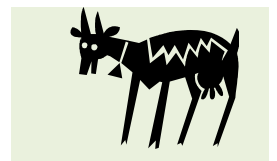
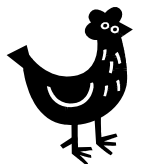
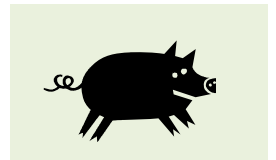


Livestock Matters

A series of newsletters/bulletins to the farming community

In this edition

Presentation of Livestock for Slaughter



3. Presentation of Livestock for Slaughter

There are many actions that an animal keeper can take to help to improve food safety and quality of the end product. This bulletin is concerned with animal keepers' responsibilities to do all that they reasonably can to reduce public health hazards from the food that they produce. Once an animal has been accepted for slaughter these responsibilities lie with the slaughterhouse operatives. However, prior to an animal being accepted for slaughter, these responsibilities rest with the animal keeper or consignor. The consignor is the person who holds the final responsibility for the animal before presentation at the slaughterhouse and it may not be the keeper; it may for instance be a butcher who has brought the animal.

The keeper's responsibilities are no more onerous than they are now but if the new slaughterhouse is to be licenced to export meat then it must comply with British and European requirements. This requires robust tractability and evidence that the requirements have been met which can be audited by external regulators.

Food Standards

Following several high-profile outbreaks and deaths from foodborne illness in the 1990's the UK Government commissioned a review by Professor P James¹. At the time the Ministry of Agriculture, Fisheries and Food (MAFF) was responsible for farming, food processing and food safety. The report recommended that it was inappropriate for one government department to be responsible for production and processing of food as well as its safety. As a consequence the Food Standards Agency (FSA) was created in 2000 and its main objective is to protect public health from risks which may arise in connection with the consumption of food.

MAFF was merged with part of the Department of Environment, Transport and the Regions (DETR) and a small part of the Home Office to create The Department for Environment, Food and Rural Affairs (DEFRA) following MAFF's perceived failure to deal with the 2001 outbreak of Foot and Mouth disease.

The FSA is an independent government department and maintains distance from government so it is free to publish any advice it issues. However the FSA has an agreement, a concordat, with DEFRA and its executive agencies that sets out an agreed framework for co-operation between them.

In Guernsey the Environmental Health and Pollution Regulation (EHPR) takes on a similar role to the FSA whereas the DEFRA's role in Guernsey is currently shared between the Commerce & Employment, Environment and Home Departments.

Hazard management

In the UK meat inspection was introduced in the 1850's to prevent butchers purchasing diseased cattle, killing them and selling the meat. At this time it was estimated that 20% of meat came from diseased animals and a presumptive and not always correct link was made between animal disease and disease in humans. The 'Sanitary Inspectors' searched for signs of animal diseases in the carcasses through visual inspection, palpation and incision. Through better understanding of animal disease, improved hygiene and chilling of meat, the risks to consumers were reduced but the process of meat inspection had not significantly changed.

Following the food poisoning incidents in the 1990's, which lead to the establishment of the FSA, new approaches were appraised. Over the previous century improvements in husbandry, animal welfare and veterinary medicine had reduced animal disease.

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Refrigeration had reduced the growth of bacteria on the carcasses but contamination of the carcass with animal faeces during the slaughter process had not received the attention that it warranted. The traditional meat inspection processes of visual inspection, palpation and incision were no longer adequate to protect public health. The main cause of public health hazards are the food borne pathogenic bacteria campylobacter, E.coli and salmonella all of which may be found in animal faeces. Faecal contamination of the carcass is not always visible as it can take fewer than two hundred E.coli O157 bacteria to cause serious illness in a human. At any one time it is estimated that 1% to 2% of cattle are excreting E.coli O157.

The main source of carcass contamination with faeces is from the hide or fleece during skinning. The more contaminated the hide or fleece the greater the contamination of the carcass.

In summary the aim is to reduce the hazard of pathogenic bacteria contaminating the carcass by:

- P** Reducing the **Presence** of bacteria in and on the animal
- I** Avoiding the **Introduction** of bacteria by cross-contamination
- G** Minimising the **Growth** of bacteria through chilling
- S** Preventing the **Survival** of bacteria by cooking

(Meat inspection also protects public health from the harmful effects of meat residues such as veterinary drugs but also provides surveillance for animal diseases and ensures animal welfare.)

