

RSPH Level 4 Diploma for Proficiency in Meat Inspection

June 2021

Ofqual Qualification Number: 603/7562/0

Guided Learning Hours: 297 hours

Total Qualification Time: 937 hours

Description

The objective of the RSPH Level 4 Diploma for Proficiency in Meat Inspection qualification is for learners who wish to qualify as Official Auxiliaries (meat hygiene inspectors) and be appointed by the Food Standards Agency to work in England, Scotland and Wales and by the Department of Agriculture and Rural Development to work in Northern Ireland. This qualification is one of three which are required by Official Auxiliaries in order to comply with Regulation (EU) 2019/24. The qualification meets the requirements for the training and tests, and the theoretical knowledge and practical skills, set out in Annex II, Chapter II of this Regulation.

Official Auxiliaries are also required to achieve the Level 2 Certificate for Proficiency in Poultry Meat Inspection and the Level 4 Award for Proficiency in Pre-slaughter Inspection of White Meat Species.

Holders of these qualifications will have demonstrated that they have the skills, knowledge and understanding to carry out post-mortem inspection of the designated meat species and can apply the required food safety management procedures to their work.

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Unit: Understand how to verify food safety management procedures for meat establishments

Unit: D/617/0783

Level 4

Guided Learning: 26 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand the role of Food Safety Management Procedures (FSMP) for slaughter and dressing, by being able to meet the following assessment criteria:**
 - 1.1 Explain food safety practices for slaughter and dressing
 - 1.2 Summarise the importance of the Food Business Operator's (FBO's) FSMP for slaughter and dressing
 - 1.3 Describe the methods of collecting information for the Official Veterinarian's (OV) audit procedures
 - 1.4 Clarify what constitutes deficiencies in dressing standards, carcass hygiene and the action to be taken
 - 1.5 Summarise the statutory and FBO's requirements for post-mortem handling and despatch of carcasses from slaughterhouses
2. **Understand the requirements of Food Safety Management Procedures (FSMP) for the Food Business Operator's (FBO) facilities, by being able to meet the following assessment criteria:**
 - 2.1 State the requirements for the handling, preparation, packaging and storage of meat and offal in slaughterhouses
 - 2.2 Explain the importance of the "cold chain" in the handling of meat and offal
 - 2.3 Describe the cleaning methods suitable for use in slaughterhouses and cutting plants and how these should be monitored
 - 2.4 List the procedures for good hygiene practice and structural maintenance to maintain a hygienic working environment
 - 2.5 Explain the requirements and procedures to maintain the separation of clean and non-clean areas
 - 2.6 Explain the requirements and procedures to maintain the separation of edible co-products and animal by-products
 - 2.7 Explain what constitutes non-compliance in the FBO's FSMP consistent with current requirements
3. **Understand how to comply with procedures for storage and cutting, by being able to meet the following assessment criteria:**
 - 3.1 Describe the FSMP in relation to:
 - The design and maintenance of premises and equipment

- Pre-operational, operational and post-operational hygiene
 - Personal hygiene
 - Training in hygiene and work procedures
 - Pest control
 - Water quality
 - Temperature control
 - Controls on raw materials and products entering and leaving the establishment and any accompanying documentation
 - The identification, separation, storage and disposal of animal by-products
 - Cutting, wrapping and packaging
4. **Understand the requirements of health and identification marks, by being able to meet the following assessment criteria:**
- 4.1 Describe the documentation accompanying consignments of raw materials entering and products leaving the establishment
- 4.2 Explain the use of health and identification marks and the related documentation
5. **Understand reporting and actions needed to verify FSMP, by being able to meet the following assessment criteria:**
- 5.1 Describe the appropriate actions to be taken by the FBO when non-compliance in the FSMP against current requirements is identified
- 5.2 Explain how verification judgements are made in accordance with FSMP
- 5.3 Summarise the reporting and action to be taken by the authorised officer in the case of non-compliance

Content:

1. **Understand the role of Food Safety Management Procedures (FSMP) for slaughter and dressing.**
 - 1.1 *Food safety practices for slaughter and dressing:* Slaughter and dressing practices should minimise the risk of contamination; hygienic methods for bleeding stunned animals; methods for ensuring carcasses are dressed hygienically.
 - 1.2 *Importance of the Food Business Operator's (FBO's) FSMP for slaughter and dressing:* FBO's FSMP should ensure that carcasses and offal are presented for final inspection free from contamination by faeces, gut content, feathers, bile, grease and disinfectants etc; FSMP should include hygiene monitoring procedures and ensure that stunning, bleeding, de-feathering, evisceration and dressing are carried out without undue delay and in a manner that avoids contaminating the meat.
 - 1.3 *Methods of collecting information for the Official Veterinarian's (OV) audit procedures:* Information to be collected such as regarding post mortem inspection, number of carcasses contaminated, number of line stoppages, detention and rejection of meat; recording methods such as carcass contamination recording sheets.
 - 1.4 *What constitutes deficiencies in dressing standards, carcass hygiene and the action to be taken:* Use of the Manual for Official Controls' as a guide to the regulatory requirements for contamination of carcass and offal; action to be taken if inspection demonstrates contamination.
 - 1.5 *Statutory and FBO's requirements for post-mortem handling and despatch of carcasses from slaughterhouses:* Summary of statutory and FBO requirements for post mortem handling and despatch of carcasses; need to prevent/reduce contamination and prevent/reduce growth of microorganisms on animal carcasses.
2. **Understand the requirements of Food Safety Management Procedures (FSMP) for the Food Business Operator's (FBO) facilities.**
 - 2.1 *Requirements for the handling, preparation, packaging and storage of meat and offal in slaughterhouses:* Know the contents of the FBO's written procedures relevant to handling, preparation, packaging and storage of meat and offal.
 - 2.2 *Importance of the "cold chain" in the handling of meat and offal:* Components of the cold chain; temperature range; transport between components; importance of the cold chain in restricting the growth of microorganisms.
 - 2.3 *Cleaning methods in slaughterhouses and cutting plants:* Good hygiene practice in maintaining cleanliness of the slaughterhouse; monitoring cleaning; frequency of cleaning; assessing effectiveness of cleaning.

- 2.4 *Procedures for good hygiene practice and structural maintenance:* List of hygiene procedures and maintenance requirements needed to maintain hygienic working environment in slaughterhouse.
- 2.5 *Separation of clean and non-clean areas:* Reasons why clean and non-clean areas should be kept separate; identification of separate areas; processes which occur in these areas; procedures for keeping these areas distinct and reducing contamination and cross contamination.
- 2.6 *Separation of edible co-products and animal by-products:* Reasons why edible co-products and animal by-products should be kept separate; methods for achieving this.
- 2.7 *What constitutes non-compliance in the FBO's FSMP:* How the food safety management plan recognises actions or omissions which do not conform to the required standard for food safety set by the FBO and current legislation.

3. Understand how to comply with procedures for storage and cutting.

- 3.1 *Food Safety Management Procedures:* The FBO's FSMP for the design and maintenance of premises and equipment; pre-operational, operational and post-operational hygiene; personal hygiene; training in hygiene and work procedures; pest control; water quality; temperature control; controls on raw materials and products entering and leaving the establishment and any accompanying documentation; the identification, separation, storage and disposal of animal by-products; cutting, wrapping and packaging of meat are described.

4. Understand the requirements of health and identification marks.

- 4.1 *Documentation:* Documentation that should accompany raw materials for meat cutting and packing establishments; documentation to enable identification and correlation of animal parts and carcasses; test results for Transmissible Spongiform Encephalopathy (TSE) and other notifiable diseases; documentation that should accompany products leaving the meat cutting and storage establishment.
- 4.2 *Use of health and identification marks and related documentation:* Purpose of health marks; responsibility for applying health mark; meat which can be health marked; position of health mark on carcass or part carcass; with-holding of health mark; recording and security; use of identification marks.

5. Understand reporting and actions needed to verify Food Safety Management Procedures (FSMP).

- 5.1 *Actions to be taken by the FBO in the event of non-compliance:* Actions that the FBO should take in the event of non-compliance, as set out in the food safety management plan; actions should correct food safety management problems and be recorded.
- 5.2 *Verification judgements:* Checks to ensure that FSMP maintain the safety of meat; recording of verification checks.
- 5.3 *Reporting and action to be taken by the authorised officer in the case of non-compliance:* Reporting procedures in the event of non-compliances being discovered such as use of the operational form, daybook and enforcement programme; action such as verbal advice, corrective action and enforcement action.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Verify food safety management procedures for meat establishments

Unit: H/617/0784

Level: 4

Guided Learning: 16 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Verify slaughter and carcass dressing operations, by being able to meet the following assessment criteria:**
 - 1.1 Inspect carcass and dressing operations
 - 1.2 Confirm that hygienic slaughter and dressing of the animals are in accordance with the Food Business Operator's (FBOs) Food Safety Management Procedures (FSMP) and consistent with current requirements
2. **Verify compliance for meat and offal storage and cutting, by being able to meet the following assessment criteria:**
 - 2.1 Confirm that the reception of meat and offal in the Food Business Operator's (FBO's) FSMP is consistent with current requirements
 - 2.2 Confirm that the application of FSMP regarding Transmissible Spongiform Encephalopathy (TSE) is consistent with current requirements
 - 2.3 Confirm that the application of FSMP for the inspection of meat and offal entering and leaving cutting establishments is consistent with current requirements
 - 2.4 Confirm that meat and offal temperatures are in accordance with the FSMP and consistent with current requirements
 - 2.5 Confirm that the cutting, wrapping and packaging of meat and offal conforms to FSMP and is consistent with current requirements
 - 2.6 Confirm that correct identification marking materials are being used in accordance with the FBO's FSMP and is consistent with current requirements
3. **Verify offal handling and traceability operations, by being able to meet the following assessment criteria:**
 - 3.1 Inspect offal handling operations
 - 3.2 Confirm that preparation and packaging of offal is carried out in accordance with the FBO's FSMP and is consistent with current requirements
 - 3.3 Inspect traceability documentation
 - 3.4 Confirm the validity of traceability documentation

4. **Verify the hygiene standards of the meat establishment, by being able to meet the following assessment criteria:**
 - 4.1 Inspect standards in accordance with FBO's FSMP against current requirements including;
 - Equipment
 - Animals and carcasses
 - Temperatures and records
 - Staff
 - 4.2 Confirm that hygiene and maintenance standards are in accordance with the FBO's FSMP and is consistent with current requirements
5. **Understand how to deal with non-compliances, by being able to meet the following assessment criteria:**
 - 5.1 Identify non-compliances with respect to:
 - Slaughter and dressing operations
 - Meat and offal storage and cutting
 - Offal handling and traceability operations
 - Hygiene of buildings, equipment and staff and maintenance of buildings and equipment
 - 5.2 Take action to deal with any identified non-compliances

Content:

1. Verify slaughter and carcass dressing operations.

- 1.1 *Inspect carcass and dressing operations:* Operations and equipment are inspected to ensure hygiene is maintained at all stages of the operation; procedures minimise risk of contamination and cross contamination.
- 1.2 *Confirm operations are in accordance with published procedures:* Operations inspected to ensure consistent with food safety management procedures and current regulatory requirements.

