

Animal Welfare Committee Consultation

Castration and Tail Docking of Lambs

**Consultation response from the Agriculture and Horticulture
Development Board (AHDB)**

2nd September 2021

Castration of Lambs

What proportion of lambs do you estimate are castrated across GB? Is your response based on data collection / personal experience / anecdotal evidence? If your knowledge is of a particular breed, a particular area, or a particular farming method, what proportion of those lambs do you estimate are castrated? (If answering the remaining questions from that knowledge base, please explain that you are doing so.)

AHDB is not aware of data that provides a national figure for the number or proportion of lambs that are castrated across GB. AHDB's remit for the Beef and Lamb sector extends to England only. Anecdotal evidence based on our staff's engagement with farms across England would suggest that most male lambs in England are castrated. The levy boards in Wales, Hybu Cig Cymru – Meat Promotion Wales (HCC), and Scotland, Quality Meat Scotland (QMS), may be able to provide details for respective areas. Other potential sources of data, experience, and anecdotal evidence would be abattoirs and the Food Standards Agency. As part of Defra research project AW1028¹, 60 indicators of cattle and sheep welfare were assessed for feasibility of assessment in the abattoir. Amongst these 60 included assessments of castration and tail docking of sheep. Neither of these indicators were part of the 11 taken forward in the main study which assessed prevalence.

Although the authors do not reference a source, it has recently been reported by Gascoigne et al that the proportion of lambs castrated in Wales is lower than that of England².

Over the last 10-15 years, has the use of castration increased, decreased or stayed the same?

In the absence of national data, it is difficult to suggest trends over time.

Case studies in farming literature demonstrate how some farmers have deliberately and successfully reduced the number of male lambs they castrate within their flock². In addition, Red Tractor, the UK's largest farm assurance scheme with a membership of approximately 24,500 beef and lamb farmers³, includes a requirement that castration is documented within members' health

¹ Defra 2015. Ante- and Post-mortem inspection indicators of ruminant welfare – AW1028. Defra Evidence Project Final Report. Available at: <http://randd.defra.gov.uk/Default.aspx?Menu=Menu&Module=More&Location=None&ProjectID=18282&FromSearch=Y&Publisher=1&SearchText=aw1028&SortString=ProjectCode&SortOrder=Asc&Page=10#Description>

² Gascoigne et al 2021. Considering the 3Rs for castration and tail docking in sheep. In Practice: 43(3), p152-162. Available at: <https://doi.org/10.1002/inpr.29>

³ SHAWG 2020. Sheep Health and Welfare Report Third Edition. AHDB publication: p35. Available at: www.shawg.org.uk

plans. The standard⁴ also includes a recommendation that the need for the procedure is reviewed with the vet. It is widely reported by industry that approximately 50-55% of beef and lamb farms are assured, although this figure is not officially used by Red Tractor. The AHDB 2019 levy payer satisfaction survey reports that 6% of farmers in the Beef and Lamb sector agree with the statement “*I like to be the first to adopt new methods and practices even if there is a risk that they might fail*”. A further 6% agree with the statement “*I am one of the first to adopt new methods and practices – I consider myself to be an opinion leader*”. Anecdotally, the above may suggest that castration could have decreased over the last 10-15 years, perhaps particularly among farm assurance members and the more progressive farmers. Although there is no data, based on the above, it may be plausible to suggest that between 12% and 55% of farmers have actively considered alternative strategies for castration, with an unknown proportion of these refining, reducing or replacing them.

A national database which tracks trends in castration over time, including methods, would be useful. If acceptable to industry, this could be used to demonstrate improvements in lamb welfare, support the reputation of the sheep industry in GB and indicate where future refinements and developments would have the greatest impact. This could be considered for development within Defra’s Animal Health and Welfare Pathway for England (and potentially similar schemes for Scotland and Wales) and as part of reforms to the Basic Payment Scheme. Alternatively, the data could be captured in Government annual farming survey returns or via a randomised abattoir survey.

Does the use of castration differ according to the circumstances in which the sheep are farmed / the age at which the lambs or sheep are to be sold / to whom lambs or sheep are sold and how they are sold / whether they are sold finished or for finishing?

Yes, although AHDB is not aware of any data that captures the proportion of lambs castrated by factors which are thought to influence the use or method of castration. Anecdotal data provided by our staff is given below.

The use of castration as a routine procedure may vary depending on individual farm circumstances. These include access to common grazing, type of fencing, month and length of the lambing period, the ability to finish lambs on farm, the buyers’ requirement/penalties, farmer knowledge, willingness to adopt new techniques, as well as practicalities surrounding infrastructure and the number and size of fields/paddocks to enable management of multiple groups on farm. These factors will also influence each individual farm’s ability to reduce, refine or replace castration as a management procedure.

It is advisable for farmers to check with their markets, abattoirs and buyers any restrictions or financial penalties as a result of leaving male lambs entire before

⁴ Red Tractor 2018. Beef & Lamb Standards November 2021 version 5. Red Tractor: p50. Available at: <https://assurance.redtractor.org.uk/standards>

changing castration practices. In addition, entire ram lambs should be declared to potential buyers so that buyers can ensure they are managed separately to females to prevent accidental mating during finishing.

Where the farm is capable of finishing lambs pre-weaning or before sexual maturity, it is possible for single-born lambs, and lambs born early in the lambing period to be left entire. However, in early maturing breeds, particularly where the breed is capable of out of season breeding, an early weaning date is essential to prevent accidental mating with either ewe lambs or mothers.

