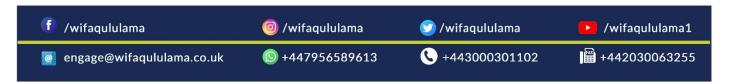


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LAMB/SHEEP

PRE-SLAUGHTER STUNNING

Contents

Question:	2
Abstract:	
Response	
Lambs in Britain	2
Breeding age & Qurbānī	4
Feed	4
Health checks (Before & After Slaughter):	5
Stunning:	
Heartbeat & bleeding after Stunning:	
Slaughter vs <i>Halāl</i> Slaughter:	
Resources:	

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Fatwa ID: 00012 Page **1** of **8**

Question:

I have heard that most lambs/sheep are stunned before slaughter in Britain. What is your opinion on stunning provided that all the rules and regulations of Islamic slaughter are followed and fulfilled?

Question, as received.

Abstract:

The query was deliberated amongst the Scholars at Department of *Darul-Iftaa* (*Wifaqul Ulama*).

It is well known principle that animals need to be alive¹ at the time of slaughter for them to be permissible for consumption in *Islam*.

When reversible electric head-only stunning is used for lambs/sheep in Britain, it is not known, scientifically or in practice, for animals to die from it. Therefore, as long as all the rules and regulations pertaining to *Islāmic* slaughter are fulfilled, the lambs/sheep slaughtered after stunning (as described above) will be permissible for Muslims to consume.

This statement should not be applied generally to all species and other types of stunning. We hope to *Inshā-Allāh* address stunning methods and techniques relevant to other animals (poultry, cattle etc) at a later date. Our statement should also not be

applied to other countries without consulting the local slaughter practises.

- 1. Mufti Yusuf Sacha
- 2. Maulana Marghoob Ahmed Lajpuri
- 3. Mufti Amjad Mohammed
- 4. Mufti Faisal al-Mahmudi (Canada)
- 5. Qadhi Imran Sayed Falahi
- 6. Mufti Mohammed Ashfaq
- 7. Qari Muhammad Shoyaib Nurgat
- 8. Mufti Zakaria Akudi
- 9. Mufti Zubair Dudha

May Allah preserve them all.

Response

The rearing of the animals, stunning techniques and methods greatly differ in United Kingdom. It is critical to understand the entire process from "Farm to Fork" to ensure that not only *Halāl* but healthy and wholesome food is consumed².

This paper covers the process for lamb and sheep. The findings of this paper should not be applied to other species in Britain.

Lambs in Britain

The terrain and climate of United Kingdom is uniquely suited to rearing sheep. Over 60% of the British farmland is only suited to grow grass, making it possible for Britain to have approximately 25% of EU sheep stock and 3% of global stock³. We produce one third of EU sheep meat and currently sitting as the sixth biggest producer worldwide⁴. The export of

³ <u>https://www.nationalsheep.org.uk/know-your-sheep/sheep-facts/</u>

Fatwa ID: 00012 Page **2** of **8**

¹ http://askimam.org/public/question_detail/32697

² [16:114] Then eat of what Allah has provided for you [which is] lawful and good. And be grateful for the favor of Allah, if it is [indeed] Him that you worship.

⁴ Ibid

sheep wool has played a unique role in the prosperity of Britain⁵.

There are several specific terms used within the industry in our country and brief definitions are as follows:

- 1. Castration: The testes (or testicles) produce sperm and the male hormone which testosterone is responsible for secondary sexual characteristics and influences certain aspects of male behaviour. or inactivation of the testes renders the animal infertile (thus preventing indiscriminate breeding) and removes the influence of testosterone on carcass characteristics behaviour. and Consequently the darker. characteristically flavoured and tougher meat found in mature rams is avoided, as is potential in-breeding and inter-male fighting for dominance with its associated problems of injury and loss of productivity. Castration is predominately done by placing a constricting latex ring (band) at the right position ensuring that both testicles are covered and the urethra is not trapped. It can also be done by surgical castration but this is not the norm due to cost reasons. Banding causes the scrotum to shrivel up and fall off after 2-3 weeks. It is possible to procure uncastrated lambs but the majority in Britain are castrated.
- 2. Ear Tagging: All sheep in Britain must be identified by law. This is accomplished by tagging the animals on the ears. Legally, the animals must be tagged:
 - a. within 6 months of birth if they're housed overnight;
- 5 http://www.bahs.org.uk/AGHR/ARTICLES/12n1a1.pdf

- b. within 9 months of birth if they're not housed overnight;
- c. before you move them off their holding of birth if this is sooner;

In practise, all animals are tagged when they move from their holding (transferred from farm to farm or sold etc.). Lambs must have a minimum of one slaughter tag. Sheep over 1 year, or intended for breeding, must have a minimum of two tags. There can be more than the minimum tags for additional management purposes or when the animals are sold between farms. One of the minimum tags must be electronic EID6 so it can be read electronically.

