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## ***A Greener World Technical Advice Fact Sheet No. 2***

# **Management to Avoid Tail Docking Sheep**

Certified Animal Welfare Approved by A Greener World (AGW) has the most rigorous standards for farm animal welfare currently in use by any organization in North America. Its standards have been developed in collaboration with scientists, veterinarians, researchers and farmers across the globe to maximize practicable, high-welfare farm management.

Certified Animal Welfare Approved by AGW standards prohibit certain livestock management procedures, such as tail docking piglets to prevent tail biting or debeaking chickens to prevent feather pecking. The reason is that you can avoid most of the problems that these practices are meant to prevent by making changes to your farm system, rather than forcing the animal to fit the system.

Other management procedures are permitted under Certified Animal Welfare Approved by AGW standards, such as castration or disbudding of calves, provided they are carried out in a particular way. This is because there could be a risk to animal or human health and welfare if these procedures are not done.

### **Why tail dock lambs?**

Some farmers find that tail docking sheep is completely unnecessary, while others have experienced severe welfare problems if their sheep have not been docked.

On most farms the main reason for tail docking sheep is to prevent fly strike (or myiasis). Tail docking removes the lower part of the tail, an area which is often contaminated with urine and dung – and therefore highly attractive to blowflies.

Fly strike occurs when blowflies lay eggs in damp wool, usually soiled with urine or dung. The eggs hatch into larvae (maggots) which burrow into the flesh of the lamb. If undetected or untreated, fly strike can result in bacterial infections that could lead to septicaemia, toxemia and in severe cases, death.

### **What's the downside of tail docking?**

Although tail docking is usually performed to avoid the welfare problems associated with fly strike, research shows that the act of tail docking is itself a key welfare issue.

Tail docking is carried out by using rubber rings, emasculators or, in some instances, a scalpel. In the last 10 years, researchers have clearly demonstrated that tail docking causes significant pain and distress to lambs – regardless of the technique used or the age of the lambs (see Grant 2004; Kent *et al* 2001).

Researchers have also identified other problems associated with tail docking. For example, scientists have shown that docking too short – as is often practiced with show sheep – can increase the risk of rectal prolapse. Thomas *et al* (2003) found that short docked lambs had a higher incidence of rectal prolapse (7.8%) than lambs with a medium (4.0%) or long (1.8%) dock. Fisher and Gregory (2007) found that shorter tail docking resulted in significantly lighter recto-cooccygeal muscles, which potentially increases the risk of prolapse. In addition, they found that the tail stumps of half of the no-tail, short and medium docked lambs showed signs of neuroma development and degenerative nerve changes – yet only a few of the long docked lambs showed this. Neromas are swollen bundles of nerve fibers which can persist indefinitely, causing pain even after the docked tail appears totally healed. In the second part of their 2007 study, Fisher and Gregory also showed that pain and distress was more pronounced the shorter the tail was docked.

Other researchers found that the complete removal of the tail actually increased the incidence fly strike compared with lambs that were docked but had some tail remaining (Watts and Marchant 1977; Watts and Luff 1978). This mirrors earlier work from Australia, as reviewed in Fisher *et al* (2004), which reports that up to 55–60% of no-tail and short docked sheep showed signs of fly strike, compared to up to 32% of medium tail docked sheep. The same review reports that cancer of the perineal region – usually the vulva – and tail infection were far higher in short tail docked sheep and almost non-existent in medium or long docked sheep. It is thought that the ability of a lamb to shake its (undocked) tail can help minimize fly strike by deterring flies from landing, while also helping to spread and scatter its feces.

### **How can I avoid fly strike without tail docking lambs?**

Some farmers feel that the pain of tail docking must be better than the potential pain and suffering from fly strike. However, there are many management techniques that can help to minimize the risk of fly strike without the need for tail docking.

