

Frequently Asked Questions for *CCAC guidelines on: the care and use of farm animals in research, teaching and testing*

These Frequently Asked Questions (FAQs) have been developed as a tool to assist investigators and members of animal care committees (ACCs) in the implementation of the *CCAC guidelines on: the care and use of farm animals in research, teaching and testing*.

The FAQs provide a generic response to the many comments and questions received by the CCAC during the development of the *CCAC guidelines on: the care and use of farm animals in research, teaching and testing*. Questions were received both as part of the three stages of review of the guidelines, and at workshops held across Canada on the subject of the farm animal guidelines.

If you do not find the answer to your question here, please contact the CCAC and we will be pleased to provide assistance. These FAQs will be updated regularly and will continue to reflect questions asked by ACCs and investigators in implementation of the *CCAC guidelines on: the care and use of farm animals in research, teaching and testing*.

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. These institutions are considered to be in a position to provide a leadership role in the exploration and implementation of best practices for the agricultural industry, and it is expected that the guidelines will be applied to all farm animals in their care.

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

The term *environmental improvement* is applied to manipulations or additions to an animal's environment that address areas where the animal may otherwise experience some degree of suffering. For examples, young calves are highly motivated to suck and the use of artificial teats during or just after feeding provides an appropriate outlet for this motivation. It has also been shown that providing artificial teats increases relaxation in the calf after feeding. However, 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.

The term *environmental enrichment* is reserved for those improvements that provide additional benefit to the animal, but whose absence will not result in suffering. An example of environmental enrichment for cattle is the provision of grooming devices, also known as 'scratchers'.

3. 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 (ACC). Where research is conducted at a site other than the home institution and the conditions under which the animals are held do not meet the guidelines, the investigator will need to provide scientific justification based on the research goals.

4. 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.

5. 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?

The guidelines recognized that farm animals are often kept in conditions that are very different from laboratory research conditions. The common environments for farm animals with turf, straw and wood present are not as hygienic as laboratory environments constructed of stainless steel and plastic. However, these materials are more comfortable for the animals and very forgiving physically, and are appropriate for some uses involving contact with the animals, providing the area can be appropriately cleaned and sanitized.

The materials used in facilities that house farm animals should be suited to both the animals that will be held and the intended use of those animals. The guidelines note that unpainted wood is acceptable for many applications, except when 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 areas where it is possible to replace the wood if it becomes roughened through use or damaged by insects, such as in pen dividers or the sides of shelters.

6. For dairy cattle, the recommendation that milk-fed calves be fed a quantity of milk equivalent to at least 20% of their body weight per day seems 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 revised *Code of Practice for the Care and Handling of Dairy Cattle* (2009) requires that calves must receive a volume of milk or milk replacer to maintain health, growth and vigor, 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.

7. Castration and teeth clipping are usual procedures and 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.

8. 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.

9. 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 ACC. The CCAC views adherence to the national industry recommended codes of practice as minimum acceptable standards.