2. Verify compliance for meat and offal storage and cutting.

- 2.1 *Confirm reception of meat and offal:* Reception of meat and offal is confirmed as being consistent with the FBO's food safety management plan (FSMP); the FSMP is checked to confirm that it is consistent with current requirements
- 2.2 *Confirm application of FSMP regarding TSE:* The FSMP is inspected to ensure that it meets current requirements with respect to TSE; operations are monitored to ensure the FSMP is applied correctly and consistently.
- 2.3 *Confirm application of FSMP for inspection of meat and offal:* The FSMP is inspected to ensure that it meets current requirements with respect to meat and offal entering and leaving the establishment; operations are monitored to ensure the FSMP is applied correctly and consistently.
- 2.4 *Confirm that meat and offal temperatures are in accordance with the FSMP and consistent with current requirements:* The FSMP is inspected to ensure specified meat and offal temperatures are consistent with current requirements; temperatures and temperature records are monitored to ensure compliance with the FSMP.
- 2.5 *Confirm that the cutting, wrapping and packaging of meat and offal conforms to FSMP and is consistent with current requirements:* The FSMP is inspected to ensure that it meets current requirements with respect to cutting, wrapping and packaging of meat and offal; operations are monitored to ensure the FSMP is applied correctly and consistently.
- 2.6 *Confirm correct identification marking materials are being used according to requirements:* Use of identification marking materials is checked to confirm it meets the requirements of the FSMP.

3. Verify offal handling operations.

- 3.1 *Inspect offal handling operations:* Operations and equipment are inspected to ensure hygiene is maintained at all stages of the operation; procedures minimise risk of contamination and cross contamination.

- 3.2 *Confirm operations are in accordance with published procedures:* Operations inspected to ensure consistent with food safety management procedures and current regulatory requirements.
 - 3.3 *Inspect traceability documentation:* Documentation accompanying meat inspected to confirm traceability; confirm the validity of traceability documentation; documentation corresponds to animal identification.
 - 3.4 *Identify and take action to deal with any non-compliance:* Non-compliances identified and FBO or OV informed as appropriate; ensure corrective action is taken to rectify non-compliance.
- 4. Verify the hygiene standards of the slaughterhouse establishment.**
- 4.1 *Inspect standards against requirements:* Hygiene standards of the establishment are inspected and checked against current regulatory requirements; hygiene standards of plant, equipment, staff, live animals and carcasses are assessed against regulatory requirements.
 - 4.2 *Confirm hygiene standards are in accordance with requirements:* Buildings and equipment are inspected to ensure that the level of maintenance and hygiene is consistent with food safety management plan and regulatory requirements.
- 5. Understand how to deal with non-compliance**
- 5.1 *Identify non-compliances:* Non-compliances are identified and the FBO or OV is informed as appropriate
 - 5.2 *Take action to deal with any non-compliance:* Corrective action is taken to rectify identified non-compliances, the non-compliance and actions taken are documented.

Assessment:

Assessment for this unit will be by observation of the candidates carrying out verification activities and a portfolio of evidence. A minimum of three formal observations must be carried out and include all of the following locations: red meat slaughterhouses, white meat slaughterhouses and cutting plants. Assessments must be supported by at least two items of witness-based supplementary evidence from relevant occupationally competent supervisory personnel. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Understand how to carry out pre-slaughter inspection of red meat species

Unit: F/617/2459

Level 4

Guided Learning: 26 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand the pre-slaughter inspection checks, by being able to meet the following assessment criteria:**
 - 1.1 Summarise the purpose and importance of animal identification
 - 1.2 Explain the benefits, purpose and limitations of carrying out an initial check of animals during unloading
 - 1.3 Outline the requirements of the reporting and recording procedures of pre-slaughter inspection
 - 1.4 Clarify the Food Business Operator's (FBO's) responsibilities in relation to food chain information for red meat species including;
 - Cattle
 - Pigs
 - Sheep
 - Deer
 - Goats
 - Horses
 - 1.5 Describe the documentation and records required by the Official Veterinarian (OV) and records of animals which are found to be:
 - Dead on arrival
 - Diseased
 - Suspected of having notifiable disease
 - Injured
2. **Understand how to deal with abnormalities and the welfare of red meat species, by being able to meet the following assessment criteria:**
 - 2.1 Describe the characteristics which indicate that an animal is abnormal or suspect
 - 2.2 Explain what action should be taken if an animal is believed to be abnormal or suspect
 - 2.3 Summarise why it is important to transfer abnormal or suspect animals to the designated isolation facilities

- 2.4 Summarise how to identify signs of stress and injury in animals including;
- Cattle
 - Pigs
 - Sheep
 - Deer
 - Goats
 - Horses
- 2.5 Describe the problems caused by inhumane or careless handling and poor welfare of animals
3. **Understand how to check facilities and equipment for pre-slaughter inspection checks, by being able to meet the following assessment criteria:**
- 3.1 Describe the features of a well maintained vehicle used for animal transportation
- 3.2 Describe the requirements of appropriate offloading facilities, holding areas and lairage for animals including;
- Cattle
 - Pigs
 - Sheep
 - Deer
 - Goats
 - Horses
- 3.3 Explain the importance of cleanliness of animals, transport, equipment and lairage including vehicle cleansing and disinfection
4. **Understand the procedural requirements pre- and at point of slaughter, by being able to meet the following assessment criteria:**
- 4.1 Clarify what constitutes non-compliance under the Food Safety Management Procedures (FSMP), animal health and welfare, and the action to be taken
- 4.2 Explain the importance, and methods of humane handling of animals at slaughter including the use of restraining equipment including those for;
- Cattle
 - Pigs
 - Sheep
 - Deer
 - Goats
 - Horses
- 4.3 Summarise the signs of an effective stun, taking into account the different stunning methods available for different species
- 4.4 Summarise the signs of inhumane treatment in the slaughter or killing operation

Content:

1. Understand the pre-slaughter inspection checks.

- 1.1 *Purpose and importance of animal identification:* Need for traceability of animals and confirmation of their identity before slaughter; legal requirements; methods of identification such as ear tags, electronic identification, passports; relationship to fitness for consumption.
- 1.2 *Benefits, purpose and limitations of carrying out an initial check of animals during unloading:* Welfare requirements; prioritisation of animals for slaughter or emergency slaughter; early separation of suspect from healthy animals; limitations of checks on animals at unloading.
- 1.3 *Reporting and recording procedures of pre-slaughter inspection:* Information that needs to be reported and recorded at pre-slaughter inspection; methods of recording and reporting; role of official auxiliary and official veterinarian; reporting and recording of emergency slaughter, suspect animals and positive release for slaughter.
- 1.4 *Responsibilities in relation to food chain information:* Responsibilities of Food Business Operators (FBO) for food chain information.
- 1.5 *Documentation and records required by the Official Veterinarian (OV):* Documentation and record requirements for animals that are dead on arrival, diseased, suspect or injured.

2. Understand how to deal with abnormalities and the welfare of red meat species.

- 2.1 *Characteristics which indicate that an animal is abnormal or suspect:* Normal appearance of animal; deviations from normal appearance which might indicate a problem such as breathing rate, abnormal temperature, locomotion; presence of visible lesions such as swelling/inflammation, ulceration, pustules, scabs, bleeding, diarrhoea.
- 2.2 *Action to be taken if an animal is believed to be abnormal or suspect:* Need to report any animals believed to be abnormal or suspect to the OV; isolation of animals to facilitate later inspection by the OV; welfare requirements.
- 2.3 *Importance of transferring abnormal or suspect animals to the designated isolation facilities:* Facilitation of further inspection by OV; sample/evidence collection; quarantine considerations; emergency slaughter.
- 2.4 *Identification of signs of stress and injury in animals:* Signs of stress such as vocalisation, posture, fighting, mounting, agitation.

2.5 *Problems caused by inhumane or careless handling and poor welfare of animals:* Carcase defects; animal welfare; difficulty with handling; effects on ability to stun; legal infringements.

3. Understand how to check facilities and equipment for pre-slaughter inspection checks.

3.1 *Features of a maintained vehicle used for animal transportation:* Legal requirements; features are dependent on travel time; features such as insulated roof, feeding equipment, partitions, water supply, ventilation and temperature control, loading and unloading equipment, satellite tracking.

3.2 *Requirements of appropriate offloading facilities, holding areas and lairage for animals:* Requirement for suitable equipment and facilities for unloading of animals; need to minimise handling of animals during movement from transporter to lairage and on to place of slaughter; requirements in lairage for minimising risk of slipping, ventilation, availability of food and water; space allowance.

3.3 *Importance of cleanliness of animals, transport, equipment and lairage:* Legal requirements; contamination risk; spread of disease; hygiene during transport; cleansing and disinfection of vehicles and lairage; monitoring of cleansing and disinfection; inspection of cleanliness of animals at unloading and in lairage.

4. Understand the procedural requirements pre- and at point of slaughter.

4.1 *What constitutes non-compliance under the food safety management procedures, animal health and welfare:* Legal requirements; requirements of FBO's FSMP; action to be taken by OV and official auxiliary if non-compliances found.

4.2 *Importance, and methods of humane handling of animals at slaughter:* Importance of humane handling; handling methods; restraint prior to slaughter such as stunning boxes, restrainer-conveyors and static conveyors.

4.3 *Signs of an effective stun:* Neurophysiological effects of each stunning method; tonic and clonic activity of stunned animal; physical signs of effective and ineffective stuns; signs of recovery from stunning.

4.4 *Signs of inhumane treatment in the slaughter or killing operation:* Vocalisation pre-slaughter; indications of multiple stun attempts; recovery from stun during bleeding; effect on carcase quality.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Carry out pre-slaughter inspection of red meat species

Unit: T/617/2460

Level: 4

Guided Learning: 16 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

- 1 **Prepare to carry out pre-slaughter inspection, by being able to meet the following assessment criteria:**
 - 1.1 Select appropriate personal protective equipment and protective clothing
 - 1.2 Wear and use personal protective equipment in line with workplace requirements
 - 1.3 Select equipment that will enable safe and effective inspection
 - 1.4 Check that facilities are appropriate for carrying out safe and effective inspection including those for:
 - Cattle
 - Pigs
 - Sheep
 - 1.5 Follow personal hygiene requirements

2. **Carry out pre-slaughter inspection, by being able to meet the following assessment criteria:**
 - 2.1 Monitor the Food Business Operator's (FBO's) lairage procedures against current requirements
 - 2.2 Check the FBO's collection of food chain information in accordance with operational procedures
 - 2.3 Verify the FBO's movement documentation and animal identification
 - 2.4 Carry out an initial check of animal welfare including:
 - Cattle
 - Pigs
 - Sheep
 - 2.5 Refer signs of abnormalities in animals to the Official Veterinarian (OV)
 - 2.6 Complete inspection records according to organisational procedures including those for:
 - Cattle
 - Pigs
 - Sheep

