To cull or not to cull (III)

(This article is continued from the April 2014 issue.)

During and after a major [dairy] expansion, it may be particularly difficult to control proportions of involuntary and voluntary culls. In an analysis of 186 Wisconsin herds that expanded significantly between 1994 and 1998, Weigel et al. (2003) noted that cows in the bottom 20% for production in these herds prior to expansion were 4.2 times more likely than the average production cow to be culled, while after the expansion, they were only 2.55 times more likely to be culled than the average cow. In contrast, cows in the top 20% for production in these herds prior to expansion were only half (0.5) as likely to be culled as the average cow, while after the expansion, they were 0.68 times as likely to be culled than the average cow. These results indicate that following an expansion, voluntary culling decreases and involuntary culling increases.

Culling Due to Death

Death may be the most devastating cull for a dairy, both emotionally and economically. The impact of a death to the bottom line of a dairy is both the lost revenue from selling the cow for slaughter or dairy purposes, as well as any labor and medical costs for treating the cow prior to death.

According to the 2007 NAHMS survey, 5.7% of cows in the typical herd died. *"This rate has increased in recent years since BSE was found in the United States (2003) and it subsequently became illegal to sell down and disabled cattle"* (Stone et al., 2007).

Death losses can vary substantially between herds indicating that management, nutrition and environment all can impact death losses. An analysis of records from 21 New York dairies, found that the average death loss ranged from 3.5%-16.8% (Stone et al., 2007). Death losses were less than 5% in three of the herds, indicating that a realistic and obtainable goal for dairies is to achieve a death loss of less than 5%. It should be noted that management of all these dairies was considered to be average or above average for similarly sized dairies. It is interesting to note that the three herds with the lowest overall death rate had death losses greater than 0.5% in the first 5 days of lactation, indicating either that these dairies have the opportunity to further reduce their death losses or that if an animal on these dairies appears to have a low chance of recovery, the decision to terminate the cow is quickly made. One interesting observation was that three of the five herds with the lowest death loss also had the most aggressive hoof trimming program with overgrown toes rarely observed on these dairies (Stone et al., 2007). Necropsies are rarely performed on causalities, despite research at Colorado State University noting that cause of death is misdiagnosed more than 50% of the time (Pierce, 2008). For operations that necropsied at least one death, on average, these operations were necropsying 4.4% of cows that died (NAHMS, 2007).

Reasons for Culling

According to the NAHMS survey, only 21.9% of culls would be considered voluntary as cows were culled due to low production or sold to another dairy as a dairy replacement. Approximately 65.3% of cows culled were culled due to mastitis or udder problems, lameness or injury and reproductive problems. This is probably a conservative estimate of involuntary culls as some of the low producing cows probably had some other problem such as a post-calving metabolic disorder or previous lameness episode that contributed to the low production. Several studies have noted that incidence of lameness is under reported (Whay et al., 2002). Similarly, a team of Michigan veterinarians evaluated 13,144 cows on 95 dairy operations (Kopcha et al., 2003). They reported that while dairy producers estimated that only 4.5% of cows were lame, nearly 52% of cows were identified by the veterinarians as mild-to-acutely lame. These studies confirm earlier research in which lameness recorded by independent observers was 2.5 times higher than prevalence reported by dairy producers (Wells et al., 1993). Clearly, reducing involuntary culling requires implementing programs on the dairy aimed at reducing mastitis, lameness and injuries, while increasing the number of cows that conceive in a timely fashion. It may also be helpful to develop a proactive program that is aimed at reducing lameness on the dairy.

Conclusions

When and why cows are culled has a direct impact on dairy profitability. Three important numbers to monitor on a dairy to determine if the right cows are leaving the dairy at the right time include:

- Percent of cows (dry and lactating) that die in a 12 month period. The target is to have <5% of the cows die in a 12 month period.
- Percent of cows that calve that are culled (including deaths) in the first 30 and first 60 days of lactation. The target is to have 6% or less of the herd culled in the first 60 days in milk.
- Average Cow Value of cows culled from the herd. The target is to have the Average Cow Value of cows leaving the herd be less than $100.

(Edited from an article by M. Socha, et al)

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THE TEAM FOR RESULTS

SOLUTIONS FOR SUCCESS

Tomorrow's Herd ~

Nutrition and management can critically influence the health and growth of your future lactating herd: calves and replacement heifers! On many farms, raising replacements represents about 15-20% of the cost of producing milk. The goal is encourage heifers to grow and develop to their full lactation potential at a desired age and at minimal expense. In order to achieve optimum results, consider implementing a quality nutrition and management program for calves and heifers ~ in fact your entire herd! This can make a positive difference in both productivity and profitability currently and long term. A calf and replacement heifer program is an important investment. Start growing your future today! I'll be happy to review your entire program and work with you toward greater success now and in the future. We can also discuss heat stress and its impact on your replacement animals.

The impact of quality cow comfort!

There has been a great deal of research in recent years that has focused on cow comfort, and its impact on productivity and profitability. Cow comfort is an important key to reaching your milk production goals, along with good nutrition and genetics. When you combine quality nutrition and good genetics, along with ideal cow comfort your cows will produce more milk, live longer and healthier lives, and reward you with improved milk production. As we move toward summer and the chance of extremely hot, humid weather, this becomes an important and critical issue – but in reality, cow comfort is a year-round consideration. How much time do you take to evaluate your herd's comfort? This involves not only the lactating cows, but also your calves, replacement heifers and dry/ transition cows. We often overlook the other groups on our farm, which can be positively impacted when we pay a little attention to their needs as well. Consider this picture: cows resting in a soft meadow on a cool summer day; a stream flows nearby through a grove of trees; a gentle breeze stirs the air… and the cows seem to have it all. The scene is idyllic. It paints a picture of quality feed and water, good ventilation and fresh air, a soft and clean place to rest, and sound footing. The essence of ideal cow comfort includes each of these components. Are your cows enjoying the "comforts of home" on your farm? Are you working proactively against the impact of heat and humidity? Add comfort to the equation for all your cows and appreciate how they perform!

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