

Extending the shelf life of PGI Welsh Lamb would open up new trade opportunities and increase port sales. For the UK retailer, lengthening lamb shelf life is an important tool to reduce food wastage. As such, shelf life is a key industry priority to continue to improve the competitiveness of lamb in the protein market. The Welsh red meat industry aims to increase sales in established markets by 4% a year and to build export sales by 5% a year. Extending the shelf life of PGI Welsh Lamb could help to meet these targets.

### What is Shelf Life?

Shelf life is “the number of days at which the product is no longer acceptable to a consumer”. In lamb this is usually due to changes in appearance, texture, odour or flavour. There are many factors affecting these including livestock handling, carcass processing, and packaging techniques. Bacterial contamination reduces shelf life, so ensuring both livestock and carcasses are clean is vital to reduce this risk.

### What can farmers do to improve Shelf Life?

Ensuring lambs are presented as clean as possible is the most effective way a farmer can improve the shelf life of lamb. The Food Standards Agency Clean Livestock Policy aims to minimise the risk from bacteria on sheep fleeces by scoring the contamination level. Sheep that score 4 or 5 with the Clean Livestock Scale need to have the dirty wool removed which adds a cost to the processor, and the clipping charge is often passed back to the farmer. Here are some examples of category 1 and category 5 lambs:

#### Category 1: Clean Sheep



### How does lamb become contaminated?

<b>Lambs</b>	Microbes on live lambs’ bodies and fleeces can be a factor in the contamination of the carcass at processing. Gut contents also pose a high risk of bacterial contamination on farm, in transport, at the market, lairage and the first stages of processing.
<b>Carcass preparation</b>	Ensuring high standards of hygiene at the initial processing stage (abattoir) reduces the potential for contamination. Minimal contact is key to reduce risks on the line but clean lambs are vital to minimise risk and improve shelf life.
<b>Processing and packaging</b>	Sealed packaging prevents bacterial growth but once opened or damaged, the meat has the potential to spoil and therefore shelf life is reduced.

#### Category 5: Dirty Sheep



Extending shelf life rests with the whole supply chain from the farm through to the retailer. It starts on farm with clean lambs presented for slaughter that are free from stress. Some lamb finishing systems present more challenge and risk, but below are some simple management tips.

### There are a few things farmers can do to improve shelf life:

**Outdoor finishing** – Lambs finished outdoors need a clean pasture runback. The runback shouldn't become poached, if it does, the lambs should be moved to somewhere clean and dry at least 24 hours before slaughter.

**Indoor finishing** – Lambs finished indoors need clean and dry bedding.

**Full bellies** – Ensure that feed is removed 6 hours before slaughter to minimise gut fill. During this period the lambs will still require fresh water and clean bedding.

**Shearing** – Crutching, bellying and shearing of lambs before transport to slaughter will remove wool and any contamination on the wool. This will ensure no extra cost is incurred.

**Transport** – Vehicles should have absorbent bedding (especially in tiered vehicles). They must have a waterproof roof, be dry, well ventilated and be cleaned and disinfected after every journey.

**Animal handling** – Calm and competent handling reduces stress. Stress adversely affects shelflife and meat quality. This is important at the farm, the auction mart, and in the lairage, as stress from 48 hours before slaughter can reduce shelf life.

### Extending shelf life of PGI Welsh Lamb

Increasing shelf life will improve the competitiveness and potential profitability for the whole Welsh supply chain. There are many aspects to extending shelf life in Welsh Lamb and these will be investigated as part of the Welsh Lamb Meat Quality Project. This includes reviewing current practices along the supply chain to help understand and promote best practice.



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