- 2.7 Check that suspect and abnormal animals are transferred to isolation facilities and that their welfare is not compromised
- 2.8 Identify and take action to deal with any non-compliance
3. **Verify procedures relating to dirty, diseased, dead-on-arrival and animals suspected of notifiable disease, by being able to meet the following assessment criteria:**
 - 3.1 Monitor the procedures followed by the FBO for animals found moribund, dead, diseased or injured
 - 3.2 Confirm procedures and report to the OV animal conditions including;
 - un-clean
 - dead-on-arrival
 - dead in lairage
 - moribund
 - diseased
 - suspected of notifiable disease
 - injured
4. **Inspect livestock vehicles, by being able to meet the following assessment criteria:**
 - 4.1 Monitor control of cleansing and disinfection in accordance with the business' FSMP for transport of;
 - Cattle
 - Pigs
 - Sheep
 - 4.2 Carry out additional inspection on cleaning and disinfection as required
 - 4.3 Identify and take the action to deal with any non-compliance

Content:

1. Prepare to carry out pre-slaughter inspection.

- 1.1 *Select personal protective equipment and protective clothing:* Personal Protective Equipment (PPE) and clothing is selected that is appropriate for the task, has been cleaned and disinfected and stored in suitable facilities; protective clothing would normally include coats, overalls, gloves, aprons, headgear and footwear; PPE and clothing selected is of an appropriate size and fit and is inspected prior to selection for signs of damage or wear; any equipment or clothing found to be damaged or worn is reported.
- 1.2 *Wear and use personal protective equipment:* PPE is worn that is appropriate for the task; PPE is put on in the correct sequence; PPE is used in a manner which maximises operator and product safety; PPE is changed after becoming unacceptably soiled/contaminated or when moving from 'dirty' to 'clean' areas of the workplace; PPE is cleaned, stored or disposed of in accordance with workplace procedures after use.
- 1.3 *Select equipment that will enable safe and effective inspection:* Equipment is selected that is appropriate for the task, has been cleaned and disinfected and stored in suitable facilities; equipment is inspected prior to selection for signs of damage or wear; any equipment found to be damaged or worn is reported.
- 1.4 *Check that facilities are appropriate for carrying out safe and effective inspection:* Facilities should be in accordance with the regulations; work stations should have sufficient lighting and have sufficient space for inspection to be carried out safely and effectively; the work area is free of obstructions that might be a health and safety hazard or reduce the effectiveness of inspection; hand washing facilities are accessible and appropriate to the task; the area is free of risks that may affect product safety.
- 1.5 *Personal hygiene requirements:* A high degree of personal cleanliness is maintained; hands are washed at appropriate times; any jewellery that is worn is in accordance with the food business' Food Safety Management Procedures; 'unsafe behaviour' such as eating and drinking in the work area is avoided; cuts, abrasions and illnesses are reported to the appropriate person.

2. Carry out pre-slaughter inspection.

- 2.1 *Monitor FBO's lairage procedures:* Lairage procedures conform to requirements specified in Manual for Official Controls, with regard to ensuring that animals are slaughtered without undue delay and are not removed from the lairage until ante-mortem inspection is completed and any conditions for suspect animals have been met.
- 2.2 *Check the FBO's collection of food chain information:* Food chain information is inspected to ensure compliance with current regulatory requirements.

- 2.3 *Verify the FBO's movement documentation and animal identification:* FBO's movement documentation and animal identification is checked for accuracy and compliance with current regulatory requirements.
- 2.4 *Carry out an initial check of animal welfare:* Animals are inspected for any welfare issues on arrival in the lairage.
- 2.5 *Refer signs of abnormalities in animals to the Official Veterinarian (OV):* Any animal exhibiting abnormalities are identified and referred to the OV
- 2.6 *Complete inspection records:* Inspection records are completed according to procedures set out in the Manual of Official Controls
- 2.7 *Check that suspect and abnormal animals are transferred to isolation facilities:* Ensure that suspect and abnormal animals are transferred to an isolation pen, and that the animal is identified by a 'Suspect Animal Card' completed by the OV.
- 2.8 *Identify and take action to deal with any non-compliance:* Non-compliances are identified and reported to the FBO or OV as appropriate.
- 3. Verify procedures relating to dirty, diseased, dead-on-arrival and animals suspected of notifiable disease.**
- 3.1 *Monitor the procedures followed by the FBO for animals found moribund, dead, diseased or injured:* Ensure procedures are consistent with regulatory requirements and are carried out in accordance with regulatory requirements.
- 3.2 *Confirm procedures and report to the OV animal conditions:* Ensure instances of dirty, diseased or dead-on-arrival animals and animals suspected of having notifiable diseases are notified to the Official Veterinarian.
- 4. Inspect livestock vehicles.**
- 4.1 *Monitor control of cleansing and disinfection:* Ensure facilities for cleansing and disinfection of livestock vehicles are consistent with regulatory requirements; check records relating to cleansing and disinfection of livestock vehicles.
- 4.2 *Carry out additional inspection:* Need to carry out spot-checks on vehicles according to risk-based assessment.
- 4.3 *Identify and take the action to deal with any non-compliance:* Report non-compliances to the FBO and OV as appropriate; ensure required remedial actions are carried out by the FBO.

Assessment:

Assessment for this unit will be by observation of the candidates carrying out inspection and verification activities and by a portfolio of evidence. Formal observations must be carried out on at least two separate occasions, covering all three species, and may be supported by supplementary evidence where necessary.

Assessments must be supported by at least two items of witness-based supplementary evidence from relevant occupationally competent supervisory personnel. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Understand how to carry out post-mortem inspection of red meat

Unit: J/617/2463

Level 4

Guided Learning: 26 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

- 1 Understand the preparations for the post-mortem inspection of red meat, by being able to meet the following assessment criteria:**
 - 1.1 Describe the purpose of personal protective equipment and protective clothing
 - 1.2 Explain the importance of wearing and using personal protective equipment
 - 1.3 Explain the use of equipment and facilities in line with specified procedures
 - 1.4 Explain the required form of presentation of carcasses and offal for inspection
 - 1.5 Explain the reason for using ante-mortem information during post-mortem inspection processes
 - 1.6 Summarise the methods of establishing the identity of the carcass to be inspected

- 2. Understand the procedures for the post-mortem inspection of red meat, by being able to meet the following assessment criteria:**
 - 2.1 Summarise the regulatory requirements and specified procedures for post-mortem, including for parasitic controls and those for detention, partial and total rejection of carcasses and offal
 - 2.2 Explain the significance of post-mortem inspection for public and animal health, animal welfare and the limitations of post-mortem inspection
 - 2.3 Explain the importance of hygienic dressing of the carcass and offal in relation to public health
 - 2.4 Explain the purpose and importance of recording results

- 3 Understand the procedures for reporting post-mortem inspection findings, by being able to meet the following assessment criteria:**
 - 3.1 Describe the importance and purpose of reporting the reasons for rejection of meat
 - 3.2 Describe the importance and purpose of the collection of evidence
 - 3.3 State the importance of communicating any issues to the Official Veterinarian (OV) and competent authority

Content:

1. Understand the preparations for the post-mortem inspection of red meat.

- 1.1 *Purpose of personal protective equipment and protective clothing:* Personal Protective Equipment (PPE) is intended to protect the wearer from harm; protective clothing is worn to protect the product from contamination; protection afforded by different items of PPE such as chain mail gloves, wrist guards and visors; design features of protective clothing.
- 1.2 *Importance of wearing and using personal protective equipment:* Hazards and risks associated with post-mortem inspection; how PPE can reduce the risk to the wearer of these hazards and increase operator safety; how the absence of PPE or use of inappropriate PPE can increase the risk to the operator; reasons why PPE should be changed if it becomes unacceptably soiled/contaminated or when moving from 'dirty' to 'clean' areas of the workplace.
- 1.3 *Use of equipment and facilities in line with specified procedures:* Equipment and facilities must enable safe and effective inspection of red meat species and reduce the risk of cross-contamination; specific purpose of equipment used; importance of appropriate lighting; requirement for waste disposal and hand-washing facilities.
- 1.4 *Required form of presentation of carcasses and offal for inspection:* How different animal carcasses, parts of animal carcasses and offal are presented for post-mortem inspection.
- 1.5 *Use of ante-mortem information during post-mortem inspection processes:* Information from ante-mortem inspection will determine if any tests should be carried out in relation to disease diagnosis or for residues of veterinary medical products; importance of ante-mortem information in relation to possible zoonotic disease.
- 1.6 *Establishing the identity of the carcass to be inspected:* Methods such as use of passports and other official records and checking dentition.

2. Understand the procedures for the post-mortem inspection of red meat.

- 2.1 *Regulatory requirements and specified procedures for post-mortem:* Summary of current regulatory requirements for the post mortem inspection of red meat species, to include regulatory requirements for control of parasites, detention, partial and total rejection of carcasses and offal; procedures for post mortem inspection.
- 2.2 *Significance of post-mortem inspection:* Role of post-mortem inspection in the detection of diseases and conditions that may affect public or animal health; detection of specified risk material and notifiable diseases, detection and recording of contamination; prevention of meat not fit for human consumption

entering the public domain; role of post-mortem inspection in detecting possible animal welfare issues.

2.3 *Importance of hygienic dressing of the carcass and offal in relation to public health:* Hygienic dressing reduces the risk of contamination and ensures those parts of the animal not fit for human consumption are removed.

2.4 *Purpose and importance of recording results:* Recording of inspection results allows correlation of production issues with post mortem findings such as contamination levels and compliance with FBO's food safety management procedures; importance of inspection results with regard to compilation of national and regional statistics by the competent authorities and disease surveillance.

3. Understand the procedures for reporting post-mortem inspection findings.

3.1 *Importance and purpose of reporting the reasons for rejection of meat:* Allows compilation of national statistics and disease surveillance; identification of issues at the farm; identification of poor processing methods or poor food safety management by the FBO.

3.2 *Describe the importance and purpose of the collection of evidence:* Evidence enables better identification of diseases and conditions; evidence of effectiveness of FBO's procedures and food safety management system; potential use in legal action against the farm or FBO.

