

FALL 2018

# HEIFER NOTES

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DAIRY CALF & HEIFER ASSOCIATION



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## Dairy producer and calf raiser Ronda Meier discusses the value of DCHA membership, conference attendance

*DCHA participation fosters experience sharing and networking opportunities*

*Dairy Calf and Heifer Association (DCHA) members' enterprises come in a variety of shapes, sizes and business models. Thus, reasons for joining DCHA vary from member to member and so does their perspective of DCHA membership benefits.*

Ronda Meier of Meier Dairy, Palmer, Kan., shared the importance DCHA to her family's dairy business and how conference attendance enhances her business skills and management strategies.

### **Why do you belong to DCHA?**

My situation is a little different than most DCHA members. We own a 650-cow dairy with automated calf feeders. I raise our calves to 350 pounds and then they are sent to our grower. Living in Kansas, I don't have a lot of resources for help with calf feeding and raising. I happened to run across DCHA when reading a magazine. I went online and became a member after seeing a conference the association was coordinating and hosting. I'm so glad I did!

### **Why have you attended DCHA conferences?**

Initially, I attended the conference with hopes of getting some tips and advice on raising calves with automated feeders. Also, I was looking for networking opportunities.

### **What changes have you made recently to enhance calf/heifer health and/or improve performance?**

After attending the last conference, we decided to try switching to transition milk for our calves the first five days and then switching to milk replacer before putting them onto the automated feeder. I also learned that I can push my calves a lot harder than I had been in the past.

### **What do you know now that you wish you knew five years ago?**

Reflecting on the past five years, I wish we would have been feeding transition milk all along. We have seen a big improvement in calf health. At one conference we attended, a speaker presented data on how feeding colostrum longer also helps improve calf health. A lot of us dairy farmers have it stuck in our heads that after 12 hours (past birth), feeding colostrum is not going to do much good. It was helpful to see and hear the data.

### **List services/products/technologies that are key to profitability on your operation?**

Automated calf feeders have helped our operation a lot. I can feed all our calves by myself, twice a day. I also found that using Peach Teat nipples\* in our bottle barn have helped with some clostridium problems, which we experienced in the past. Calves do well on them and I don't have to worry about someone coming in and cutting larger holes in the nipples. We also use BlueLite C\* in our waterers and the calves stay hydrated during stressful times. Plus, we use Resflor\* and Zuprevo\* for respiratory issues. We also have ventilation tubes and fans in our barns, which were added a few years ago. We have seen a huge health improvement since installing them.

### **As you look to the future, what goals are of highest priority?**

In the next 5 years, I would like to see a new calf facility on our farm. I think we could improve overall calf health with a new facility. We turned our old freestall barns into calf barns and we experience some ventilation challenges. I would also like to add a couple more calf feeders to our program.

\*The Dairy Calf & Heifer Association does not support one product over another. Any mention is not an endorsement.



# Provide proper ventilation year round

## Evaluate fresh air access and movement



Proper ventilation in calf housing has a major impact on calf health and well-being. It's important to evaluate ventilation and look for areas of improvement. Consider these three things to help manage and improve ventilation in calf housing for healthy calves all year round.

### 1. AIR EXCHANGE

It's important to realize that ventilation is not just about access to fresh air, it should also include air movement, exchanging stale air for fresh air. Proper air movement helps

reduce the ammonia and bacteria levels that build up. Optimum ventilation is a minimum of four air exchanges per hour. A positive-pressure ventilation system helps remove stagnant air and directs fresh air where needed.

### 2. VENTILATION FOR THE SEASONS

Ventilation is critical in hot weather to reduce heat stress in young calves. A hot, muggy environment can increase risk of respiratory disease and weaken calves' immune system. During the heat it is recommended to increase air exchanges a minimum of 40 changes per hour.

Ventilation remains important during cold weather. Keeping housing open and air moving allows calves to receive proper ventilation. To keep calves warm you can supply clean straw bedding, deep enough to cover the calves' legs while they are lying down.

### 3. KEEP CALF PENS OPEN

Natural and mechanical ventilation of calf facilities is key, and necessary to provide optimal ventilation within individual pens. For maximum ventilation in each pen, look for pens with open, mesh back panels and front panel ventilation to encourage air flow. Keeping calf pens as open as possible is important but it's also recommended to provide solid walls between each calf to limit contact between calves – prevent disease transfer.

It's always a good idea to evaluate your ventilation system and look for areas of improvement. All Calf-Tel housing is designed for maximum airflow and helps you raise successful, healthy calves.

*Information provided by Calf-Tel, a DCHA sponsor*

# Calf barns can equal hutches as excellent environments

## Positive pressure tube ventilation systems enhance air quality

"We view the well-managed, individual calf hutch as being the optimal housing for a calf, but it can be a brutal environment for calf caretakers," said Ken Nordlund, University of Wisconsin College of Veterinary Medicine emeritus clinical professor. "With careful design and management, we believe calf barns can equal hutches as excellent environments for nursing calves."

Speaking at the 2018 Dairy Calf and Heifer Association Annual Conference, Nordlund shared key features of calf barns, based on the designs of hundreds of positive pressure tube ventilation systems.