- 3. Ewe: Female lamb or sheep which is of breeding age.
- 4. Lamb: An animal less than 1 year old, also refers to meat from that animal
- 5. Lambing: The process of giving birth to lambs.
- 6. (Spring or Early) Lamb: An animal which is 3 to 5 months old, produced traditionally for the Easter market when lamb supply numbers are low. The meat is tender and does not have the flavour of an older lamb because of its age. The timing of Easter means that these animals may not have had a lot of time to graze on grass and would have been fed hay, silage, fodder or other feed instead.
- 7. Hogg/Hogget: An older lamb that is getting past one year of age, usually 9-15 months.

Note: The term Hog is also used to describe an older pig.

Fatwa ID: 00012 Page **3** of **8**

⁶ https://www.cckoutfitters.com/blogs/blog/70585157understanding-eid-ear-tags

- 8. Mutton: Meat from a sheep rather than a lamb. The meat from older animals develops more flavour but is less tender than lamb. Mutton is usually produced from ewes that have reached the end of their productive life but is typically used to refer to meat from any sheep over two years old.
- 9. Ram: Male lamb or sheep.
- 10. Sheep: An animal more than 1 year old.
- 11. Tail docking: This is the process of placing a constricting latex ring (band) around the tail which stops the blood supply and within 7-10 days part of the tail falls off. It is done because in a young animal the tail is long and the build-up of faeces around the tail can result in occurrence of Blow Fly Myias⁷. (Lucilia sericata) The blowfly the attracted damp conditions of a soiled breech and tail to lay is eggs. The larvae which hatch out burrow into the flesh to feed, leading to tissue damage, distress, loss condition and even death depending on the severity of the infestation. Tail docking is to protect the welfare of the animal. It is possible to find lambs in the UK with their tails intact and some breeds have naturally shorter tails so their tails do not need to be docked. However, majority of the animals in Britain have their tails docked.
- 12. Wether: A male lamb (Ram) castrated before sexual characteristics have appeared.

Breeding age & Qurbānī

⁷ https://www.moredun.org.uk/sites/default/files/memberdocs/pdf/Tail-Docking-and-Castration-of-Lambs.pdf Ewes have a typical breeding season in autumn when daylight hours start decreasing but some breeds can mate all year round. The gestation period is approximately five months and lambing typically starts in early Spring but there is great variety in the UK due to the length of the country with some farmers lambing in December in the south whilst others in the north lambing in April. Early Spring lambing is convenient because the weather is warming up and the grass is becoming to grow⁸.

To be eligible for *Qurbani*, goats & sheep (lambs, rams, ewes) need to be 1 year old. However the exception is for a lamb that if it is six months old but it is fat enough to look like a 1 year old animal, it is permissible to slaughter it⁹. Both of the conditions for the lamb i.e. the minimum age (of six months or more) and the size need to be fulfilled in order for the lamb to be suitable for *Qurbānī*. Due to the current dates of Eid-al-Adha and the normal lambing cycle in the UK, it may not be possible to find lambs which fulfil both criteria.

We therefore advise Muslims to be certain that both conditions are fulfilled before sacrificing lambs for *Eidul-Adhā Qurbānī*.

Feed

British lambs are predominantly fed naturally, there are several derivatives of natural feed as follows:

- 1. Grass: When grass growth is present. It is also the most prevalent and cheapest method.
- 2. Hay/Silage¹⁰: Cut & bailed grass stored for feed during winter.
- 3. Forage: Home-grown farm crops to feed sheep such as stubble turnips, sugar

Fatwa ID: 00012 Page **4** of **8**

⁸ https://www.dailyinfo.co.uk/feature/2885/everything-youever-wanted-to-know-about-sheep-but-were-afraid-to-ask

⁹ http://www.wifaqululama.co.uk/qurbani/

¹⁰ https://www.smallholderfeed.co.uk/sheep-feeding-guide/

- beet, kale etc. Again typically used during winter when there is no/low grass.
- 4. Concentrate: Artificial feed¹¹ high in energy & density. Often given to sheep housed indoors for lambing, or when no other feed, or weaning of young lambs from milk to solid feed (known as creep feeding). This is a high-cost production system and so is used sparingly for certain markets. It is typically used to supply the Easter lamb trade when prices are at their highest. In UK it is not legally permitted to put other animal proteins into sheep feed since sheep are herbivores.

