

Unit 21: Understand and Carry Out Farm Livestock Husbandry

Unit code:	L/600/9457
QCF Level 3:	BTEC National
Credit value:	10
Guided learning hours:	60

● Aim and purpose

This unit aims to provide learners with an understanding of the principles of farm livestock husbandry and how these can be put into practice. This unit is primarily aimed at learners within a centre-based setting looking to progress into the sector or to further education and training.

The aim of this unit is to develop the learner's knowledge and skills required for the successful care and management of farm livestock. The learner will be able to handle farm livestock in order to carry out specific husbandry techniques. The learner will understand the accommodation and environmental requirements of farm livestock and how to prepare suitable rations according to need.

● Unit introduction

The welfare of farm livestock in the UK is important for the whole industry. In recent years there have been a number of incidents relating to disease that have raised the profile and affected public perception of farming practices in the UK. The care and welfare of farm animals is a priority for all employees in the industry. Learners could be employed at visitor attractions where farm livestock are housed or on working farms.

The aim of this unit is to equip the learner with the necessary skills and experience to deal with large and sometimes unpredictable farm animals. This unit should be delivered via a mixture of practical and theoretical study to engage and interest learners.

● Learning outcomes

On completion of this unit a learner should:

- 1 Understand the production systems for farm livestock
- 2 Be able to carry out handling techniques for farm livestock
- 3 Understand the environmental conditions required for farm livestock
- 4 Understand the feed and water requirements of farm livestock.

Unit content

1 Understand the production systems for farm livestock

Breeds and production systems: commercial breeds (native and imported breeds of dairy and beef cattle); native and imported pure-bred and cross-bred sheep; pigs (hybrid and pure breeds); poultry (hybrid and pure breeds) rare breeds (rare breed status for breeds of pigs, cattle, sheep and poultry)

Production systems: pigs (breeding stock, pork, bacon, heavy pigs); poultry (broilers, laying hens); cattle (beef, dairy); sheep (lowland, upland, hill); class of stock; ages of stock; length of time animals are in production

2 Be able to carry out handling techniques for farm livestock

Animal handling techniques: livestock (cattle, sheep, pigs, poultry); animal checks prior to handling (appearance, condition scoring); behaviour (species-specific behaviour, behaviour pattern, interaction with other animals); handling techniques; handling and restraint equipment selection and use eg halters, crates; health and safety; personal protective equipment (PPE); risk assessments

3 Understand the environmental conditions required for farm livestock

Accommodation requirements: indoor and outdoor accommodation; health and safety; PPE; current relevant legislation and codes of practice, maintenance of accommodation; safe handling and disposal of organic and inorganic waste; minimising stress; accommodation requirements for species at different life stages; five needs

4 Understand the feed and water requirements of farm livestock

Feed requirements: rations for different species and what is in a ration; preparation of feed; hygiene; PPE; presentation of food including feeding equipment; variations in rations according to life stages; provision of water to species and equipment

Assessment and grading criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria for a pass grade describe the level of achievement required to pass this unit.

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
<p>P1 explain the use of different breeds of common farm livestock in production systems [CT, RL, IE]</p>	<p>M1 summarise different systems of production for a given farm animal judging which is the most suitable</p>	<p>D1 evaluate livestock production systems in detail relating them to animal welfare.</p>
<p>P2 evaluate production systems for common farm livestock [CT, RL, IE]</p>		
<p>P3 carry out animal health checks prior to handling farm livestock [TW, SM, EP]</p>	<p>M2 carry out, record and present condition scoring on a variety of farm livestock species, using selected methods and equipment</p>	<p>D2 evaluate health and behaviour of selected farm livestock</p>
<p>P4 select appropriate equipment to be used when carrying out handling techniques for farm livestock [EP, TW, SM]</p>		
<p>P5 handle farm livestock safely in a way that complies with relevant legislation and minimises stress and injury [TW, EP, RL]</p>		
<p>P6 complete animal movement records appropriately [RL, SM, CT]</p>		

Assessment and grading criteria		
To achieve a pass grade the evidence must show that the learner is able to:	To achieve a merit grade the evidence must show that, in addition to the pass criteria, the learner is able to:	To achieve a distinction grade the evidence must show that, in addition to the pass and merit criteria, the learner is able to:
P7 explain the accommodation requirements of indoor reared farm livestock [IE, CT, RL, SM]	M3 compare advantages and disadvantages of alternative livestock accommodation provision including accommodation maintenance	D3 justify indoor and outdoor accommodation for selected farm livestock
P8 explain the accommodation requirements of outdoor reared farm livestock [CT, SM, EP]		
P9 discuss the routine maintenance requirements of farm livestock accommodation [IE, CT, RL]		
P10 explain the suitability of feed rations according to purpose and life stage of common farm livestock [CT, RL, SM]	M4 plan feed rations for a variety of selected farm livestock taking into account life stage and ease of preparation.	D4 analyse current feed rations given to named farm livestock making justified suggestions for alternatives.
P11 explain the correct storage and preparation of feed and water for common farm livestock. [CT, RL, SM]		

PLTS: This summary references where applicable in the pass criteria, in the square brackets, the elements of the personal, learning and thinking skills. It identifies opportunities for learners to demonstrate effective application of the referenced elements of the skills.