The decision whether to castrate may also depend on whether the farmer has sufficient paddocks and infrastructure to enable management of weaned lambs into separate male and female groups to prevent unwanted pregnancies. To reduce the risk of sexual behaviours and aggression in entire ram lambs, it is recommended that they are kept out of sound and sight of cycling females. The ability to accommodate entire ram lambs in this way may depend on the layout of the farm. It may not be practical to leave ram lambs entire where the use of temporary fencing is used to manage grazing (e.g., electric fencing), or in extensive hill areas where fencing is limited or where there is access to common land.

In recent years, seasonal weather patterns have been less predictable with both droughts and flooding affecting grazing availability and grass growth. These experiences may influence farmers decisions on the number of management groups they can accommodate and ultimately the decision on whether or not to castrate some or all lambs.

In pedigree flocks, farmers may castrate lambs that have no breeding potential to either themselves or potential buyers. This decision would be made on farm records.

Within the Muslim community, there is a preference for entire rams for the festival known as Qurbani, during which an estimated 70,000 small ruminants are slaughtered in the UK⁵. Outside the Qurbani festival, both entire and castrated animals are acceptable.

It is perhaps worth noting that castration is a traditional practice, dating back to the time that domestication of sheep intensified⁶. Human behaviour and decision making is multifactorial and there may be a variety of influences, barriers and drivers to adopting a change in traditional practices. The ease of access to new knowledge, and willingness to adopt or adapt to new knowledge and implement new practices will affect the uptake of reduce, refine and replace strategies.

Finally, in relation to castration of sheep UK legislation states: *'When the method used is the application of a rubber ring or other device to constrict the flow of blood to the scrotum, the procedure may only be carried out on an animal aged not more*

⁵ AHDB, internal communication with Market Development Team

⁶ Kathryn Reusch 2013. That Which Was Missing: The Archaeology of Castration. PhD thesis. Accessible at: https://ora.ox.ac.uk/objects/uuid:b8118fe7-67cb-4610-9823-b0242dfe900a/download_file?file_format=pdf&safe_filename=THESIS01&type_of_work=Thesis

*than 7 days. When any other method is used, an anaesthetic must be administered where the animal is aged 3 months or over.*⁷ AHDB suggest that the wording of the legislations is ambiguous in relation to requirements for pain management when using other methods of castration, and for lambs that are younger than three months of age.

Why is castration carried out in the various circumstances / settings in which it takes place? And why not in other settings?

See above. Each farm is individual and there may be a variety of reasons why castration can be replaced on one farm and only reduced and or refined on another.

Reasons for castration include:

- Removes risk of ram taint in meat
- Reduces sexual and aggressive behaviours
- Removes risk of pregnancy with ewe lambs and mothers which has welfare and economic consequences
- Reduces the number of management groups needed over winter
- Facilitation of store lamb sales with buyers on open market

AHDB data⁸ shows that most (86%) Beef and Lamb farmers require considerable thought and evidence that is based on similar farming systems before changing existing management practices. Forty-four percent like to fully understand new methods and practices and how they fit into their own situation before committing to them, a further 19% like to wait and see what happens on other farms before being persuaded to try something new or different on their own farm; with 23% basing decisions on past experience that has worked before.

External factors may also influence decisions around castration e.g., Farm Assurance Scheme Standards, buyer requirements, local veterinary advice and the practices and opinions of respected/influential farmers.

Do some farmers castrate only some of their lambs, and if so why?

Yes. There is evidence that entire ram lambs have more efficient growth rates, finish faster and are consequently more efficient than castrated lambs⁹. Farmers that are capable of finishing lambs on farm may decide to leave lambs that are capable of finishing before weaning/sexual maturity entire (i.e., early born or single lambs) but castrate others.

⁷ UK Statutory Instruments 2007 No. 1100 Schedule 5. The Mutilations (Permitted Procedures) (England) Regulations 2007. Available at: <https://www.legislation.gov.uk/uksi/2007/1100/schedule/5>

⁸ AHDB 2019. Levy payer satisfaction survey results

⁹ HCC 2004. Rearing Entire Males. HCC publication. Available at: https://meatpromotion.wales/images/resources/Rearing_Entire_Males.pdf

Some pedigree farmers may castrate lambs they do not intend to sell as breeding stock.

What methods are being used – at different ages and in different circumstances / settings?

AHDB is not aware of data that indicates the proportion of farmers using the different methods or data suggesting method preferences for systems or ages. Staff experience suggests that within England, the most popular method being used is the rubber ring, which is generally used as early as possible following birth but after the lamb has bonded with its mother.

Methods we are aware of that are currently used for castration include:

- A rubber ring to constrict the flow of blood to the scrotum, used within seven days of birth by farm staff
- Burdizzo (clamp), used up to three months of age by farm staff
- Combined ring and clamp, used up to seven days of birth by farm staff
- Short scrotum method, used up to seven days of birth by farm staff
- Surgical, used at any age by vet.

There are indications that the short scrotum method may not be 100% effective¹⁰. It would be of value to consider the evidence on this method to safeguard welfare and ensure male lambs are not subject to a management method that causes pain, and which may not be reliable in achieving intended benefits.

