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Use and perceptions of on-farm emergency slaughter for dairy cows in British Columbia

When farm animals become injured, farmers must decide whether to treat, transport, euthanize, or use on-farm emergency slaughter (OFES). OFES is one end-of-life option for animals that cannot be transported humanely but are fit for human consumption. OFES is allowed in the European Union as well as in several Canadian provinces. In the OFES process, veterinary inspection, stunning (using a firearm) and bleeding of the animal occur on the farm before the carcass is transported to a slaughterhouse for processing. The stated goals of OFES are to avoid undue suffering of an injured animal and to salvage meat.

In British Columbia, OFES is used primarily for dairy cows and occurs in situations where dairy industry professionals (i.e. dairy farmers, veterinarians and others) are faced with making a decision that is unexpected and unwanted, and where there may be uncertainty over the diagnosis of the condition and prognosis for the cow. Both in British Columbia and elsewhere, OFES is acknowledged to be a controversial practice that is used and supported by some but not others. Therefore, we conducted two studies to first determine the types of injuries that lead to OFES, and second to identify the controversies and perceptions about OFES. We then combined study findings and developed recommendations for the OFES program that could retain its positive features and address valid concerns.

First, we examined veterinary inspection documents for 812 dairy cows that underwent OFES from August 2014 to December 2015. Table 1 lists the injury or condition that led to OFES for each age group of cows. Leg injuries,

including fractured femurs and stifle injuries, were the most common, with rear leg problems outnumbering front leg problems by 3:1. Hip injuries included mostly partial and full hip dislocations. 61% of nerve injuries were classified as damage to the obturator nerve which can be damaged during the calving process. Foot injuries and lameness were most common among cows aged 5 years and older. Hind-end injuries, mostly classified as hind-end weakness, were especially common for cows aged 6 years and older. In summary, OFES was often used for acute injuries such as fractured femurs, but it was also used for more chronic conditions such as lameness in older cows.

Table 1 Injury or condition that led to OFES for each age group of cows from August 14, 2014 to December 31, 2015. Percentage of cases is shown within each age group, with the actual number of cases in parentheses. From: Koralesky, K.E., and D. Fraser. 2018. Use of on-farm emergency slaughter for dairy cows in British Columbia. *J. Dairy Sci.* In press. <https://doi.org/10.3168/jds.2017-14320>

Injury or condition	Age group			
	1-2 yr	3-4 yr	5 yr	6+ yr
Leg	48 (57)	40 (112)	33 (80)	40 (31)
Hip	21 (25)	26 (73)	24 (58)	13 (10)
Nerve	13 (15)	12 (35)	16 (39)	5 (4)
Spinal	9 (11)	10 (28)	7 (18)	10 (8)
Foot	1 (1)	5 (15)	13 (31)	14(11)
Hind-end	8 (9)	7 (20)	6 (15)	17 (13)
Total	100(118)	100 (283)	100 (241)	100 (77)

In comments written by veterinarians on the

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documents, some form of the term “non-ambulatory cow”, for example “downer”, appeared on 63% of the documents. This shows that OFES was often used for down cows regardless of the specific injury or condition they had. Some documents included information about the number of days elapsed between the injury and OFES; some were done on the day of injury, but others noted delays of up to several days. These data show that OFES is sometimes used shortly after an acute injury, but it is also used after longer delays.

To understand dairy industry professionals’ perceptions of OFES, we conducted 25 individual interviews and 3 group interviews (“focus groups”) with 40 dairy farmers, veterinarians and other industry professionals. We spoke with participants who supported and used OFES and those who did not. These discussions revealed positive and negative perceptions of OFES influenced by participants’ values, by how they perceived the operational legitimacy of OFES, and by concerns about social responsibility and public perception of the dairy sector.

Perceptions were influenced by participants’ values regarding cow welfare, avoiding financial loss, and meat salvage. Some participants believed that OFES promoted fast decision-making for injured cows and was therefore positive for cow welfare. Others thought OFES prolonged animal suffering, for example if farmers waited for the veterinarian, transporter, or slaughterhouse to be available rather than doing prompt euthanasia. Additionally, although some participants appreciated that they could gain financially through OFES, more appreciated that OFES helped them avoid the cost of carcass disposal. Finally, participants valued OFES as a way to feed people instead of wasting meat from an animal that they had raised and cared for.

Some participants expressed confidence in the OFES program while others did not. Supportive participants saw OFES as an accessible program adequately regulated by legislation, veterinarians and meat inspectors. Participants who lacked confidence in OFES felt there had been a lack of clarity, for example regarding which injuries or conditions were appropriate for OFES, when the program began.

Participants also questioned whether veterinarians may be put into a conflict between their duty to verify an animals’ eligibility for OFES and their client’s desire to use the program. Additionally, some participants felt that if veterinarians were not consulted first on the animals’ eligibility for OFES, they may feel pressured to endorse the farmers’ decision to use the program.

Many participants were concerned about how OFES could affect public perception of the dairy industry and felt responsible for how OFES affected compromised cow management. Some participants saw OFES as a positive opportunity to avoid the inhumane transport of cows to public auction, but others saw it as a stop-gap rather than a satisfactory solution to compromised cow management. Participants also expressed concern over food safety depending on hygiene at the site of slaughter. Finally, although participants did acknowledge that accidents happen on farms, proactive culling was discussed as a better way of removing animals that are at risk of developing problems in the future.

We make the following recommendations for the OFES program that retain its positive features but also address valid concerns:

1. Clarification is needed on what conditions (for example, fractures versus lameness) are allowable for OFES.
2. Precise timing parameters are needed to avoid inappropriate delays.
3. Veterinarians need training on how to verify animals’ eligibility for OFES.
4. Veterinarians should be designated as the first point of contact in the OFES process.
5. Proactive culling should become the norm so that emergency procedures like OFES are needed less often; however, each farm should have an end-of-life decision-making protocol to use when necessary.
6. OFES needs to be conducted in a hygienic location with appropriate equipment.

For further information please email Katie Koralesky at katie.koralesky@alumni.ubc.ca. We are grateful to the study participants and the British Columbia Ministry of Agriculture for the provision of the veterinary inspection documents. General funding for the Animal Welfare Program is provided by NSERC, the British Columbia Dairy Association, the Dairy Farmers of Canada and many others listed at <http://awp.landfood.ubc.ca/>