

Penn State Cooperative Extension Capitol Region Dairy Team

THESE FARMS SHARE COW COMFORT IDEAS PART 2

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This is the second of a two-part article on cow comfort that we have titled "Focus on Dairy Forum."

Our forum participants will address two questions this week. First, let's have a brief review of the dairy businesses operated by our participants.

Meadow Vista Farm is owned by Don and Gerald Risser. They milk 260 cows near Bainbridge. The cows are housed in two freestall barns, both tunnel ventilated. The newer barn, built in 2000, also contains a bedded pack for transition cows and box stalls for freshening pens.

Elvin Reiff milks 60 cows in a tiestall barn just outside of Mount Joy. He has a purebred

herd, and sells a few bulls and heifers for breeding purposes annually.

Vince and Julie Wagner milk 45 cows in a tiestall barn outside of Myerstown. Ju-Vindale Holsteins has had one of the lowest somatic cell counts in Lebanon County for the past 10 years,



The Elvin Reiff Farm in Mount Joy.

usually about 80,000 or better.

Lee Simmons operates an 80-cow dairy near Mount Solon, Va. The herd is housed in a naturally ventilated 50 by 200 foot bedded pack barn. He combines this barn with a "Dairy Rotational Loafing Lot System" which consists of three paddocks that

can be rotated for cow exercise and cleanliness.

What have you tried that did not work well for you?

Gerald Risser: The stalls in our older barn are 45 inches wide, and those in the new barn are 48 inches in width. That doesn't sound like a lot of variation, but we see a difference in how well the cows use the stalls. Our older, larger cows are not as comfortable in the stalls of the older barn, and will not use them as well. We tried using rubber belting in our feeding areas, but it has been too slick. If I were to redo it, I would use a material designed for cow traffic, such as we did in the holding pen.

Reiff: A few years ago we made some changes for the better in the barn, particularly as related to stall size. We moved the neck rail forward and moved the water bowls from the cow bed divider to the feed alley side of the stalls. The cows can access the water much more easily, and seem to be more comfortable.

Wagner: We used to have the PVC pipe bedding saver attached to the stalls with chains rather than fastened in place. This did not work well, as we had cows that had legs and dew claws caught and sustained hock injuries as a result.

We now have a 2-inch PVC

pipe fastened to the curb as a bedding retainer, which works well.

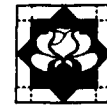
Simmons: When we were still using the older clay-base freestalls, we tried to modify them by making them wider and, in some cases, longer. The cows still refused to use the stalls as we had hoped. Although the pack barn has worked well, if I built another barn I would look at the possibility of taller sidewalls for more natural ventilation.

If you were talking to a young dairy producer just going into the business, what advice would you give related to keeping the cow herd comfortable?

Risser: I would say to not shortchange yourself on square footage — design your barn or stalls for maximum cow numbers you anticipate. We have seen here that when the herd is overcrowded, the cows are more stressed and have more health problems. If you are designing a new facility, make it easy to work with the cows! When we built to barn in 2000, we designed the bedded pack and freshening pens so that one person can handle and move fresh cows. It has really made things so much easier for everyone working on the farm.

Reiff: I guess my first piece of advice would be to use generous amounts of bedding in the cow stalls. We have tried cutting down on the amount of bedding on our mattresses, but the cows did not stay as clean and dry, causing more problems in the long run. If I were to do my barn over, I would probably install one water bowl per cow. I have noticed that some cows tend to take

Agriculture Insights



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BIOTERRORISM AND AGRICULTURE

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"What would happen if someone deliberately infected a plant with a pathogen?"

Larry Madden, a professor of plant epidemiology at Ohio State University, presented that question to a Phytopathological Society conference in 1999.

Yet even prior to 1999, scientists and government officials began seriously considering the possibility of an individual or terrorist state intentionally using or threatening the use of viruses, bacteria, fungi, or toxins from living organisms to produce death or disease in humans, animals, and plants.

The threat of bioterrorism in agriculture is essentially twofold: preharvest crop injury that creates an economic hardship for both livestock and crop producers and post-harvest infection that threatens public health. Both scenarios would be a disaster psychologically, physically, and economically with marked losses for integrated agricultural businesses and U.S. trade in farm products.

A risk factor for bioterrorism is the relative abundance of possible bioterror agents. Foreign animal diseases such as foot and mouth disease, classical swine fever, and Exotic Newcastle Disease and foreign pests such as citrus canker, soybean rust, karnal bunt, and black stem rust present the biggest threats because they are relatively unknown in the U.S. and may be difficult for field agents and diagnostic labs to quickly identify.

The first step in thwarting the spread of a bioterror attack is education. Enhancing basic understanding of the biology of pests and pathogens will allow field agents, labs, and other first responders to develop new tools for surveillance and new ways to control an outbreak. Vaccines and the creation of pest-and disease-resistant varieties of crops will also provide some protection against bioterrorism or the threat of bioterrorism.

Secondly, vigilance is paramount. Farmers and ranchers should remain diligent and take notice of visitors to their farm. Simple steps such as limiting farm entry to one gated road, securing the farm perimeter with fencing, minimizing entrance into restricted areas, placing buzzers on entrance gates, having occupied homes or offices at roads leading to the farm, and ensuring that areas within and surrounding the farm buildings are well lit can help reduce the risk of unauthorized entry.

Finally, rapid response will be the key to preventing a large-scale outbreak. As with any outbreak of disease, rapidly containing the threat is the key to preventing widespread economic damage. In the case of livestock disease, animals will need to be quarantined and may need to be slaughtered. Crops that are diseased may need to be destroyed. By remaining vigilant, identifying the disease or pest, and rapidly responding to the threat, bioterror threats can be contained.

For more information, see the FDA's bioterrorism page at <http://www.fda.gov/oc/opacom/hottopics/bioterrorism.html>.



Lee Simmons talks with Lancaster Dairy producers.



Vince Wagner at Ju-Vindale Holsteins.



Gerald Risser caring for calves.

over the water bowl from their stallmate, and I think having plenty of water for each cow might help production.

Wagner: It seems like many people are building and designing new barns around a manure storage system, but sometimes they forget cow comfort. A system which doesn't allow for adequate bedding may hurt you in the long run, because the cows won't be as

healthy. Use plenty of bedding in cow stalls, even with mattresses! It cuts down on injuries and keeps cows much cleaner.

We would like to thank each of these farmers for taking time to show us their operations and answer our questions. If you have ideas for future "Focus on Dairy Forums," please share them with your local Penn. State dairy agent.