3.3 *Importance of communicating any issues to the Official Veterinarian (OV) and competent authority:* Issues that the OA needs to report to the OV; actions that can only be taken by the OV or competent authority; OV is able to diagnose disease conditions.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Carry out post-mortem inspection of red meat

Unit: L/617/2464

Level: 4

Guided Learning: 25 hours

Total Unit Time: 326 hours

Summary of Outcomes:

To achieve this unit a candidate must:

- 1 **Prepare for post-mortem inspection of red meat, by being able to meet the following assessment criteria:**
 - 1.1 Select appropriate personal protective equipment and protective wear
 - 1.2 Wear and use personal protective equipment in line with workplace requirements
 - 1.3 Select equipment that will enable safe and effective inspection including:
 - Cattle
 - Pigs
 - Sheep
 - 1.4 Check that facilities are appropriate for carrying out safe and effective inspection
 - 1.5 Follow personal hygiene requirements.
2. **Carry out post-mortem inspection of red meat, by being able to meet the following assessment criteria:**
 - 2.1 Correlate the identification and documentation of the animal to be inspected
 - 2.2 Inspect carcasses and offal in accordance with specified procedures including:
 - Cattle
 - Pigs
 - Sheep
 - 2.3 Identify normal and abnormal material and butchery cuts
 - 2.4 Judge conditions that render material unfit for human consumption
 - 2.5 Follow specified procedures for the detention of abnormal material, the partial or total rejection of meat including evidence collection
 - 2.6 Verify that unfit material is sorted into the relevant by-product category
 - 2.7 Record official inspection results in line with workplace requirements
 - 2.8 Apply the health mark to ensure its legibility as required under legislation
 - 2.9 Ensure the health mark stamp is retained securely at all times

Content:

1. Prepare for post-mortem inspection.

- 1.1 *Select personal protective equipment and protective wear:* Personal Protective Equipment (PPE) and clothing is selected that is appropriate for the task, has been cleaned and disinfected and stored in suitable facilities; protective clothing would normally include coats, overalls, gloves, aprons, headgear and footwear; PPE and clothing selected is of an appropriate size and fit and is inspected prior to selection for signs of damage or wear; any equipment or clothing found to be damaged or worn is reported.
- 1.2 *Wear and use personal protective equipment:* PPE is worn that is appropriate for the task; PPE is put on in the correct sequence; PPE is used in a manner which maximises operator and product safety; PPE is changed after becoming unacceptably soiled/contaminated or when moving from 'dirty' to 'clean' areas of the workplace; PPE is cleaned, stored or disposed of in accordance with workplace procedures after use.
- 1.3 *Select equipment that will enable safe and effective inspection:* Equipment is selected that is appropriate for the task, has been cleaned and disinfected and stored in suitable facilities; equipment is inspected prior to selection for signs of damage or wear; any equipment found to be damaged or worn is reported.
- 1.4 *Check that facilities are appropriate for carrying out safe and effective inspection:* Facilities should be in accordance with the regulations; work stations should have sufficient lighting and have sufficient space for inspection to be carried out safely and effectively; the work area is free of obstructions that might be a health and safety hazard or reduce the effectiveness of inspection; waste disposal and hand washing facilities are accessible and appropriate to the task; the area is free of contamination risks that may affect product safety.
- 1.5 *Personal hygiene requirements:* A high degree of personal cleanliness is maintained; hands are washed at appropriate times; any jewellery that is worn is in accordance with the food business' FSMP; products that may contaminate the product such as nail varnish, perfume and aftershave are not worn; 'unsafe behaviour' such as eating and drinking in the work area is avoided; cuts, abrasions and illnesses are reported to the appropriate person.

2. Carry out post-mortem inspection.

- 2.1 *Correlate the identification and documentation of the animal to be inspected:* The Food Standard Agency's 'Manual of Official Controls' is complied with in regard to correlating the identification and documentation of animals to be inspected.
- 2.2 *Inspect carcase and offal in accordance with specified procedures:* Carcases and offal are inspected in accordance with the regulations and specified procedures.

- 2.3 *Identify normal and abnormal material including butchery cuts:* Normal appearance of carcasses, parts of carcasses and organs; recognition of abnormalities in carcasses, parts of carcasses and organs resulting from disease or trauma.
- 2.4 *Judge conditions that render material unfit for human consumption:* Perform judgements on the fitness or unfitness for human consumption of the carcasses and offal of cattle, pigs and sheep in accordance with the regulations and specified procedures.
- 2.5 *Follow specified procedures for the detention of abnormal material, the rejection of meat and evidence collection:* Ensure abnormal/unfit material is removed from carcasses wherever possible; correct procedures for rejection of carcasses or parts of carcasses; collection of appropriate evidence relating to detention and/or rejection of meat.
- 2.6 *Verify that unfit material is sorted into the relevant by-product category:* Different categories of unfit material; verification that unfit material is sorted into the appropriate categories in accordance with the Food Business Operator's Food Safety Management Procedures.
- 2.7 *Record inspection results in line with workplace requirements:* Ensure that workplace and legal requirements for recording and reporting results are followed accurately; inform appropriate staff of notifiable or unusual conditions, or conditions that occur in significant numbers.
- 2.8 *Apply the health mark:* Correct health mark is applied; legibility of health mark is checked.
- 2.9 *Retain health mark stamp:* Health mark stamp is retained in accordance with regulations and standard operating procedures; measures are taken to ensure that health mark stamp is only used by appropriately authorised personnel.

Assessment:

Assessment for this unit will be by observation of the candidates preparing for and carrying out post-mortem inspection of red meat species. Candidates must be inspecting at normal line speeds during the assessment and in compliance with workplace standard operating procedures. Formal observations must be carried out on at least two separate occasions for each species and may be supported by supplementary evidence where necessary.

Assessments must be supported by at least two items of witness-based supplementary evidence from relevant occupationally competent supervisory personnel. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Assessment of butchery cuts should be by practical assessment and oral questioning.

Unit: Understand how to verify the removal of specified risk material animal by-products and processing of edible co-products in meat operations

Unit: K/617/0785

Level 4

Guided Learning: 11 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

- 1 Understand the processes to deal with specified risk material, by being able to meet the following assessment criteria:**
 - 1.1 List the range of live animals and carcasses specified in relevant legislation
 - 1.2 List the parts of the carcass and offal identified as Specified Risk Material (SRM)
 - 1.3 Describe the examination processes to determine the presence of SRM in carcasses and offal
 - 1.4 Explain the procedures and requirements for the removal of SRM from carcasses and offal of animals intended for the human food chain
 - 1.5 Explain the procedures for removal, separation, staining, storage and dispatch

- 2 Know the recording procedures for specified risk material, by being able to meet the following assessment criteria:**
 - 2.1 Describe the documentation required to accompany animals
 - 2.2 State the importance of correlating the documentation to the identification of the animal
 - 2.3 List the information required on animal movements and the purpose of these checks
 - 2.4 Describe the importance of cross-referencing information held by competent authorities about animal movements
 - 2.5 List the required documents for record keeping
 - 2.6 Describe the purpose of keeping records

- 3. Understand the processes to deal with animal by-products and the processing of edible co-products, by being able to meet the following assessment criteria:**
 - 3.1 Summarise the different types, categories, staining, processing and methods of disposal of, animal by-products and edible co-products
 - 3.2 Explain the uses of animal by-products and edible co-products
 - 3.3 Explain the risks associated with the processing, storage, removal and disposal of animal by-products and edible co-products
 - 3.4 Describe the methods used to minimise the risk of cross contamination

- 4 **Understand how to verify removal and processing operations, by being able to meet the following assessment criteria:**
 - 4.1 Clarify what constitutes non-compliance
 - 4.2 Explain how verification judgements are made and concluded in accordance with Food Safety Management Procedures (FSMP)
 - 4.3 Summarise the reporting and action to be taken by the authorised officer in the case of non-compliance

5. **Understand the Food Business Operator's (FBO's) responsibilities, by being able to meet the following assessment criteria:**
 - 5.1 Explain the FBO's responsibility for monitoring and evaluating the procedures for handling, processing, storage and disposal of, SRM, animal by-products and edible co-products as appropriate
 - 5.2 Describe the appropriate actions to be taken by the FBO when non-compliance with the FSMP against current requirements is identified
 - 5.3 Describe the FBO's responsibilities for record keeping

Content:

1. Understand the processes to deal with Specified Risk Material (SRM).

- 1.1 *Range of live animals and carcasses:* List of live animals and carcasses that are specified in current legislation concerning SRM.
- 1.2 *Parts of the carcass and offal identified as SRM:* List of the parts of carcasses and offal that are identified as SRM.
- 1.3 *Examination processes for determination of the presence of SRM in carcasses and offal:* How carcasses and offal should be examined in order to detect the presence of any SRM.
- 1.4 *Removal of SRM:* Procedures for removing SRM from carcasses and offal; legal requirements.
- 1.5 *Removal, separation, staining, storage and dispatch:* Procedures and legal requirements for the removal, separation, staining, storage and despatch of SRM.

2. Know the recording procedures for SRM.

- 2.1 *Animal documentation:* Documentation such as animal passports, transfer permits, movement documents and commercial documentation.
- 2.2 *Correlation of documentation:* Importance of correlating animal identification and corresponding documentation.
- 2.3 *Animal movement information:* List of information required on animal movements and the purpose for which this information is required.
- 2.4 *Importance of cross-referencing information:* Why it is important that information held by competent authorities with respect to the movement of animals is cross-checked.
- 2.5 *Record keeping:* The records that are required to be kept by the Food Business Operator (FBO) and the regulator.
- 2.6 *Purpose of records:* Reasons why records have to be kept by the FBO and the regulator.

3. Understand food waste, animal by-products and processing of edible co-Products.

- 3.1 *Types, categories, staining, processing and methods of disposal of food waste, animal by-products and edible co-products:* Categories of animal by-products as defined in legislation; requirements of the meat industry guide and industry

guide on edible co-products and animal by-products in relation to staining, processing and disposal.

- 3.2 *Uses of food waste, animal by-products and edible co-products:* Use in (for example) production of fat, gelatine, collagen and sausage casings for human consumption, organic fertiliser and soil improvers, compost and biogas, animal feed and pet food.
- 3.3 *Risks associated with the processing, storage, removal and disposal of food waste, animal by-products and edible co-products:* Presence of food-poisoning micro-organisms and the risk of these entering the food chain; risk of contamination and cross-contamination; risk of material unfit for human consumption becoming mixed with material destined for edible co-products.
- 3.4 *Describe the methods used to minimise the risk of cross-contamination:* Methods for separating material temporally or spatially; use of designated equipment and storage facilities.

4. Understand how to verify removal and processing operations.

- 4.1 *Non-compliance:* Failure to comply with the FBO's Food Safety Management Procedures (FSMP) or regulatory requirements; e.g. not ensuring separation of material fit for human consumption from material classified as unfit for human consumption, presence of visible faecal contamination, processing and storage temperatures exceed required maximum.
- 4.2 *How verification judgements are made and concluded in accordance with FSMP:* Verification that procedures comply with FSMP and regulatory requirements with respect to identification, separation, staining, storage, labelling and disposal of animal by-products; collection of blood; drainage requirements; digestive tract separation; frequency of checks.
- 4.3 *Reporting and action to be taken by the authorised officer in the case of non-compliance:* Action should be risk-based and proportionate; hierarchy of enforcement with respect to repeated non-compliances; reporting procedures as determined by the Manual for Official Controls.

5. Understand the FBO's responsibilities

- 5.1 *FBO's responsibilities:* FBO has responsibilities for monitoring and evaluating the procedures for handling, processing, storage and disposal of food waste, animal by-products and edible co-products; requirements of meat industry guide and industry guide on edible co-products and animal by-products.
- 5.2 *Actions to be taken by the FBO when non-compliance with the FSMP against current requirements is identified:* Corrective actions such as dealing with contaminated product and re-classifying material as unfit for human

consumption, establishing underlying cause of non-compliance, ensuring non-compliance does not recur.

- 5.3 *FBO's responsibilities for record keeping:* Consignment records comply with regulatory requirements; food chain information; generation of commercial documents, copy number and signature requirements; records of destruction or use of animal by-products; retention of records.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Verify the removal of specified risk material and animal by-products and the processing of edible co-products in meat operations

Unit: M/617/0786

Level 4

Guided Learning: 15 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Verify the identity of relevant animals, carcasses, documentation and Specified Risk Material (SRM), by being able to meet the following assessment criteria:**
 - 1.1 Identify the category of live animals and of carcasses as classified by Transmissible Spongiform Encephalitis (TSE) legislation
 - 1.2 Inspect the dentition of animals at post-mortem to confirm the number of permanent incisors of cattle, sheep and goats
 - 1.3 Confirm the identification of animals requiring TSE testing
 - 1.4 Identify the parts of the animal which are listed as specified risk material for removal
 - 1.5 Identify the categories of animal by-products

2. **Verify procedures for dealing with SRM and animal by-products, by being able to meet the following assessment criteria:**
 - 2.1 Verify the application of the FBO's Food Safety Management Procedures (FSMP) for animals requiring TSE testing consistently with current requirements
 - 2.2 Verify the removal of SRM in accordance with TSE legislation
 - 2.3 Inspect the FBO's removal, separation and categorisation of animal by-products in accordance with legislation
 - 2.4 Inspect the storage, staining and disposal of waste at regular intervals as specified in procedures
 - 2.5 Confirm that records are accurate, legible and complete
 - 2.6 Confirm that by-products are separated into the specified categories so that the risk of cross contamination is minimised
 - 2.7 Confirm that animal by-products are stored in accordance with statutory requirements
 - 2.8 Identify any non-compliance with the FSMP against current requirements and take relevant action.

