

2-IN. HOLE THROUGH CENTER OF BALE "ELIMINATES MOLD, MILDEW"

Holemaker For Hay Bales

"It lets you bale hay 24 hrs. after you cut it," says F.B. Recker, Dyersville, Iowa, inventor and manufacturer of a new "holemaker" for square balers that simply bolts to the bale plunger to create a 2-in. dia. hole through the center of bales.

"One of my customers has already made more than 4,500 bales using a prototype. Once installed it's trouble-free. You never have to think about it," says Recker, who worked on the design for years before finally coming up with the dimensions that work.

The pointed tip of the 10-in. long hole-

maker widens out to 1 1/2-in. dia. and then bevels out sharply to 3 in. dia. for about the last 3 in. of its length. "I've tried many different designs. We tapered it from the point all the way back and tried making the base of the unit square, but they wouldn't make a hole that would last. Starting with a small dia. and moving out sharply to 3 in. is the key to making it work," says Recker, noting that the holemaker is hard-surfaced.

To demonstrate the hole made by the holemaker, Recker sticks a 1 1/2-in. dia. wood rod through the length of the bale and out the opposite end.

Home-Built "Holemaker"

About 10 years ago commercial hay grower Roy Canadas of Orland, Calif., decided to try to find a way to eliminate mold and mildew on his hay bales.

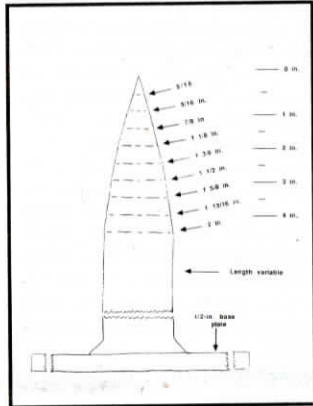
Canadas has problems with uneven drying on his hayland which contains both sandy and heavy clay soils, often in the same fields. Windrows on sandy soil dry faster than windrows on clay. If he waits till the windrows on clay are dry, he has heavy leaf loss in the windrows on sandy soil. He needed a new baling method that would let him bale the wet hay along with the dry and not worry about it spoiling later. That's when he got the idea of putting a hole down the center of bales. It took 10 years to perfect his "holemaker".

"It's a lot more difficult than it looks. You have to taper the point just right to make a hole that'll stay in the bales," Canadas explains.

His holemaker bolts directly to the plunger in the bale chamber. It's 11 in. long and tapers back gradually from a sharp point to 2 in. in dia. at the base of the spear. It makes a 7/8-in. dia. hole through the length of the bale. Canadas now bales hay at up to 28 percent moisture with no problems.

"The bales with hay don't get any mold at all. The hole lets moisture escape rather than getting trapped and heating up the bale. I get more for ventilated bales than for conventional bales because quality is higher," says Canadas.

University of California forage specialist Don Toenjes tested the holemaker last



summer. He baled one stack of bales with the holemaker and another without it, working in 30 percent moisture hay. He covered the stacks with tarps and let them stand for 30 days. At that time 42 of 45 "ventilated" bales were free from mold while only 7 of 45 bales without holes were free from mold. The ventilated bales also contained considerably less moisture. Toenjes concluded in his report that the holemaker offers considerable benefits to hay producers. He recommends baling at less than 26 percent moisture with the holemaker (hay can be baled at higher moisture contents in arid California than in the more humid Midwest).

Contact: FARM SHOW Followup, Roy Canadas, Rt. 2, Box 2226, Orland, Calif. 95963 (ph 916 865-2752).

Modified Swather Makes Tunnel Inside Windrow

"I've got more business than I can handle," says Bob Stewart, the Zillah, Wash., farmer-inventor who in 1987 showed FARM SHOW readers his modified swather that windrows hay with a tunnel down the center that cuts hay-drying time by 30 to 75 percent.

Since our original story, Stewart has quit farming and started modifying swathers full time. He modifies shields around the conditioner rollers at the back of the cutterhead. Hay comes off the rollers in a rounded, rain-shedding windrow that's got a 6-in. dia. tunnel at its center.

