

Frentress stacks his round bales 4-high on end and puts a reusable waterproof cap over the top bale.

## **COVERS TOP OF BALE WHEN STACKED ON END**

## Easy New Way To Protect Big Bales

It was extremely wet last year in the Northwest Colorado region where Kurt Frentress farms, but he wasn't worried about the hundreds of tons of good quality timothy hay he had in storage.

Frentress stacks his round bales 4-high on end and puts a water-proof cap over the top bale. "They do a good job of protecting from rain and snow since most damage occurs at the top of the stack and not on the sides." he notes.

"It's a lot easier covering a stack of bales with caps as compared to big tarps, and much more convenient when selling or using the bales because you can take away any number without disturbing the rest of the stack."

Bale caps consist of reusable waterproof covers shaped to fit over the end of a bale.

The sides of each cap have two slits so they're expandable to fit different size bales. Elastic bungee straps are sewn into the lower hem of each cover to secure them in place.

The material used in the caps is a long life U.V. protected fabric that Frentress arranged to have produced by a California company. He has applied for a patent on the design and plans to offer the bale caps for sale.

Frentress expects his bale caps to last at least 5 years. He figures the cost per ton to use the caps is about \$1.54 per year, which he figures he can easily recoup by receiving premium prices for his hay.

Contact: FARM SHOW Followup, Kurt Frentress, P.O. Box 282, Hayden, Colo. 81639 (ph 970 276-3602).



"When we're finished you won't notice a bit of difference in the appearance of your tractor. What you will notice is its greatly improved performance," says Mark Mertes of The Motor Works, an Iowa business that repowers some of the most popular Deere tractors ever built - 4000's, 4010's, and 4020's - with newer-style diesel engines.

In the past, installing newer Cummins, Perkins, even Deere diesels in these tractors invariably required stretching the frame 3 in. or more, hurting its looks and resale value.

What's unique about The Motor Works is that it found a quick, economical way to repower these tractors without modifying the frame or hood. The Sibley, Iowa, shop pioneered the technique two years ago and remains the only place in the U.S. that knows how to do it, according to Mertes.

He installs the larger 100 hp 466 cu. in. engines built for Deere 4440's in the shorter-framed 4000's, 4010's, and 4020's.

"We strip the engines down to the bare block," he says. "Then we bring all the components into the upper range of newer Deere specs. We rebuild the engines from the ground up, modifying the external engine parts, using all new Deere parts so they fit the other tractors. It took us a while to perfect the process but we can now repower a 2-WD in just one or two working days, a 4-WD in just three or four."

A recent job involved repowering a 1969



4020 used to stockpile corn at the elevator at Sanborn, Iowa. Its original 404 cu. in. 95 hp diesel engine had 7,000 hours on it. By last fall, it needed a minimum of \$4,000 worth of repairs and a week in the shop. The elevator decided to try The Motor Works way instead.

"We couldn't be happier. The tractor often runs 24 hours a day in the fall and we've seen up to a 15% improvement in fuel efficiency, more torque and easier cold starts," says shop foreman Don Brower. "It's a heavier duty, higher tech engine than the original and cost a total of \$6,000 with exchange of the original engine core. Downtime was only two days."

Besides diesels, The Motor Works repowers gas and LP Deeres as well. Cost averages \$6,500. Engines are backed by a two-year, 2,000-hour warranty.

Contact: FARM SHOW Followup, The Motor Works, Ahrendt & Clark Inc., Hwys 9 & 60, Sibley, Iowa 51249 (ph 712 754-3741 or 800 262-7720).



Falkowski ties old twine together end-to-end and winds it up on empty 2-ft. dia. wooden welding wire spools. Twine feeds into baler just like it would out of twine box.

## TWINE SAVED FROM OLD BALES GOES ONTO BALER-MOUNTED SPOOL

## He Saves Money By Recycling Bale Twine

By Bill Gergen, Associate Editor

Ed Falkowski makes 700 to 800 round bales a year, but he hasn't bought any new bale twine for the past four years, a savings of \$1,000 to \$1,200 per year.

The Yorkton, Sask., farmer simply recycles plastic twine from the bales he feeds to his cattle. He ties the strings together end-to-end and winds them up on empty 2-ft. dia. wooden welding wire spools. When baling, he mounts a spool on a bracket above the twine box on front of his Hesston 5800 round baler. Twine feeds into the baler just like it would out of the twine box.

"It's a simple idea but it really works good. I've used some twine for six years and it still looks like new," says Falkowski. "I have about eight spools which I get from my brother-in-law who works for a welding company. Each spool has enough capacity to hold the strings from 30 to 35 bales. The twine rolls off the spool nicely. During the haying season I use about three spools per day. I keep a spare ball in the baler's twine box in case I ever run out of full spools. The knots made by tying the strings

together go right on through the baler with no problem.

"I've used it only on my Hesston baler, but I think the same idea would work on other brands. My neighbor does the same thing by bolting an old car wheel and spindle onto a steel shaft that he bolts onto his baler frame.

"To remove twine in one piece from a bale I generally stand the bale up on end, grab the loose end of the twine, and walk around the bale while wrapping the twine up in a loop on my hand. After I've tied a number of strings together, I mount the spool on a jig that's equipped with a crank that makes it easy to roll up the twine. I use the thickest plastic twine on the market - no. 9000. I tried using thinner twine but it stretches out too much and won't last for more than a couple of years before it frays and breaks."

Falkowski used 1 by 2-in. steel tubing to make the spool mounting brackets.

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