



# Research Reports

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### The welfare of cull dairy cows from farm to slaughter

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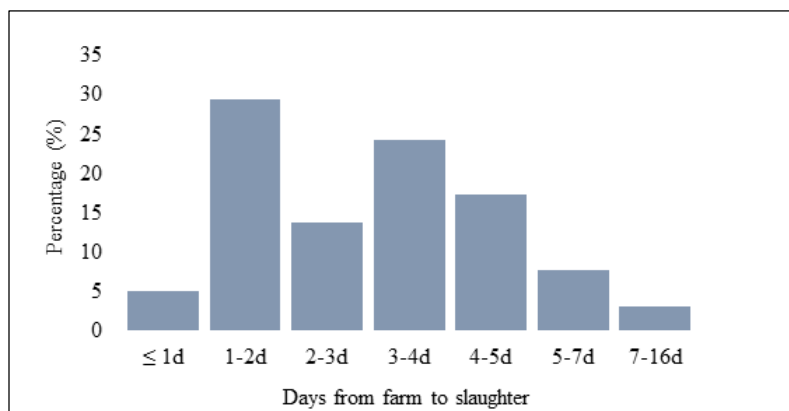
Every year about 250,000 cows are removed from Canadian dairy herds, in many cases with health challenges such as lameness or mastitis. The marketing system for cull dairy cows typically involves loading at the farm, further handling at livestock markets, and then transport to a slaughter plant, sometimes with significant delays that could lead to deterioration of their condition. In this study, we followed cull cows from dairy farms in British Columbia to their final destination in order to understand the kind of journeys they undergo, the delays that can occur, and their condition on arrival at the final destination.

During 2017-2018, we regularly visited 20 participating dairy farms, 2 auction markets in the Fraser Valley, and 6 slaughter plants located in British Columbia, Alberta, and the USA. We visited the dairy farms regularly just before cows were shipped and recorded body condition score (BCS), udder condition and lameness. At the slaughter plants, trained assessors evaluated the cows' condition at arrival and recorded the time of slaughter.

We were able to follow 731 cows from farm to one of the participating slaughter plants. We found that only 9% of the cows were slaughtered at local BC plants whereas most (80%) were trucked roughly 280 km to the USA and 11% were trucked an average of 1,100 km to plants in Alberta.

For 538 cows we had complete records of the time the animals spent in the marketing system including time on the truck, at auctions and waiting at the slaughter plants. On average, cows spent 82 hours – about 3.5 days – in the marketing system before being slaughtered. About 41% were in the marketing system for 4-5 days and 11% for 6-16 days.

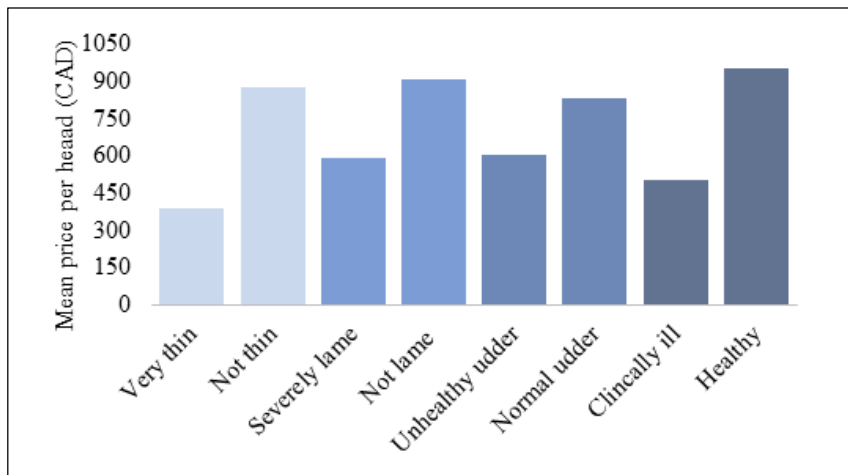
During this time, many cows visibly lost body condition. The percentage of thin cows (BCS  $\leq 2$ ) increased from 8% at the farm of origin to 27% at the plant. Lameness did not change, but cows with engorgement or inflammation of the udder rose from 8% at the farm to 48% at the plant. By combining scores for poor body condition, severe lameness and udder edema into a single “fitness for transport” score, we found that 22% of the cows had poor fitness for transport when removed from the farm, and this had increased to 60% when cows arrived at the plants.



**Figure 1.** Percentage of cows that experienced different delays (in days) from the 20 farms of origin until slaughter, including the time cows spent at livestock markets, assembly yards, and abattoir yards. Data were gathered for 538 cull dairy cows.



At the livestock markets, as well as recording the cows from the 20 participating farms we assessed a total of 6,263 cull dairy cows. About 30% of these animals were judged as having poor fitness for transport: 10% were thin, 7% severely lame, 13% had engorged or inflamed udder, and 6% had other defects including abscesses, signs of pneumonia or other illness, hobbles, eye injury or lump jaw. These cows were sold for lower prices than cows showing good fitness for transport.



**Figure 2.** Mean price per head paid for cull dairy cows with poor and good condition/health, at two livestock markets in British Columbia.

The delay from farm to slaughter – averaging over 3 days – will come as a surprise to many dairy farmers who imagine that cull cows will be slaughtered promptly after leaving the farm. And BC is not alone, as similar delays are reported from other parts of Canada. We need the help of the whole industry to make these findings known to producers so they can take the potential delays into account when they decide whether to ship an animal.

We also need better criteria for deciding whether an animal should be loaded. Given the likely delays, cows should be well dried off before being shipped, and ideally they should have a Body Condition Score of around 3 so they won't become very thin during several days in the system.

For more information on this research project, email [j.stojkov@alumni.ubc.ca](mailto:j.stojkov@alumni.ubc.ca) or [dfraser@mail.ubc.ca](mailto:dfraser@mail.ubc.ca).

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