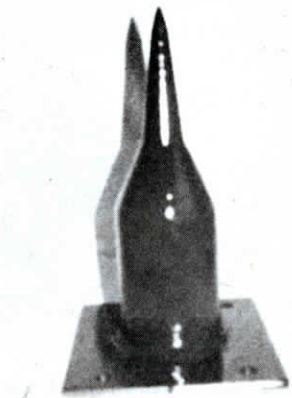
"I've had windrows rained on for 9 straight days in a row that were fine for baling with

no mold or mildew. It takes the worry out of rain," says Stewart, who says that since the original FARM SHOW story he's heard of farmers who started making tunnels behind swathers by simply dragging a piece of PVC pipe behind the machine and depositing the windrow on top of it. Stewart stresses that his modifications become a permanent part of the machine. In addition to the tunnel-making apparatus, he makes 9 other major alterations to the machine that he says "totally eliminates chunks and slugs" of hay caused by feeding problems. Other modifications include installation of extra bats in the reel, a reel slow-down kit, speed-up kits

Recker says the ventilated bales have almost no mold or mildew problems even at high moisture contents. His goal in developing the holemaker was to be able to bale hay the day after cutting.

The holemaker bolts directly to the face of the plunger. It requires no other modification to baler. Sells for \$149.50 and is available in two models. One has a ready-made mounting plate that simply bolts in place on Deere balers. The other model, designed for all other square balers, has a 4 by 4-in. mounting plate that you simply center on the plunger and drills holes to bolt in place. Recker is also working on a bigger model that would make a 5-in. sq. hole in bales.

Contact: FARM SHOW Followup, F.B. Recker Company, 802 1st. St. S.W., Dyersville, Iowa 52040 (ph 319 875-2131).



Holemaker bolts directly to bale plunger.



New machine makes 4 by 4 by 8-ft. bales using a new continuous compression process.

10-IN. DIA. HOLE RUNS LENGTH OF BALE Hollow Center Baler

A Colorado company has developed a new square baler that forms a 10-in. dia. hole down the center of big square bales.

Winco Manufacturing Company's Vern Meyer says the new baler lets farmers bale at higher moisture levels and then dry bales in storage. "It lets bales cure from the inside as well as the outside for uniform curing and also reduces hard spots and mildew."

The new machine makes 4 by 4-ft. bales in 1-ft. increments from 4 to 8 ft. long. "Our continuous flow compressing system forms layered flakes with less leaf loss than conventional plunger or roller balers. Bales are tied with an exclusive floating needle and tying system that maintains constant sensing of bale pressure throughout the baling process. It enables us to provide continuous flow baling," says Meyer.

Power requirements are as low as 60 hp.

"That's because we use simple drives with 70 percent fewer moving parts, resulting in lower maintenance costs," adds Meyer.

The baler is equipped with a 6 1/2-ft. wide pickup and either an air-controlled tying system or a new patent pending plastic clip banding system that eliminates the need for the expensive tying and knotting devices.

The company has built 5 prototypes that have been tested over the past several years. They're hoping to form a joint venture with an existing manufacturer to complete final testing and bring the baler on the market later this year. Meyer estimates production machines will sell for around \$25,000.

For more information, contact: FARM SHOW Followup, Winco Manufacturing, 6906 Rodney, Windsor, Colo. 80550 (ph 303 493-6469).

for the cutterbar and feeder auger, and installation of a double-bladed sickle bar.

"If you feed hay more smoothly into the machine, you get less slugs in the windrow. The more even the windrow, the faster it dries," notes Stewart. "It's unbelievable how much faster and easier this machine moves through even the heaviest hay crop."

Stewart charges about \$4,850 to modify any New Holland self-propelled machine. He also sound-proofs New Holland cabs. At this time he's not interested in working on machines from other manufacturers.

For more information, contact: FARM SHOW Followup, B & L Enterprise, 2422 Blaine Road, Zillah, Wash. 98953 (ph 509 829-5783).

"Hollow" Round Bales

Two Wisconsin researchers have discovered a method to make holes through the center of big round bales by wrapping hay around a length of 8-in. dia. PVC pipe inserted into a round bale chamber. They pull the pipe back out after the bale is formed, according to a recent report in Hay & Forage Grower magazine.

Richard Straub at the University of Wisconsin and Richard Koegle at the U.S. Dairy Forage Research Center use the hollow core method to bale hay at 30 to 35 percent moisture. Then they dry the bales down to 17 percent by forcing air down the hollow center and exhausting it out the sides. The bales are dried on pallets. End caps are placed over one end and air is forced into the open end. Drying takes 48 to 72 hrs.