



DAIRYINFO

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How Does Your Calf Housing Stack Up?

The University of Wisconsin's School of Veterinary Medicine conducted a field study regarding air quality in calf units. In the trial, they measured the air quality within 13 calf facilities on Wisconsin dairy farms during winter months. The results were quite startling. Air quality, as determined by measuring the concentration of bacteria in the air of the calf units varied a lot — from very low to too many bacteria to accurately measure. Several factors were identified that contributed to air quality and solid recommendations were made from the research that can be applied to calf management on all farms, helping to reduce the incidence of respiratory infection.

Key recommendations made by this study were:

- Only have solid panels between calf pens, but not in the front and rear of pens, allowing for better air circulation
- Maintain deep straw bedding
- Lower the barn temperature
- Maintain at least 30 square feet of pen space per calf

Other research, conducted on a multi-year project, evaluated three main concepts:

- Housing type (poly hutches vs. wire mesh pens within a well-ventilated nursery)
- Bedding type (sand vs. straw bedding)
- Cooling calves with fans during summer months

Results from this research from September to March, showed that calves weighed five pounds less at eight weeks of age when housed in poly hutches vs. in wire mesh pens (32 square feet/calf) in a facility using straw bedding. All calves were bedded with straw for this aspect of the trial.

During the months of May through September, calves bedded with straw were six pounds to nine pounds heavier at eight weeks of age than calves bedded with sand. Additionally, calves in wire pens on straw bedding had the least days with scours, while calves housed in hutches on sand had the most days with scours. The data compared well to previous research conducted during winter months. In the winter trials, calves were bedded either on straw or hardwood shavings, and fed various amounts and types of milk replacers. Calves bedded with straw gained five to nine pounds more body weight by eight weeks of age when compared to calves bedded with shavings. Furthermore, in these trials increasing the amount of a conventional 20% protein, 20% fat milk replacer by 50% did not change weight gain, while the bedding type did. This demonstrates the importance and effectiveness of deep straw bedding.

Calves in poly hutches bedded with sand had significantly greater concentrations of airborne bacteria than calves within the nursery bedded with either sand or straw. Airborne bacteria concentrations were also measured in

several types of poly hutches on several other farms and were all very high (over 300,000 colony forming units/cubic meter of air). This compares to an average of 30,000 colony forming units/cubic meter of air within well-ventilated nursery pens. A possible management strategy to improve the air quality in hutches is to elevate the rear of hutches with thick boards or blocks. A simple 1.5 inch gap at the rear of hutches reduced the concentration of airborne bacteria within the hutches to under 100,000 colony forming units/cubic meter. These hutches were not shaded. In the 1990s, researchers at both Auburn University and the University of Missouri reported numerous benefits from shading calf hutches, especially in their southern climates. This may also benefit calves raised during hot, humid summer and early fall weather.

Airborne bacteria concentrations increased with calf age in the nursery. The range was 5,000 to 50,000 colony forming units/cubic meter of air in the calf pens. This makes it more difficult to ventilate nursery pens, increasing the chances of respiratory infection as calves get older. To this point, the University of Wisconsin research observed the highest incidence of respiratory infection in seven-week old calves. Also, extending the time calves are housed in nurseries or hutches could increase their chances of respiratory infection.

Fans operated during the daytime hours of 8 a.m. to 5 p.m. in order to cool calves during summer months supported approximately 11 pounds more weight gain and better feed efficiency at eight weeks of age compared to calves that were not cooled. Calves cooled with fans had lower respiration rates than calves not cooled. The panting or faster breathing in the calves that were not cooled with fans likely used more energy to reduce calf weight gain.

Summary:

- Use straw bedding, ensuring deeper bedding in colder, winter months ~ less respiratory infection and scouring, along with improved weight gain
- Ventilate facilities well ~ less respiratory infection and improved weight gain/development
- Keep calves cool during hot weather ~ improved weight gain/development

(Edited from an article in Dairy Herd Management)

SUMMER STILL HERE!
ARE YOU READY FOR FALL PLANTING?
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Interested in discussing topics in this newsletter, or to do a better job feeding and managing your cows? Call us today.

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THE TEAM FOR RESULTS
W-S FEED for SUCCESS!



Fall seeding... when and what is best?

Late-summer and fall establishment of certain forage species is often desired in many locations. Many producers do not realize how much fall seeding can affect yields in both the current and future years, while helping to improve forage inventories for the coming fall and winter months. Even grasses benefit into the next year. If you are looking for additional forage to maximize your available inventory, consider planting TRICAL, ForagePlus Oats, or one of the ryegrass varieties. The benefits of these species when planted in this time frame can garner outstanding results – and in many locations, provide additional benefits next spring ahead of corn planting. Even when considering various grass species the results have been exceptional. Numerous research trials, over a three-year period, showed excellent results, especially when seeding dates were spaced approximately every 2 to 3 weeks from August 1 to November 1. Species included orchardgrass, smooth bromegrass, timothy, reed canarygrass, perennial ryegrass, and tall fescue. Keep in mind that, the later the planting date, the more variable the results. TRICAL products may provide you with both a fall cutting as well as another one in the spring, depending on the variety and climatic conditions throughout the late fall and winter months. Delaying late summer seeding from mid-August to mid-September may result in substantial yield losses. Get the facts and plan ahead for late summer and fall seeding. August is an ideal 'target month' to grow more forage for feed in coming months.



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CHECK IT OUT!

