

Volume 7
May 30, 2006

This Month's Topics

- * Summer Management Tips for Compost Dairy Barns
- * Frequently Asked Questions
- * Producer Spotlight—Jonathan Seifert

Ideas? Suggestions?

Contact Mindy Spiehs, Wayne Schoper, or Vince Cray to share your ideas/suggestions

Upcoming Tour

A tour of Compost Dairy Barns will be held on Monday, June 5, 2006. The tour will start at 12:30 p.m. from the Holiday Inn in New Ulm, MN. Those interested should contact Wayne Schoper to register (507) 794-7993 or (507) 276-5662

Frequently Asked Questions: Somatic Cell Counts, Ventilation

Question: I am very concerned about the effect of the pack on somatic cell count (SCC) and mastitis incidence. Is there any data or trials looking specifically at SCC and mastitis levels in CDB herds?

Answer: At this point, there is no research data on mastitis per se in the compost dairy barn. Our past experience has been that the bacteria counts at the surface of the packs are relatively high (9—23 million

Dairy producers with compost dairy barns tend to all do things a bit different during the summer months. One thing that all producers should do the same is remember how difficult it was to get the sawdust you needed to make your barn work during this last winter. Work with your sawdust supplier and stock pile the sawdust during the warmer months of the year. A number of compost dairy barn users have told us you do not have to worry about the sawdust being rained on, you only need to make provisions so the wind does not blow your sawdust. Working with your sawdust supplier through the summer months will provide them with a place to take their product and will provide you a more consistent supply for next winter. You may also find reduced prices during the warmer months. Fuel costs may impact the price you pay for sawdust this summer. However the benefit is that you will have a supply ready for next winter, which will help you better manage your compost dairy barn during the winter months.

CFU/mL). However, farmers using compost dairy barns are able to maintain or improve BTSCC and udder health when care is taken to manage the pack (including aerating twice daily). Pre-milking cow prep is extremely critical to maintaining good udder health in all dairies, but especially in compost dairy barns. We do intend to study mastitis pathogen growth and viability on the composting bedded pack during the next year. (con't on back)

A number of dairy producers have an outside lot that cows can choose to use verses the compost dairy barn. Producers say the cows prefer to be outside on a cool overcast day and in the barn during hot sunny days. A number of dairy producers with compost dairy barns have put in fans for the hot sunny days when the cows choose to use the barns. If you do not have fans the cows tend to stand in the area of the barn that has an air movement instead of spreading out through the whole barn. This well-ventilated area will get more urine and manure and needs to be stirred well. Producers will often stir the compost area in different directions to insure a good mix of the concentrated areas of urine and manure from cows standing in a given area to take advantage of air movement. For example, they may stir the pack lengthwise and crosswise to get the concentrated urine and manure well mixed.

Do fans pay? This is a question each producer needs to think about. See how your cows are

acting on hot sunny days. Do your cows remain spread out in the barn or are they crowding in one well-ventilated area of the barn?

You also need to think about the many different types of fans available that can be put into a compost dairy barn. The big ceiling fans used in churches are being used by some producers. Other dairy producers have used the big box type fans that blow across the compost area. Still others have gone with the Big Ass® style fans, with 12 foot blades. When considering an overhead fan, make sure you have adequate over head room so you can stir your compost area without hitting the fans with stirring equipment. Look at the costs, the benefits, and what the cows are telling you they need to make a decision on what you want for fans in your compost dairy barn.

Vince Cray is an Extension Educator in Otter Tail County



Ceiling fans may be necessary to provide adequate ventilation in the compost dairy barn during the warm summer months.

Producer Spotlight—Jonathan Seifert, Sleepy Eye, MN

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Jonathan Seifert and his father, Steve, of Sleepy Eye, MN started using a compost dairy barn (CDB) in February 2005. Jonathan was gracious enough to share some of his experiences and thoughts about the CDB for our May newsletter.

Between Jonathan and Steve, the Seiferts milk approximately 160 Holstein cows. All of their lactating cows are housed in the CDB. Jonathan designed the CDB using a basic 3 row free stall barn as a model. The barn is 80 ft x 300 ft and designed to hold 160 cows with 100 ft²/cow or 180 cows at 80 ft²/cow. The feed alley is on the north side of the barn and completely enclosed. Bunk space ranges from 19 to 24 inches depending on the number of cows in the barn. The parlor and CDB are connected in a T-style. The barn has curtains on all four sides.

They have divided their pack into three pens. Two large pens are on either side of the barn with a smaller pen in the center of the barn. The center pen is used for transition and sick cows. The barn has a 12 ft scrape alley that is cleaned twice daily. The manure is scraped into a gravity flow manure tube in the center of the barn which empties into a 20,000 gallons concrete pit. The pit is emptied every 2–3 weeks. Jonathan cleaned out the CDB in mid-April when the pack was 3

1/2 to 4 ft deep. Instead of taking the top 3 ft of bedding off the entire pack, he cleaned out the front 3/4 of the building all the way down to the floor. He then spread the remaining bedding from the back 1/4 of the barn throughout the rest of the barn to get a 1 to 1 1/2 ft base over the entire barn. He said he plans to clean it out again in the fall.

The Seiferts use sawdust and wood shavings for bedding. They don't have sufficient space to store extra sawdust so the entire semi load is spread in the barn when it arrives. This past winter was so humid that the Seiferts needed to add fresh bedding every 1 to 2 weeks. Scheduling a consistent supply of sawdust was a problem during the winter. As Jonathan put it, "Once you get behind on bedding, you have to fight to get ahead again." In other words, when they didn't get sawdust as soon as they needed it, they had to add fresh bedding weekly for a couple weeks to get the pack in good shape again. During the winter when it was difficult to get sawdust they tried grinding some bean straw in their TMR. The straw was ground to a length of 1 inch. Jonathan said they really didn't use enough for the bean straw to make a difference in their overall bedding.

When asked why they decided to build a CDB, Jonathan said that the primary reason was cow

comfort. That is also what he likes best about their CDB. He said the cow comfort and foot/leg health have been excellent. Their hoof trimmer was very pleased with the condition of the cows' feet and legs. There were no major lesions or hoof and leg problems.

The biggest challenge they have faced with their CDB is mastitis. While somatic cell counts have stayed low (around 106,000), they have noticed an increase in the number of cows with mastitis. They are thankful they haven't had any *Klebsiella*, but they did have a toxic strain of *E. coli* that caused cows to dry up in a matter of a few days. Keeping udders and teats clean during the winter was a challenge, too. Jonathan estimated that it could take 15 minutes less time to prep cows for milking when a fresh load of bedding had been applied compared to when the pack was starting to get dirty.

Some advice that Jonathan would give to a producer who is considering a CDB: Build the barn to be versatile in case you change your mind and decide you want to use stalls at some point in the future.

Overall, Jonathan said that their compost dairy barn works very well. It is a great facility for smaller producers like them who were looking to transition to a larger size.

Frequently Asked Questions: SCC, Ventilation (con't)

Question: What can you tell me about ventilation in compost dairy barns?

Answer: What I hear from producers is the more ventilation, the better. Good ventilation is critical, especially in retrofitted

barns. When re-bedding with the fine, dusty sawdust there is a need for good ventilation to reduce cow respiratory concerns, and to help keep the pack surface dry. This past warmer-than-usual winter resulted in a lot more humidity in compost dairy

barns than during past winters. Farmers reported that bedding use increased dramatically with increased humidity.

Answers provided by: Jeff Reneau, University of Minnesota Dept of Animal Science