

THE CARE AND USE OF FARM ANIMALS IN RESEARCH, TEACHING, AND TESTING

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These frequently asked questions (FAQs) are intended to assist investigators, instructors, and members of animal care committees in the implementation of the [CCAC guidelines on: the care and use of farm animals in research, teaching and testing](#) (CCAC, 2009). FAQs provide general responses to comments and questions received by the CCAC during the external reviews of this guidelines document.

If you do not find the answer to your question here, do not hesitate to [contact the CCAC](#) and we will be pleased to provide assistance.

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1. Do the guidelines apply to farm animals kept at institutions when they are not being used for research, teaching, or testing?

The guidelines apply to all farm animals kept at research and teaching institutions when they are used for, or are intended to be used for, scientific purposes. These animals should be listed on an animal use protocol, reviewed by the local animal care committee. If institutions keep animals separately and exclusively for commercial purposes unrelated to research, teaching, or testing, there is no requirement to include them in an animal use protocol. There is also no CCAC expectation that these animals be overseen by the institutional animal care committee. However, the CCAC encourages institutions to house these animals in conditions that meet CCAC standards.

Animals that could **potentially** be part of research, teaching, or testing activities should be on an approved holding protocol, overseen by the animal care committee and held in conditions that meet the requirements of the CCAC farm animal guidelines. Where the institutional environment (including management practices) must be of direct relevance to the commercial animal production environment so that the results can be translated to the agricultural industry, the best industry standards for animals in that project should be used, as approved by the animal care committee. The CCAC views adherence to the national industry recommended codes of practice as minimum acceptable standards, for example for research studies conducted on commercial farms. Certified institutions must ensure that animals to be used in research, teaching, and testing are not adversely affected by animals kept for commercial purposes. To this end, if animals that potentially will be used in research, teaching, or testing are housed with other animals, the entire group should be housed in conditions that meet the CCAC guidelines.

2. Do the guidelines apply to farm animals kept solely for teaching purposes?

For institutions involved in teaching, it is important that the facilities and procedures used expose students to the current best practices in the agricultural industry. Much like research, any deviation from CCAC guidelines must be approved by the institutional animal care committee.

3. Do different standards apply to farm animals used in biomedical research?

Biomedical research or specialized medical training activities with farm animals often require indoor housing. In such cases, the environment should be fully controlled. Animals should be kept in facilities compatible with each animal's species-specific requirements and under conditions that promote positive animal welfare and minimize stress. Conditions to ensure appropriate levels of biosecurity should be similar to those required for non-agricultural species used in similar experiments.

4. What is the difference between environmental improvement and environmental enrichment?

Environmental improvement is applied to manipulations or additions to an animal's environment that meet an animal's basic need. For examples, the use of artificial teats during or just after feeding calves, as they are highly motivated to perform suckling behaviour. Where artificial teats are not provided, calves engage in abnormal behaviour, such as cross-sucking among group-housed calves, which can have a negative impact on their welfare.

Environmental enrichment goes beyond meeting an animal's basic needs. Environmental enrichment provides additional benefit to the animal, but its absence will not result in suffering. An example of environmental enrichment for cattle is the provision of grooming devices, also known as scratchers.

5. How do the guidelines address research that involves collaboration with industry facilities such as feedlots?

The guidelines reflect the conditions under which animals should be cared for and maintained. However, it is recognized that deviation from these guidelines may be necessary when animals are involved in particular scientific protocols.

Where the institutional environment (including management practices) must be of direct relevance to the commercial animal production environment so that the results can be translated to the agricultural industry, the best industry standards should be used, as approved by the animal care committee. When research is to be conducted at a site where the conditions under which the animals are held do not meet the CCAC guidelines, the investigator will need to provide scientific justification based on the research goals.

6. Why don't the guidelines specify minimum space requirements for various types of housing situations?

Farm animals in general have changed over time (e.g., the average size of cattle has increased), making it difficult to set measurements that will continue to be valid throughout the lifetime of the guidelines document. Therefore, the subcommittee drafting the guidelines determined that the focus should be more on requirements for the animals to be able to perform behaviours important to their welfare. However, some general measurements have been provided to try to accommodate the needs for defined standards from those building facilities.

7. In other guidelines, the CCAC has required removal of all wood in contact with animals unless sealed so that it can be properly sanitized. Do the farm animal guidelines maintain this restriction on the use of wood?

Materials and finishes in farm facilities should be durable and suited to the behaviour of the animals and the use of the facilities, taking into account the safety of the animals and farm personnel, and the required sanitation processes. For indoor facilities, surfaces should be impervious, easily sanitized, and resistant to water and chemicals used in their sanitation. Penning and all materials to which animals have access (e.g., feeding troughs) should be capable of being cleaned and disinfected.

The guidelines note that unpainted wood is acceptable for some applications; however, it should not be used if treatment for structural damage and insects is not possible, or where it is in direct contact with the ground. Unpainted wood may be acceptable in some areas where it is possible to replace the wood if it becomes roughened through use or damaged by insects, such as in outdoor pen dividers or the sides of shelters.

8. For dairy cattle, is the recommendation that milk-fed calves be fed a quantity of milk equivalent to at least 20% of their body weight per day appropriate or does it seem high?

Research has now shown that the previous commercial practice of providing milk at 8-10% body weight leads to 50% of normal growth rates and many signs of hunger, while providing milk ad libitum leads to normal growth with no negative effects on health (but weaning needs to be gradual). The recommendation of 20% of their body weight is close to ad libitum for 4-6 weeks.

The *Code of Practice for the Care and Handling of Dairy Cattle* (NFACC, 2009) requires that calves must receive a volume of milk or milk replacer to maintain health, growth, and vigour, and recommends as best practice that calves be offered 20% of their body weight until 28 days old. This amounts to approximately 8L/day for a Holstein.

9. As castration and teeth clipping are usual procedures, will it will be difficult to change the way in which they are done?

Although castration is considered a routine agricultural procedure, studies have shown it to be painful for the animals, and therefore the guidelines recommend that analgesics and anesthetics be used.

As for teeth clipping of piglets, the guidelines state that it should be avoided as far as possible, and only performed in cases of serious problems of damage to the udder or piglets' skin. In other words, it should not be performed as a routine procedure, but only when there is a need in terms of the welfare of the animals. Teeth clipping is stressful and can result in pain and injury for the piglets if not properly performed.

10. In some places the guidelines give age limits for performing certain procedures. Is allowing surgical procedures on younger animals really any more humane?

The guidelines do recognize that young animals are able to feel pain, and therefore the use of analgesics is recommended for procedures such as disbudding and castration. However, performing some invasive procedures at a young age results in lower welfare concerns than if those procedures were performed on older animals. For example, it is recommended that, where horn removal is required for goats, the horn buds be removed from the kids as soon as the buds are palpable. Horns in older goats are heavily vascularized and there is a greater risk of excessive blood loss which could be life-threatening. As well, there is an auxiliary nerve supply in horns which would make the procedure more painful.

11. Do the guidelines exclude the use of regular poultry production cages due to the requirement for environmental improvement?

The guidelines recommend that where poultry must be housed in cage systems, it is preferable to keep them in small groups in systems that permit performance of behaviours that they are highly motivated to perform, such as nesting and perching. However, the guidelines also recognized that where the research must be of direct relevance to the industry setting, the best industry standards should be used, as approved by the animal care committee. The CCAC views adherence to the national industry recommended codes of practice as minimum acceptable standards.