

TAIL DOCKING DAIRY CATTLE

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Tail docking of dairy cattle, or amputating ½ or more of the cow's tail, first became a routine practice among dairy farmers in New Zealand.¹ Today, tail docking of dairy cattle is also practiced in Australia and Ireland and is becoming a routine practice on an increasing number of North American dairy farms. The procedure is banned in the Netherlands, Norway, Sweden, Switzerland and the United Kingdom.²

Generally, tail docking is performed on the unanesthetized animal by the farmer. Veterinarians, whose priority should be the welfare of the animal rather than farmer convenience, have refrained from condemning the practice outright, preferring instead to advise farmers as to how to perform the procedure with a reduced risk of disabling illness in the animal and economic loss to the farmer.³

The procedure

In heifers and grown cattle, tail docking usually involves applying a tight rubber ring around the tails below the level of the vulva.^{4,5} The rubber ring reduces oxygen to the tail below the ring as a result of reduced blood supply. The necrotic tail below the rubber ring may be amputated with pruning shears after 7 days or it may be left to fall off on its own.

In one to two day old calves, a tourniquet may be applied to the tail several centimeters below the tip of the vulva, before amputating with heavy sharp scissors. The tourniquet is removed after 24 hours. Alternatively, a rubber ring may be used to close off circulation to the part to be amputated. The tail eventually falls off anywhere from 30 days to 7 weeks after ringing,^{6,7} the length of time appearing to depend on tail diameter (age of animal). In some cases, a heated scissors is used to cauterize the stump simultaneously with cutting. In 6-8 week old calves, an emasculator (used in crushing testicles during castration of male calves) is recommended to crush the tail, controlling bleeding, and then the tail may be cut off below the crushed area.⁸

Why do some farmers dock tails?

In New Zealand, tail docking dairy cattle originated as a possible way to reduce the risk of transmitting Leptospirosis to workers.⁹ The organism causing Leptospirosis is shed in the urine and present on tails that contact urine. However, little research exists to evaluate this claim¹⁰ and other, unrelated risk factors have been identified for transmission of the disease.¹¹

Tail docking has also been claimed to improve cow and udder cleanliness, cow health, and milk quality and be more convenient for workers than leaving tails intact when cows are confined indoors.^{12,13} It has been assumed that udders could be contaminated when they come into contact with the dirty tails, increasing the incidence of mastitis (a painful disease of the udder that can be caused by microorganisms in the environment) and reducing milk purity.^{14,15,16,17}

Manure may soil the tail switch if it gets in the way as the cow defecates or when she lies down in a dirty stall and her tail comes to rest in a dirty manure channel or a dirty barn floor. This can be a

particular problem in modern free-stall dairy barns using liquid manure handling systems and no straw bedding (see photo 1). However, udders also come in contact with the floors when cows lie down in dirty stalls and can become soiled whether or not their tails are intact. Research shows that areas of the body where cows become soiled with manure do not closely correspond with areas that can be reached by intact tails.¹⁸



Lack of bedding and manure covered floors and gutters in modern confinement dairy buildings create a situation where tails easily can get soiled.

With respect to worker convenience, workers can be hit in the face with a feces-clad tail, particularly in modern milking parlors that are designed so workers approach the cow from behind and apply the milkers from between the back legs of the cow.¹⁹

Is tail docking necessary?

Scientific evidence to date indicates that tail docking dairy cattle does not increase udder cleanliness, reduce the incidence of mastitis, or improve milk quality or purity relative to keeping the tail intact.^{20,21,22,23,24,25,26} Most researchers conclude that tail docking does not result in the benefits claimed for it and do not recommend it. Therefore, farmers claiming cow hygiene or udder health advantages to tail docking are operating on a belief system that may be passed on by their counterparts in the industry but is not science based.

The remaining explanation for tail docking is farmer or worker convenience. However, there are other ways to keep tails from getting dirty such as cleaning the barns regularly and using ample straw bedding to separate the cow from her dung rather than relying on slatted floors to drain manure away. Well-managed straw beds and solid manure systems are generally better for cow welfare than liquid manure handling.²⁷ If the tops of the beds are refreshed with new straw daily and if the straw is long or uncut rather than chopped,²⁸ cows can be kept dry and comfortable and udders can be protected from mastitis-causing organisms.²⁹ Flies and odor will also be reduced. Rotational grazing systems on green pastures eliminate the dirty tail problems that can arise when animals are kept indoors on bare concrete or on dirt lots for their entire lives. Researchers also report that workers have relatively little contact with the tail in rotary style milking parlors, where cows are approached from the side rather than the back.³⁰

Is tail docking of dairy calves and cows a welfare problem?

Tail docking is a mutilation and causes injury to the animal. In this regard, at least, tail docking is a welfare concern. The tail has a purpose and a cow without a tail is to some extent disabled. She is handicapped, for example, with respect to protecting herself from flies. Research shows that docked cows spend considerably more time than intact cows in fly avoidance behavior and that inability to swat flies results in greater fly numbers on docked versus intact cows, despite claims that docked cows are cleaner and cleaner cows attract fewer flies.³¹ Docked cows stand more than intact cows as fly numbers increase, possibly indicating that docked cows are uncomfortable, as cows tend to stand when they are uncomfortable.³² As cows have a biological need to lie down 9-14 hours each day in order to ruminate efficiently and produce milk,³³ fly avoidance behavior can disturb rumination and milk production. Fly avoidance behaviors also disturb grazing.³⁴

The farming industry suggests that cows on modern dairy farms do not need their tails because they are kept indoors and insecticides can be used to control flies.³⁵ Balanced against this must also be potential risks of using insecticides in terms of their effects on animal and human health, e.g., workers and milk consumers. Research has also indicated that cows use tail postures in signaling to other cows.³⁶ Without a tail, the cow is robbed of this method of communication.



