 University of British Columbia Centre for Dairy Education and Research	Document Number	SOP-COW-004
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DOWNER COWS		

1. PURPOSE

1.1. This Standard Operating Procedure (SOP) instructs farm staff and students what to do when a downed cow is found.

2. SCOPE

2.1. This document refers to the dairy cattle housed at the UBC Dairy Education and Research Centre.

2.2. This SOP will describe the methods used to assess the reason for the cow's inability to stand, and the steps to take to treat and/or move the animal to a hospital pen.

2.3. This document will also provide a general overview of important points to remember which impact the welfare of the animal.


3. RESPONSIBILITY

3.1 The Operations Manager is responsible for reviewing and updating this procedure as required

3.2 The Operations Manager is responsible for ensuring all staff are trained in this procedure.

3.3 Staff and students are responsible for reading and understanding the information in this procedure, and reporting the location of any downed animal to the Farm Worker II on duty, or to the Operations Manager.

3.4 The Farm Worker II along with the Operations Manager are responsible for the initial assessment and treatment of a downed animal. If necessary to call in the

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herd veterinarian, he/she will assume responsibility for the treatment of the animal.

3.5 The Farm Operations Manager and the herd veterinarian are the only two persons authorized to euthanize an animal.

4. TRAINING

Training will include animal handling, and the handling of biological specimens. See SOP on Cattle Blood Sampling.

5. DEFINITIONS

5.1. Downer Cow: a non-ambulatory cow. A cow that is unable to stand or move without assistance, regardless of size or age.

5.2. Transition Cow: a cow is referred to being a Transition cow from three weeks pre- until three weeks post-calving. Cows face many metabolic and management challenges during this time period as she transitions into a lactating animal.

5.3. Nonambulatory: cows that are unable or unwilling to stand and remain recumbent for ≥ 12 hrs.

6. SAFETY PRECAUTIONS

6.1. Cows are heavy animals and care must be taken when moving them not to injure one's self.


6.2. All personnel entering the cattle facilities will wear personal protective equipment -coveralls, and dedicated facility footwear is worn to enter the animal holding area. When working with blood, disposable latex gloves must also be worn.

6.3. Care will be taken when handling sharps; needles and syringes will be disposed in appropriate sharps containers.

6.4. Wash hands thoroughly with soap and water when leaving the barn.

7. PROCEDURE

7.1. If a cow is found unable to stand, **immediately** inform the on-duty Farm Worker II or the Operations Manager.

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7.2. The Farm Worker will then obtain background information: animal #, DIM, health history, age, and will investigate why the cow is not standing-is she stuck, or trapped somehow? If not, perform an assessment for an injury, metabolic disease or other disorder. **See Fig 1. Decision Tree.**

7.3. If the cause of recumbency is unclear, consult the herd nutritionist, especially if this is a Transition cow. The herd nutritionist will review the ration, and develop a plan to help prevent further cases from occurring.

Metabolic diseases at the UBC Dairy have been greatly reduced due to constant consultation with the herd nutritionist, and revision of the cow's diet as she moves through the Transition stage.

7.4. If the cause for recumbency is still unclear, consult the **herd veterinarian.**


Injuries to the cows have been greatly reduced due to the use of sand bedding (see SOP on Cow Stall Maintenance).

7.7. If there is a serious injury, animal is to be euthanized immediately by a professional. **DO NOT** move animal. See SOP on Euthanasia

7.8. Incidents and all treatments are to be recorded in the day book located in the vet room.


8. ANIMAL TREATMENT

8.1. If the cow does not respond to treatment within an hour, and she is in a free stall, on concrete or other surface that has insufficient cushion/traction for a recumbent cow, retrieve the wooden sled and some help. Gently pull (people power only) cow onto the sled with a rope halter and then, using a bobcat pull the sled out of the barn to a

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large, well bedded pack pen. Provide the cow with clean water and feed within easy reach.

- 8.2. With the help of several staff, manually shift cow's weight from side to side every 6-12 hours if cow is not doing that herself.
- 8.3. **Nonambulatory animals are never moved.**
- 8.4. If there has been no improvement in the cow's condition within 24 hours, as determined by whether or not she is eating, drinking water and/or defecating, a blood sample should be taken and sent for analysis.
- 8.5. If treatments have had no effect and no injury is evident (as determined by veterinarian), downer cows can be allowed 96 hours to become standing (provided they are eating and attempting to stand). After this point, the probability of standing is greatly reduced. The veterinarian will make the final decision on if animal should be

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euthanized. If such a decision is made, the animal will be euthanized on site by a professional. See SOP on Euthanasia

9. REFERENCES

- 9.1 CCAC Guidelines on the care and use of farm animals in research, teaching and testing. Canadian Council of Animal Care. 2009.
www.ccac.ca/Documents/Standards/Guidelines/FarmAnimals.pdf
- 9.2 Code of Practice for the Care and Handling of Dairy Cattle. National Farm Animal Care Council. 2009. <https://www.nfacc.ca/codes-of-practice/dairy-cattle#current>
- 9.3 Green et al. 2008. Factors associated with occurrence and recovery of nonambulatory dairy cows in the United States. Journal of Dairy Science. 91:2275-2283.
- 9.4 Stojkov et al.2016. Nonambulatory cows: duration of recumbancy and quality of nursing care affect outcome of flotation therapy. Journal of Dairy Science. 99:2076-2085.

10. REFERENCED SOPS

1. SOP-Cow-001 Cattle Blood Sampling
2. SOP-Cow-003 Euthanasia
3. SOP-Cow-010 Cow Stall Maintenance
4. SOP- Cow-013 Giving Calcium
5. SOP-Cow-013 Subclinical and Clinical Mastitis

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11. APPROVAL AND REVISION HISTORY

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Fig 1. Decision Tree

