

Avoid summer struggles with calves

By Margaret Quaassdorff

Successful management of calves is all about the details that add up to create a healthy, profitable member of the milking herd. Beyond excessive heat, summer weather provides an environment that can challenge our calves with increased humidity, favorable conditions for pests and pathogens, and a higher incidence of disease due to these factors. In the summer, heat stress causes immune system depression in calves. In addition, calves born to heat-stressed dams absorb fewer antibodies, leading to higher rates of failed passive transfer of immunity. According to the DCHA Gold Standard performance goals, your calf program should strive to have a treatment rate of less than 10 percent of calves for pneumonia, and less than 15 percent of calves for scours with an overall survival rate of greater than 97 percent for calves up to weaning age.

Calf scours, or diarrhea, is not a single disease, but a clinical sign associated with several disease pathogens and/or flaws in feed management practices. Causes could be bacterial, viral, protozoan or nutritional. Dehydration is the real danger here and can quickly overtake calves in the summer. Morbidity of respiratory disease is increased caused by both bacterial and viral pathogens when stressed calves are in hot, moist, poorly ventilated conditions.

PREVENTION IS KEY TO SUCCESS

Consider the following to help your calves stay upbeat in the summer heat and to prevent costly diseases from holding back your future herd from its genetic potential.

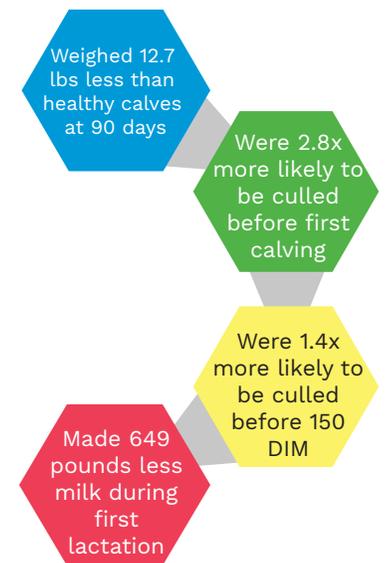
Colostrum. Timely feeding of adequate amounts of clean, high-quality colostrum will ensure that calves are receiving the best chance to develop immunity against pathogens. It is advantageous to offer calves a second feeding of colostrum, and it may be beneficial to incorporate extra IgGs in the follow-up colostrum feeding to promote gut integrity.

Keep feedings consistent. Check total solids of mixed milk replacer or whole milk. If your farm struggles with consistency in mixing, or are feeding higher percentages of solids (closer to 15 percent), consider feeding a higher volume of mixed milk replacer, but keep the solids around 12.5 percent. Adding another milk feeding can be advantageous as calf starter intakes tend to come down, but the need for energy to grow and to cool the calf is still there. To gain efficiency and maintain hydration, some nutritionists also recommend amino acid balanced diets for calves to reduce the amount of excess nitrogen needed to be excreted in the urine.

Water. Keep fresh water in front

FIGURE 1

Calves that had pneumonia before 70 days vs healthy calves

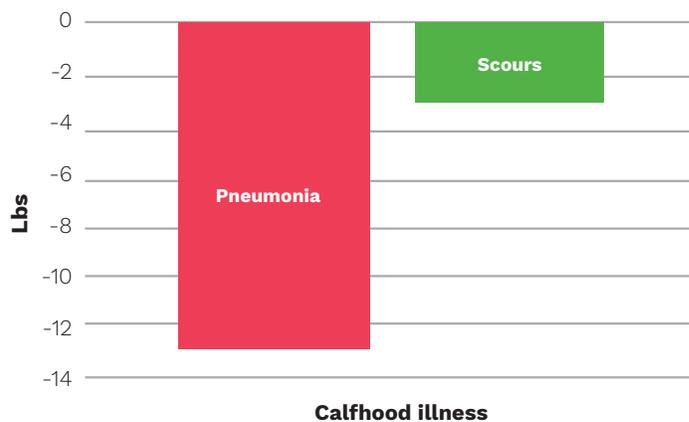


of calves at all times, and wash pails when they become contaminated with feces, grain, flies, etc. When water is available, calves consume more starter, grow faster, and scour fewer days (Kertz, 1984). In addition, calves drink more when water is warm (60 to 65°F) compared to when it is offered cold (Huuskonen et al., 2010). Healthy calves under heat stress will drink between 6 and 12 quarts (3 gallons) of water daily just to maintain normal hydration, while sick and scouring calves may require up to 20 quarts (5 gallons) to maintain hydration. In a calf behavior study (Lowe et al., 2019), when calves were

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FIGURE 2

Lost growth potential of sick vs healthy calves at 90 days of age



experiencing an outbreak of Salmonella, number of visits to the water trough did not increase, but visit duration increased before clinical signs of disease appeared.

Reaction time. Quickly identify and rapidly rehydrate calves that develop scours. According to an article by calf specialist Sam Leadley of Attica Veterinary Clinic, mild scouring could increase fluid losses by 1 quart per day or more, with a severely scouring calf losing 8 quarts (2 gallons)! Two or three times daily feeding of warm electrolytes (in a bottle if the calf is not capable of drinking out of a pail) mixed according to label, as well as IV and SQ lactated ringers, are good strategies to minimize the impact of dehydration caused by scours.

Cleanliness. Maintain excellent hygiene for feeding equipment and the calf environment, including proper ventilation for air quality and humidity control.

Equipment. Bacteria thrive in warm, moist climates, and they use nutrients left on dirty equipment to grow and reproduce. Double-check

spouts, hoses and nipples on all feeding equipment, and change or clean often. Perform a pasteurizer microbial audit if you suspect bacterial contamination. Properly diluted chlorine dioxide may be sprayed on equipment pre-feeding to help reduce pathogen exposure.

Environment. Flies can spread E. coli and Salmonella directly from calf to calf via fecal-oral contact. To reduce fly-hospitable conditions, minimize spilling of starter, water and milk around feeding areas, and keep weeds and grass short surrounding calf and heifer areas. Other methods to reduce fly populations include feed additives, sprays, baits and traps. Aluminum-based aerosol spray bandage works well to speed healing and keep flies out of fresh disbudding wounds (Huebner et al., 2017). Sand bedding is a better option than straw in the summer as it allows more airflow in hutches, and it allows for better heat dissipation from the calf. Keep it clean and well-drained as any moist bedding can harbor pathogens and attract flies. Extra care should also be taken to clean and sanitize hutches and pens between

calves/calf groups.

Ventilation. Proper ventilation and air exchange reduces humidity in calf barns to a point where it is difficult for pathogens to flourish. You may have to increase the number of air exchanges in your calf facility due to increased drinking and respiration of calves in warm weather.

LONG-TERM ECONOMIC IMPACT OF CALFHOOD DISEASES

It is important to understand that the cost associated with bovine respiratory disease and severe scours goes beyond treatment and labor costs at onset of each disease. In a 2017 study by Dunn et al., calves that were found via ultrasound to have suffered from respiratory disease before weaning went on to have a 1,155-pound decrease in first-lactation milk production. In another study, scouring calves treated with antibiotics gave 1,086 pounds less milk during their first lactation than those not treated (Soberon et al., 2012). With a milk price of \$16.50/cwt, you can see how potential lost to early disease can add up down the road. Make sure to keep accurate records of disease and treatments for each calf to help you make culling decisions to keep the best animals in your milking herd. ■

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