

Canadian National Dairy Study Cull Cow Management

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Why is this important?

In Canada, producers cull approximately 30% of their herd each year. Given the risk that health concerns may pose to animal welfare, the decisions around when and where to ship each cow become particularly important.

Cull cows are at a high risk of becoming lame, non-ambulatory, injured, or ill during transport. When shipping cattle, factors that should be considered include shipping times, distances, location (i.e. auction market, abattoir), ambient temperatures, weather conditions, and stocking density. Studies have found that shipment of these animals continues to be an important welfare concern for the industry. The Canadian Food Inspection Agency enforces the Health of Animals Act and Regulations, which specify the condition in which animals may be shipped, what constitutes an unfit or compromised animal, and how long compromised animals may travel (max. 12 hours). The objective of this study was to describe self-reported shipment behaviours of Canadian dairy producers and understand producer perspectives on the factors that influence their decision to cull a cow.

What did we do?

The Canadian National Dairy Study (2015) was designed to gather dairy cattle health and management data from dairy farms across all provinces. Targeted data included herd demographics, biosecurity, animal care, lameness, calf health and management, reproductive management, and udder health.

The study was conducted in 2 phases: phase I was a producer survey and phase II consisted of farm visits to a subset of phase I participants. The questions focused on:

- the number of cattle leaving the farm and their destination (auction/sale/stockyard, abattoir, another farm),
- the importance of different factors on culling decisions (drug withdrawal status, ability of cow to stay standing, reproductive status, current SCC of the cow, body condition score, length of the trip, quota incentive period, current cull cow price).

In total, 1,076 surveys were analyzed for this study.



What did we find?

The ability of the cow to stand and stay standing and drug withdrawal status were the most important factors when deciding to cull and transport sick or lame cattle (Table 1). Although this represents a majority, it is concerning that 7% of producers do not view these factors as important. This represents a risk for food safety and animal welfare. Body condition score was only viewed as important by 52% of producers. This suggests a noticeable gap in assessing fitness for transport, as we expect a cow's condition to worsen during transport and an already thin animal is at higher risk.

Producers were generally confident that most cattle they sent to slaughter would arrive at the slaughter facility in the same condition as they left (>80% scoring ≥ 8 , with 10 being very confident). However, producers felt very unsure about knowing the final destination. Factors related to economics (cull cow price, quota incentives) were not generally viewed as being important. The time between culling decision and when the cow was actually transported was longer for lame cows than sick cows.

Table 1. Proportion of producers' views on the importance of several pre-given factors when making culling decisions.

Factor	Very important /important	Moderately important	Little importance
Drug withdrawal status	93%	2%	5%
Ability of cow to stand and stay standing	93%	5%	2%
Reproductive status	65%	19%	16%
Current SCC	64%	17%	19%
Body condition score	52%	26%	23%
Length of the trip	46%	22%	32%
Quota incentive period	36%	25%	39%
Current cull cow price	30%	27%	44%
Availability of transport to sale or slaughter	27%	15%	59%
Number of cows to be transported	18%	15%	67%

What does it mean?

Several of the factors considered in this study are important considerations that may impact a cull cow's health and welfare after culling. There appears to be a disconnect between producer's assumptions and the reality of a cull cow's journey. In Canada, the most common route for cull cows to go to slaughter is through a livestock auction, which may result in several days between leaving the farm and slaughter. Previous studies demonstrated that cull cows often arrive at auctions with compromised health and reduced welfare. This study identified an important gap in producer awareness of how a cow's condition may degrade while in the marketing system. Furthermore, studies have found that there is a low level of agreement when it comes to assessing fitness for transport in dairy cows. Inconsistent views among veterinarians, producers, and livestock drivers on what is "fit for transport" and assumptions that a cow's condition will not worsen during transport are important barriers to decision-making.

Assessment of fitness for transport is a critical first step in better management of cull cows, with decisions followed promptly by action. Future efforts to address this problem should combine efforts to raise producer awareness and understanding with new policies and/or regulations surrounding transport of compromised animals. Additional infrastructure and transportation options will also help Canadian producers to make the best decision for each of their animals.

Summary Points

- The ability to stand and drug withdrawal status were the most important factors for culling decisions.
- Producers felt confident that their culled cows would arrive at slaughter in the same condition as they left but were unsure of the location of their final destination.
- There are several gaps in producer awareness of the cull cow's journey, which can be used to develop tailored programs aimed at improving cull cow decisions and cow welfare.