



Chopper mounts in place of hay pickup and is belt-driven at 1,400 rpm's off the main baler drive.

IT FEEDS CHEWED-UP STALKS DIRECTLY INTO BALER

First-Of-Its-Kind Baler-Mounted Stalk Chopper

"There's never been anything like it on the market. Interest has been tremendous from local farmers and our four prototype units have worked perfectly," says Deere & Co. dealer Loras Gravel, Dyersville, Iowa, about the first-of-its-kind baler-mounted stalk chopper he and Michael Trenkamp, also of Dyersville, invented and now manufacture.

"When we got involved in the local Deere dealership several years ago, one of the first things we noticed was that when people baled comstalks it took a long time because they had to make three trips over the field - to chop, rake and bale - and they almost always broke a lot of pickup teeth and stripper plates. We decided to try to improve the process and built our first prototype baler-mounted chopper a year ago," says Gravel. "The first prototype didn't work the way we wanted it to but we could see that the basic idea was good. We redesigned the unit and then built four prototypes and gave three of them to farmers. They worked great."

The farmers made from 250 to more than 2,000 bales with the units. "Except for minor changes, our first production units will be nearly identical to the prototypes. We think we have a strong, dependable design that's simple and easy to service. It's got a heavy-duty shaft, 3 bearings, and reversible flail chopper knives," says Gravel.

The chopper is chain-driven off the main baler drive. The chain drives a sprocket attached to a belt pulley that drives a smaller belt pulley, which gears the shaft up to operating speed of 1,400 rpm's. To install, the baler hold-down tines are removed and three brackets must be welded to the baler. The only operating adjustment that must be made on the baler is to reduce the density setting.

"The bales are heavy and very dense. Farmers were impressed with the quality of the bedding - the chopper chops stalks in 6 to 8-in. lengths - and they liked the fact that the bales are neat and easy to handle compared to stalks gathered in 'stack makers' they'd used in the past. Our chopped stalks

make excellent bedding and good feed for dry and stock cows. One farmer injected the bales with molasses before feeding them," says Gravel.

The chopper unit can be easily removed to convert the baler back to baling hay. Gravel says one sign of how well the chopper works is that all three farmers who were given prototype units to test have purchased the add-on chopper units. "One farmer has already pre-sold 1,500 bales for next year to neighbors who tried his stalk bales this year."

At this time the chopper fits Deere's 530 round baler but the company plans to fit other makes and models in the near future. The chopper is the width of the bale chamber, wide enough to chop two rows of comstalks at a time. Gravel says the chopper works best on standing stalks since it works down to within 2 in. of the ground. Farmers who've used the unit chopped the rows of stalks left standing by the combine and skipped the rows that were flattened. He says many farmers want to be able to pick up down stalks, however, so the company is experimenting with different shaped flails that would create more vacuum, sucking stalks up into the machine.

The add-on chopper sells for \$3,500 FOB Dyersville, Iowa. The company is looking for dealers.

For more information, contact: FARM SHOW Followup, T.A.G. Enterprises, Box 8, Hwy 136 North, Dyersville, Iowa 52040 (ph 319 875-2724 or 319 875-8553).

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A 1/4-in. thick layer of "balebuter" is applied to top of bale in place of plastic covers.

EDIBLE SOYBEAN OIL-BASED MIXTURE COVERS TOP THIRD OF BALE

Spray-On Bale Cover Also Boosts Feed Value

"It protects round bales as well as plastic and improves their feed value at the same time. Cows lick it right up," says Dale Halford, Bingham, Ill., about his new edible mixture of soybean oil and feed ingredients that he calls "balebuter". The protective coating is sprayed evenly in a 1/4-in. thick layer over the top of bales.

"The soybean oil in the mixture repels rain and also keeps the balebuter from washing away," says Halford. "Balebuter is easier to handle than plastic and can't blow away in the wind or tear. It boosts the nutritional value of bales and provides a new use for agricultural products."

Halford, a former farmer and feed salesman, began developing "balebuter" four years ago and has been working with researchers at Southern Illinois University-Carbondale (SIU) for the past two years. He has applied for a patent on the product and will test market it this summer, on a custom application basis, in Illinois. Balebuter costs \$4 to \$5 per bale to apply, compared to about \$3.50 per bale for plastic. However, Halford says there's about \$2 worth of feed ingredients added to each bale, according to tests by SIU researchers. "The oil adds energy and the feed ingredients add minerals, including calcium and phosphorus. We think balebuter will work terrific on low quality, low energy corn stalks and grass hay. Also, balebuter lasts a long time. I applied some two years ago and it still looks

almost as good as new."

Balebuter probably can't be used to completely seal high-moisture hay bales in order to make silage bales, says Halford. "Balebuter is so heavy that if it completely covered the bale, it would probably fall off the ends or bottoms of bales. However, it should work great to cover silage pits. "We're testing an applicator with a slotted pipe that applies balebuter in 10-ft. wide swaths."

During application, balebuter has the consistency of tooth paste, but after a week it hardens to the consistency of playdough. It hardens further in cold weather but still retains its pliability. Cows chew or lick it right off the bales or it can be mixed into the bale by running it and the bale through a grinder-mixer."

Halford and SIU are still working on the most effective way to apply balebuter. "It takes lots of pressure to drive balebuter into the outer layer of the bale. We've used a spray gun used to spray ceilings with plaster, but this method uses as much as 50 lbs. of balebuter per bale. We're experimenting with other spraying devices for semi-solid material. We hope that with the proper application equipment, we'll be able to apply only 42 to 45 lbs. per bale."

For more information, contact: FARM SHOW Followup, Dale Halford, Box 30, Bingham, Ill. 62011 (ph 618 423-9048).

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