HACCP

Hazard Analysis Critical Control Point (HACCP)ⁱⁱ was conceived in the 1960s when the US National Aeronautics and Space Administration (NASA) asked the Pillsbury food company to design and manufacture the first foods for space flights. HACCP is a system which identifies all potential hazards to food safety at each stage of the production chain and aims to prevent contamination. HACCP ensures food safety and does not necessarily ensure food quality. A Critical Control Point (CCP) is a point, step or procedure where control must be applied to prevent, eliminate or reduce a food hazard to an acceptable level. To assure food safety, each CCP is monitored to check that it is within critical limits. A HACCP plan for a slaughter process will have a series of CCP's which must be passed for an animal/carcass to proceed to the next CCP.

The Food Business Operator (FBO) for the new slaughterhouse has to produce a HACCP plan for each of the species being slaughtered. The HACCP plan has to be audited by the Official Veterinarian (OV) to ensure that it is valid, that once implemented it can be verified and that it is reviewed and if necessary amended.

In Guernsey Alan Cox's company will be the FBO and the States Veterinary Officer (SVO) will be the OV who in this role is responsible to the EHPR.

The first CCP

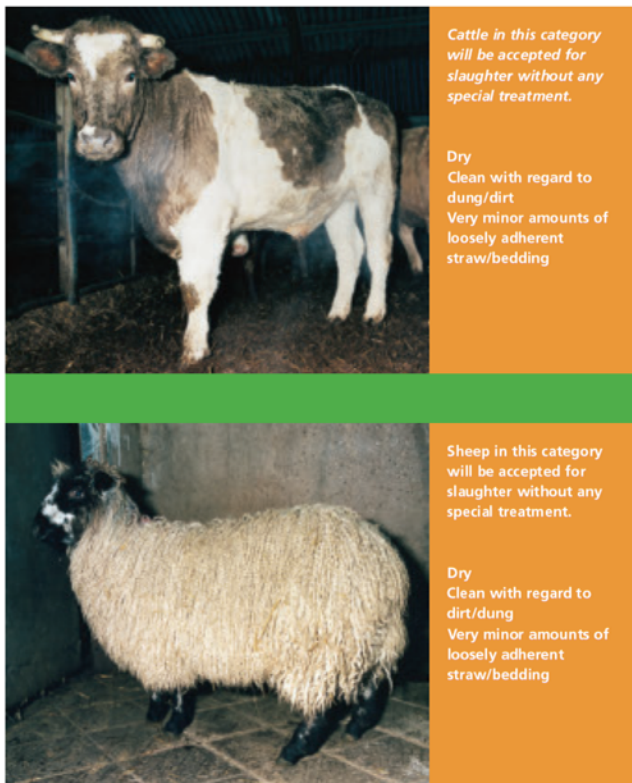
Whether the animal is a cow, sheep, goat or pig the first CCP in all the species HACCP plans concerns the animal's cleanliness upon arrival at lairage. If the animal's hide, fleece, skin is contaminated with faeces at this point it will significantly increase the likelihood of carcass contamination with faeces.

Before the FSA was created the Meat Hygiene Service (MHS) of England, Scotland and Wales created five visible cleanliness scores as part of its Clean Livestock Policy (CLP). This followed research in 1997 which compared the cleanliness of the live animal presented at the slaughterhouse and the levels of bacterial contamination detected of the carcass once the animal had been slaughtered and dressed. There was a clear correlation between the cleanliness of an animal presented for slaughter and the bacterial contamination of the carcass. To assist with the evaluation of cleanliness the MHS produced a series of photographs of cattle and sheep to illustrate the scores.

Visible Cleanliness Scores

The acceptance of animals for slaughter is regarded as a CCP to limit the bacterial hazards on a carcase to a safe limit. Each animal presented for slaughter is assessed against the cleanliness scoring scale by the OV, FBO or the lairage operative. Animals in categories 1 & 2 are considered safe for slaughter with no further precautions.

Category 1 - Clean and dry



Category 2 - Slightly Dirty



Animals allocated a score of 3 or above at first presentation for ante-mortem inspection will be rejected for slaughter on that occasion. Livestock keepers of rejected animals must collect their animals and take them away from the slaughterhouse. Livestock keepers may clean their animals and re-book them in for slaughter in the normal way.

