



DAIRYINFO

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Taking service to another level!

To cull or not to cull (II)

Are the right cows leaving the herd? At some point, all cows leave the herd, regardless of level of production or genetic merit. When and why cows leave the herd has a direct impact on dairy profitability. Cady (2005) noted that *"Culling management is more complex than simply reducing herd turnover rate."* A cow that leaves the herd before her time negatively impacts the bottom line of the dairy, as she hasn't generated enough marginal income to recoup rearing costs or purchase price. Similarly, like an athlete that stays in the game beyond their time, a cow that stays in the herd beyond her time hurts the profitability of the dairy by occupying a space that could be occupied by a more productive and profitable cow.

Culling is probably best defined as departure of cows from the herd because of sale, slaughter, salvage, or death (Fetrow et al., 2006). In the 2007 NAHMS survey, 23.6% of cows were culled, not including cows that died. In general, as the size of the dairy increases from fewer than 100 cows to 500 cows (or more), the percentage of cows permanently removed from the operation decreased from 24.1% to 23.4% (NAHMS, 2007). It appears that culling and death rates are increasing over time. Michigan DHIA data indicates that from 1959 to 2001, herd turnover rates have increased from 29% to 41% and % died increased from 1.8% to 6.9% (Ferris and Ross, 2003). It is noteworthy that herd turnover and death rates increased in the 1990s.

How Does Culling Affect Profitability of the Dairy?

Replacement costs are the third largest expense on the dairy, with only hired labor and feed costs comprising a larger portion of expenses (Thomas et al., 2003). It has been estimated that the average replacement heifer needs to produce approximately 15,876 kg of milk to pay off her purchase price or rearing costs (Thomas et al., 2003). Thus, it appears that reducing the number of cull cows and increasing the number of parities each cow attains before culling, can increase profitability of the dairy due to reduced need for growing or purchasing replacements. Nunes (2008) noted that decreasing the culling rate by 5% in general, can increase the profitability of a dairy \$0.15 to \$0.20/cwt. However, culling is a balancing act between milk production and genetic progress. Fisher (2008) observed in analysis of 18,146 Canadian cow records that younger cows are genetically, consistently better than older cows and that rank within the herd drops on average by 6% per year. In other words, "if a cow is in the 60th percentile this year, she would be in the 54th percentile next year." However, milk production increases 17% between first and second lactation, 8.7% between second and third lactation and 5% between third and fourth lactation (Fisher, 2008). In his analysis, Fisher (2008)

determined that the fourth lactation was the most productive with regards to genetic improvement and lactation yield. It should be noted that the most productive lactation is dependent upon several factors including cost of heifers, and as price of heifers increases, the most productive lactation number increases. Fetrow (1988) noted that there are several fundamental questions that need to be asked when making the decision as to whether or not to remove a cow from the herd:

Improved profitability associated with replacing a cow is dependent upon several factors including the quality of replacements available, quality of cows currently in the barn, cost of replacements minus salvage value of cows being replaced, marginal cost of producing milk and available capital if purchasing replacements. Generally, factors that tend to increase net income per cow, such as higher milk prices and high milk production, favor higher culling rates (Thomas et al., 2003). In contrast, factors that result in lower net income per cow, such as higher replacement costs, lower milk prices and higher feed costs tend to favor lower culling rates (Thomas et al., 2003). A key finding evident in this analysis is that cutting culling rates in herds with average production has a greater impact on dairy profitability than in high production herds. For example, when dairy replacements are valued at \$1800, decreasing the culling rate from 50-to-25% will help to decrease replacement cost in an 8,165 kg herd by about \$1.80/cwt., while in a 13,608 kg herd reducing culling to this extent decreases replacement costs by \$1.09/cwt. Another way to look at this is that the replacement cost per hundredweight on an 8,165 kg herd with a 30% cull rate is the same as a 13,608 kg herd with a 50% cull rate.

Increase profitability by reducing involuntary culls: as noted above, the optimum culling rate for a dairy is dependent upon a number of factors. However, all dairies have the potential to improve profitability by lowering the involuntary culling rate (Thomas et al., 2003). Rogers et al. (1988) estimated that decreasing involuntary culling from 19.4% to 1.6% and increasing voluntary culling from 7.8% to 15.2% increased annualized returns per cow by \$136. This article will be continued in the April edition.

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

SPRING IS HERE!

**Time to Think Preservatives/Inoculants
W-S FEED... *quality & service!***

Interested in discussing topics in this newsletter, or to do a better job feeding and managing your cows? Call us today.

Our goal and commitment is to help you!!

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THE TEAM FOR RESULTS

SOLUTIONS FOR SUCCESS

Ready or Not?

Hot and humid weather comes quickly... when it comes! This often means heat stress for livestock. It is vitally important to be prepared before temperatures climb in order to alleviate the potential impact of heat stress, which may include reduced feed intakes, lower production and the potential of numerous health considerations. Preparations for summer heat and humidity may include a review of the barn's ventilation system; checking that you have sufficient fans – and that they are clean and in good working condition in order to manage necessary airflow; and to take a closer look at summer rations. Summer rations may need to provide your cows with supplemental energy, as an aid in reducing the effects of heat stress. Call me today and let's review ideas on how to deal with heat and humidity this year and help to avert the impact of heat stress on your livestock before it becomes a reality!

Think Preservation! Get Quality.

It's not too soon to start considering an inoculant or preservative that can effectively aid silage fermentation and stabilization. A quality, research-tested product can dramatically impact forage quality during storage and until feedout. However, keep in mind that not all preservatives or inoculants are "created equal." There are many products on the market that make numerous claims, which are unsubstantiated in some cases. The research that goes into such products, along with on-farm management of forages and end-results, is critical when making a decision on what to purchase. Quality forages are an investment in the rations that you will be feeding your dairy and livestock throughout next fall and winter. If you choose not to use a preservative or inoculant you potentially place your feeding program at risk, losing valuable quality and dry matter availability. This ultimately can have a critical impact on how our animals can perform. W-S Feed offers a unique lineup of quality products that can help to meet your silage and haylage needs this year. Don't delay! Harvesting often begins before we completely realize it is time. Get all the facts and plan to use one of our W-S Feed-recommended products! Call me today for details, technical and application information, and more!



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Ready or Not?

CHECK IT OUT!