Management techniques for wool sheep include regular dagging or clipping around the breeches and tail to remove any soiled wool, leaving shorter wool that is less likely to build up dung and urine – and attract flies. Some studies have shown that it is the amount of soiling around the tail and breech area of the sheep and length of wool that causes the problem, not necessarily length of tail (Fenton *et al* 1994).



## **Breed and genetics**

One management option is to think about the breed or type of sheep you farm. Some breeds or types of sheep, such as hair sheep or rat tailed sheep, are much less susceptible to fly strike and can be a worthwhile consideration – particularly on farms where there is a high risk of fly strike. Hair sheep breeds include Katahdin, Barbados, St Croix and the Wiltshire Horn. Rat tailed sheep breeds – which have naturally short tails or thin tails with no wool – include Finn, Shetland and Soay.

It is worth noting that Scobie and O'Connell (2002) found that tail length is highly heritable and the tail length of a lamb is an average of the length of the parents. Therefore, introducing short tailed rams to your long tailed flock could be a way of reducing the length of tails on the lambs, if so desired.

In the past, researchers have attempted to breed sheep with no tails. A no-tail breed was developed over a 50-year period, ending in the mid 1960s at South Dakota University. At the end of this time 40% of the lambs had no tails and another 20% had short tails; however, lambs that were born with no tails often had paralysis of the hind quarters.

In the 1970s and 1980s the same problem was found by New Zealand researchers. It seemed to be the same genetic problem as is found in Manx cats, where animals that are homozygous for the tailless gene die before birth and animals that are born have skeletal and other disorders. Cross breeding sheep for shorter tails seems to be fine; trying to breed a no-tail sheep obviously leads to problems.

## **Minimize soiling of the wool**

Anything that reduces dung soiling of the wool will also lessen the risk of fly strike.

Attention to nutrition can help here: lambs on rich spring pastures with no access to dry forage, for example, will have very loose or liquid dung which is far more likely to stick to the wool – and attract flies. Providing dry forage, such as hay, can help to slow down grass digestion in the rumen, reducing the likelihood of liquid or loose dung.

Lambs fed grain also often have looser dung than those on dry forage, so minimizing the amount of concentrate feed can also help to reduce problems.

Infection with internal parasites is another condition that can lead to loose or liquid dung, so try to keep on top of pasture management and worming regimes.

## **The environment**

Flies prefer warm, moist and sheltered environments. Moving sheep to more exposed pastures at times of high risk – or not grazing sheep in high risk areas at certain times of the year or during certain weather conditions – can help minimize fly strike, where practical.

Another method of reducing the fly population is to use lure traps. These traps contain a pheromone that attract flies and are hung on fence posts around the pasture. Note that these traps work best in smaller pastures, rather than extensive range situations where sheep may be a long way from the lure.

### **Insecticides**

Pour-on or spray-on insecticide treatments can significantly reduce the risk of fly strike. While Certified Animal Welfare Approved by AGW standards do not allow the use of organophosphates, you can use synthetic pyrethroid (SP) pour-on or spray-on products. It is important to note that some products only work as preventatives, while others both prevent and cure fly strike, so always read the labels carefully.

Take care in applying the product – accurate dosing and placement of the product will more than repay the time and trouble of gathering sheep. Also pay attention to how long the product will remain effective. Most farmers will need to apply the spray at least twice during fly season.

Remember that although wormers will help to eliminate soiled fleeces they do not themselves have any effect on flies.

If you are in any doubt about the suitability of any product contact your vet, but always check to ensure any products they recommend are compatible with Certified Animal Welfare Approved by AGW's list of prohibited and permitted parasite control products.

### **Good farm management**

Other health problems that might not immediately appear to relate to fly strike can also have an affect. Sheep with foot rot, wounds or cuts – particularly those that become infected – will attract the attention of flies, so make sure that any problems like this are treated promptly.

Maintaining good hygiene around the farm will also help to reduce the prevalence of flies. Dead animals, dung piles and rotting vegetation can all provide alternative places for flies to feed and breed, so try to avoid having them on your farm.