Due to the topography and system of extensive farming, hill farmers may find it difficult to gather lambs to castrate them within seven days of birth. In hill systems, lambs are typically born on the hill with gathering delayed to prevent potential injury, mismothering, and misadventure. This may leave hill farmers unable to use the rubber ring method legally due to the seven-day age limit. We suggest this is an area that may require further exploration.

As per previous comment, it may be beneficial to examine the wording of the legislation in relation to requirements for pain management when using other methods of castration, and for lambs that are younger than three months of age.

¹⁰ Clements and Bright 2010. The short scrotum method of castration in lambs: a review. AHDB final report. Available at: <https://ahdb.org.uk/the-short-scrotum-method-of-castration-in-lambs-part-1>

What is the impact of these practices on the lambs – at different ages and in different settings and circumstances?

AHDB has not carried out a literature review and it may be beneficial for the AWC working group to do so.

A description of the impact of both castration and tail docking in terms of physiological pathways is described by Meintjes 2012¹¹. Cortisol levels are frequently used to assess acute pain but assessment of severe pain using this method is problematical as cortisol levels demonstrate a ceiling effect¹². Behavioural responses have also been used to assess pain but there can be variation in responses between individual animals¹³. A brief review of the response of lambs to different practices has been carried out by Gascoigne et al² and it may be useful for the working group to contact the authors.

Neonatal lambs that are in pain may be reluctant to feed and at risk of insufficient colostrum intake, at risk of mismothering and consequently at greater risk of disease and predation.

Do you consider these practices to be necessary? If so, why?

Yes, although the principles of the 3Rs should be applied and reviewed regularly with the farm vet. Competent stock persons should carry out the procedure to ensure the method used is carried out correctly, is effective and appropriate steps are taken to safe-guard animal welfare e.g., age-appropriate methods, with the provision of pain relief. The provision of stock person training has the added benefit of helping to find and retain qualified stock people within the industry and provide a career structure.

Where separate management of entire male lambs is not possible, castration prevents impregnation of ewe lambs and ewes. The unintended consequence of accidental mating in this way has both welfare and economic implications.

Are you aware of alternatives to these practices?

Yes.

¹¹ Meintjes 2012. An overview of the physiology of pain for the veterinarian. Veterinary Journal: 193(2), p344-348. Available at: <https://doi.org/10.1016/j.tvjl.2012.03.001>

¹² Malony et al 2002. Validation of a method for assessment of acute pain in lambs. Applied Animal Behaviour Science: 76(3), p215-238. Available at: [https://doi.org/10.1016/S0168-1591\(02\)00014-X](https://doi.org/10.1016/S0168-1591(02)00014-X)

¹³ Grant 2004. Behavioural responses of lambs to common painful husbandry procedures. Applied Animal Behaviour Science: 87(3-4), p255-273. Available at: <https://doi.org/10.1016/j.applanim.2004.01.011>

It is possible to vaccinate male lambs so that sexual maturity can be delayed using GnRH¹⁴. This would increase welfare as there would be no need to castrate lambs, enable farmers to benefit from growth rates similar to those seen in entire males and reduce the risk of both ram taint and unintended breeding. The vaccine can be given to lambs at two to three months of age, and with a booster it is possible to delay puberty by at least three months - and further if a third vaccine is given. Such a method would have significant welfare advantages over physical castration. However, the product is not licenced in sheep. AHDB recommend investigation of the possibility for obtaining a licence, or for its use under the cascade system.

The following are perhaps variations of current practice developed for ease of use rather than alternatives per se:

AHDB is aware of a product licenced for use in Australia in 2019 and intended for launch in New Zealand in 2021 called 'Numnuts®'¹⁵. Numnuts® is a ring applicator, combined with an injector that dispenses anaesthetic for use with tail docking and castration procedures. This product is not available in the UK. It is currently being trialled for regulation purposes in 4–8-week-old lambs in the UK and would require a change in legislation to enable its use.

Kent et al (2004) describe two new techniques for castration and tail docking of lambs less than two days of age¹⁶:

- 'Big nipper' bloodless castrator
- Newly developed high-pressure jet injector for use with rubber rings after application

Have you tried / witnessed alternatives to these practices? If so, what were the results?

No.

Numnuts® is being trialled on a hill farm in Scotland, details are available on the manufacturers webpages¹⁵.

To what extent is consumer demand a factor in the castration of lambs? – eg taste preferences, or demand for higher welfare lamb. What evidence is there for consumer preference either way?

¹⁴ Jenett et al 2003. The castration of male lambs by immunisation against GnRH. Schweiz Arch Tierheilkd: 145(6), p291-9. Available at: <https://doi.org/10.1024/0036-7281.145.6.291>

¹⁵ Senesino Pty Ltd 2021. Numnuts®. Available at: <https://numnuts.store>

¹⁶ Kent et al 2004. Randomised, controlled field trial of two new techniques for the castration and tail docking of lambs less than two days of age. Veterinary Record: 154(7) p193-200. Available at: <https://doi.org/10.1136/vr.154.7.193>

Taste and price are hugely important to consumers when shopping for meat. Consumer research has consistently shown that consumers dislike the fat of lamb and lamb is considered too fatty.

Carcase Characteristics

Studies show that the meat of ram lambs is leaner, and has less saturated fat compared with castrated lambs or ewe lambs which helps to address this problem. However, eating quality of ram lamb meat can be poorer in both flavour and tenderness.

