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As seen in Section J, Care Care

## Protecting calves from respiratory diseases

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SPECIAL TO AGRI-VIEW

There are countless ways for producers to protect their calves from respiratory diseases starting before birth and continuing through the post-weaning period, specifically for the first 4 to 6 months.

“To prevent the occurrence of respiratory diseases in our calves, it starts with our cows. Making sure that they are well vaccinated, well cared for and that the calving area is clean, dry, well maintained and monitored so calves can be cared for and that they are moved promptly to limit their exposure to potential pathogens,” says Rebecca

Brotzman, associate outreach specialist for the Dairyland Initiative with the UW School of Veterinary Medicine.

After birth, producers need to continue to carefully care for their calves by providing them with skilled caretakers, quality nutrition and excellent housing conditions with good ventilation systems.

“We consider calf hutches to be the gold standard in calf housing in preventing the spread of diseases from calf to calf while providing them with adequate shelter that is both well ventilated and isolated, not just in space, but also in time,” says Brotzman. “A lot of it also is being able to more easily let those hutches sit empty and get thoroughly cleaned and disinfected between calves.”

For producers not raising calves in hutches, natural ventilation should be used when possible to decrease incidence of respiratory diseases.

“We have found, in our clinical work, that barns that work best to keep calves healthy are naturally ventilated with high side walls, one to two rows of calves to keep that barn narrow for wind to easily move through it, and to limit the exposure of young calves to older calves,” says Brotzman.

When natural ventilation is not available, especially in the cold winter months, natural ventilation should be



*Photo by Ashley Curtis*

Protect calves from respiratory disease by vaccinating all cows prior to calving, feeding quality products and keeping housing ventilated and comfortable.

supplemented and a pattern of good air-flow should be continued.

“In the winter-time when we close up the curtains, we should use supplemental positive pressure ventilation systems to deliver the minimum winter ventilation rate of fresh air to the immediate environment of the calf for air hygiene purposes,” Brotzman says.

Throughout the calf raising process, producers should constantly be aware of the exposure points and limit them as much as possible.

“The calves’ first point of exposure starts out in the birthing area with their exposure to adult cows,” says Brotzman. “If they are raised in a calf barn where there is not a solid panel between calf pens, they can have nose to nose contact with other calves, also a point of exposure.”

The solid panels between calf pens provide protection from calf to calf contact and spread of diseases, but that form of housing also has its limitations.

“We like them because they decrease disease transmission from calf to calf, but they also decrease air quality. Accumulated airborne bacteria do not necessarily cause a specific disease, but it can impair a calf’s immune function through inflammation in her airways and requires the respiratory tract to work harder to clear those things from her airways, making her more susceptible to disease,” says Brotzman.

Providing the calf with a clean environment and clean equipment also can help promote a healthy respiratory system.

“Disease also can be spread when a calf handler works with one calf that is sick and moves on to the next calf. If they are not careful about washing their hands after handling or using gloves for treating sick calves, and washing

equipment between calves, then they serve as a source of disease transmission,” says Brotzman.

The type of feeding environment and process used also can have an impact on the spread of respiratory diseases on an operation.

“In group feeder situations, every calf in the pen is exposed to every other calf in the pen using one or two nipples and sharing other equipment like waterers and feeders, and these also can be a source of disease transmission,” says Brotzman.

The presence of respiratory diseases on an operation can be impacted through stressors, whether they are environmental stressors or nutritional stressors.

“In everything, stressors such as cold temperatures and inadequate nutrition can impact the health of a calf,”

says Brotzman. “Calves spend a lot of energy to stay warm, and providing them a deep bed of straw that covers their legs helps them conserve heat and energy. Not having enough to eat or the balance of what is being fed not being appropriate in energy, protein and other nutrients can contribute to the calf not being able to stay healthy and continue to grow well, making her more prone to respiratory diseases.”

Producers looking for diseases before a calf falls extremely ill often watch

their calves’ appetites.

“Appetite is useful, but we should not rely solely on it,” says Brotzman. “A calf that is still hungry and that has not been satiated at her meals or whose nutritional needs have not been met many times will continue to eat even though she is not feeling well.”

While appetite can be used as a monitoring point, producers also should look for physical signs that a calf might be ill.

“There are physical signs that are not just based on appetite. Things like a runny nose, eye discharge or labored breathing” says Brotzman. “Ear infections also are related to respiratory disease and she may end up



Photo by Ashley Curtis

Proper ventilation will aid in reducing respiratory disease for calves housed in barns.

with head tilt or ear droop. Increased rectal temperature can be a sign of respiratory diseases. Regular use of a scoring system such as the one developed by Sheila McGuirk gives caretakers a consistent method for detecting and monitoring disease in calves.”

Beyond careful monitoring of the calves, producers can work to prevent the spread of disease through vaccinations.

“In our newborn calves less than a couple months old, intranasal vaccinations can be helpful in the face of challenging environments or disease outbreaks, but they offer a short-lived boost in immunity,” says Brotzman. “Systemic vaccinations can be helpful as calves get older and their passive immunity gained from colostrum and their dam decreases.

Vaccinations for respiratory diseases like pneumonia are most effective for older calves on an operation.

“Calves can successfully be vaccinated against many viruses that cause respiratory disease and that is one reason we see a decrease in cases of respiratory diseases as calves get older,” says Brotzman. “But it’s certainly a disease that we have to be particularly watchful of through the post weaning period and up to around six months old. Even older heifers and cows can get respiratory disease if their environment, management and vaccination status are not up to par.”



Rebecca Brotzman

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