Key	IE – independent enquirers CT – creative thinkers	RL – reflective learners TW – team workers	SM – self-managers EP – effective participators
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Essential guidance for tutors

Delivery

Delivery of this unit will involve practical and written assessments, visits to suitable collections and will link to industrial experience placements.

To complete this unit successfully, learners should be given opportunities to practise routine care on a variety of farm animal species from the following categories: pigs, cattle, poultry and sheep. The emphasis should be on practical delivery and assessments where possible for the unit, with learners given adequate time to prepare for them.

Access to the animals should be given to people of all abilities with the emphasis on health and safety and animal welfare at all times, especially when dealing with large animals.

Centres should be encouraged to give learners appropriate access to a variety of animals, but animal welfare is of paramount importance, and this is likely to involve careful planning to prevent stress or suffering to the animals.

Learners should be encouraged to carry out independent research for this unit, to allow for guided development of research and independent thinking skills.

Tutors should also be encouraged to formulate links with external animal care organisations to provide a 'real' view of animal production and farming, and how it relates to overall welfare of animals. This could be done via both visits to animal collections such as different types of farms and guest lectures from organisational professionals.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments.

The outline learning plan gives **an indication of the volume of learning it would take the average learner** to achieve the learning outcomes. It is **indicative and is one way of achieving the credit value**.

Learning time should address all learning (including assessment) relevant to the learning outcomes, regardless of where, when and how the learning has taken place.

Topic and suggested assignments/activities and/assessment
Introduction to the unit and health and safety aspects of the unit
Assignment 1: Production Systems (P1, P2, M1, D1) Introduction and research
Visits to local farms and educational talks from farmers
Assignment 2: Handling Livestock (P3, P4, P5, P6, M2, D2) Introduction and research
Theory: handling livestock and completing records/legislation
Practical: handling livestock
Assignment 3: Farm Livestock Accommodation and Maintenance (P7, P8, P9, M3, D3), Introduction and research
Practical: maintenance of accommodation of a range of species
Theory: different types of accommodation, maintenance,

Topic and suggested assignments/activities and/assessment

Assignment 4: Feeding and Watering Livestock (P10, P11, M4, D4)

Introduction

Practical: making a ration and providing feed and water to farm animals

Theory: what goes into a ration

Theory: rationing for various life stages

Assessment

For P1 and P2, learners could create a poster that describes the uses of different livestock and evaluates production systems used for type. The use of pictures can be encouraged to make the poster interesting to the reader, and it could be displayed in the centre's own farm buildings.

This could be extended further for M1 where learners must cover a minimum of three different production systems for a specified farm animal. Learners must justify a judgement which they think is most suitable in relation to animal welfare, costs and efficiency, in relation to the breeds of animal involved.

The impact on animal welfare for D1 could be evaluated in the same assignment. Evidence for M1 and D1 could be covered in a completed report or assignment.

For P3, P4, P5 and P6, learners are required to carry out health checks, handle animals safely using correctly selected equipment and complete necessary movement records. This should cover a minimum of two different farm animal species. This should be a practical assessment, with the learners being observed handling a variety of livestock tasks in the centre's own farm. If the centre does not have a farm arrangements should be made with a local farm.. All off-site visits should be checked for health and safety before any visits. The assessor should produce a marking tick sheet that covers all the pass criteria that against which learners are being assessed.

In the same assessment, for M2, learners are required to carry out condition scoring on a minimum of three livestock species. This should be carried out using a selection of methods and equipment from a range provided by the assessor. As evidence, learners could summarise this information into notes, and present it to the owner or the staff on the farm. For D2, learners should evaluate the overall health and behaviour of the livestock from what they have seen in the pass and merit tasks, which could be assessed through a completed report.

For P7, P8 and P9, learners are required to explain accommodation requirements for indoor and outdoor reared livestock, and discuss routine maintenance of accommodation. This could be in the form of two learner produced guidance booklets, one on indoor accommodation requirements, and the other on outdoor accommodation requirements. Learners should cover all key livestock requirements and a discussion on routine maintenance requirements for each species.

This could be extended for M3 and D3 by comparing alternative accommodation types for animals, giving valid advantages and disadvantages of each type. This could be in a written assignment that includes a table of advantages and disadvantages. For D3, learners must justify the selection of indoor and outdoor accommodation that they have seen livestock kept in. This could be in an assignment including diagrams with annotated suggestions.

For P10 and P11, learners are required to explain storage and preparation of livestock feed and the suitability of feed rations for animals at different life stages. This could be assessed in a written short answer or multiple choice test.

For M4, learners need to plan the rations for a minimum of three different farm livestock species, taking life stage and ease of preparation into account. This could be in the form of longer answer questions in a test. For

D4, learners could be given a diet or ration plan for farm livestock and could then analyse it and make justified suggestions for alternatives. This could also be part of the same test.