It is very difficult to separate the effects of age, weight and season in lambs. In general, the literature supports the view that older/heavier lambs are tougher with lower water holding capacity and are consequently less juicy or drier^{17,18}. There is also a tendency for older lambs to have a stronger (or less desirable) flavour. It is recommended that the variation in tenderness of meat from older lambs can be improved by applying high voltage electrical stimulation post slaughter thereby improving eating quality.

There is a higher incidence of abnormal flavours which can occur in older male lambs. The development of abnormal flavours occurs by 30 weeks of age¹⁹ and is thought to be due, at least in part, to the increased presence of branched chain fatty acids. Ram lambs are also higher in skatole and testosterone, which gives rise to undesirable odour and flavour^{20,21}.

The acceptance of ram lambs by the meat industry is coloured by the view that ram lambs develop undesirable carcass characteristics that develop at 5-6 months of age. These include:

- Heavier forequarter
- Thick neck
- Loose muscle on loin
- Darker flesh (although research does not always find this)
- Carcass 'wet'
- Coarse meat

Historically, this resulted in automatic rejection of ram lambs sent for slaughter after December.

Castration has an effect on eating quality, with the biggest effect being on reducing toughness, often considered the most important sensory trait in determining

¹⁷ Beriain et al 2000. Effect of animal and nutritional factors and nutrition on lamb meat quality. In Ledi and Morand-Fehr (eds) Sheep and goat nutrition: intake, digestion, quality of products and rangelands. Zaragoza, CIHEAM-AAMZ.

¹⁸ Jeremiah 2000. The effects of chronological age, slaughter weight, and gender on lamb: A review. Technical Bulletin. Lacombe Research Centre.

¹⁹ Sutherland and Ames 1996. Free fatty acid composition of the adipose tissue of intact and castrated lambs slaughtered at 12 and 30 weeks of age. Journal of Agricultural and Food Chemistry: 44, p3113-3116. Available at: <https://doi.org/10.1021/jf960049h>

²⁰ Craigie et al 2012. The effect of sex on some carcass and meat quality traits in Texel ewe and ram lambs. Animal Production Science: 52, 601-607. Available at: <https://doi.org/10.1071/AN11282>

²¹ Schreurs 2013. Comparison of castrate and entire ram-lambs for meat quality and skatole in the fat. New Zealand Society of Animal Production: 73, p68—70.

consumer acceptability. It could be considered best practice to ensure that uncastrated male lambs are finished as rapidly as possible to avoid increased toughness.

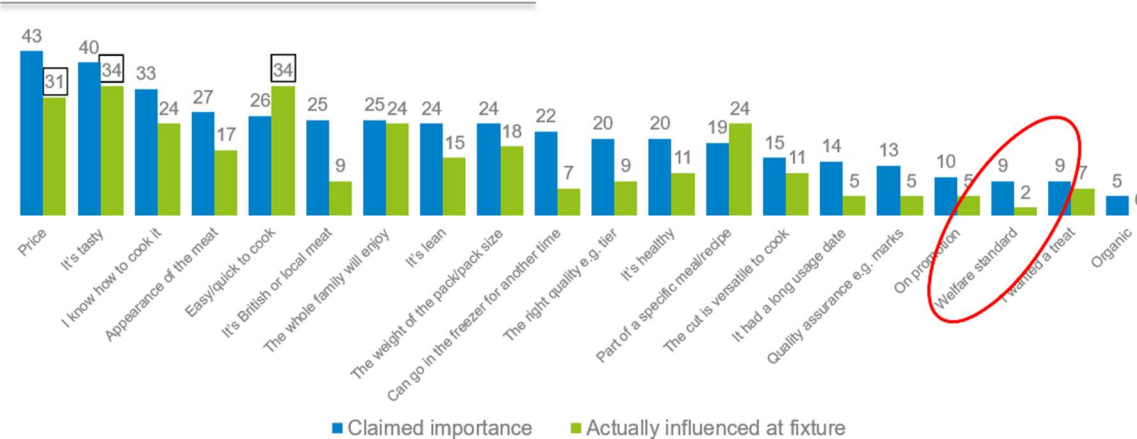
There is also concern within the industry about the slaughter of in-lamb ewe lambs, which can arise if management of ram lamb production does not avoid contact between sexually active male and female lambs. This presents both welfare and economic concerns.

Data from Consumer Insights

A qualitative study conducted with 30 respondents in 2019 identified that castration is not top of mind to consumers. However, when prompted, consumers see it as necessary, based on the assumption that farmers would not be undertaking the practice otherwise. This is supported in the fact that 82% of consumers agree that farmers are experts at what they are doing and 76% agree that farmers care about animals²². It is important to note that while consumers generally find castration acceptable, they do expect it to be done for the benefit of the flock, and to be undertaken in a humane manner. For them, this means without pain or suffering, therefore usually with anaesthesia.

Consumers do not spontaneously link castration with meat quality. However, taste – as well as price – are hugely important overall when shopping for meat. Therefore, farm practices should not adversely affect these factors and look to improve them where possible²³.

Claimed important decision drivers vs. actually influenced at fixture



ONLINE: Q21. Which of these played a part in your decision to buy ... on this occasion? (ALL FACTORS) Base: all respondents n=751
 IN STORE Q15. Thinking specifically about the meat, which of these played a part in your decision to buy this particular pack of meat, once at fixture today? Base: all respondents n=485
 Source: AHDB/Future Thinking, Protein Shopper Journey Research, July 2018

As per earlier comments, there is a preference for entire rams for the Muslim festival known as Qurbani.

