
DAIRY NEWSLETTER

Calf Program Bench Marking

Heifer calves dictate the future success of our dairy farms; making their health, housing and feeding important pillars of farm management. But how can we tell if we are doing an effective job of raising our calves? How do we find the bottlenecks that are holding heifers back from future production goals?

The first step to evaluating the success of a calf raising program is to compare to the industry standard. Three simple parameters can be used to set benchmarks: pre-weaning calf growth, morbidity and mortality. This will allow us to find the areas of our calf raising program that need improvement, and focus our efforts on fine tuning calf health management protocols.

Pre-weaning calf growth

The average daily gain of calves is one of the most important health indicators that we are able to measure. The gold standard for calf growth dictates that calves should double their birth weights by eight weeks of age, meaning an average daily gain of approximately 1.5 pounds per day. Healthy calves receiving adequate nutrition should be able to reach this goal and will outperform slower growing calves in terms of lifetime milk production. To assess if your farm is reaching this standard, weigh tapes are a simple tool that can be used to approximate calf weights at 0 and 56 days of age. The average daily gain can then be calculated and used to track the success of calf programs over time. Your herd veterinarian would be more than happy to instruct you in the use of a weigh tape, or alternatively regular recording can be added to our technician's dehorning visits.

Calf growth is dependent on a number of factors including genetics, colostrum intake, milk intake, energy demands and environment. Failing to meet the goal of doubling birth weight by eight weeks of age should prompt an investigation into these contributing factors. The success of alterations to calf health protocols can be tracked over time using changes in average daily gains and weaning weights.

Pre-weaning calf morbidity

Morbidity can be defined as the rate of disease in a population. The two most important disease states in pre-weaning calves are scours and pneumonia. Therefore, pre-weaning calf morbidity is the rate of scours and pneumonia in calves under 56 days of age. With ProAction requirements for treatment records and protocols, this data should now be recorded on every farm, so why not use it? According to the DCHA 2010 survey, the average pre-weaning incidence of disease was 25% and 10% for scours and pneumonia respectively. To calculate the incidence of disease on your farm, use the number of calves treated at least once for scours, divided by the total number of calves raised over that set time period (and then repeat the process for pneumonia).



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If the morbidity for pneumonia and scours are too high, an investigation into disease specific factors should be performed. The incidence of disease is determined by 3 types of factors: host (health and immunity of the calf, including vaccines), agent (the virus, parasite or bacteria) and environment.

Pre-weaning calf mortality

According to the DCHA 2010 survey, pre-weaning calf mortality is on average 5% between day 1 and 60. Thanks to ProAction requirements, this data should also be easy to find on your farm. Take the number of calves that died for any reason between day 1 and 60, divided by the total number of calves born during that selected time period to achieve this number. If you record the cause of death, this can be used to further categorize pre-weaning mortality.

Ideally, the cause of death for all mortalities should be determined. If mortality rates in pre-weaned calves are too high, post mortem and treatment data can be used to focus on which diseases are issues on farm.

Take home message: The health of pre-weaning calves is important to the success of dairy farms. Calf growth, morbidity and mortality can be used to assess the success of a calf rearing protocol. Your herd veterinarian can help you achieve the North American average for these three parameters, and challenge you to exceed them.