- 3 **Verify practices and procedures for the removal and storage of edible co-products, by being able to meet the following assessment criteria:**
 - 3.1 Identify the material which can be used for edible co-products
 - 3.2 Verify the process the FBO uses to make edible co-products in compliance with FSMP
 - 3.3 Confirm the storage conditions of edible co-products in compliance with FSMP
 - 3.4 Identify any non-compliance and report to the Official Veterinarian (OV)

4. **Complete records relating to SRM, by being able to meet the following assessment criteria:**
 - 4.1 Check the accuracy of animal identification documentation
 - 4.2 Complete the relevant documentation for SRM

Content:

1 Verify the identity of relevant animals, carcasses, documentation and SRM.

- 1.1 *Category of live animals and of carcasses classified by Transmissible Spongiform Encephalitis:* Categories of live animals and carcasses identified and classified by *TSE legislation*, other relevant legislation and the Manual of Official Controls.
- 1.2 *Inspection of animal dentition:* Dentition of cattle, sheep and goats inspected post-mortem; number of permanent incisors confirmed.
- 1.3 *Identification of animals requiring TSE Testing:* Identity of animals requiring TSE testing as specified by relevant legislation and Manual of Official Controls is confirmed.
- 1.4 *Identification of the parts of the animal which are listed as SRM for removal:* Parts of the animal listed in the legal requirements and the Manual of Official Controls is correctly identified in carcasses or parts of carcasses at post mortem.
- 1.5 *Animal by-products:* Animal by-products are identified according to their category, as specified by legal requirements.

2. Verify procedures for dealing with SRM and animal by-products

- 2.1 *Verify TSE testing:* Application of the FBO's Food Safety Management Plan (FSMP) with respect to TSE testing is verified.
- 2.2 *Removal of SRM:* Carcasses inspected in order to verify the removal of SRM.
- 2.3 *Separation and categorisation of food waste and animal by-products:* FBO's separation and categorisation of food waste and animal by-products inspected to ensure that procedures and operation of procedures comply with legal requirements.
- 2.4 *Storage, staining and disposal of waste:* Storage, staining and disposal of waste is inspected in accordance with the Manual for Official Controls.
- 2.5 *Records are accurate, legible and complete:* Records relating to the storage, staining and disposal of waste are inspected at intervals specified by the Manual for Official Controls to confirm that they are accurate, legible and complete.
- 2.6 *Separation of animal by-products into specified categories:* Stored animal by-products inspected to ensure that they have been correctly separated into the categories specified by the legal requirements.
- 2.7 *Storage of animal by-products:* Storage of animal by-products is checked to confirm that regulatory requirements are adhered to.

2.8 *Non-compliance:* Non-compliances are dealt with in accordance with the Manual of Official Controls; FBO or Official Veterinarian (OV) notified as appropriate; appropriate evidence gathered, recorded and stored; non-compliances referred for investigation in line with requirements of Manual of Official Controls.

3. Verify practices and procedures for the removal and storage of edible co-products.

3.1 *Edible co-products:* Material which can be used for edible co-products is identified.

3.2 *Procedures for making edible co-products:* The process used by the FBO to make edible co-products is inspected to ensure that it is compliant with the food safety management plan.

3.3 *Storage of edible co-products:* Storage conditions for edible co-products are inspected to confirm that they are in compliance with the FSMP.

3.4 *Non-compliance:* Non-compliances relating to the removal and storage of edible co-products are identified and reported to the OV.

4. Complete records relating to SRM.

4.1 *Check animal identification documentation:* Animal identification documentation checked for accuracy with specific reference to requirements of identification requirements relating to SRM.

4.2 *Complete documentation:* Documentation for SRM completed in accordance with requirements of legislation and Manual of Official Controls.

Assessment:

Assessment for this unit will be by observation of the candidates carrying out verification activities and by a portfolio of evidence. Formal observations must be carried out on at least two separate occasions and may be supported by supplementary evidence where necessary. Assessments, which must include an observation of SRM controls must be supported by at least two items of witness-based supplementary evidence from relevant workplace personnel, who have the appropriate experience and understanding to provide meaningful witness judgements. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Assessments must be supported by at least two items of witness-based supplementary evidence from relevant occupationally competent supervisory personnel. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Understand how to manage sampling in meat operations

Unit: T/617/0787

Level 4

Guided Learning: 7 hours

Total Unit Time: 30 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand how to manage sampling operations, by being able to meet the following assessment criteria:**
 - 1.1 Summarise the preparation required for the collection of samples
 - 1.2 Explain why samples must be collected as prescribed at the dates specified in the sample schedule
 - 1.3 Explain the checks required to confirm that sampling methods, materials and equipment conform to procedural specifications
 - 1.4 Clarify the importance of ensuring that only marked animals are selected for sampling
 - 1.5 Explain the importance of selecting and obtaining evidence of the origin for animals to be sampled including suspect animals

2. **Understand how to manage the collection and processing of samples, by being able to meet the following assessment criteria:**
 - 2.1 Describe the health and safety and standard operating procedures to be followed
 - 2.2 Explain the importance of identification and labelling of the samples
 - 2.3 Summarise the methods of preparing the samples for storage and despatch within the required timescales
 - 2.4 Explain the procedure for dealing with and reporting the collection of samples

Content:

1. Understand how to manage sampling operations.

- 1.1 *Preparation for the collection of samples:* Preparation for collecting samples for TSE, Trichinella, residues and specific monitoring programmes such as for Campylobacter in poultry.
- 1.2 *Importance of specified dates for sample collection:* Dates for sample collection determined by Food Standards Agency; central control of sampling dates enables randomisation of process; importance for statistical analysis and determining patterns of disease or antibiotic use.
- 1.3 *Checks required to confirm that sampling methods, materials and equipment conform to procedural specifications:* Sampling specifications for TSE, Trichinella and residues; how to confirm sampling procedures are adhered to.
- 1.4 *Importance of only marked animals being selected for sampling:* Importance with regard to traceability; identification of animal's farm of origin.
- 1.5 *Importance of selecting and obtaining evidence of the origin for animals to be sampled:* Evidence of origin of sampled animals enables correlation of results of testing programme with farm of origin; identification of geographical clusters of animals that test positive; ability to determine origin of identified residues.

2. Understand how to manage the collection and processing of samples.

- 2.1 *Health and safety and standard operating procedures:* Health and safety and standard operating procedures for collection of samples for TSE, Trichinella and residue testing.
- 2.2 Importance of identification and labelling of the samples: Importance for traceability and ensuring appropriate analysis is performed on the sample.
- 2.3 *Methods of sample preparation:* Sample preparation for TSE, Trichinella and residue testing; storage requirements prior to despatch; specific preparation of samples for despatch.
- 2.4 *Procedure for dealing with and reporting the collection of samples:* procedures for dealing with and collecting samples for TSE, Trichinella and residue testing; procedures for collecting samples for specific disease surveillance programmes.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Manage sampling in meat operations

Unit A/617/0788

Level 4

Guided Learning: 15 hours

Total Unit Time: 26 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Prepare to manage sampling operations, by being able to meet the following assessment criteria:**
 - 1.1 Determine that the number, types, specific requirements and dates for collection are as prescribed in the sample schedule
 - 1.2 Check to confirm that sampling methods, materials and equipment conform to the procedural specifications
 - 1.3 Identify animals for sampling, ensuring individual identification and marking before slaughter including suspect animals
 - 1.4 Ensure that evidence of the origin of animals is obtained
 - 1.5 Check that health and safety procedures are in place and understood
2. **Manage sampling in accordance with procedures, by being able to meet the following assessment criteria:**
 - 2.1 Check that samples are collected as prescribed and at the time specified in the sample schedule
 - 2.2 Ensure that routine samples required for a specified period are collected during the period stated and spread as evenly as possible throughout the period in accordance with the schedule
 - 2.3 Ensure that standard operating procedures are followed when obtaining samples
 - 2.4 Ensure that animals are selected which conform to the information provided in the sampling request
 - 2.5 Check that samples are clearly identified and label the sample in line with the procedures
 - 2.6 Ensure that procedures for maintaining the security of samples, integrity of samples and continuity of evidence are met
3. **Monitor storage and despatch of samples in accordance with procedures, by being able to meet the following assessment criteria:**
 - 3.1 Monitor the storage and despatch of the sample in accordance with procedures
 - 3.2 Follow the recording and reporting procedures for the collection of samples

Content:

1. Prepare to manage sampling operations.

- 1.1 *Confirm adherence to sample schedule:* Number, types, specific requirements and dates for collection of samples to be taken are confirmed by checking against the sample schedule.
- 1.2 *Sampling methods:* Collection of samples monitored to confirm that methods used, materials and equipment conform to the procedural specifications.
- 1.3 *Animal identification:* Animals from which samples are to be collected are identified prior to slaughter and marked to ensure that samples are only collected from these animals.
- 1.4 *Evidence of origin:* Evidence of origin of the animals selected for sample collection is obtained.
- 1.5 *Health and safety:* Checks are carried out to ensure health and safety procedures are in place and that these procedures are understood and followed by operatives.

2. Manage sampling in accordance with procedures.

- 2.1 *Sample collection:* Checks are carried out to confirm that samples are collected as prescribed and at the time specified in the sample schedule.
- 2.2 *Routine sample collection:* Checks are carried out to confirm that routine samples required for a specified period are collected during the period stated and spread as evenly as possible throughout the period in accordance with the schedule.
- 2.3 *Standard operating procedures:* Collection of samples is monitored to ensure that standard operating procedures are followed.
- 2.4 *Selection of animals:* Animals selected for sample collection are checked against the sampling request to make sure that they match the information on the request.
- 2.5 *Identification and labelling of samples:* Samples are checked to ensure that they are clearly identified and correctly labelled in accordance with procedures.
- 2.6 *Sample security:* Procedures for maintaining the security and integrity of the samples and continuity of evidence are adhered to.

3. Monitor storage and despatch of samples in accordance with procedures.

3.1 *Storage and despatch:* Storage and despatch of samples are monitored to ensure adherence to procedures.

3.2 *Recording and reporting procedures:* Recording and reporting procedures for the collection of samples are followed and adhered to.

Assessment:

Assessment for this unit will be by observation of the candidates carrying out preparation, management and monitoring activities and by a portfolio of evidence. Formal observations must be carried out on at least two separate occasions and may be supported by supplementary evidence where necessary.