²² AHDB/Blue Marble, 2019, n=1500

²³ AHDB/Future Thinking, Protein Shopper Journey Research, July 2018

Please add any other information on castration of lambs that you consider to be useful to this review.

There is a rich diversity in farming and a one-size-fits-all approach is rarely of practical use. Consequently, having multiple 'methods' available and enabling vets and farmers to work together, applying the 3Rs may be the best approach to improving welfare.

Care should be used if drawing conclusions from international literature as lamb diets (e.g., milk fed, grain-fed and grass-fed) may differ between countries with resulting differences in both flavour and tenderness of meat.

There are currently no licenced anaesthetics or analgesics products for use in sheep. These are prescribed by vets under the cascade system. However, the lack of licensed products for sheep remains a challenge. In 2018, the RSPCA reported²⁴ concerns that farmers had informed them that their vets were reluctant/refused to prescribe pain relief for sheep, despite industry recommending their use.

As mentioned previously, a national database which tracks trends over time, including methods, would be useful. If acceptable to industry, it could be used to demonstrate improvements in lamb welfare, support the reputation of the sheep industry in GB and indicate where future refinements and developments would have the greatest impact. This could be considered for development within Defra's Animal Health and Welfare Pathway for England (and potentially similar schemes for Scotland and Wales) and as part of reforms to the Basic Payment Scheme. Alternatively, a randomised abattoir survey, either as a periodic survey or as a one-off assessment, could provide information on the proportion of lambs castrated. Although it would not provide the additional information sought in this consultation on methods and ages and consideration would need to be given for potential differences in castration practices for early season and store lambs.

On a final note, with practical difficulties for hill systems in castrating lambs within seven days of age, there is a risk that castration methods may be used that are non-compliant with legislation.

²⁴ RSPCA communication from John Avizienius to SHAWG members at a SHAWG members meeting in 2018

Tail docking of lambs

What proportion of lambs do you estimate are tail docked across GB? Is your response based on data collection / personal experience / anecdotal evidence? If your knowledge is of a particular breed, a particular area, or a particular farming method, what proportion of those lambs do you estimate have their tails docked? (If answering the remaining questions from that knowledge base, please explain that you are doing so.)

AHDB is not aware of data providing a national figure for the number or proportion of lambs that are tail docked across GB. Our remit for the Beef and Lamb sector extends to England only. Anecdotal evidence based on our staff's engagement with farms across England would suggest that most lambs in England are tail docked. The levy boards in Wales (HCC) and Scotland (QMS) may be able to provide details for their areas. Our previous comments in relation to this question on castration are also applicable.

Over the last 10-15 years, has the practice of tail docking increased, decreased or stayed the same?

In the absence of national data, it is difficult to suggest trends over time.

The recent Sheep Breed Survey results²⁵ indicate that wool shedding breeds (e.g., Easy care, Exlana and Wiltshire Horn) have increased since the last survey in 2012 with approximately 250,000 ewes mated in 2020. The benefit of these breeds is that as the wool is naturally shed, the risk of blowfly strike is reduced and therefore tail docking and crutching are unnecessary.

There may be regional differences in the proportion of lambs that are tail docked, with larger proportions of lambs' tail docked in lowland systems compared with hill systems due to breed influences.

Case studies in farming literature demonstrate how some farmers have deliberately and successfully refined or reduced the number of lambs they tail dock². In addition, Red Tractor includes a requirement that tail docking is documented within members health plans. The standard additionally includes a recommendation that the need for tail docking is reviewed with the vet⁴. It is widely reported by industry that approximately 50-55% of beef and lamb farms are assured, although this figure is not officially used by Red Tractor. The AHDB 2019 levy payer satisfaction survey reports that 6% of farmers in the Beef and Lamb sector agree with the statement "*I like to be the first to adopt new methods and practices even if there is a risk that they might fail*". A further 6% agree with the statement "*I am one of the first to adopt new methods and practices – I consider myself to be an opinion leader*".

²⁵ AHDB 2021. The breeding structure of the British sheep industry 2021. Results of the 2020 survey of sheep breeds in Great Britain. AJDB publication. Available at: <https://ahdbsiteauth.ahdbdigital.org.uk/knowledge-library/sheep-breed-survey-2021>

Anecdotally, the above may suggest that tail docking could have decreased over the last 10-15 years, perhaps particularly amongst farm assurance members and the more progressive farmers. Although there is no data, based on the above, it may be plausible to suggest that between 12% and 55% of farmers have actively considered alternative strategies for tail docking, with an unknown proportion of these refining, reducing or replacing them.

A national database which tracks trends in tail docking over time, including methods, would be useful. If acceptable to industry, it could be used to demonstrate improvements in lamb welfare, support the reputation of the sheep industry in GB and indicate where future refinements and developments would have the greatest impact. This could be considered for development within Defra's Animal Health and Welfare Pathway for England (and potentially similar schemes for Scotland and Wales) and as part of reforms to the Basic Payment Scheme. Alternatively, data could be captured in Government annual farming survey returns. A randomised abattoir survey, either as a periodic survey or as a one-off assessment, could provide information on the proportion of lambs' tail docked. Although it would not provide the additional information sought in this consultation on methods and ages.

