is that you don't get tired of raking leaves,” says the inventor. “You're doing all the work with your legs, instead of your arms, which allows you to rake three times faster than with a conventional broom rake.”

Ken-Rakes are available in two and three “rake wide” models. The three-rake model features three plastic rake heads mounted on a frame that lets you cover a 5 ft. wide swath.

The key feature of the Ken-Rake is the spring loaded arm that extends from the handle down to the base of the unit. As you push the rake, the arm moves forward, pushing the teeth against the grass. When you pull the handle back, the rake teeth spring back.

The rake has a 22 in. wide lawnmower-type handle and folds flat for storage.



The Ken-Rake lets you rake a 5 ft. swath, pushing the rake, so there's less strain on your arms and legs.

The “three rake” Ken-Rake sells for \$59.95, and the “two rake” model sells for \$56.95, plus shipping.

For more information, contact: FARM SHOW Followup, K & K Sales, Inc., Box 156, Tracy, Minn. 56175 (ph 507 629-3405).

HOLDS CROOKED TREES STRAIGHT

Christmas Tree Holder Keeps Tree Watered

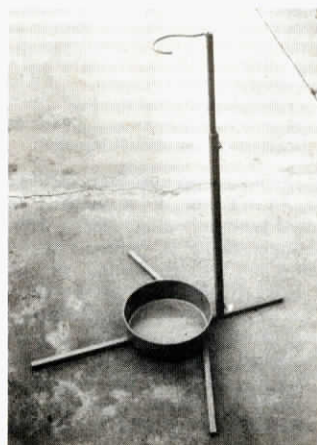
“It keeps live trees fresh and fragrant throughout the entire holiday season,” says C.H. Reisner, inventor-manufacturer of a new-style Christmas tree holder.

The holder's base is a 10 in. dia. pan which keeps the tree watered. An adjustable vertical pipe, with a hook at the top, holds the tree upright. The holder can be adjusted so the hook supports the tree, regardless of height, at mid-section. The base of the tree is free-standing inside the pan, requiring no bracing, adjustable screws and so forth to keep it standing straight.

“If the tree is crooked and doesn't stand quite straight, just move the butt of the tree inside the pan to align it,” explains Reisner. “The wide base eliminates tipping and you don't have to remove lower branches, as is often the case with conventional tree stands.”

He notes that the holder can also be used, without water, as a holder for artificial trees.

Sells for \$23.55, including shipping and handling.



The new-style tree holder leaves the base of the tree free standing, in water-filled pan.

For more information, contact: FARM SHOW Followup, C. H. Reisner Co., P.O. Box 1472, Bakersfield, Calif. 93302 (ph 805 399-4447 or 213 622-1423).