Assessments must be supported by at least two items of witness-based supplementary evidence from relevant occupationally competent supervisory personnel. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Principles of microbiology and parasitology in meat production

Unit: F/617/0789

Level 4

Guided Learning: 11 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand that organisms can cause disease in livestock and humans, by being able to meet the following assessment criteria:**
 - 1.1 State examples of diseases of red and white meat livestock species caused by bacteria, viruses and parasites
 - 1.2 Explain what is meant by the term 'disease'
 - 1.3 State which livestock diseases can also cause disease in humans, including those which are notifiable

2. **Understand the structure and life cycles of bacteria and viruses of relevance to livestock, by being able to meet the following assessment criteria:**
 - 2.1 Describe the structure of bacteria and viruses
 - 2.2 Describe how bacteria and viruses grow and multiply
 - 2.3 Explain the conditions necessary for the optimal growth and multiplication of bacteria and viruses
 - 2.4 Outline the life-cycles of representative bacteria and viruses
 - 2.5 Explain the significance of spore and toxin formation in bacteria to human health

3. **Understand the life cycles of representative parasites of relevance to livestock, by being able to meet the following assessment criteria:**
 - 3.1 Describe the life-cycles of representative parasites, to include examples of:
 - Endo-parasites
 - Ecto-parasites
 - Direct lifecycles
 - Indirect lifecycles
 - 3.2 Explain how parasites can infect their hosts and spread between hosts

4. **Understand how practices in lairage or in the meat plant can affect the risk of spread of organisms capable of causing disease in livestock and humans, by being able to meet the following assessment criteria:**
 - 4.1 Summarise the potential sources and reservoirs of infection in lairage and in meat plants

- 4.2 Explain how poor practice in lairage and in meat plants can increase the risk of infection and spread of disease
- 4.3 Explain how good practices in lairage and in the meat plant can reduce the risk of infection

Content:

- 1. Understand that organisms can cause disease in livestock and humans.**
 - 1.1 *Diseases of red and white meat livestock species:* Representative examples of diseases of bovines, ovines, porcines and poultry caused by bacteria, fungi, viruses and parasites.
 - 1.2 *Zoönotic diseases:* Definition of zoonosis to emphasise the risk to human health and transfer of infection between animals and humans.
 - 1.3 *Which livestock diseases can also cause disease in humans:* Examples of Zoönotic diseases as stated in DEFRA publications; examples of notifiable Zoönotic diseases.

- 2. Understand the structure and life cycles of bacteria and viruses of relevance to livestock.**
 - 2.1 *Structure of bacteria and viruses:* Bacterial structure to include cell wall, cell membrane, cytoplasm, nuclear material, flagella, pili and capsule; bacterial shapes; viral structure to include arrangement of nucleic acid, protein coat and envelope.
 - 2.2 *Growth and multiplication:* Binary fission of bacteria; germination from spores; bacterial growth curves; multiplication of viruses inside living cells.
 - 2.3 *Conditions for optimal growth:* Nutritional, pH, water and temperature requirements of bacteria.
 - 2.4 *Life cycles of bacteria and viruses:* Life-cycle of sporing and non-sporing bacteria; viral life cycle to include entry into cells' production of viral nucleic acid and proteins, assembly and cell lysis.
 - 2.5 *Significance of spore and toxin formation:* Role of toxins in diseases of animals and humans; spore formation and survival of bacteria.

- 3. Understand the life cycles of representative parasites of relevance to livestock.**
 - 3.1 *Life-cycles of representative parasites:* Explanation of terms endo-parasite, ecto-parasite, direct life-cycle and indirect life-cycle; examples of parasites exhibiting these characteristics that infect bovines, ovines, porcines and poultry; life-cycles of representative parasites that exhibit endoparasitism, ectoparasitism, direct life-cycles and indirect life-cycles; importance of secondary hosts for completion of life-cycles of parasites exhibiting indirect life-cycles.

- 3.2 *How parasites can infect their hosts and spread between hosts:* Infection by ingestion, injection, burrowing and myiasis; examples of parasites that exhibit these modes of infection; importance of vectors.
- 4. Understand how practices in lairage or in the meat plant can affect the risk of spread of organisms capable of causing disease in livestock and humans.**
- 4.1 *Potential sources and reservoirs of infection in lairage and in meat plants:* Sources and reservoirs of infection in the lairage such as bedding, feeding troughs, soiled animals; sources and reservoirs of infection in the meat plant such as animal skins, tools, surfaces, waste bins, containers for meat and animal by-products, cleaning equipment, staff and protective clothing.
- 4.2 *How poor practice in lairage and in meat plants can increase the risk of infection and spread of disease:* Insufficient or inadequate cleaning; use of contaminated equipment; poor waste disposal; poor personal hygiene of staff; practices that cause aerosol formation; practices that cause cross-contamination.
- 4.3 *How good practices in lairage and in the meat plant can reduce the risk of infection:* Use of cleaning schedules and microbiological testing; planned waste removal; use of sealed bins; methods for reducing cross-contamination and aerosol formation.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Principles of rearing and welfare of meat species

Unit: H/618/7293

Level 4

Guided Learning: 11 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand the structure and organisation of the UK meat industry, by being able to meet the following assessment criteria:**
 - 1.1 Explain how the industry is represented and regulated
 - 1.2 Explain how the industry is structured and operates from rearing to consumption, including trade in:
 - UK market
 - Internationally
 - 1.3 Summarise the rearing and welfare regulatory frameworks in which the industry operates
 - 1.4 Explain how recognised rearing and animal welfare quality assurance schemes work in the industry
 - 1.5 Explain how the transportation arrangements operate in the industry
 - 1.6 Explain how the meat production systems work in the industry
2. **Understand the rearing (husbandry) of meat species in the UK, by being able to meet the following assessment criteria:**
 - 2.1 Summarise how species are selected and bred to improve carcass composition and quality for meat production, including the following:
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
 - 2.2 Explain how the sex of meat species can affect carcass composition and quality.
 - 2.3 Summarise how rearing and feeding regimes are formulated and can influence carcass composition and quality, in the following;
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species

- 2.4 Summarise the key differences in organic rearing and feeding methods compared with conventional methods
- 2.5 Summarise the environmental requirements for buildings, farms and transportation
3. **Understand the welfare requirements of meat species in the UK, by being able to meet the following assessment criteria:**
 - 3.1 Explain the legal requirements for welfare from rearing to slaughter
 - 3.2 Summarise the factors affecting welfare during rearing and the ways in which these are managed and controlled
 - 3.3 Explain the effects of the following, during loading/unloading and transit;
 - Stress
 - Water and food deprivation
 - Exhaustion
 - Handling
 - Poor ventilation
 - Mixing of animals not reared together
 - 3.4 Explain the effect of poor welfare on meat quality

Content:

1. Understand the structure and organisation of the UK meat industry.

- 1.1 *How the industry is represented and regulated:* Industry groups such as British Meat Processors' Association, Red Meat Industry Forum, British Poultry Council, BPEX, EBLEX and Agriculture and Horticulture Development Board; regulatory organisations such as Department for Environment, Food and Rural Affairs (DEFRA) and Food Standards Agency (FSA); European organisations.
- 1.2 *How the industry is structured and operates from rearing to consumption:* Structure of the British meat industry; rearing of animals for different purposes such as breeding, meat production, milk and egg production; different types of herds and flocks; structure of the game meat industry; different types of approved meat establishments; UK and international trade.
- 1.3 *Rearing and welfare regulatory frameworks:* EU and UK regulatory frameworks; EU Animal Welfare strategy, the 'five freedoms' for farm animal welfare.
- 1.4 *Rearing and welfare quality assurance schemes:* Operation of farm assurance schemes; examples of schemes; 'from farm to fork'.
- 1.5 *Transportation arrangements:* Operation of transportation arrangements; transportation of animals between farms and from farm to slaughter.
- 1.6 *Meat production systems:* Operation of meat production systems; extensive and intensive systems of meat production; 'organic' systems.

2. Understand the rearing (husbandry) of meat species in the UK.

- 2.1 *Species selection and breeding:* Summary of how carcass composition and meat quality can be improved by selective breeding and selection of species; species selection and breeding for poultry, game birds, lagomorphs and red meat species.
- 2.2 *Sex of meat species:* How carcass composition and meat quality is affected by the sex of the species.
- 2.3 *Formulation of rearing and feeding regimes:* Purpose of different formulations and regimes; use of milk replacers and concentrates; effect on carcass composition and quality.
- 2.4 *Organic rearing and feeding methods:* Comparison of advantages and disadvantages of organic rearing and feeding methods with conventional methods; effect on carcass quality and composition; economic effect.
- 2.5 *Environmental requirements for buildings, farms and transportation:* Environmental requirements to include space, lighting, heating and access to water.

3. Understand the welfare requirements of meat species in the UK.

- 3.1 *Legal requirements for welfare from rearing to slaughter:* EU and UK regulations for the welfare of farm animals, welfare of farm animals at markets and during transport and at time of killing or slaughter; legal requirements for welfare as outlined in the UK regulations listed in the Manual for Official Controls (volume 2).
- 3.2 *Factors affecting welfare during rearing:* Effect of different husbandry methods on animal welfare; access to 'five freedoms'; effect of abuse, negligence and deprivation.
- 3.3 *Factors affecting animal welfare during loading/unloading and transit:* Effect of stress, water and food deprivation, exhaustion, handling, poor ventilation and mixing of animals not reared together on the welfare of animals during transportation, loading and unloading.
- 3.4 *Effect of poor welfare on meat quality:* How meat quality is affected by poor animal welfare.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Principles of meat primary processing

Unit: K/618/7294

Level 4

Guided Learning: 11 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand the difference between small and large scale processing, by being able to meet the following assessment criterion:**
 - 1.1 Explain the main features of small and large scale processing of meat, including the following:
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
2. **Understand the de-feathering process, by being able to meet the following assessment criteria:**
 - 2.1 Explain the types of equipment used for de-feathering of birds
 - 2.2 Explain how de-feathering equipment functions to achieve complete de-feathering, in the following:
 - Poultry
 - Game birds
3. **Understand whole and part carcass processing, by being able to meet the following assessment criteria:**
 - 3.1 Explain the primary processing of meat, including the following systems:
 - De-hairing
 - Skinning
 - Removal of viscera/offal
 - Splitting
 - Whole carcass preparation of poultry
 - Portioning
 - Boning
 - Chilling
 - 3.2 Explain the types of equipment used for skinning, evisceration and splitting.
 - 3.3 Summarise how the skinning and splitting process can be made as efficient as possible.

Content:

1. Understand the difference between small and large scale processing.

1.1 *Main features of small and large scale processing of meat:* Overview of the processing of poultry, game birds, lagomorphs and red meat species; comparison of these processes in small and large establishments.

2. Understand the de-feathering process.

2.1 *Equipment used for de-feathering of birds:* Equipment to include scald tank, flail machinery and collection equipment for feathers; equipment for reduction of cross-contamination; small scale dry mechanical de-feathering equipment.

2.2 *How de-feathering equipment functions to achieve complete de-feathering:* Effect of scalding and wetting; adjustments to de-feathering equipment; variations for different bird species; de-feathering of game birds.

3. Understand whole and part carcass processing.

3.1 *Primary processing of meat:* Stages of processing to include de-hairing, skinning, evisceration, splitting, portioning, boning and chilling, whole carcass preparation of poultry; overview of operations at each stage.