Does the practice of tail docking differ according to the circumstances in which the sheep are farmed / the age at which the lambs or sheep are to be sold / to whom lambs or sheep are sold and how they are sold / whether they are sold finished or for finishing?

Yes, although AHDB is not aware of any data that captures the proportion of lambs tailed docked by factors which are thought to influence the use or method by which it is carried out. Anecdotal data provided by our staff is given below.

The practice of tail docking originated in the 16th/17th century to reduce faecal and urine contamination amongst breeds with longer wool.

Tail docking is currently used as a management tool for two reasons:

- to reduce the risk of blowfly strike and,
- to reduce the time taken to shear sheep.

There are several factors thought to influence the decision whether to tail dock:

- Tradition
- Breed
- System

The introduction of sheep breeds that naturally shed wool, allows farmers to reduce the need for tail docking. These breeds include Easy Care, Exlana and Wiltshire horn.

Hill breeds are traditionally left undocked as longer tails provide protection against harsher environmental conditions in these areas. In addition, the extensive nature

of hill farming may mean farmers choose to leave tails undocked to reduce labour. Consequently, farmers of hill systems may be less likely to tail dock.

In recent years, seasonal weather patterns have been less predictable with both droughts and flooding. There is therefore a longer and variable period of risk for blowfly strike. These experiences may influence farmers' decisions on whether or not to dock tails.

Human behaviour and decision making is multifactorial and there may be a variety of influences, barriers and drivers to adopting a change in traditional practices. The ease of access to new knowledge, and willingness to adopt or adapt to new knowledge and implement new practices will affect the uptake of reduce, refine and replace strategies.

Why is tail docking carried out in the various circumstances / settings in which it takes place? And why not in other settings?

See above.

There may be regional variations in the incidence of blowfly strike due to weather patterns across GB. Farm location and incidence of blowfly strike may influence a farmer's decision to tail dock.

Do some farmers practice tail docking on only some of their lambs, and if so why?

AHDB is not aware of any farmers that tail dock only some lambs. However, we have not explored this question with farmers.

It may be plausible to suggest that some farmers may treat male and female lambs differently depending on their intended markets and if lambs will be used for breeding or finishing. This may be an area for further investigation by the AWC working group.

What methods are being used – at different ages and in different circumstances / settings?

AHDB is not aware of data that indicates the proportion of farmers using the different methods or data suggesting method preferences for systems or ages.

Methods AHDB is aware of that are currently used for tail docking include:

- A rubber ring to constrict the flow of blood to the tail
- Hot docking iron

In cases where tail docking is carried out, to what extent is the tail removed? And why?

Where tail docking is carried out, the recommendations are that the tail should be long enough to cover the vulva in females and anus in males. Research suggests that tails of a medium length, are beneficial as the tail is better able to remove faecal matter²⁶.

AHDB is not aware of data that provides an 'in practice' picture. It is possible to see a variety of tail lengths on some farms and at abattoirs, including short tail docks. Possible reasons for differences in tail length may be due to the number of on farm helpers at lambing, a lack of training/inexperience or personal preference.

What is the impact of tail docking on the lambs – at different ages and in different settings and circumstances?

AHDB has not carried out a literature review and it may be beneficial for the working group to do so.

A description of the impact of both castration and tail docking in terms of physiological pathways is described by Meintjes 2012¹¹. Cortisol levels are frequently used to assess acute pain but assessment of severe pain using this method is problematical as cortisol levels demonstrate a ceiling effect¹². Behavioural responses have also been used to assess pain but there can be variation in responses between individual animals¹³. A brief review of the response of lambs to different practices has been carried out by Gascoigne et al² and it may be useful for the working group to contact the authors.

Neonatal lambs that are in pain may be reluctant to feed and at risk of insufficient colostrum intake, at risk of mismothering and consequently at greater risk of disease and predation. There may be a need to give additional consideration to the welfare of lambs that undergo multiple mutilation procedures simultaneously e.g., ram lambs that are both tail docked and castrated.

Do you consider tail docking to be necessary? If so, why?

Yes, although the principles of the 3Rs should be applied and reviewed regularly with the farm vet. Competent stock persons should carry out the procedure to ensure the method used is carried out correctly, and appropriate steps are taken to safe-guard animal welfare e.g., age-appropriate methods and with the provision of pain relief. The provision of stock person training reduces the risk of short tail docking, has the added benefit of helping to find and retain qualified stock people within the industry and provides a career structure.

²⁶ Fisher et al 2004. Justifying the appropriate length for docking lambs' tails – a review of the literature. New Zealand Society of Animal Production: 64, p293-296. Available at: <http://www.nzsap.org/proceedings/2004/justifying-appropriate-length-docking-lambs-tails-review-literature>

It is important to note that shearing is a source of stress for sheep. It is documented to take longer to shear sheep with undocked tails.

Currently there is no information on the relative effectiveness of reducing the risk of blowfly strike and this should be carried out before tools are considered unnecessary.

AHDB views tail docking as one of the tools within the tool kit that farmers could potentially use following regular risk assessment based around the 3 R principles where the welfare risks out-weigh the welfare benefits. Information on the proportion of sheep undergoing tail docking, the proportion with short tail docks, the methods being used, alongside assessment of the number of blowfly strike cases per annum would be useful on a national scale to enable targeted campaigns which bring about improvements in welfare.

Are you aware of alternatives to these practices?

