CUTS BALES "CLEAN AS A WHISTLE" FOR EASIER FEEDING IN CONFINED SPACES

Loader-Mounted Round Bale Saw

A prototype, hydraulic-powered round bale cutter mounted on a front-end loader makes it easier to cut up round bales and feed them to livestock in confined spaces, according to engineers at the University of Guelph, Guelph, Ontario. W. K. Bilanski originally developed the giant bale saw to open round bales for quality evaluation. It worked so well they decided to evaluate it as an aid for feeding bales. They built a frame that allows the cutter to be mounted on a front-end loader. It's powered by the tractor's hydraulic system.

"It cuts through bales clean as a whistle in 25 to 30 seconds," says Bilanski. "A single cut down the length of the bale opens it up into a stack of loose hay which can easily be fed with a fork. It's best to cut the bale lengthwise because only a slight downward force on the cutter is needed. Cutting it sideways takes up to twice as long and requires much more force. A bale handling device could be mounted behind the tractor which would allow the same tractor to move the bale into the feeding area and open it up. It could also be mounted on a gantry in a feedroom adjoining a tie stall barn. A tractor would place the bale in the feedroom, and the cutter would swing over the gate and split it open. It could be powered electrically with a self-contained hydraulic system."

The engineers used an industrial sickle bar design to cut paper to build the bale saw. They replaced the cutterbar on the unit with their own 7-ft. 3 in. long, 4 in. wide, 3/4 in. thick sicklebar. The cutting edge is a 1 in. wide bandsaw blade with 3 teeth per inch. The blade is clamped in a sheet metal holder and is connected to the pitman drive of the original cutter which provides a reciprocating motion with a knife stroke of 2 1/2 in.

"The cutter performs best at 1,070 cycles per minute," says Bilanski. "If adequate hydraulic flow and pressure were available, a higher rate of reciprocation would improve cutting efficiency. At slower speeds the knife tends to shake the bale rather than starting the cut."

Bilanski notes that the length of the tractor and blade may be too long for confined areas. "Replacing the pitman with a wobble drive would reduce the overall length." The cutter should be fitted with a shield when not in use, he adds.

For more information, contact: FARM SHOW Followup, W.K. Bilanski, University of Guelph, School of Engineering, Guelph, Ontario, Canada N1G 2W1 (ph 519 824-3923).

THEY'RE NOT "COVERS"

They Make Moldboard Plows Out Of Plastic

Showgoers at the recent National Farm Machinery Show in Louisville, Kent., got their first look at a revolutionary new product - plastic moldboard plow bottoms.

For several years a number of companies have been selling plow covers made out of the heavy duty new "slippery" plastics but, until now, no one has made an entire moldboard out of plastic. Ralph Bolinger of C.F.C. Distributors, the manufacturer, says the key to making a plastic plow bottom was coming up with a way to bend half-inch plastic, which he says was a "tricky job," and also the development of curved steel brackets to hold the plastic bottom in place.

"Our plastic moldboards will outperform and outlast anything else on the market, including steel plows with plastic covers," says Bolinger, noting that he never did believe in putting plastic covers on moldboards and he refused to sell them, even though he has been selling other plastic parts for years. "The problem with plastic covers is that in order to mount them you have to tack them in behind the plow sheath. That lowers the frog at least 1/8 in., putting it lower to the ground and causing it to wear sooner as the shears wear down."

C.F.C. is making their plastic bottoms out of 1/2 in. thick plastic to fit all popular models of plows. The moldboard kit also includes a plastic shank and the pair of carved rectangular mounting brackets that mount behind the plastic moldboards. A standard metal plow sheath is used with the plastic bottoms. No modification is required to existing plow. Plastic moldboards and shanks are available to fit all popular models.

The plastic shin sets for $18.50 and the plastic moldboard for $90. "That compares with a price of $75 for many plastic moldboard covers and $75 to $100 for standard moldboards," says Bolinger.

For more information, contact: FARM SHOW Followup, C.F.C. Distributors, Inc., Rt. 1, Box 181, Roann, Ind. 46974 (ph 800 548-6633).