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Category 3 - Dirty



Cattle in this category will be rejected for slaughter except in circumstances which are exceptional, e.g. animal welfare grounds, disease control reasons.

Dry/damp
Significant contamination with dirt/dung and/or Significant amounts of adherent straw/bedding



Sheep in this category will be rejected for slaughter except in circumstances which are exceptional, e.g. animal welfare grounds, disease control reasons.

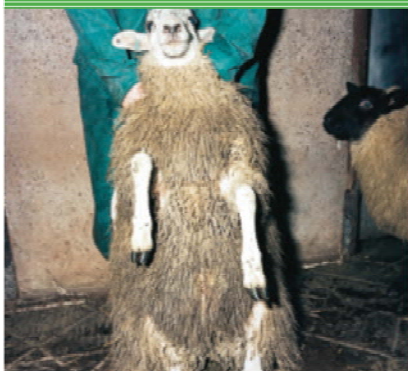
Dry/damp
Significant contamination with dirt/dung and/or Significant amounts of adherent straw/bedding

Category 4 - Very Dirty



Cattle in this category will be rejected for slaughter except in circumstances which are exceptional, e.g. animal welfare grounds, disease control reasons.

Dry/damp
Heavily contaminated with dirt/dung
Heavily clagged (clegged) and/or Significant amounts of adherent bedding



Sheep in this category will be rejected for slaughter except in circumstances which are exceptional, e.g. animal welfare grounds, disease control reasons.

Dry/damp
Heavily contaminated with dirt/dung
Heavily clagged (clegged) and/or Significant amounts of adherent bedding

Category 5 - Filthy and Wet



Cattle in this category will be rejected for slaughter.

Very wet
Very heavily contaminated with dirt/dung and/or Very heavily clagged (clegged) and/or A lot of bedding adherent to the coat



Sheep in this category will be rejected for slaughter.

Very wet
Very heavily contaminated with dirt/dung and/or Very heavily clagged (clegged) and/or A lot of bedding adherent to the coat

Note: Contamination of the following critical areas is particularly likely to result in rejection for slaughter of the animal:- brisket, abdomen (underside), flank, ribcage (lower areas and underside), hind legs (posterior surface of the hock), fore legs (anterior surface of the knee), neck and rectal area.

Pre-Slaughter Management for Animals Entering the Human Food Chain

There are a number of measures that livestock keepers can take to help ensure that their animals achieve a satisfactory visible cleanliness score and pass the first CCP. The animals' welfare must not be compromised as any unnecessary stress is likely to alter the environment in the animals' guts encouraging the proliferation of the pathogenic bacteria and defecation that we seek to avoid.

There are a number of other issues which are not necessarily related to animal cleanliness which it is opportune to mention here too.

- 1) On Farm avoid the build-up of pathogenic bacteria in the environment.
 - Diseases must be promptly diagnosed and treated
 - If possible operate an 'all-in, all-out' management policy and disinfect pens/houses between batches
 - Avoid mixing batches of animals
 - If new animals are brought on to the farm make sure they are from a reliable source
 - Train staff in good hygiene practices, clean boots and leave work clothes at work
 - Restrict visitors
 - Regularly clean and disinfect trailers and vehicles used to transport animals
 - Good vermin control measures
 - Regular cleaning of food and water troughs
 - Store/compost manure for 3 months prior to application to land
 - Good feed management – production, reliable sources, storage
- 2) Feed management prior to slaughter.
 - Reducing faecal output and ensuring faeces is firm helps avoid contamination of the environment and the hide/fleece
 - To avoid diarrhoea in animals, alterations in feed must be made gradually
 - Grass, silage, vegetables and cereal feeds tend to result in soft faeces and quantities must be gradually reduced prior to slaughter
 - Hay and straw feeds tend to result in firm faeces and quantities must be increased gradually prior to slaughter
 - Cattle and sheep, young-stock and adults, have established a rumen so are able to manage without food for reasonable periods. Therefore they can be starved for up to 24hr immediately before slaughter.
 - For lambs and calves less than 12 weeks of age without a well-developed rumen and all pigs it is only necessary to withdraw feed for 12 hours immediately prior to slaughter.
 - Feed withdrawal 12hr to 24hr prior to slaughter reduces:
 - gut fill at slaughter and reduce the risk of gut rupture during disembowelling
 - the quantity of faecal material carried in case of gut rupture
 - the amount of faeces on the carcase
- 3) Animals destined for slaughter must have water available at all times. Water is provided in the lairage area of the new slaughterhouse. It is acceptable for animals being transported directly from farms on Guernsey to the slaughterhouse to be without access to water provided the time from loading on farm to delivery at the slaughterhouse is less than ½ hour.
- 4) All animals transported to the slaughterhouse must be fit to travel. Animals which are obviously lame must not be transported to the slaughterhouse without prior consent of the OV.