Reducing the risk of blowfly strike is an alternative. These methods include:

- Frequent inspection of the flock
- Management of parasitic gastroenteritis
- Management of lameness
- Rapid disposal of fallen stock
- Use of chemical fly preventative products (not licenced for milking animals)
- Shearing at strategic time points
- Dagging
- Use of wool shedding breeds
- Genetic selection of performance recorded breeds for shorter tails

Have you tried / witnessed alternatives to these practices? If so, what were the results?

AHDB has seen all of the above listed alternative examples carried out as responses to cases of blowfly strike and also as a proactive, preventative measures with positive results (although no control was used for comparison). Farmers may use more than one method to reduce the risk of blowfly strike where they consider the flock at risk.

Currently there is no information on the relative effectiveness of reducing the risk of blowfly strike and this should be carried out before tools are considered unnecessary or as effective alternatives.

Heritability of tail length is variable but high and is considered to be approximately 70%²⁷, it therefore presents an opportunity for performance recorded flocks. However, AHDB recommend that this opportunity be examined both holistically

²⁷ Scobie and O'Connell 2002. Genetic reduction of tail length in New Zealand sheep. Proceedings of the New Zealand Society of Animal Production: 62, p195–198. Available at: <http://www.nzsap.org/proceedings/2002/reduction-tail-length-new-zealand-sheep>

and within the context of other performance recorded traits to reduce the risk of unintended consequences. The use of wool shedding breeds combined with genetic selection for shorter tails in preference to tail docking is documented in a single farmer case study². This progressive pedigree farmer is selecting animals for breeding to enable a targeted tail length of 10-15cm as a possible desirable trait for potential buyers. Whilst AHDB see the potential welfare advantages of this case study example, it should be acknowledged as a single example. Consideration needs to be given to the time taken to develop a genetic trait, whether there is a market for these animals, or a premium (cost vs benefit), and that robust evidence is provided to ensure no unintended consequences. It may be an area that the working group explores further with a view to further research.

Anecdotal evidence from conversations with farmers may suggest that spray-on prevention products used to reduce the risk of fly strike maybe getting less effective. In addition, as the traditional fly strike season has extended, farmers now need to use the products for a longer period of time adding labour and overhead costs.

To what extent is consumer demand a factor in the tail docking of lambs? – e.g. demand for higher welfare lamb. What evidence is there for consumer preference either way?

In a study conducted in 2019²⁸, 53% of consumers had not heard of tail docking in lambs. Of the remaining consumers, there was a slight skew towards those being concerned about it, with 26% saying they had heard of it and were concerned, and 21% saying they had heard of it but were not concerned.

A qualitative study, conducted as part of the same project, confirmed that tail docking is not top of mind to consumers. While the quantitative study identified that some consumers are concerned about tail docking, further exploration as part of the qualitative interviews identified that consumers generally trust farmers to be undertaking it out of necessity. This is supported in that 82% of consumers agree that farmers are experts at what they are doing and 76% agree that farmers care about animals³³. However, the general consumer opinion is that it should be for the benefit of the animal and/or flock and done in a manner that does not inflict pain or suffering.

While welfare is important to consumers, as a factor in the shopper decision making process for meat it is far surpassed by other factors such as price, taste and ease of cooking. Therefore, any change on-farm, to practices such as tail docking, should not negatively affect the end-product quality or price of lamb²⁹.

²⁸ AHDB/Blue Marble, 2019, n=1500

²⁹ AHDB/Future Thinking, Protein Shopper Journey Research, July 2018

Please add any other information on tail docking of lambs that you consider to be useful to this review.

There is a rich diversity in farming, a one-size-fits-all approach is rarely of practical use. Consequently, having multiple 'methods' available and enabling vets and farmers to work together, applying the 3Rs may be the best approach to improving welfare.

There are currently no licenced anaesthetics or analgesics products for use in sheep. These are prescribed by vets under the cascade system. However, the lack of licensed products for sheep remains a challenge. In 2018, the RSPCA reported²⁴ concerns that farmers had informed them that their vets were reluctant/refused to prescribe pain relief for sheep, despite industry recommending their use.

The nervous system continues to develop after birth and there is evidence of both gender specific effects and increasing pain perception with age and bodyweight in lambs. However, there is also evidence that mutilation procedures carried out on lambs at 1 day old compared with 10 days can lead to increased pain responses during subsequent procedures. A useful gap evaluation of pain alleviation research was carried out in 2020 by Australian Wool Innovation Limited³⁰.

As mentioned previously, a national database which tracks trends over time, including methods, would be useful. If acceptable to industry, it could be used to demonstrate improvements in lamb welfare, support the reputation of the sheep industry in GB and indicate where future refinements and developments would have the greatest impact. This could be considered for development within Defra's Animal Health and Welfare Pathway for England (and potentially similar schemes for Scotland and Wales) and as part of reforms to the Basic Payment Scheme. Alternatively, data could be captured in Government annual farming survey returns. Alternatively, a randomised abattoir survey, either as a periodic survey or as a one-off assessment, could provide information on the proportion of lambs' tail docked. Although it would not provide the additional information sought in this consultation on methods and ages.

