

"WORKS EQUALLY WELL ON WET OR DRY BALES"

Maryland Farmer Built His Own Round Bale Wrapper

Most bale wrap machines have a rotating turntable and a stationary arm that unrolls plastic to wrap the bale as it turns. A Maryland farmer who didn't like that bale wrap design has built a new-style machine with a stationary turntable and a plastic-wrap arm that rotates around the bale.

"It'll outwrap any bale wrapper on the market because it solves the problem of bales falling off the rotating turntable, and because it can be used on both wet and dry bales, doing the work of two machines," says Randall Steyer, Oakland, Md.

Mounted on a two-wheel trailer, the machine picks the bale off the ground with a hydraulic fork and sets it on the turntable. A pair of belted rollers on the table turn the bale slowly, while the plastic-wrap arm rotates 360° around it. After the bale has been wrapped, a hydraulic cylinder tilts the table to one side to dump the bale off. To put a sleeve on a lower moisture bale that leaves the ends open, the plastic-wrap arm is positioned horizontally above the bale, then the arm swings forward and back along the length of the bale as it turns.

"I've used it to wrap over 2,000 bales with virtually no problems," says Steyer, who built the bale wrapper two years ago. "I've even used it to wrap bales for many of my neighbors who had trouble with bales falling off their bale wrap machines. The problem is that when bales get lopsided or oblong they can easily fall off the table as it rotates. Another problem is that with a very lopsided bale the belts often slip. The bale stops rolling but the turntable continues to rotate, causing layer after layer of plastic to cover the same place on the bale. I can stop the rotating arm independent of the rollers to avoid wasting plastic. I can also independently control speed of the rollers and rotating arm according to bale size.

"I built it for \$2,000. Commercial bale wrappers cost at least \$12,000."

Steyer used channel iron and steel sheeting to build the trailer frame which he mounted on a mobile home trailer axle. The 15-in. tires are off an old pickup. He used 6-in. dia. steel tubing to make the overhead support arm and 3-in. dia. steel tubing to make the side-mounted bale fork. Two small rubber wheels (taken from an ATV) and a rubber side bumper (from an old New Holland 404 hay conditioner), keep bales from falling off the table. The steel rollers on the table also come from the New Holland 404 hay conditioner.

Two hydraulic cylinders are used to lift the bale onto the table. Another cylinder is used to lift the table and dump the bale off. The rotating arm is chain-driven by a hydraulic motor. Another hydraulic motor is used to turn the rollers. Control levers mount behind the tractor seat. "I generally operate the control levers from the ground because I have to get off the tractor anyway to tie the plastic onto the bale and to cut it after the bale is wrapped," notes Steyer.

For more information, contact: FARM SHOW Followup, Randall Steyer, Rt. 3, Box 8075, Oakland, Md. 21550 (ph 301 334-2900).



Steyer's machine has stationary turntable and plastic-wrap arm that rotates around bale. Hydraulic fork sets bale on turntable.

TOTALLY AUTOMATIC, IT WRAPS BALES AS YOU CARRY THEM OFF THE FIELD

State-Of-The-Art Bale Wrap Machine

Bale wrap machines have been catching on fast over the past few years but there's always been one big drawback - they take a lot of time and labor to use.

Several years ago Wisconsin farmer-inventor Lloyd Krutza set out to solve the problem by designing a totally automatic 3-pt. bale wrap that lets the operator remain seated on the tractor during the wrap cycle. In fact, it'll wrap bales on-the-go while you transport them to the edge of the field or back to the farm.

"I conceived the machine myself, built the prototype, and have tested it for two years on my farm. I also did the patent search, application and drawings by myself with no outside help. So far I've had interest from two manufacturers but no commitments," says Krutza.

The bale wrapper has one large spear and two smaller ones. When the operator raises the bale up after spearing it, an electric switch is automatically triggered, starting the bale wrap process which takes 1 min. for a 5 by 5-ft. bale (it wraps the circumference of the bale for weather protection - it's not a silage bale wrapper).

The bale is rotated by a hydraulic motor controlled by a variable speed valve. Plastic is stretched 10 to 15 percent. After plastic is cut, the bale is rotated so the loose end is on the bottom of the bale to hold it in place when it's set back down.

"It's fast. I've wrapped as many as 23 randomly dropped bales in the field in an hour," says Krutza, noting that other bale wrappers require one person on the ground during wrapping to get the plastic started and to cut it off.

To build the machine, Krutza used a variety of miscellaneous components in-



Photo shows "smoother" that presses end of plastic against bale after it's cut.



When operator raises bale after spearing it, bale starts rotating and is automatically wrapped.

cluding windshield wiper motors, garage door track and rollers, can opener motors, and a variety of other salvaged components.

Contact: FARM SHOW Followup, Lloyd Krutza, 9692 Hwy K, Amherst, Wis. 54406 (ph 715 824-3264).