3.2 *Equipment used for skinning, evisceration and splitting:* Types of equipment used for skinning, evisceration and splitting of carcasses; variations in equipment for different meat species.

3.3 *How the skinning and splitting process can be made as efficient as possible:* Use of power-tools and conveyors; automation of parts of the process; variation in degree of automation for different meat species.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Principles of HACCP based food safety management for official meat controls

Unit: R/617/2465

Level 4

Guided Learning: 11 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand the role of HACCP based Food Safety Management Procedures (FSMP), by being able to meet the following assessment criteria:**
 - 1.1 Summarise the HACCP approach to food safety management procedures
 - 1.2 Outline the legislation relating to the requirement for HACCP based procedures
 - 1.3 Explain the role of HACCP based procedures
2. **Understand the principles of HACCP based FSMP, by being able to meet the following assessment criteria**
 - 2.1 Outline the prerequisites for HACCP based procedures
 - 2.2 Outline the importance of, and methods for, hazard analysis
 - 2.3 Explain the role of critical control points and critical limits in HACCP based procedures
 - 2.4 Explain the need for monitoring of critical control points and applying corrective actions if critical limits are exceeded
 - 2.5 Justify why HACCP based procedures should be validated and verified.
3. **Understand how HACCP based FSMP are applied in meat operations, by being able to meet the following assessment criteria:**
 - 3.1 Explain the importance of prerequisites
 - 3.2 Identify common hazards, critical control points and critical limits
 - 3.3 Describe appropriate monitoring procedures and corrective actions
 - 3.4 Outline methods for validating and verifying HACCP based procedures
 - 3.5 Summarise the documentation and records required for HACCP based procedures
4. **Understand the audit requirements for HACCP based FSMP in meat operations, by being able to meet the following assessment criteria:**
 - 4.1 Explain the requirements for audit of HACCP based procedures
 - 4.2 Describe the roles of the authorised officers in the audit process

Content:

1. Understand the role of HACCP based FSMP.

- 1.1 *The HACCP approach to FSMP:* HACCP explained as a proactive, preventative system; overview of HACCP; the seven HACCP principles; HACCP terminology; definition of HACCP terms as stated in Codex Alimentarius; HACCP is applied separately to specific operations; importance of prerequisite programmes, education and training.
- 1.2 *Legislation relating to the requirement for HACCP based procedures: Importance and main provisions of the legal requirements:* enforcement of legislation and consequences of non-compliance; relevance of Codes of Practice and Industry Guides produced by Government departments and the food trade.
- 1.3 *Role of HACCP based procedures:* Advantages and benefits of HACCP systems; importance of HACCP for food safety and in reducing likelihood of bacterial contamination of meat and meat products; use of HACCP to aid identification of stages in food production that are critical to food safety, controlling most important hazards, taking appropriate action when required, recording use of appropriate actions.

2. Understand the principles of HACCP based FSMP.

- 2.1 *Prerequisites for HACCP based procedures:* Need for food businesses to have effective policies and procedures in place prior to the development of a HACCP-based food safety management system; prerequisites to include management commitment and leadership, resources and facilities, approval systems for suppliers, staff training, staff hygiene procedures, effective cleaning and disinfection procedures, pest management, waste management and labelling, traceability and recall procedures.
- 2.2 *Importance of, and methods for, hazard analysis:* Methods for hazard analysis and risk assessment; biological, chemical (including allergenic) and physical hazards; examples of each type of hazard; hazards associated with particular processes; hazards associated with purchase of raw materials, delivery of raw materials, storage, handling, preparation, processing, cooling, post-processing treatments, packaging of finished product, transport of finished product; risk and severity of hazards.
- 2.3 *Role of critical control points and critical limits in HACCP based procedures:* Critical control points; identification of critical control points; use of decision trees; relationship of critical limits to food safety; sources of information for critical limits; danger to consumer if critical limits exceeded; examples of critical limits for a range of processes and critical control points.
- 2.4 *Monitoring of critical control points and applying corrective actions if critical limits are exceeded:* Importance of monitoring; methods for monitoring at critical

control points; need for corrective action if critical limits exceeded or not reached, or if monitoring indicates a likelihood of critical limits being exceeded or not reached; types of corrective action; responsibility for implementing corrective action; importance of restoring control.

2.5 *Why HACCP based procedures should be validated and verified:* Importance of verification and validation; validation of the HACCP plan; information required for verification and validation; steps in the HACCP system requiring verification; methods and frequency of verification.

3. Understand how HACCP based food safety management procedures are applied in meat operations.

3.1 *Importance of prerequisites:* Importance of prerequisite programmes for food safety in meat operations; examples of prerequisite programmes such as staff training and personal hygiene, cleaning programmes, microbiological sampling, pest control.

3.2 *Common hazards, critical control points and critical limits:* Common hazards, critical control points and critical limits in meat operations; identification of critical control points in meat operations.

3.3 *Appropriate monitoring procedures and corrective actions:* Examples of monitoring procedures at critical control points; frequency of monitoring; examples of corrective actions; authorisation of staff to take corrective action.

3.4 *Methods for validating and verifying HACCP based procedures:* Verification and validation procedures in meat operations; use of independent experts; types of evidence required for verification and validation; role of staff in verification and validation.

3.5 *Documentation and records required for HACCP based procedures:* Documentation such as HACCP plan, process flow diagram, description of product, review process; records such as monitoring records, use of corrective actions, verification activities, records of review of the process.

4. Understand the audit requirements for HACCP based FSMP in meat operations

4.1 *Requirements for audit of HACCP based procedures:* Obligation to comply with legal requirements; the requirements for audit as set out in the Manual for Official Controls.

4.2 *Roles of the authorised officers in the audit process:* Role of official veterinarian and official auxiliary as set out in the Manual for Official Controls.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Principles of slaughter techniques for meat species

Unit: Y/617/2466

Level 4

Guided Learning: 16 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand the legal and organisational requirements for slaughter, by being able to meet the following assessment criteria:**
 - 1.1 Explain the legal requirements for the slaughter of meat species
 - 1.2 Summarise the factors which determine which type of slaughter system might be used in an organisation slaughtering meat species, including:
 - Gas
 - Electrical
 - Manual v Automatic
 - Mechanical
 - 1.3 Explain why it is necessary to stun before bleeding
 - 1.4 Explain the signs of effective and ineffective stunning and how stunning can be monitored
2. **Understand gas killing systems, by being able to meet the following assessment criteria:**
 - 2.1 Clarify the gas combinations used in gas killing systems
 - 2.2 Summarise the main features and stages of a gas killing system
 - 2.3 Explain the advantages associated with a multi-stage gas killing system
 - 2.4 Summarise the advantages and disadvantages of a gas killing system over an electrical or mechanical system
3. **Understand electrical stunning systems, by being able to meet the following assessment criteria:**
 - 3.1 Summarise the main features and stages of an electrical stunning system
 - 3.2 State the currents used for stunning
 - 3.3 Explain the importance of waveform, frequency and constant current stunners to welfare
 - 3.4 Explain why an immersion tank is used in an electrical stunning system
 - 3.5 Explain the positive and negative features of a head only stun and immersion system
 - 3.6 Explain the advantages and disadvantages of a high frequency electrical system
 - 3.7 Summarise the advantages and disadvantages of an electrical stunning system over a gas or mechanical system

- 4 **Understand mechanical stunning systems, by being able to meet the following assessment criteria:**
 - 4.1 Explain the use of the penetrating captive bolt and the non-penetrating bolt as mechanical stunning systems
 - 4.2 Compare and contrast the advantages and disadvantages of the penetrating and non-penetrating bolt systems

- 5 **Understand bleeding procedures, by being able to meet the following assessment criteria:**
 - 5.1 Summarise the bleeding procedures used
 - 5.2 Explain the factors determining which bleeding procedures might be used in a business slaughtering meat species
 - 5.3 Clarify why it is important for blood vessels to be cut completely and promptly after stunning
 - 5.4 Explain how different bleeding procedures can affect microbial contamination of carcasses
 - 5.5 Explain the advantages and disadvantages of different bleeding procedures

Content:

1. Understand the legal and organisational requirements for slaughter.

- 1.1 *Legal requirements for the slaughter of meat species:* Current legislation relating to slaughter of meat species; definitions of slaughter, stunning, killing and restraint, requirements for killing without prior stunning; slaughter methods allowed by law.
- 1.2 *Factors which determine which type of slaughter system might be used:* Animal species; effect of system on carcase quality; cost and benefits; need for back-up system; maintenance requirements.
- 1.3 *Why it is necessary to stun before bleeding:* Welfare considerations, carcase quality; health and safety of operator.
- 1.4 *Signs of effective and ineffective stunning and how stunning can be monitored:* Neurophysiological effects of each stunning method; tonic and clonic activity of stunned animal; physical signs of effective and ineffective stuns; monitoring of stunned animals until brain death; actions to take in the event of an ineffective stun or if animal exhibits signs of recovery from stunning.

2. Understand gas killing systems.

- 2.1 *Gas combinations used in gas killing systems:* Legal requirements for gas combination; effect of different CO₂ concentrations on killing and animal welfare.
- 2.2 *Main features and stages of a gas killing system:* Transport of animal to chamber; transfer into chamber; exposure to gas combination; features which allow observation of animal and continual monitoring of gas levels; light levels; visible and audible warning devices.
- 2.3 *Advantages associated with a multi-stage gas killing system:* Gas gradients; induction of anaesthesia; anoxic convulsion; effect of gas on spinal reflexes.
- 2.4 *Advantages and disadvantages of a gas killing system over an electrical or manual system:* Group handling of animals; volume of throughput of animals; welfare considerations; reduction of human error; consistency of operation.

3. Understand electrical stunning systems.

- 3.1 *Main features and stages of an electrical stunning system:* Outline of equipment used; effect of electricity on animal body; electronarcosis.
- 3.2 *Currents used for stunning:* Legal minimum current requirements; need to generate effective current.

- 3.3 *Importance of waveform, frequency and constant current stunners to welfare:* Relationship between waveform and frequency; effect on animal welfare during stunning.
- 3.4 *Use of immersion tank in an electrical stunning system:* Use of water bath stunners for stunning of poultry.
- 3.5 *Positive and negative features of a head only stun and immersion system:* Operation of head only stunning systems; different systems in use; preslaughter handling; operator health and safety; production requirements; need for correct positioning of electrodes; likelihood of ineffective stun and 'double stunning'.
- 3.6 *Advantages and disadvantages of a high frequency electrical system:* Relationship between frequency and ventricular fibrillation; effect on meat quality and animal welfare.
- 3.7 *Advantages and disadvantages of an electrical stunning system over a gas or manual system:* Advantages and disadvantages of different systems in terms of animal welfare, operator safety, meat quality, through-put of animals, effectiveness of stun, need for maintenance, expertise requirements of operator.

4. Understand mechanical stunning systems.

- 4.1 *Use of the penetrating captive bolt and the non-penetrating bolt as mechanical stunning systems:* Procedures for use of both systems; mode of action; effect on animal.
- 4.2 *Advantages and disadvantages of the penetrating and non-penetrating bolt systems:* Advantages and disadvantages of the two systems in terms of ease of use, suitability for different locations and age of animals, need for restraint of animal.