Note: Chicken/Pigs are omnivore but it is still illegal to feed animal proteins or growth hormones (as practised in the US) for these species in the UK at this time. Farmed fish can be fed blood proteins in farmed fish systems and they are also typically stunned mechanically and/or electronically.

Health checks (Before & After Slaughter):

At the abattoir each animal is checked by an independent government-appointed veterinarian before slaughter and it is ensured that the animal is fit healthy to be slaughtered. The veterinarian also oversees the entire process from the slaughter to the hygienic meat production. The Food Standards Agency manages all veterinarians in the UK¹².

From the 5th of November 2018, all slaughterhouses must also be equipped with CCTV cameras in all areas where there are live animals present, including the slaughtering and bleeding area, and the images are required to be kept for upto 90 days¹³.

Qualified meat inspectors are stationed at the end of the evisceration process to inspect the meat after slaughter¹⁴.

Stunning:

The 3 most commonly used terms in the industry are:

- 1. Stunned: Animal is stunned prior to neck cutting (slaughter) using either electric current or mechanical captive bolt. There are three methods of stunning in Britain:
 - a. EHOS (Electric Head-Only Stunning): Head-only stunning electrodes are placed so that they span the brain as directly as possible and an electric current is applied¹⁵. When electrical stunning is carried out effectively, the result essentially the same as epileptic seizure in man, known as a grand mal epileptic fit, during which the brain is severely stimulated, the body tonic/clonic exhibits activity, and there is complete loss of consciousness¹⁶. This is known as electronarcosis. EU

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 $\frac{https://www.hsa.org.uk/downloads/publications/electricalst}{unningdownload.pdf}$

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http://www.molevalleyfarmers.com/mvf/store/category/sheen-feed

https://www.food.gov.uk/business-guidance/animal-welfare

¹³ <u>https://www.food.gov.uk/business-guidance/animal-</u>welfare

¹⁴ https://www.food.gov.uk/business-guidance/animal-welfare

¹⁵ https://www.hsa.org.uk/electrical-stunning-of-red-meatanimals-equipment/head-only

legislation requires minimum 1A current for sheep. No parameter is set for frequency or voltage. In practice stun equipment voltage is static around 400V with frequency being set by the abattoir operator typically around 300Hz¹⁷.

- b. EHBS (Electric Head-to-Back stunning): It is carried out by passing a current simultaneously through the brain and through the heart of the animal¹⁸. Since the purpose of the method is to kill the animal the current is passed through the heart at low 50Hz frequency to stop the heart and kill the animal.
- c. Mechanical Stunning: Captive bolt stunning is used by used by some smaller plants but generally they are not involved in the *Halal* meat industry. The goal of captive bolt stunning is to inflict¹⁹ a forceful strike on the forehead with the bolt in order to induce unconsciousness.
- 2. Un-stunned: Animal is slaughtered by a neck cut using a sharp knife without any form of stunning before or after.
- 3. Post-cut Stunned: Stunning is applied after the animal is slaughtered. It is applied to reduce the time between the cut and unconsciousness and thus minimise any potential suffering or harm to the animal. This method is not widely used or adopted.

Heartbeat & bleeding after Stunning:

The animal is stunned and then slaughtered within 15 seconds. The bleeding within the animal after slaughter is completed within 2 minutes. When the blood loss was compared between Traditional Religious Slaughter without stunning (TRS), Electric Head-Only Stunning (EHOS) and Post-Cut Electric Head-Only Stunning (PCEHOS), no significant differences were found²⁰. The blood flow from the carcass lasts approximately 90 seconds.

The animal carcass also shows convulsions after death which are essentially muscle convulsions. When the neck is cut and massive amounts of blood is lost the muscles in the carcass realise that there is no blood supply carrying energy to it so they start to contract more and more to tell the brain to pump blood to the muscle quickly. No blood comes because it is draining from the body. Lactic acid builds up in the muscles which now is not taken away by the blood supply and the pH drops from around 7pH to ultimately around 5.5pH when the muscle enters rigor mortis and can no longer contract (i.e. it 'sets'). The time is different for different species but for lamb it is typically 6-12 hours but is also influenced by other factors such as temperature and rate of chilling.