### **Summary**

Fly strike is a serious welfare issue and definitely something to guard your sheep against. However, as can be seen from the information above, tail docking is not the only option to control strike. Breed choices (picking suitable stock for your farm

environment), management to reduce fecal soiling through feeding, parasite control and appropriate use of insecticides can be just as effective.

Sheep have tails for a reason: tails help protect the anus, vulva and udder. A tail can be shaken to deter flies or to scatter feces. By applying the management tools described in this fact sheet you should be able to minimize the risks of fly strike – and avoid the need to tail dock your lambs.

## References

Fenton, A., Wall, R., and French, N. (1994). The incidence of sheep strike by *Lucilia sericata* on sheep farms in Britain: a simulation model. *Veterinary Parasitology* 76, Issue 3, 15 April 1998, Pages 211–228.

Fisher, M. W., Gregory, N. G., Kent, J. E., Scobie, D. R., Mellow, D. J. and Pollard, J. C. (2004). Justifying the appropriate length for docking lambs' tails – a review of the literature. *Proceedings of the New Zealand Society of Animal Production*, 64: 293.

Fisher, M. W. and Gregory, N. G. (2007). Reconciling the differences between the length at which lambs' tails are commonly docked and animal welfare recommendations. *Proceedings of the New Zealand Society of Animal Production*, 67: 32–38.

French, N.P., Wall, R., and Morgan, K.L (1994). Lamb tail docking: a controlled field study of the effects of tail amputation on health and productivity. *The Veterinary Record*, 134 pp 463–467.

Grant, C. (2004). Behavioural responses of lambs to common painful husbandry procedures. *Applied Animal Behaviour Science*, 87, 255–73.

Kent, J.E., Molony, V., and Robertson, I.S. (1993). Changes in plasma cortisol concentration in lambs of three ages after three methods of castration and tail docking. *Research in Veterinary Science*, v. 55 (2) p. 246–251.

Kent, J.E., Molony, V. and Graham, J. (2001). The effect of different bloodless castrators and different tail docking methods on the responses of lambs to the combined Burdizzo rubber ring method of castration. *The Veterinary Journal*, 162, 250–254.

Scobie, D. R. and O'Connell, D. (2002). Genetic reduction of tail length in New Zealand sheep. *Proceedings of the New Zealand Society of Animal Production*, 62: 195–198.

Thomas, D. L., Waldron, D. F., Lowe, G. D., Morrical, D. G., Meyer, H. H., High, R. A., Bereger, Y. M., Clevenger, D. D., Fogle, G. E., Gottfredson, R. G., Loerchi, S. C., McClure,

K. E., Willingham, T. D., Zartman, D. L., and Zelinsky, R. D. (2003). Length of docked tail and the incidence of rectal prolapse in lambs. *Journal of Animal Science*, 81:2725–2732.

Watts, J. E., and Luff, R. L. (1978). The importance of the radical mules operation and tail length for the control of breech strike in scouring Merino sheep. *Australian Veterinary Journal*, 54:356–357.

Watts, J. E., and Marchant, R. S. (1977). The effects of diarrhea, tail length and sex on the incidence of breech strike in modified mulesed Merino sheep. *Australian Veterinary Journal*, 53:118–123.

### **Further reading**

Farm Animal Welfare Council (2008) *FAWC Report on the Implications of Castration and Tail Docking on the Welfare of Lambs*, Farm Animal Welfare Council, London.  
<http://www.fawc.org.uk/pdf/report-080630.pdf>

Meat and Wool New Zealand (2006) *Breeding Sheep with Bare Breech and Belly*, R&D Brief Number 116.  
[http://www.meatandwoolnz.com/download\\_file.cfm/R&D\\_Brief\\_116\\_FINAL.pdf?id=646,f](http://www.meatandwoolnz.com/download_file.cfm/R&D_Brief_116_FINAL.pdf?id=646,f)

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### **KEYWORDS**

Welfare; sheep; lambs; (avoiding) tail docking; (avoiding) fly strike;