5. Understand bleeding procedures.

- 5.1 *Bleeding procedures:* Time interval between stunning and bleeding; methods for severing carotid arteries and jugular veins.
- 5.2 *Which bleeding procedures might be used in a business slaughtering meat species:* Variation in bleeding procedures for different animal species.
- 5.3 *Why it is important for blood vessels to be cut completely and promptly after stunning:* Effect of incomplete cutting on time of death; welfare considerations.
- 5.4 *How different bleeding procedures can affect microbial contamination of carcasses:* Effect of procedures on hygiene and potential contamination; use of two-knife method.

- 5.5 *Advantages and disadvantages of different bleeding procedures:* Comparison of different methods; ease of use of different methods; effectiveness; welfare; contamination risk; operator health and safety.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Principles of pathology of meat species

Unit: M/618/7295

Level 4

Guided Learning: 16 hours

Total Unit Time: 37 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand the ante-mortem factors affecting health and the indicators of disease, by being able to meet the following assessment criteria:**
 - 1.1 Explain the factors affecting the health of meat species in ante-mortem conditions
 - 1.2 Summarise the signs and symptoms of disease and abnormalities which are evident in ante-mortem examination, including the following:
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
 - 1.3 Explain how the use of medicines and vaccines are controlled and how residues are routinely tested.
2. **Understand the post-mortem findings affecting fitness of meat and the indicators of disease, by being able to meet the following assessment criteria:**
 - 2.1 Explain the factors that lead to findings at post-mortem
 - 2.2 Describe the signs of disease and abnormalities which are evident in post-mortem inspection of carcasses and offal, including the following:
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
3. **Understand the pathology of anatomical systems in meat species, by being able to meet the following assessment criteria:**
 - 3.1 Explain the causes, nature and effects of diseases of the urogenital system, of the following:
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species

- 3.2 Explain the causes, nature and effects of diseases of the alimentary system, of the following:
- Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
- 3.3 Explain the causes, nature and effects of diseases of the cardiovascular, lymphatic and respiratory systems, of the following:
- Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
- 3.4 Explain the causes, nature and effects of diseases of the skeleto-muscular system, of the following:
- Poultry
 - Game birds
 - Lagomorphs
 - Red meat species

Content:

1. Understand the ante-mortem factors affecting health and the indicators of disease.
 - 1.1 *Factors affecting the health of meat species in ante-mortem conditions:* Effect of nutrition, husbandry, environment and biosecurity on the health of meat species; use of antibiotics, vaccines and growth regulators.
 - 1.2 *Signs and symptoms of disease and abnormalities which are evident in ante-mortem examination:* Signs and symptoms of disease that can be observed in the live animal; signs of disease or abnormalities caused by poor husbandry or welfare issues; signs of disease or abnormalities caused by infection or parasitism; signs of disease or abnormalities due to poor nutrition.
 - 1.3 *How the use of medicines and vaccines are controlled and how residues are routinely tested:* Legislative and national requirements for the control of medicines and vaccines in meat species; reasons for control of medicines and vaccines in meat species; types and sources of residues; maximum residue limits; testing requirements; use of sample schedules.
2. **Understand the post-mortem findings affecting fitness of meat and the indicators of disease.**
 - 2.1 *Factors that lead to findings at post-mortem:* How disease and trauma can result in lesions visible at post-mortem; reaction of body and tissues to infection; spread of disease through the animal body.
 - 2.2 *Signs of disease and abnormalities which are evident in post-mortem inspection:* Comparison of normal and abnormal carcasses, meat and offal; appearance of diseased tissue; type of visible lesions caused by disease and trauma; diagnosis of disease or trauma from visible lesions.
3. **Understand the pathology of anatomical systems in meat species.**
 - 3.1 *Causes, nature and effects of diseases of the urogenital system:* Diseases of the urogenital system caused by infectious agents, metabolic disorder, trauma and parasites; effect of disease on the animal carcass; fitness of the meat for human consumption.
 - 3.2 *Causes, nature and effects of diseases of the alimentary system:* Diseases of the alimentary system caused by infectious agents, metabolic disorder, trauma and parasites; effect of disease on the animal carcass; fitness of the meat for human consumption.
 - 3.3 *Causes, nature and effects of diseases of the cardiovascular, lymphatic and respiratory systems:* Diseases of the cardiovascular, lymphatic and respiratory systems caused by infectious agents, metabolic disorder, trauma and

parasites; effect of disease on the animal carcass; fitness of the meat for human consumption.

- 3.4 *Causes, nature and effects of diseases of the skeleto-muscular system:* Diseases of the skeleto-muscular system caused by infectious agents, metabolic disorder, trauma and parasites; effect of disease on the animal carcass; fitness of the meat for human consumption.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Unit: Principles of anatomy and physiology of meat species

Unit T/618/7296

Level 4

Guided Learning: 38 hours

Total Unit Time: 74 hours

Summary of Outcomes:

To achieve this unit a candidate must:

1. **Understand the anatomical structure of meat species, by being able to meet the following assessment criteria:**
 - 1.1 Explain the anatomical structure and identifiable features of the urogenital system of the following:
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
 - 1.2 Explain the anatomical structure and identifiable features of the alimentary system of the following:
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
 - 1.3 Explain the anatomical structure and identifiable features of the cardiovascular, lymphatic and respiratory systems of the following:
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
 - 1.4 Explain the anatomical structure and identifiable features of the skeleto-muscular systems of the following:
 - Poultry
 - Game birds
 - Lagomorphs
 - Red meat species

- 1.5 Explain the anatomical structure and identifiable features of the cerebro-nervous systems of the following:
- Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
2. **Understand the physiology of anatomical systems in meat species, by being able to meet the following assessment criteria:**
- 2.1 Explain the physiology of the urogenital system of the following:
- Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
- 2.2 Explain the physiology of the alimentary system of the following:
- Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
- 2.3 Explain the physiology of the cardiovascular, lymphatic and respiratory systems of the following:
- Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
- 2.4 Explain the physiology of the skeleto-muscular systems of the following:
- Poultry
 - Game birds
 - Lagomorphs
 - Red meat species
- 2.5 Explain the physiology of the cerebro-nervous systems of the following:
- Poultry
 - Game birds
 - Lagomorphs
 - Red meat species

Content:

1. Understand the anatomical structure of meat species.

- 1.1 *Urogenital system:* Identification and normal appearance of urogenital system of named animal species to include kidney, ureters, bladder, urethra and reproductive organs; recognition of sex of carcasses; commonly used commercial terms of anatomical features; main anatomical differences between species.
- 1.2 *Alimentary system:* Identification and normal appearance of alimentary system of named animal species from mouth to anus; relative positions of structures; comparison of alimentary system of ruminant and non-ruminant red meat species; identification of age of animal from dentition where relevant; commonly used commercial terms of anatomical features; main anatomical differences between species.
- 1.3 *Cardiovascular, lymphatic and respiratory systems:* Identification and normal appearance of cardiovascular, lymphatic and respiratory systems of named animal species to include heart and lungs, trachea and bronchi, location of main blood vessels; pulmonary circulation; location of lymphoid tissue and lymph nodes; comparison of avian and mammalian cardiovascular systems; commonly used commercial terms of anatomical features; main anatomical differences between species.
- 1.4 *Skeleto-muscular systems:* Identification, location and normal appearance of bones and their articulations and the position of the major muscles; comparison of avian and mammalian bone structure; importance of avian flight muscles; commonly used commercial terms of anatomical features; main anatomical differences between species.
- 1.5 *Cerebro-nervous systems:* Main anatomical features of brain and spinal cord; location of main nerves in carcasses and separated viscera; commonly used commercial terms of anatomical features; main anatomical differences between species.

2. Understand the physiology of anatomical systems in meat species.

- 2.1 *Urogenital system:* Physiology and function of urogenital system of named animal species to include kidney, ureters, bladder, urethra and reproductive organs.
- 2.2 *Alimentary system:* Physiology and function of alimentary system of named animal species; comparison of digestion in ruminant and non-ruminant red meat species.
- 2.3 *Cardiovascular, lymphatic and respiratory systems:* Physiology and function of cardiovascular, lymphatic and respiratory systems of named animal species; comparison of avian and mammalian ventilation.

- 2.4 *Skeleto-muscular systems*: Physiology and function of skeleto-muscular systems of named animal species.
- 2.5 *Cerebro-nervous systems*: Physiology and function of cerebro-nervous systems of named animal species.

Assessment:

Assessment for this unit will be by a portfolio of evidence, supported by questioning of the candidates. Assessment will be carried out by internal assessors. Assessment decisions are subject to internal and external scrutiny.

Guidance:

Suggested Reading:

Ewbank, R., F Kim-Madslien & CB Hart (Eds) 1999	Management and welfare of farm animals. 4th Edition. Universities Federation for Animal Welfare
Food Standards Agency	Meat Plant HACCP Manual Manual for Official Controls Industry guide on edible co-products and animal by-products
Grist, A. 2006	Poultry Inspection: Anatomy, physiology and disease conditions 2nd Edition. Nottingham University Press
Grist, A. 2011	Ovine meat inspection: Anatomy, physiology and disease conditions. 2nd Edition. Nottingham University Press
Grist, A. 2008	Bovine meat inspection: Anatomy, physiology and disease conditions. 2nd Edition. Nottingham University Press
Grist, A. 2007	Porcine meat Inspection: Anatomy, physiology and disease conditions. Nottingham University Press
Wilson	Wilson's Practical Meat Inspection
J.Infante Gil/J.Costa Durao	A colour atlas of Meat Inspection

Recommended prior learning:

There are no recommended prior learning requirements for this qualification.

Restrictions on candidate entry:

This is a proficiency qualification. Candidates must have access to slaughterhouses and cutting plants processing all of the animal species listed in this specification.

Special Assessment Needs:

Centres that have candidates with special assessment needs should consult The Society's Reasonable Adjustments and Special Consideration Policy; this is available from The Society and The Society's website (www.rsph.org.uk).

Recommended qualifications and experience of assessors:

The RSPH would expect assessors to have or be working towards an assessors qualification and relevant qualifications in and experience of meat inspection.

How to apply to offer this qualification:

Centres should be registered with The Society. To become a centre approved to offer this qualification, please complete the 'Centre Application Form' which can be found on our website in the Qualifications and Training section. If you are already an approved centre, please complete the 'Add an additional qualification form' which can be downloaded from the Centre area on the website www.rsph.org.uk. Please ensure that you include details of your quality assurance procedures. You will need to attach a CV to this application. Centres should ensure that paragraphs 4.5 and 4.6 of the application forms are completed as this qualification is assessed and marked by the centre.

Please contact the Qualifications Department at centreapproval@rsph.org.uk if you need any assistance.

Other Information:

All RSPH specifications are subject to review. Any changes to the assessment or learning outcomes will be notified to Centres in advance of their introduction. To check the currency of this version of the specification, please contact the Qualifications Department or consult the RSPH website.

Centres must be registered with RSPH.

Any enquiries about this qualification should be made to:

The Qualifications Department,
Royal Society for Public Health,
John Snow House,
59 Mansell Street,
London E1 8AN

Tel: 020 7265 7300

Fax: 020 7265 7301

Email: info@rsph.org.uk

Website: www.rsph.org.uk