Timeline for stunning to slaughter to death is shown here:

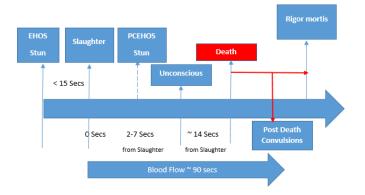
19 https://en.wikipedia.org/wiki/Captive bolt pistol

 $\frac{\text{https://www.sciencedirect.com/science/article/pii/S0309174}}{015300358}$

Fatwa ID: 00012 Page **6** of **8**

¹⁷ https://eur-lex.europa.eu/legalcontent/EN/ALL/?uri=celex%3A32009R1099

¹⁸ https://www.hsa.org.uk/electrical-stunning-of-red-meatanimals-equipment/head-to-back



Newhook & Blackmore²¹ in their study conclude, "In both adult sheep and lambs, conscious at the time of slaughter, insensibility occurred within 2 to 7 s and EEG traces became isoelectric between 10 and 43 s. In sheep which were lightly anaesthetised at the time of slaughter, EEG traces became isoelectric between 18 and 70 s after incision of the major blood vessels of the neck. In one sheep which was slaughtered by severance of the carotid artery and jugular vein on one side of the neck only, the onset of insensibility was delayed for 29 seconds." This study also states that in the majority of animals, electrocardiogram (ECG) i.e. heart-beat continued to show a normal pattern for more than 10 min after slaughter.

Another study has shown that on average, severing both carotid arteries plus jugular veins took 14 sec to induce a loss of brain responsiveness²².

Slaughter vs *Halal* Slaughter:

The neck cut slaughter process for lambs and sheep in United Kingdom is the same for *Halal* or *non-Halal* purposes. The major blood vessels in the neck are severed to allow the blood to flow freely from the carcass to render the animal dead²³.

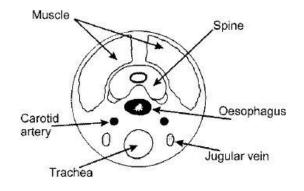
A cross section of the animal's neck is shown below with the major blood vessels on either side of the trachea which need to be severed for the mechanical process of the slaughter to complete.

Despite the slaughter process being the same, the meat is not permissible for Muslims to consume until it is slaughtered in a *Halal* manner.

In order for the lamb or sheep meat to be *Halal* i.e. permissible for Muslims to consume, certain conditions need to be met²⁴:

- 1. The one slaughtering the animal must be a Muslim;
- 2. The slaughter must be done with a tool with a sharp edge and the animal must be killed by the sharpness and not by using force and the majority of the four neck vessels (jugular veins, carotid arteries, trachea, oesophagus) must be cut²⁵;

Sheep Neck Cross Section



Fatwa ID: 00012 Page **7** of **8**

²¹ https://www.ncbi.nlm.nih.gov/pubmed/22054866

https://www.sciencedirect.com/science/article/pii/00071935 8490126X

²³ https://www.youtube.com/watch?v=wuFXgM-IBno&t=5s

²⁴ https://www.albalagh.net/general/zabiha.shtml

²⁵ https://www.central-mosque.com/index.php/General-Figh/meat-of-ahlul-kitaab-people-of-the-book.html

- 3. The name of *Allah* must be taken at the time of slaughtering and this is known as *Tasmiyah*²⁶.
- 4. Animal must be alive (not necessarily conscious) at the time of slaughter.
- 5. The blood which pours out is Haram and must be adequately drained from the carcass

Resources:

- 1. Farm-to-Fork Islam Channel Halal lamb supply chain documentary²⁷
- 2. Sheep slaughter methods educational video²⁸
- 3. Literature Review The Bleeding of Slaughtered Lambs for the Purposes of Halal Slaughter²⁹

والله أعلم وعلمه أتم

27 <u>www.youtube.com/watch?v=BfrumvIW0Xg&t=6s</u>

²⁶ [6:121] And do not eat of that upon which the name of Allah has not been mentioned, for indeed, it is grave disobedience. And indeed do the devils inspire their allies [among men] to dispute with you. And if you were to obey them, indeed, you would be associators [of others with Him]. Fatwa ID: 00012

²⁸ www.youtube.com/watch?v=wuFXgM-IBno&t=5s

²⁹ http://halalfocus.net/wp-content/uploads/2011/11/Khalid-2011-Bleeding-Literature-Review.pdf