### All calf barns with group/individual pens

- Spatial allowances of about 30 square feet (2.8 m<sup>2</sup>) or more of bedded space per calf, not including service alleys
- Deeply bedded surfaces in cool weather (<50° F. [10° C.])
- Drainage below the bedding
- Multiple smaller barns that allow for "all-in, all-out" groupings
- Natural ventilation supplemented with positive pressure tube ventilation
- Minimal solid sidewalls (limited to about 2 feet [61 cm] high)
- Build calf barns at least 80 feet (24 m) apart
- Slope (2 to 4 percent) calf barns to back of stalls (crowned central work alley)

### All calf barns with individual pens

- East-west barn orientation
- One or two rows of pens limited to a width of 36 feet (11 m)
- Separate pens from outer wall by at least 3 feet (0.9 m)
- Place solid panels between every other calf, with an open mesh front and a rear panel that is solid to about 2 feet (61 cm) high, and mesh above

Let's look at a few of the recommendations a little closer.

To foster excellent drainage, use a tiled gravel bed about 1.5 feet (0.5 m) deep below the bedded area. Drainage tile below the gravel bed should lead to a collection area outside the calf barn. Do not substitute sand for gravel. When using a gravel base, caretakers use about half the amount of straw for calf bedding.

Due to a more limited thermoneutral zone (compared with cows), Nordlund advocates for supplemental positive pressure tube ventilation in calf barns. "Unlike adult cows, calves do not generate sufficient heat to effectively warm the air that surrounds them to allow for thermal buoyancy to occur. Thus, natural ventilation becomes inefficient."

On those hot, summer days, the sun warms air outside the barn more

quickly than inside. When this occurs, air entering the cooler barn interior through eaves will rise and leave the barn without falling toward the floor and mixing with air around the calves.

Nordlund firmly believes that positive pressure tube ventilation systems support healthy calves. Calf raisers typically report respiratory disease reduction of 50 to 75 percent. A Minnesota study showed that calves raised in barns without supplemental positive pressure tubes were 80 percent more likely to show signs of disease (Jorgensen et al., 2017). Plus, calf barn workers report that floors dry out quicker and odor is less inside the barn.

Regarding barn slope, Nordlund noted that previous designs recommended sloping stalls to the front. Researchers found that moisture gathered under calf buckets and calf caretakers transferred moisture and contaminants around the entire barn to all calves.

Nordlund concluded, "Calf barns designed and constructed using positive pressure tube ventilation systems (and other noted recommendations) can produce calves as healthy as those raised in hutches." And, these "new barns" improve calf caregivers' working conditions.

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# DCHA awards 2 scholarships

## Winners hail from Ohio, Wisconsin



Marina Sweet

Rachel O'Leary

Thanks to generous contributions from Dairy Calf & Heifer Association (DCHA) members, DCHA awarded two \$1,000 Education Scholarships this year. The recipients are Marina Sweet, London, Ohio; and Rachel O'Leary, Janesville, Wis.

Sweet graduated in May from The Ohio State University with a bachelor's degree in animal sciences. This fall, she embarks on her journey to become a food animal veterinarian by enrolling in Ohio State's College of Veterinary

Medicine. Until age 10, Sweet resided in a Detroit suburb. Her family's move to rural Ohio sparked her passion for livestock, particularly dairy cattle.

Sweet's 4-H dairy project experiences went beyond the showing. During the summer of 2015, she milked cows, vaccinated cattle, administered IV fluids, practiced palpation, pulled calves and administered propylene glycol to ketotic cows. "Observing the veterinarians who came for herd checks also gave me insight to the life of a food animal veterinarian, which solidified my career goal," she said.

The following summer, Sweet interned at Hall's Calf Ranch in Kewaunee, Wis., where her job revolved around the care of 8,000 calves, along with a research project to observe the effects of a metabolizable protein on calf growth rate. "This internship sparked my more specific passion of calf health and management," she said.

Last summer, Sweet interned at the U.S. Department of Agriculture's Agricultural Research Service Livestock and Range Research Laboratory in Miles, Mont.

Her responsibilities included collecting, diluting and extending semen, and evaluating sperm morphology. She also collected and centrifuged blood samples and removed serum.

O'Leary, now entering her fourth year as a veterinary medical student at the University of Wisconsin School of Veterinary Medicine, earned her bachelor's degree in dairy science from UW-River Falls. Upon graduation from veterinary school, O'Leary plans to work in a production animal clinic with mostly dairy cattle. Due to her strong interest in food animal medicine, she took elective courses, such as advanced dairy nutrition, hoof trimming and large animal diagnostic imaging, to strengthen her skills.

"The most influential course I have taken is the bovine embryo transfer (ET) and in vitro fertilization (IVF) class," said O'Leary. "Through this course, I became certified in the techniques needed to be efficient and effective in ET and IVF. I hope to utilize the skills I gained in my future career to help producers achieve the next level of reproductive success for their farm."

At UW-River Falls, O'Leary worked as a research assistant. All the research projects involved dairy calves. As a veterinary student, she held externships with Parker Veterinary Clinic, Parker, S.D.; Clear Lake Veterinary Clinic, Clear Lake, S.D.; and Brodhead Veterinary Medical Center, Brodhead, Wis. O'Leary served as an animal health intern for the 2016 and 2017 Wisconsin State Fairs.

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To donate to the DCHA scholarship fund, contact JoDee Sattler at: [jodee@calfandheifer.org](mailto:jodee@calfandheifer.org).