

## Little Mixer Saves Big Bucks

Feeding wet distillers grain to cattle can save big bucks. But to do it right takes expensive equipment that is hard to justify for small herds. Three cattlemen in Indiana decided to tackle the problem and came up with a tub mixer that does the job.

"We couldn't justify a large mixer with our cow herds," says Max Meyer, Max-R-Mixer. "Plus with a big mixer, you are limited in where you can dump the feed. With ours, we can get into tight spaces and dump into 90 degree bunk configurations."

Cattlemen Meyer, Austin Carrothers and Bobby Haecker, along with a fourth friend, Mark Milam, a steel fabricator, developed the mixer. They designed it to be used on a standard size skid steer. The all-steel tub can handle a variety of feedstuffs, wet or dry, and unload into nearly any type of feeding system. The mounting design lets them tip it all the way over, stand it upright or anything in between.

"We put a cutting edge on the tub so we could tip it flat to the ground to scoop up the feed we want, drop in the mineral and mix," says Meyer. "In a couple of minutes, it's ready to go."

The tub has a capacity of 27 cu. ft., large enough to feed a herd of 30 to 40 head, says Meyer. A large diameter auger mounted at the center of the tub is hydraulically driven.

The shape of the tub, angling out from a 3-ft. dia. base with one flat side, ensures that the contents mix. If the sides were straight and the tub perfectly round, contents would sit as the auger turned.

Mixing speed varies according to engine speed, but mixing starts at about 30 rpm's. Entire batches can be dumped or unloaded slowly into a bunk as the situation warrants.

"We put a door on each side so it could be unloaded to the left or right," says Meyer. "A removable chute can be mounted to whichever side is being used. Just open the door, and start driving alongside the bunk. Starting and stopping the auger controls the unloading."

The first unit was shared by the three cattlemen and has run daily for a year. They have several more out on farms and will soon be selling the units. Meyer says the \$7,500 price can be quickly recovered when using product like wet distillers grains. In fact, all three cattlemen have increased their herd size as feeding efficiency and economy improved.

"I've done a brood cow ration of 95 percent straw and the rest wet distillers grains and saved almost 60 percent on my cattle ration," he says. "We've mixed silage and just about any type of forage there is with it. We've even used stover with wet and dried distillers grains."



Three Indiana cattlemen came up with this skid loader-mounted tub mixer to feed wet distillers grain.

Contact: FARM SHOW Followup, Max Meyer, 2784 West 500 North, North Manchester, Ind. 46962 (ph 260 774-3303; mcmeyer@omnicityusa.com; www.max-r-mixer.com).

Tub mixer can get into tight spaces and dump into nearly any type of feeding system.



## They Built Their Own Residue Buster

No-till farmer Marvin Burkhardt and his son, Kim, built their own residue buster for \$3,000 - about a tenth of what a new piece of equipment would have cost. It's not quite as good as a purchased one, they say, but for the price they can live with it.

The Burkhardts have no-till farmed in Leaf River, Ill., for 30 years and have no desire to farm any other way, but with BT corn they've noticed the stalks are tougher and don't break down as well.

"With corn on corn, there can be more disease and fungus problems if there's a lot of residue. It takes its toll on the next year's crop," Kim says.

They had looked at vertical tillage equipment, which helps break up residue. But with only 300 acres of corn, it didn't make sense for the Burkhardts to buy an expensive new tool.

"We had this 18-ft. disk sitting in the shed," Marvin says, and he and his son decided to revamp it.

The Burkhardts completely disassembled the disk, put in new bearings, straightened the gangs, and replaced the blades with 1-in. wave blades. They staggered the 48 gangs so the rows are 4 1/2 in. apart.

"Our biggest challenge was to come up with enough weight to get penetration," Kim says. They placed an old toolbox on the frame and filled it with 3,500 lbs. of tractor weights. The weight made it bow so they added 300-lb. semi brake drums on each wing. The drums are bolted to the frame and can be removed when the disk is folded up.

The Burkhardts tested the tillage buster for the first time last spring, and it penetrated the soil 2 in.

"We did see improvement breaking up the residue, but we can see some of the old rows behind our disk," Kim says.

His neighbor's Case IH vertical tillage tool chewed up more residue, left a nicer seedbed and pulled up root balls. The neighbor's corn was 10 bushels higher per acre and a 1-point



Photo courtesy No-Till Farmer magazine

No-till farmer Marvin Burkhardt and his son, Kim, couldn't justify the cost of an expensive new residue buster. So they built their own.

drier. However, the tillage tool created more compaction.

Overall, the Burkhardts were pleased with how their homemade residue buster helped decompose the stalks by fall last. This spring, they planned to add another technique - adding 2 lbs. of sugar per acre with a stalk digester - to help speed up decomposition.

They also planned to beef up weak areas of the disk where they noticed stress cracks due to the weights that were added to the machinery to make it penetrate in the soil.

Contact: FARM SHOW Followup, Marvin Burkhardt, 1748 W. Lightsville Rd., Leaf River, Ill. 61047 (ph 815 757-7260).

## Bedding Pack "Chisel" Keeps Cattle Bedding Dry

Ripping through free-stall bedding keeps David Hoover's 50-cow dairy herd dry, warm and healthy. The skid steer-mounted, bedding pack chisel mixes and aerates chopped hay, straw and manure to make a heated bed for cattle through the winter and near perfect compost by spring.

"When you chisel the bedding pack twice a day, it stays soft, and it leaves a less favorable environment for pathogens," says Hoover. "I feel I have less mastitis problems with the herd as well."

Hoover designed the chisel to pull through the manure pack as the skid steer backs across it. The 6 by 9-ft. rectangular frame was fabricated from 3 by 4-in., 1/4-in. wall steel tubing. Two additional 6-ft. lengths are welded front to rear to reinforce the frame. Two ranks of 18-in. teeth cut from snowplow blade edges bolt to pieces of angle iron that weld to the frame.

Three teeth are mounted frame side, farthest from the skid steer with two mounted on the closer side. Quick attach arms extend the frame and teeth about 2 ft. out from the

skid steer.

"The teeth are 8 in. wide at the top and taper to a point," says Hoover. "They're spaced at 2-ft. intervals, and are offset."

A 15-degree sideways tilt to the teeth angles lift bedding up and to the side, while tips angle toward the skid steer at 8 to 10 degrees to help pull them into the pack. The angle also transfers weight to the skid steer wheels for greater traction just when it's most needed. Hoover suggests a minimum of 55 hp is needed to pull the teeth through the pack.

The dairyman prefers to bed his cattle with low-quality, old hay, noting that it's less expensive than straw and has more nutrient value. "Every ton of hay has \$60 in fertilizer value, and it cost me less than that as bedding," he explains. "With the hay and manure, the bedding pack has everything needed for good compost but oxygen. We stir that in when we chisel it."

After the herd returns to pasture in the spring, Hoover continues to chisel the pack daily for several weeks. Once it has completed the composting process, it's ready to



Photo courtesy Gazer magazine

Skid loader-mounted "chisel" is designed to be pulled through the manure pack as the loader backs across it.

spread on the garden and pastures, he says.

"I pick it up, and it's rich and black, just a friable compost that is more like soil than manure," says Hoover.

Contact: FARM SHOW Followup, David Hoover, 1045 State Route #14A, Penn Yan, N.Y. 14527 (ph 315 536-6747).