



He Uses Grain Bins To Dry Hay Bales

An Indiana farmer who dries hay bales inside his grain bins says it lets him bale hay at a higher moisture content as well as bale higher moisture hay that's already been cut but is in danger of being rained on.

John Kruse, of Summan, dries small square bales inside a pair of bins, 27 and 30 ft. in dia., that are equipped with perforated drying floors and 10 hp electric fans. He stacks bales by hand on their sides two layers deep. Each bin holds 350 to 400 bales.

"It's a good idea, but it's a lot of work and takes a lot of management," says Kruse, who has bin-dried bales for seven years. "I figured that if I could dry grain inside bins, why not hay bales? I place the first layer of bales in parallel rows across the floor. I make the second layer by placing a single row of bales around the outside of the bin and working in toward the center. Cross layering the bales forces air to go through them instead of around them. I place bales on their sides so they dry faster. It takes about 1 hp to dry a ton of hay. The 400 bales weigh about 10 tons so two layers of bales is all my 10 hp fan can handle.

"Most bales go into the bins at 25 to 30% moisture. I start the fan right after stacking the bales to keep them from heating up. Normally I use only air, but I turn on the

burner whenever the weather is very humid or when I have to dry bales that have a moisture content of 30 to 35%. The extra heat speeds up the drying process to keep wet hay from molding."

Outside temperature and humidity affect drying time, but Kruse says that it generally takes 3 to 4 days to dry bales with air only and 36 to 48 hours to dry them with heat.

"It costs about \$5 to dry a ton of hay," says Kruse. "That's about the same cost as using hay preservatives. However, I was never totally satisfied with preservatives because some spots would be missed causing moldy spots to develop on the bales. However, I've discovered it's not economical to dry bales that have more than 35% moisture.

"One potential problem is that the hay causes more dust inside the bin which could cause a fire. I use a centrifugal fan which has the burner outside the fan so it's not a problem, but on some dryer fans you should install a screen across the burner to keep sparks out of the bin."

Kruse uses a 12-ft. long, 15-in. wide roller conveyor to move bales from his hay wagon and into the bin.

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Contour Trench Tree Planting System

"I've spent 8 years developing and refining this system, which I am continuing to use extensively on my own farm," says George Maxwell, Longmont, Colo., who's come up with a new "contour trench" method for planting trees that the says reduces the amount of time and labor involved.

"Establishing trees in Colorado has special challenges - mortality tends to be high. The usual method is to water a plot and plant trees in a 10 to 12-ft. grid pattern and watering by drip, flood or sprinkle irrigation. The problem is that it can be difficult to till between trees to keep weeds down and irrigating is expensive, since flood-type irrigation often won't work on hilly ground.

"My trench method allows for cheap and easy watering, provides some shelter for plants, some control of immediate weed growth, and retains ground cover between tree rows.

"First, cut trenches 6 to 10 in. deep using a standard farm trencher or one-bottom plow. Trenches should be laid on a contour with a 1 to 2 percent slope for running water, and 10 to 12 ft. apart so machinery can run between them.

"Second, plant seedlings in the bottom of the trench using a narrow shovel or post

hole digger and water them thoroughly. During the first year, you should run enough water in the trenches so the ground never dries out completely. Water just beyond root depth and mow the cover crop between ditches. In the fall, let the cover crop grow up so it catches snow and acts as a wind-break for seedlings.

"In the second year, watering is not as critical as during the first year. Fertilizing may be done. In the third year, watering should be reduced to encourage deep root growth. Trees should now be high enough to compete with advancing weed growth in the trench. If not, weed growth around trees should be cut. As trees get larger, you may have to clean out the trench in order to continue to use it for watering.

"The main benefits of this system are that it lets you water trees cheap, the trench protects seedlings from wind and sun, and weeds are controlled for the first year or two in the trench. The biggest problem is that if you make the trench too steep, seedlings can wash out. Mini-damming with rocks or straw can help."

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"Best Ideas"

They Dock Tails & Clip Dewclaws To Keep Cows Cleaner, Healthier

Clipping Dewclaws

Sandy Foss, a Sandstone, Minn., dairy farmer, has started clipping off inside dewclaws on the back feet of dairy cows to minimize hoof damage to teats that can result in mastitis or even ruined udders.

Foss had her vet show her how to remove the dewclaws on baby calves with a pair of surgical scissors. Now it has become a normal part of her calf routine along with dipping navels and feeding them colostrum. She ties the back legs to a stanchion so the calf is laying down and can't kick. Once snipped, she applies a disinfectant and tapes the feet for a day or so. She cuts where the joint is "wiggly".

Foss also decided to experiment on just-fresh heifers by banding the dewclaws with elastrator rings normally used to castrate bull calves. It worked but Foss says it took a few tries to get it right. The key is getting the band off the horned area and onto the soft tissue just above it. In 3 to 4 weeks, the claws drop off. All that remains is a smooth bump. After her initial experiments, she decided to remove the dewclaws from all the cows in their 39-stall barn.

She says some cows had a lot more swelling than others which resulted in a drop in milk production so she recommends not attempting removal until cows are approaching the end of their lactation but early enough so they're all healed up before calving. One precaution she takes is that when the band starts sinking into the flesh - usually during the second week after application - she sprays the area each day with an iodine solution. (Jane Fyksen in Agri-View)

Tail Docking

Cows with docked tails stay cleaner, have lower somatic cell counts and are easier to work around, say farmers who've made tail docking a regular practice on their dairy farms.

Cows without tails are cleaner and the attitudes of milkers is better when working around the cows - especially when milking from behind - because they're not dreading being hit in the face with a wet, dirty tail. Their improved attitude often results in calmer animals that milk more.

The biggest argument against tail docking, according to veterinarian Gordon A. Jones of Oconto Falls, Wis., who's currently conducting a study on tail docking, is that cows need their tails to switch at flies. But researchers argue that the flies that bother cows most are around their faces where tails can't reach anyway.

Docking is a relatively simple procedure. Most farmers use "elastator" rubber bands used to castrate bull calves. Researchers recommend docking the tail about two hand widths below the vulva, which leaves enough tail to hold onto when the cow becomes unruly and enough to prevent vaginal infections and contaminations. It takes about 4 wks. for a tail to fall off and for the stub to heal completely. The best way to dock tails, however, is to do it within two weeks of birth because it causes the least amount of stress. (Hoard's Dairyman)

He Sucks Up Grain For A Living

An enterprising Nebraska farmer has found a way to make extra income using a piece of equipment he originally bought for his own operation. Tim Cada of Clarkson does custom grain vacuuming using a high-capacity vacuum that's capable of moving 4,000 bu. of corn per hour.

As more and more grain is stored in larger bins, on the floor of buildings, or outside on the ground, the market for a tool that can easily pick it up without the use of a scoop shovel has grown. Cada charges 8 to 13 cents per bushel or \$100 per hour. There's a \$100 minimum charge. The customer supplies a tractor.

At first Cada bought a small machine for

his own use but when he ran an ad in his local paper offering to do custom work, the phone rang off the hook so he went out and bought a bigger machine with a 6-in. dia. tube.

Typical special jobs include drawing off a top layer of corn that has spoiled in a bin, cleaning out bins with broken augers, and even filling bins at harvest.

Cada says grain vacs are fast ("We can fill a semi-trailer with corn in 20 min.") and can handle spoiled grain that an auger wouldn't be able to move. It also causes less damage to grain. (Shirley Roenfeldt in Nebraska Farmer)