

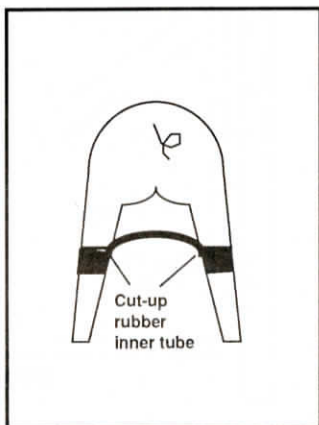
## Simple Leg Saver For Pigs

You'll like this simple method for saving spraddle-legged pigs that was dreamed up by Virgil Davis of Humboldt, Iowa, and reported on in *Iowa Farmer Today*.

Davis got the idea while observing injured pigs who couldn't get their legs together underneath them to walk. He started looking for a flexible way to hold the legs closer together and hit on the idea of cutting up pieces of bicycle inner tube after first experimenting with string, tape and other materials.

For small pigs, a length of about 3 1/2 in. works best. He cuts out a piece in the middle so two small rings slip up the legs and a short strap holds them together. He pushes the rubber rings up above the hocks.

A narrow bicycle inner tube costs about \$1.50 and will make about 25 leg savers.



## Brake Troubles Eliminated By Using Clutch-Type Lining

Missouri farmer Lonnie Wallace, says he's found a "cure" for problems with dry type disc brakes used on many tractors and combines.

"The brake lining used on many original equipment brakes is too hard and won't hold. It tends to glaze over. I hire a local clutch rebuilder at Springfield, Mo., to re-line the brake disc with clutch lining instead of brake lining. It works better because it's softer and won't glaze over nearly as bad.

"Once installed, the brake pedal free-travel needs to be set looser for a while till the linings get broken in. If you set the free-

travel too tight, the brakes could get hot. After 25 to 30 hrs. of use, you can tighten the brake setting up.

"I've used this method to reline brakes on IH 300, 400 and 560 tractors; Case 930 and 1030 tractors; Allis Chalmers D19, 190 and 200 tractors; Deere 45, 55, 95, 4400 and 6600 combines. You can use clutch lining on any machine that doesn't use band or shoe-type brakes."

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## He Uses Buried Pipe To Heat And Cool His Shop

John Ricke, Williams, Iowa, uses water flowing through pipe buried under his shop floor to heat the shop in winter and cool it in summer.

"It keeps the shop floor warm in winter and works like an air conditioner in summer," says Ricke, who installed the underground heating and cooling system five years ago. No outside energy source is required since water is heated and cooled by the earth.

Ricke laid 3/4-in. thick tongue-and-groove insulation board on top of the old shop floor, then laid 1-in. pipe in rows 18 in. apart on top of the insulation board. He covered the pipe with 4 in. of sand, then poured a new concrete floor over the sand. He used a tiling rig to dig a 2,000 ft. long trench - 6 1/2 ft. deep - in a big loop and laid 1-in. pipe in the bottom of that trench that connects up with the pipe laid in the shop. Water is pumped from a 50-gal. tank at one end of the shop and through the pipe outside the building, then back through the loop under the floor.

The pipe in the floor is divided into four cooling and heating zones - a workbench zone along the south wall, equipment repair zone in the center, parts storage zone along the north wall, and under a 3-ft. wide hallway between the shop and an adjacent machine shed. Four off-on valves mounted under the tank, one for each zone, allow Ricke to regulate the amount of water that flows to any zone.

"The constant underground temperature heats the water up to about 50 degrees in

winter and cools it to about 50 degrees in summer," says Ricke. "The insulation board forces heat from the water in the pipes to come up and keeps the cold from coming up off the old floor. In winter we use a wall-mounted propane heater to heat the shop up to 70 degrees, then we shut it off and use an infrared heater mounted on the ceiling to keep it at that temperature. We keep the pump on all day long. It takes 24 hours to heat up the concrete. It really radiates the heat - our feet never get cold. However, by itself the buried pipe won't keep the shop warm enough in winter to work comfortably. We mix methanol with the water in order to keep it from freezing during winter."

When Ricke laid the new floor he left a gap between it and the walls where he inserted insulation board to keep the walls from conducting cold into the floor. He ran the pipe under the overhead door in order to keep that area free of ice and snow.

The old shop had a leaky roof. To solve the problem and to help keep heat inside the shop, he sprayed a 3/4 in. layer of polyurethane over the roof and outside walls, then painted the polyurethane to match the color of the adjacent machine shed. He also sprayed polyurethane on the inside walls. "The polyurethane seals the building and has the same insulation value as 4 or 5 in. of conventional insulation," says Ricke.

