ANIMAL WELFARE ON ORGANIC FARMS FACT SHEET SERIES

PAIN MANAGEMENT IN LIVESTOCK HUSBANDRY
2. CASTRATION, BRANDING & TAIL DOCKING

Produced in consultation with the ECOA Animal Welfare Task Force, February 2010

INTRODUCTION

Pain is an unpleasant and emotional experience involving both a physiological and psychological component that can reduce an animal's ability to experience normal pleasures or impede natural functioning. Pain arises via chemical, thermal or mechanical stimuli that are actually or potentially damaging to the tissues. Research has shown that many of the common procedures associated with livestock husbandry, such as dehorning or castration, are painful to the animal. Some methods are less painful than others and some may continue to cause pain in the hours, and in some situations days, after the procedure. Signs of pain in animals are varied and are not always obvious.

Researchers have worked on finding effective ways to alleviate this pain, as freedom from pain is a basic tenet of animal welfare. This is recognized in the organic standards, which prohibit farmers from carrying out physical alterations except when absolutely necessary. When they are carried out, it must be in a manner that minimizes pain, stress and suffering. Pain control is allowed to achieve this objective (see CAN/CGSB-32.310, 6.7.2) and should incorporate a combination of anaesthetics, sedatives and/or analgesics that are known to be effective at controlling pain during and after the painful procedure in question.

Species-specific recommendations should be followed. Analgesics and anaesthetics will need to be prescribed by a veterinarian. All equipment used must be cleaned and disinfected between animals. **Successful implementation of pain management on farms will require a strong working relationship with your veterinarian.**

ASSESSING THE NEED

Organic farmers should ask themselves the following:

1. Is the procedure necessary?
By ensuring high welfare standards and addressing the behavioural needs of livestock, the need for surgical procedures to control problems such as tail biting in pigs, can be eliminated. For more information see "AWTF Guidance for the optimal welfare of pigs in organic production".

2. Can the same result be achieved in another way?
For example, the use of alternative methods of identification will eliminate the need for branding.

3. If there is no other choice, which of the available methods are the least painful and the most practical?
Anything a farmer or rancher can do to reduce the stress and pain of a procedure will help decrease the risk of the animal going off feed, and becoming susceptible to a secondary infection or illness. If a procedure is deemed necessary, pain may be reduced through the use of various analgesics and anaesthetics.

CASTRATION - RECOMMENDATIONS FOR PIGS, CATTLE AND SHEEP

Castration causes considerable pain regardless of which procedure is used. It is recommended that anaesthetics and analgesics be used when castrating animals.

Producers should question whether the procedure is necessary, as in some cases intact males can be marketed (e.g. pigs and lambs). Ram lambs

grow faster than wethers and often can be marketed at a young age without discrimination.

In other cases, marketing systems may indirectly cause unnecessary pain to animals; for example, by paying producers significantly less for intact males, regardless of the actual quality of the carcass. Therefore, economic factors tend to dictate whether to castrate male animals or not.

If castration is necessary the recommended time to castrate is:

- Pigs – before 7 days of age
- Cattle – before 2 months of age
- Sheep – before 7 days (rubber rings), before 14 days (Burdizzo™)

Castration methods include:

1) Rubber Ring - placement of rubber rings to restrict the flow of blood to the scrotum. The use of rubber rings likely causes the least amount of acute pain, compared with surgical or Burdizzo castration, but it has been shown to cause the greatest amount of chronic pain in the days to weeks following application.

2) Bloodless Castration, Burdizzo - crushing of the spermatic cords. Burdizzo castration has the highest failure rate and is difficult to perform on older calves.

3) Surgical Castration – removal of the testicles through a surgical incision. Wounds from surgical castration heal more quickly than rubber ring castration and are thought to cause less chronic pain but should only be used if risk of infection is low.

Irrespective of age, **all 3 methods cause pain and require appropriate pain control.** It is important to remember that prey species, such as cattle or sheep, may not outwardly exhibit behavioural signs of pain; however, this does not mean the animal is not experiencing pain. Producers are encouraged to discuss with their veterinarians the most practical methods of castration and pain control.

Recommended Pain Control

The most effective pain control would combine the use of a sedative, local anaesthetic and an analgesic administered pre-operatively. The use of sedatives can be administered before castration to help reduce distress associated with handling. A local anaesthetic, such as lidocaine, helps reduce the immediate pain but requires extra restraint and needs to be administered several minutes before the procedure is performed. The use of a non-steroidal anti-inflammatory drug (NSAID), such as ketoprofen, administered at the time of castration can assist in reducing post-operative pain responses. Consult with your veterinarian to determine the most appropriate pain management protocol for your operation.

