A practical investigation into the hygienic production of 'skin-on' sheep carcasses and cattle and sheep feet

Area of research interest: Foodborne pathogens
Study duration: 2003-11-01
Project code: M01027
Conducted by: University of Bristol

Background

Goat's meat with the 'skin-on' is produced and eaten in a number of non-European Union (EU), particularly Islamic countries. In the UK there is a market for sheep meat with the 'skin-on' as an alternative to 'skin-on' goat meat. This type of meat is not permitted to be produced under current EU legislation, which requires the skin to be removed. This has led to illegal production of skin-on sheep meat in unlicensed premises that are not subject to official inspections and may pose a risk to public health.

These illegal carcasses are known colloquially as 'Smokies'. EU hygiene legislation which came into force in January 2006 includes special provisions that will allow Member States to adopt national measures to enable the use of traditional methods at any stage of production, processing or distribution of food. This project determined the feasibility of producing skin-on carcasses to an acceptable hygiene standard. A successful result could form the basis of a case to revise legislation. The Department for Environment, Food and Rural Affairs (Defra), National Sheep Association (NSA) and the Meat and Livestock Commission (MLC) provided assistance with this project

Research Approach

This project was a practical investigation into the safe and hygienic production of 'skin-on sheep' carcasses, cattle and sheep feet.

The first phase of this project involved an evaluation of different options for removing the wool; the second phase determined the effects, on microbial counts, of specific steps in the selected method. In addition to meeting microbiological targets, another important objective involved ensuring the process resulted in a product that was acceptable to accustomed consumers of such products and an assessment was conducted. The shelf-life of skin-on meat was also studied as an extension to the microbiological comparison with conventional carcasses.

The Department for Environment, Food and Rural Affairs (Defra), National Sheep Association (NSA) and the Meat and Livestock Commission (MLC) will provide assistance with this project.

Results

This project demonstrated that by using a specific series of processing steps it is possible to produce singed, skin-on sheep carcasses that have lower microbial counts than conventionally dressed sheep carcasses produced in the same abattoir. Key factors in the process are a starting wool length of not more than 5mm, the use of gas burners to singe and remove the wool, a

pressure wash to remove charred fleece, and a final ‘toasting’ pass of the burners after all carcass dressing and handling operations have been completed. Carcasses and meat produced according to this procedure are visually and olfactorily acceptable in older sheep in a commercial abattoir. A survey of lesions occurring in older sheep in a commercial abattoir indicate that abscesses predominate and the implications of this for inspection of skin-on carcasses needs to be considered by the Meat Hygiene Service, should legitimate production of these carcasses be undertaken.

Research report

England, Northern Ireland and Wales

PDF
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