

Upper wire is electrified while lower one is insulated. Cattle graze up against the wire and nudge it with their necks, moving the sleds backward into new territory.

FENCE "WALKS" ITSELF ACROSS PASTURES

New Grazing System Lets Cattle Move Fence

It's a rancher's dream: A fence that cattle can take care of themselves.

Invented by an Argentine cattleman and in testing by USDA researchers in Oklahoma, the new "frontal grazing system" is a fence that cattle can move on their own. It consists of two strands of wire strung across moveable sleds. The upper wire is electrified while the lower one is insulated. Cattle graze up against the wire and as they clean up the available forage, nudge the wire with their necks moving the sleds backward into new territory.

The new fence system is designed to set up on long, rectangular fields that are fairly flat with no low areas. The long sides and back of each field is fenced with electrified wire while the front end is closed in with the moveable fence. Spring-loaded pulleys connect the wires on the sleds with the electrified side fence wires.

Cattle start at one end of the pasture and as they advance the sleds forward to fresh pasture, the back fence can be moved up behind to prevent backtracking.

Jerry Volesky, a range animal scientist with the USDA's Agricultural Research Service near El Reno, Okla., has tested the new grazing system for the past two seasons. It was originally developed in Argentina by Fernando Pereda, who's selling the patented components of the system in Argentina and hopes to begin selling the system in the U.S. Volesky has been testing the system with the assistance of Pereda's nephew Fabian Achaval, who's at Texas A&M University in graduate studies.

Last year they put 100 crossbred steers in each of two Caucasian bluestem pastures measuring about 109 yards wide and 820 yards long. At any given time, each herd had approximately 2 acres of grazing space. It took them about 30 days to reach the end of the pastures.

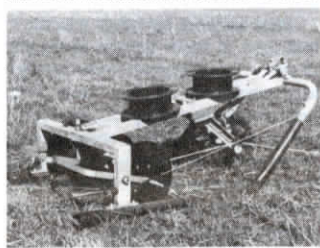
"If the cattle push the sleds ahead too quickly, you can adjust the height of the front electrified wire to increase the chances of them getting a shock when they're pushing," Volesky explains. "Also, there's enough work involved to move the sleds just a foot or two that they'll graze forage in front of them before going after more."

The system's main components are:

- The push cable and electric wire.
- A pace governor, or tension regulator located in the center of the frontal fence. It has a scissor mechanism attached to the electric wires coming from both sides. When cattle push on the wire, the tension opens the scissor mechanism, allowing a cogged wheel beneath the sled to roll forward. As soon as



Spring-loaded pulleys connect wires on the sleds with electrified side fence wires.



Pace governor at center of fence has a scissor mechanism that opens, allowing cogged wheel to roll forward.

tension eases, the scissor mechanism closes.

- Sleds between the pace governor and the side fence. They simply slide along the ground.
- Two sets of pulleys that travel along the lateral wires and form the union between those wires and the frontal fence.

Volesky says the frontal grazing system cuts grass losses from trampling and defecation, and also allows higher stocking rates. "We had about 5 1/2 head per acre compared with about 4 1/2 head per acre on conventional grazing," he notes.

Cattle catch on quick to the system although Volesky says they usually have to bounce the wire and advance it several times during the first day or two to give them the idea. One added advantage of the system is that cattle are easy to check because they usually graze right along the fence area. Frontal grazing works best when used with high stocking rates. For a 100 yard grazing line, you need 90 to 100 head of cattle. And Volesky says the method appears to be best-suited for cattle that need high-quality forage, such as stockers or dairy cows.

Several systems have already been sold on a trial basis in Argentina. Cost of equipment needed for a 100 by 820-yard pasture is about \$3,000 but Archaval expects the price of the equipment should come down once it goes into commercial production.

Contact: FARM SHOW Followup, Dr. Jerry D. Volesky, USDA Forage & Livestock Research Laboratory, P.O. Box 1199, El Reno, Okla. 73036 (ph 405 262-5291).



Little Duster stores oil in 15-gal. tank mounted on side of combine (see arrow).

SPRAYS SOYBEAN OIL ON GRAIN

"Dust Suppressor" For Combines, Grain Augers

New from KRP Enterprises is an oil "dust suppressor" for combines that sprays a small amount of soybean oil on grain inside the unloading auger to reduce dust.

The Little Duster I stores soybean oil in a 15-gal. tank mounted on the side of the combine. A small hole is drilled into the discharge auger and the nozzle is seated into the hole. A 12-volt pump circulates oil to the nozzle and onto the grain. The pump is activated by a switch inside the cab, and a pressure gauge lets you control application rate. The system works equally well on corn, soybeans, and small grains.

"A thin film of oil is deposited on the inside of the auger. This reduces the friction that causes kernel breakage and dust so there's less dust," says Kelly Pauling, part owner. "What dust is created sticks to the grain. We use a small amount of oil - only about two teaspoons per bu. The most important benefit is to your health. It's well known that constant exposure to dust can lead to diseases such as emphysema and farmer's lung. But there are economic benefits too. Moving 1,000 bu. of grain you normally lose an average of 1.4 bu. through dust loss and damage. With oil you lose only an average of .2 bu. so you save 1.2 bu. for every 1,000 bu. each time it's handled. You're saving dust that's normally lost so you get more grain volume to the elevator.

"The application rate is 1 to 1 1/2 gallon of soybean oil for every 1,000 bu. of grain so one 15-gal. tank treats 12,000 to 14,000 bu. Soybean oil currently sells for about \$3 per

gallon so it costs \$3 to \$4.50 per 1,000 bu. depending on the application rate. With soybeans at \$6 per bu., the extra grain saved covers the cost of treatment with money to spare. Cleaner grain also saves wear and tear on your equipment. Your dryer runs cleaner with increased air flow so you can dry grain faster with less energy. Dust-free grain is also easier to auger."

Units are custom fit and painted to match any combine model and retail for \$2,595.

A second model, called the Little Duster II, is designed for hog operations and portable augers. "It heats up the oil to keep it from jelling in cold temperatures," says Pauling. "It provides cleaner air in hog confinement buildings and improves feed value. Animal growth, feed efficiency, and average daily gain are improved because of the added energy that soybean oil provides and because less feed is lost as dust. It works better than fat because it's more digestible and does a better job of controlling dust. It takes 50 lbs. of fat per ton of feed to get 40 to 50% dust control. It takes only 20 lbs. of soybean oil per ton to get 80% or better dust control. To apply fat you often have to crawl up onto the feed bin and pour it in, but the Little Duster II bolts right onto your auger or grinder-mixer. At a 1% application level, treatment may cost as little as \$5 per ton."

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

TRIM TALL BRANCHES WITHOUT A LADDER

Chain Saw Tree Trimmer

You can trim tree branches up to 10 ft. high while standing on the ground, thanks to the new K & N Pruner.

It uses a model 18 Poulan chain saw mounted on the end of a long twin-tube aluminum extension. A small roller chain inside the tubing powers the 16-lb. saw.

Sells for \$575, including the saw.

Contact: FARM SHOW Followup, K & N Pruner, Rt. 3, Box 153, Kingman, Kan. 67068 (ph 1 800 872-5384, or 316 532-3487).



New chain saw trimmer lets you trim tree branches up to 10 ft. high while standing on the ground.