³⁰ AWI 2020. Project Final Report: Gap Evaluation of Pain Alleviation Research. Australian Wool Innovation Limited NSW. Available at: <https://www.wool.com/globalassets/wool/sheep/research-publications/welfare/improved-pain-relief/project-final-report-on-gap-evaluation-of-pain-alleviation.pdf>

Other permitted procedures

In addition, to castration and tail docking, there are a number of other “prohibited procedures” which are permitted by regulations in certain circumstances –

Eg: ear notching and tagging
tattooing
micro chipping
vasectomy
laparoscopic insemination
embryo and ovum transfer
implantation of a subcutaneous contraceptive into a non-farmed sheep
dehorning
disbudding.

These are permitted by the following regulations:

[The Prohibited Procedures on Protected Animals \(Exemptions\) \(Scotland\) Regulations 2010 \(legislation.gov.uk\)](#)

[The Mutilations \(Permitted Procedures\) \(England\) Regulations 2007 \(legislation.gov.uk\)](#)

[The Mutilations \(Permitted Procedures\) \(Wales\) Regulations 2007](#)

Do you have any concerns about whether any of these practices are necessary or the way they are carried out? If so, why?

Generally speaking, there is no economic interest for farmers to carry out unnecessary procedures. It would be beneficial for any routine mutilation procedures that are carried out on farm to be periodically reviewed with the farm vet, applying the 3Rs (reduce, refine, replace). When new knowledge arises, particularly where practices have a long tradition, adoption of a change within industry may be slow and challenging.

There are currently no licenced anaesthetics or analgesics products for use in sheep. These are prescribed by vets under the cascade system. However, the lack of licensed products for sheep remains a challenge.

In regard to vasectomised rams, our staff have suggested that there appears to be increased interest and a good market for these animals from farmers who want to tighten up lambing patterns.

Ear tagging is a requirement for traceability within the industry. It is our experience that the majority of farmers will wherever possible, replace lost tags in existing holes rather than create new ones. Tagging has the potential to introduce infection and it is recommended therefore that ear tags are dipped in an antiseptic solution

before being applied. This recommendation has the added benefit that it reduces the risk of antibiotic treatment being needed and therefore adheres to the principles of responsible antibiotic use.

Are you aware of alternatives to these practices?

No. There is a rich diversity in farming, a one-size-fits-all approach is rarely of practical use. Consequently, having multiple 'methods' available and enabling vets and farmers to work together, applying the 3Rs may be the best approach to improving welfare.

As mentioned previously, a national database which tracks trends over time, including methods, would be useful. If acceptable to industry, it could be used to demonstrate improvements in lamb welfare, support the reputation of the sheep industry in GB and indicate where future refinements and developments would have the greatest impact. This could be considered for development within Defra's Animal Health and Welfare Pathway for England (and potentially similar schemes for Scotland and Wales) and as part of reforms to the Basic Payment Scheme. Alternatively, data could be captured within Government annual survey returns.

Are you aware of any other procedures currently being practised which are not listed as 'permitted' in the regulations? Please give details of these practices, the contexts in which they are taking place, and how widespread they are.

No.

Please add any other information on the practice of these procedures that you consider to be useful to this review.

All comments have been included in sections above.

Questions for Buyers / Supermarkets

To what extent do you make particular specifications of the lamb you buy in relation to castration or tail docking?

Section not applicable to AHDB

Are you aware of whether castration or tail docking have been carried out on the lamb you buy?

Section not applicable to AHDB

Are you aware of any consumer preference on this matter?

Section not applicable to AHDB

Do you have any views on whether / how current rules or practices should be changed?

Section not applicable to AHDB

Respondent Information

Please provide your name, organisation and email address in the box below.

Mandy Nevel
Agriculture & Horticulture Development Board (AHDB)
Mandy.Nevel@ahdb.org.uk

If you are responding on behalf of an organisation please provide background information about your organisation as it relates to the themes of this questionnaire.

The Agriculture and Horticulture Development Board (AHDB) is a statutory levy board, funded by farmers, growers and others in the food supply chain. It exists to make British agriculture and horticulture industries more competitive and sustainable through factual, evidence-based advice, information and activity. Levy payers are considered as the primary customers although AHDB also benefits the wider industry. The delivery of services to levy payers and industry stakeholders is currently channelled through six sectors, which account for about 75% of total agricultural output in the United Kingdom (UK) including meat, dairy, cereals, vegetables and potatoes.

Privacy Notice

What information are we collecting about you?

We will collect and process the following information:

- Contact details, including your name, organisation and email address
- Information you give when responding to the survey, relating to your opinions, attitudes and experiences of this subject-matter.

How will we use your information?

Survey responses will be collected and analysed by the Scottish Government Animal Health and Welfare Division, acting as the Animal Welfare Committee Working Group Secretariat. The responses and the analysis of the responses will be shared with the Working Group.

The Working Group will produce a report on this subject-matter, which will include analysis of the responses to this questionnaire as well as the working group's other research and evidence gathering. The responses you give to this questionnaire may be quoted in the Working Group's report and attributed to your organisation. However, no names or other details which could identify individuals or individual farms will be included. Your name and email address are requested so that we can return to you for supplementary information should that be useful, but will not be used for any other purposes.

Members of the public may ask for a copy of the responses under the Freedom of Information legislation. If you do not want your response – including your name, contact details and any other personal information – to be publicly available, please say so clearly in writing when you send your response to this evidence gathering exercise. Please note, if your computer automatically includes a confidentiality disclaimer this will not count as a confidentiality request. Please explain why you need to keep the details confidential. We will take this into account if someone asks for this information under the Freedom of Information legislation. However, because of the law, we cannot guarantee that we will always be able to keep those details confidential.