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Photo courtesy The Stockman Grass Farmer

## "Mighty Suck" Portable Calf Feeder

An innovative Wisconsin dairyman who's gradually switching over to seasonal dairying New Zealand-style, says he had to go all the way to New Zealand to find rubber nipples he could use to make effective calf feeders.

Paul McCarville, who farms near Mineral Point, says that after being disappointed with American-made rubber teats, he sent off to New Zealand for their durable hard rubber nipples which require the calf to suck much harder to get nourishment. The "mighty suck" nipples, as some farmers call them, cause heavy saliva flow which McCarville says helps prevent scours. He's so pleased with the way the nipples work, he's become distributor for the U.S. and Canada.

McCarville starts calves in the barn on bottle-fed colostrum for two days and then shifts to 5-gal. plastic pails with nine rubber teats inserted. They hang from rafters about 20 in. off the ground. He also hangs plastic 55-gal. drums (cut in half) from the ceiling, inserting 19 rubber teats around the bottom.

On all his homemade nipple feeders, plastic 7/16-in. dia. hoses run from the nipples down to the bottom of the feeders which requires calves to suck hard to draw milk up from the bottom.

As McCarville shifts his dairy herd to seasonal spring calving, he's started to rear all calves on pasture. He's built two portable calf feeders for use on pasture using 35-gal. plastic drums fitted with 19 New Zealand rubber teats (and plastic hoses to the bottom). He feeds whole milk in the feeders, which can be pulled around with his ATV.

McCarville says it takes calves 2 to 3 weeks to accept the rolling feeder as "momma" and stop sucking on each other. He credits the fresh grass, sunlight and open air with a major decrease in death loss. In addition, his calves almost never get scours anymore.

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## Two Cows Better Than One?

Wisconsin county agent John Cockrell says it's more profitable to milk two cows making 11,000 lbs. of milk each than it is to milk one cow at 22,000 lbs.

According to a recent report by Joel McNair in *Agri-View*, Cockrell's controversial ideas have caused a lot of head-scratching among the state's dairy farmers. Cockrell, however, says that while the statement may not be true for every situation, in many cases lower producing herds can indeed be more profitable than high-producing "superstars". Here's an example of how his thinking works:

A typical 22,000-lb. per year producer milks 50 cows year-round, growing alfalfa and corn, harvesting the crops, storing them, feeding them and handling manure in a confinement system.

The 11,000-lb. producer has 100 cows producing milk seasonally and almost solely on pasture. These cows calve each spring and lactate mainly during the grass-growing months. The cows graze all of their milk-season forage needs. Concentrates are purchased.

Milk prices are \$12 per hundredweight for the 22,000-lb. herd and \$11.50 for the grazing system (the seasonal herd producing most of its milk at the time of the year when milk prices are lowest). But two cows in the low-producing herd nevertheless produce more income than one cow in the high-producing herd: \$3,110 versus \$2,930. The reason: Cull cow and calf sales for the 100-cow herd are double those for the 50-cow herd. When these sales are added in,

the grazing herd has \$14.14 gross income per hundredweight and the confinement herd \$13.32 per hundredweight.

Expenses are more complicated to figure but here's one scenario that could be used: Vet costs, milking supplies, testing, breeding and utilities are all figured the same for both grazing and confinement herds, although a strong case could be made that such costs would be much lower for the grazing herd.

Feed is the big difference. The low-producing cow eats just 25 bu. of corn compared to 115 bu. for the 22,000 lb. confined cow. Feed supplements for the grazing herd were at \$150 per cow while the confinement herd was at \$400 (This figure is also conservative. Does an 11,000-lb. cow need even one pound of additional protein?).

Grazing cows harvest forage at anywhere from \$25 to \$35 per ton while confinement cows are fed \$70 per ton forage (it must be fertilized, cut, windrowed, chopped, hauled and stored). Another difference is the handling of manure, which is estimated at \$20 per cow for the grazing cow versus \$100 for the confined cow. The final cost difference is the increased interest cost to own a high-producing cow - which is valued higher - as compared to a low producer.

Per-cow total expenses are \$808 for the 11,000-lb. herd, \$1,690 for 22,000-lb. herd. So, two of the low-producing cows bring in a net income of \$1,495 while one of the high producers brings in \$1,240. (Excerpted from *Agri-View*, Marshfield, Wis.)