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- 5) During transport animals must not be exposed to extreme temperatures. In hot weather animals' environment must be well ventilated and they must not be detained in stationary vehicles or trailers. In cold and wet weather it may be necessary to reduce the ventilation during transport to avoid chilling without risking asphyxiation.
- 6) Prior to slaughter keepers should ensure that their animals' hides/fleeces are not contaminated with faeces. Faecal contamination can be removed by:
 - Sheering, clipping, dagging and grooming
 - If animals are washed they must be completely dry when presented for slaughter
 - Sheering lambs and sheep prior to slaughter considerably reduces the likelihood of cross-contamination during dressing of the carcase
 - If it is not possible to entirely shear the lamb or sheep then sheering a wide strip along the belly and the brisket and dagging out around the tail and backs of the hind legs will also assist to keep the carcase clean
 - If an animal is sufficiently clean to pass the first CCP but external contamination requires that slaughter line production is slowed to meet hygiene requirements the FBO may charge more for dressing the carcase
- 7) Prior to slaughter and during transport animals should be kept on clean, dry straw or hay bedding. Saw dust is an unsuitable bedding material because it becomes caught in the hide and particularly in the fleece. Large wood chips are acceptable for cattle transport.
- 8) Animals must be dry when presented for slaughter. Wetness caused by rain, dew, sweat may result in the animal being rejected upon presentation.
- 9) Vehicles or trailers used to transport animals to the slaughterhouse will no longer need to be authorised under the Foot and Mouth regulations. However dirty vehicles and trailers will be turned away and denied access.

Hauliers of all vehicles and trailers that deliver animals to the new slaughterhouse MUST:

- Remove any bedding material and place it in a receptacle for incineration
 - Clean their vehicle and/or trailer in the vehicle wash before departure
- 10) Bulls over 10 months of age must have a nose ring and if horns have been removed it must wear a halter or neck chain. These animals must be accompanied by 2 stockmen who are used to handling the specific animal.
 - 11) Animals must be presented at the slaughterhouse at the appointed time. Space is limited in lairage and it is anticipated that there may be two delivery periods for each slaughter day.

The last two points will be covered in more detail in the next Bulletin but are mentioned below for completeness.

- 12) All animals presented must be identified according to the impending new regulations.
- 13) All animals must be accompanied with a 'Food Chain Information' (FCI) certificate, the declaration of which MUST be signed by the keeper or consignor. This includes declaring that all medicine withdrawal periods to enter the human food chain have been observed.

Summary

All animals must be identified according to the impending regulations and accompanied with a signed FCI declaration. Vehicles and trailers used to transport animals must be clean to deliver animals and must also be cleaned before departure from the slaughterhouse.

Cattle must be:

- clean
- dry
- fit to travel
- healthy
- drug withdrawal periods must be adhered to

Sheep and Goats must be:

- clean
- dry
- fit to travel
- healthy and free of drugs
- they must not be bedded on wood shavings or sawdust

Pigs must be:

- clean
- fit to travel
- healthy and free of drugs

The FBO and/or OV reserve the right not to allow unloading of animals if requirements have not been met.

Contacts

If you have any questions regarding matter in this leaflet please contact the person indicated:

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Farm / Site Management	Andrew Casebow Agricultural and Environmental Advisor	234567
Food Hygiene	Environmental Health & Pollution Regulator	711161

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References

ⁱ <http://archive.food.gov.uk/maff/archive/food/james/cont.htm>

ⁱⁱ <http://haccpalliance.org/alliance/haccpqa.html>