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FOCUS ON LONGEVITY

Longevity evokes the impression of profitability within a dairy operation. Yet in many cases longevity is based on a series of decisions and events that have forced the producer to keep unprofitable and perhaps “broken” cows. Longevity should be linked with the term “lifetime and profitable production”. The ability to cull animals from the herd on a voluntary basis has been a major challenge for many dairy producers. The average turnover rate for North America is estimated at approximately 38% - in some herds this can be profitable while in others this could be financially disastrous.

The **NAHMS** (National Animal Health Monitoring System) survey from the US market indicates that in many scenarios the dairy industry has not improved health and culling statistics and in some scenarios the numbers have worsened. The attached comparison from the **1996 and 2007 NAHMS** data set examines health problems. This data shows that the only improvement was a slight reduction in the cases of recorded milk fever.

% of Cows by Health Problems

Problem	NAHMS Dairy 1996	NAHMS Dairy 2007	Trend
Clinical Mastitis	13.40%	16.50%	↑
Lameness	10.50%	14.00%	↑
Respiratory	2.50%	3.30%	↑
Retained Placenta	7.80%	7.80%	↔
Infertility Problems	11.60%	12.90%	↑
Milk Fever	5.90%	4.60%	↓
Displaced Abomasum	2.80%	3.50%	↑

Over the last 10 years there has been tremendous improvements in cow management, barn and stall design and nutritional knowledge, yet some of the key culling reasons have persisted. The **NAHMS** data comparing 1996 to 2007 indicates that the death loss has increased and the reasons for culling have increased in key areas such as lameness and reproduction. Voluntary culling, which is linked to milk production and culling less profitable animals, had actually decreased from 21.4% to 16.1%, respectively.

Other factors that are linked to longevity and overall herd profitability are the success of the transition cow program and the ability to raise adequate heifers to replace cows leaving the herd.

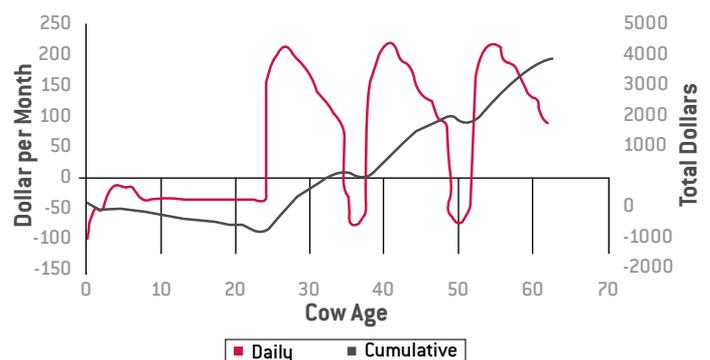
The 2007 **NAHMS** survey indicates that 24.1% of the cows that leave the dairy herd do so in the first 60 days. Whether this is due to voluntary or involuntary culling, it represents the “worst case” scenario for longevity and lifetime production. The animal that leaves the herd

at this stage has incurred the cost of the dry cow program and the lactation potential has been lost. In many scenarios, dairy producers are not accurately recording the incidence of post-calving metabolic disorders. The culls are labeled as production, lameness, etc without establishing the link with metabolic disorders.

Raising adequate numbers of replacement animals that are genetically superior to herd mates is a critical strategy for improving longevity and lifetime production. The **NAHMS** study illustrates that the number of calves that were born alive as a percentage of total cow inventory has decreased from 1996 [93.4%] to 2007 [86.0%]. Mortality, for both unweaned and weaned calves, has improved from 1996 [13.2%] to 2007 [9.6%]. This is a significant improvement but far from a realistic benchmark of < than 5% mortality.

Culling a 1st lactation heifer within the first 60 days of lactation due to transition problems is especially detrimental to profitability. David Galligan from the Pennsylvania School of Veterinary Medicine estimates that it takes one full-lactation for a heifer to offset her rearing costs. The heifer must remain in the herd until halfway through her second lactation to actually turn a profit. Focusing on improving heifer mortality, heifer growth management and heifer transition management will lead to improved lifetime production. David Galligan’s chart (below) examines the costs and revenue over the lifetime of a dairy cow. The cumulative revenue, which examines when the dairy animal is both generating and not generating revenue, isn’t in a positive position until the 2nd lactation.

Cash flows of a cow's life, monthly and cumulative



Longevity and profitable lifetime production are affected by a myriad of factors from nutrition to barn design to cow comfort but most of all herd management decisions. Understanding the “hows” and “whys” of cows and heifers leaving the dairy herd will allow the producer to make management decisions based on profitability and lifetime production. 🍷