The cow has a tail for a purpose.

Improper amputation procedures can lead to severe tail infections.³⁷ Anecdotal evidence from veterinarians in the field supports the conclusion that improper and do-it-yourself tail docking often results in serious infections, sometimes reaching up into the cow's spine and requiring lengthy and invasive veterinary treatment. It is reasonable to assume that the procedure, subsequent infections and illnesses, and veterinary treatment cause suffering in the affected animals. Milk from medicated cows also must be discarded for several days due to the presence of antibiotics, resulting in high costs to the farmer.

Researchers are less conclusive when interpreting the results of pain studies in docked cattle.^{38,39,40,41,42} It may seem obvious that the procedures used in docking tails would cause pain to the animals. Documenting it scientifically is more difficult.

Various considerations complicate the interpretation of pain in animals. There is no one index of pain or distress that is reliable and therefore it is important to measure a variety of variables.⁴³ Pain also is difficult to assess in others because it is comprised of both a physiological sensory and a psychological or emotional component.⁴⁴ The “expressiveness” of docked cows with respect to discomfort seems to vary depending on age of the animal and method of amputation. Researchers have remarked that pain behaviors in docked adults appear subtle. They have also reported that docked cows press their tails to their body more than intact cows, whose tails are relaxed.⁴⁵ Past research has shown that cows may press their tails against their bodies when in pain.⁴⁶

A lack of overtness in pain reactions in experimental situations should not lead us to conclude that pain is not present or is only mildly experienced. Nor should the results of carefully conducted research experiments, where tail docking is carefully performed by trained researchers or technical personnel, “blind us” to the injuries, infections, and suffering that can occur in on-farm situations where tail docking is performed by non-veterinary personnel.

Physiologically the responses to painful stimuli between humans and other animals are similar. On the other hand, the exact behavioral responses themselves differ dramatically between different species of animals and between individuals of the same species.⁴⁷ As prey animals, cattle may appear stoic when subjected to invasive procedures that would cause very overt reactions in humans – a prey animal would not want a potential predator to know it is in pain or disabled.

Finally, in addition to the acute pain inflicted at the time of docking, there is the potential for chronic pain due to neuroma (a tumor composed of nerve tissue that forms at the injury site) formation in the docked stump.⁴⁸ Similarly, human war amputees may experience the effects from neuroma formation when they feel pain, itching, or discomfort in limbs they no longer have. Danish researchers found a high incidence of traumatic neuromas in the tail stumps of docked pigs, raising the possibility that docking tails has long-lasting welfare effects because amputation neuromas may continue to cause significant pain to the animal for much of its life.⁴⁹ Similar neuroma formation has been found in the tails of calves that were docked.⁵⁰

Is tail docking ethically acceptable?

Against farmer or worker convenience must be weighed the very real interests of the cow or calf in retaining her tail and the costs to the cow or calf from the procedure and its aftermath. Tail docking solely benefits the farmer or farm worker and there are effective and humane alternatives to the practice that not only provide the same benefits to us, but that benefit the animal as well.

In 1964, Ruth Harrison gave the trend toward expediency in modern animal farming a name – she called it “factory farming” and she referred to the role of farm animals in factory farming as “animal machines.”⁵¹ The approach taken in factory farming is to fit the animal to the system rather than fit the system to the animal. As sentient creatures, farm animals feel pain and suffer deprivation. They can also experience pleasure and contentment. They rely on the endowments nature has given them for survival and for well-being. We have choices they do not have when it comes to designing housing systems and tailoring husbandry practices to meet our needs. Our choices should embrace both the integrity and well-being of the animals that give their lives for our benefit.

This article was stimulated by a letter from a member of the public who wrote out of concern for dairy cattle she had seen on a Kansas dairy farm. She wrote “I feel strongly that this is definitely cruelty to

animals because there is no reasonable explanation why a cow should not have a tail.... I really respected the dairy business and how they treated their animals. Now, I don't have a lot of respect."

Tail docking is not a universal practice in the North American dairy industry yet and some dairy farmers would never think of docking their cows' tails. For them, their cows' tails are indispensable parts of the cows' anatomy both practically and aesthetically.

Time was when the brushed, often bleached tail switch was a prominent feature in photos used by dairy breeders to showcase their top dairy dams. Along with sound feet, glistening hides, firm udders, clear eyes, and alert postures, the carefully brushed tail switch was a mark of pride for farmers and local breeders engaged in the proud tradition of responsible dairying and for farm children showing their cows at rural fairs. Said a retired Minnesota dairy farmer in an interview for this article, "When our kids took their cows to the county fair, they used to brush the tail switches until they were soft as silk. If the switch was white, they'd bleach it so it almost glowed."

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