BRANDING RECOMMENDATIONS FOR CATTLE

It is recommended that organic animals be ear tagged in lieu of branding. However, if branding is required for participation in a community grazing program or feeder coop, or necessary for any other reason, then only one brand should be placed on the animal in a well muscled area (face branding is prohibited) and pain control must be used.

Two methods of branding are used to permanently mark individuals, hot-iron and freeze branding. Hot-iron branding is known to cause increased pain-related behaviors and greater escape-avoidance responses at the time of branding. Both methods of branding are painful, however, freeze branded animals display less of a pain response than hot-iron branded animals. Although not an option for white cattle, it is the recommended method for coloured animals. Liquid nitrogen is readily available and easy to use.

Appropriate pain control would include the use of NSAIDs, such as ketoprofen. Please consult your veterinarian for more information on analgesia.

TAIL DOCKING RECOMMENDATIONS

Routine tail docking in pigs is not permitted. Tail biting is largely related to welfare deficiencies and can be prevented by providing a behaviourally appropriate and comfortable environment.
See: http://www.organicagcentre.ca/AnimalWelfare/aw_swine.asp.

In cattle, tail docking is prohibited in organic production. It does not improve cleanliness,

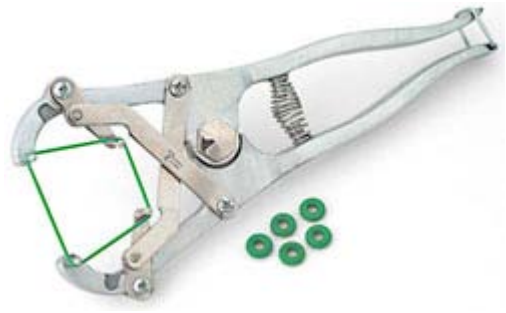
decrease the risk of udder infection or improve the overall health of cows.

Tail docking for sheep is not necessary for hair sheep with short wool-less tails or for lambs not being kept for breeding stock where fly strike is not an issue. If sheep tail docking is to occur, docking should be carried out when lambs are 2-14 days old. At least 7 cm of tail must remain; the vulva must be covered in females and the anus must remain covered in males. Chronic pain issues, such as greater sensitivity to heat and cold of the tail stump, the formation of neuromas, and the risk of post-operative infections may occur after tail-docking.

Tail docking methods include:

1) Electric Tail Docker - producers recommend using an electric tail docker on young lambs, which pinches off the tail and cauterizes at the same time.

2) Rubber Rings - the most commonly used method, however they may cause greater chronic pain issues than cautery methods.



Recommended Pain Control

An injection of a local anaesthetic, such as lidocaine, into the base of the tail before applying the rubber ring or beginning surgical removal of the tail in addition to the pre-operative administration of a NSAID, such as ketoprofen, will help in reducing pain responses. Topical anesthetic sprays alone are not sufficient to provide effective analgesia for the procedure.

The use of these methods of pain control with young lambs may be deemed problematic for practical reasons; for example, extra handling is required and there are concerns that injections cause pain similar to tail docking. More research is needed to determine the best pain control method for young lambs. Therefore, producers are encouraged to work with their veterinarians to find the most practical solution.

The use of homeopathic arnica is also advocated by some producers to assist in the control of inflammation, but its effectiveness has not been proven by the research community.

The best approach is to select breeds that have shorter tails; heritability of tail length is moderate to high (0.84) or to use breeds where tail docking is not necessary such as: Barbados Blackbelly, Damara, Dorper, Katahdin, St Croix, East Fresian Finnsheep, Icelandic, Romanov, Soay, Shetland, Wiltshire horn.

SUMMARY – CASTRATION, BRANDING AND TAIL DOCKING

- Producers should re-evaluate the need for these invasive procedures and seek out alternatives
- Combine the use of sedatives, analgesics and local anaesthetics if the procedure is deemed necessary
- Only trained personnel should perform castration, branding and tail docking
- Castration is best performed at a young age and with the use of effective pain management (sedative, local anaesthetic, and analgesic)
- Tail docking for pigs and cattle should not be performed unless medically necessary and should incorporate effective pain management
- Use alternative methods of identification rather than branding

SOURCES OF INFORMATION

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