Programme of suggested assignments

The following table shows a programme of suggested assignments that cover the pass, merit and distinction criteria in the grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

Criteria covered	Assignment title	Scenario	Assessment method
P1, P2, M1, D1	Production Systems	You work as an assistant on a farm. You need to evaluate different farm livestock production systems in relation to animal welfare. You must select one farm animal species and summarise different production systems and judge the most suitable in relation to animal welfare, costing and efficiency. You must explain the uses of different livestock breeds in livestock production systems.	Poster. Assignment.
P3, P4, P5, P6, M2, D2	Handling Livestock	The owners of a farm have asked you to carry out health checks on given farm animal livestock and complete animal movement records. You must select relevant equipment and handle livestock correctly. You must carry out condition scoring and evaluate the health and behaviour of livestock. You must then present your findings to the farm owners.	Practical/written assignment.
P7, P8, P9, M3, D3	Farm Livestock Accommodation and Maintenance	You must create two guidebooks, one entitled Indoor Accommodation requirements, and the other entitled Outdoor Accommodation explaining how these meet the needs of farm livestock and comparing the advantages and disadvantages of both types. You need to justify the selection of indoor and outdoor accommodation for selected livestock species and discuss the routine maintenance for given farm animals.	Poster. Written assignment. Table. Plans.
P10, P11, M4, D4	Feeding and Watering Livestock	You will need to plan feed rations for three different livestock species and explain different types of livestock feeding and rations according to life stages and purpose. You will be asked to feedback on an analysis of current feed rations for a given species and what alternative rations would be appropriate.	Test.

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC land-based sector suite. This unit has particular links with:

Level 2	Level 3
Maintain Animal Health and Welfare	Element LP24.1 Establish appropriate conditions for livestock Element LP24.2 Monitor and maintain appropriate conditions for livestock
	Element LP25.2 Deliver routine husbandry procedures

Essential resources

Learners should have access to a range of species that are manageable and can be used for practical sessions. Learners should ensure that animals are not overused or their welfare compromised at any time. Safe working practices should be employed at all times.

Learners should have access to a well-stocked, up- to-date library or resource centre, and ICT facilities within the centre.

As this unit is essentially regarding farm livestock, some practical tasks may need to be undertaken off site at a local farm or suitable establishment.

Employer engagement and vocational contexts

Centres are encouraged to develop links with animal collections to give learners an insight into alternative ways of livestock production. This may be vets, rare breed centres, livestock parks, feeding companies, farms or rescue facilities. This could be done through either visits to the establishments or visits from guest lecturers from suitable organisations.

Indicative reading for learners

Textbooks

Blowey R – *A Veterinary Book for Dairy Farmers, 3rd Edition* (Old Pond Publishing, 1999)
ISBN 9780852364994

Henderson D – *The Veterinary Book for Sheep Farmers* (Old Pond Publishing, 1990) ISBN 9781903366301

Lampkin N – *Organic Farming, 2nd Edition* (Old Pond Publishing, 2002) ISBN 9781903366295

Thear K – *Free-Range Poultry, 3rd Edition* (Whittet Books, 2002) ISBN 9781873580592

Journals

Beef Farmer

Farmers' Guardian

Farmers' Weekly

Farming journals

Sheep Farmer

Smallholder

Websites

Compassion in World Farming	www.ciwf.org.uk
Department for Environment, Food and Rural Affairs	www.defra.gov.uk
Farm Animal Welfare Council	www.fawc.org.uk
Health and Safety Executive	www.hse.gov.uk
National Sheep Association	www.nationalsheep.org.uk
The Poultry Club	www.poultryclub.org
The Rare Breeds Survival Trust	www.rbst.org.uk
The Pig Site	www.thepigsite.com

Delivery of personal, learning and thinking skills (PLTS)

The following table identifies the PLTS opportunities that have been included within the assessment criteria of this unit:

Skill	When learners are ...
Independent enquirers	<ul style="list-style-type: none"> explaining uses of breeds of livestock evaluating production systems explaining accommodation requirements discussing maintenance requirements
Creative thinkers	<ul style="list-style-type: none"> explaining uses of breeds of livestock completing animal movement records explaining accommodation requirements evaluating production systems discussing maintenance requirements explaining feed suitability, storage and preparation
Reflective learners	<ul style="list-style-type: none"> explaining uses of breeds of livestock evaluating production systems handling farm livestock completing animal movement records explaining accommodation requirements discussing maintenance of accommodation explaining feed suitability, storage and preparation
Team workers	<ul style="list-style-type: none"> carrying out health checks selecting appropriate equipment to use handling farm livestock
Self-managers	<ul style="list-style-type: none"> carrying out health checks selecting appropriate equipment to use completing movement records explaining accommodation requirements explaining suitability of feed, storage and preparation.
Effective participators	<ul style="list-style-type: none"> carrying out health checks selecting appropriate equipment to use handling livestock explaining accommodation requirements

Although PLTS opportunities are identified within this unit as an inherent part of the assessment criteria, there are further opportunities to develop a range of PLTS through various approaches to teaching and learning.

Skill	When learners are ...
Independent enquirers	planning and carrying out research activities related to the unit and animal health analysing information on animal health and signs of illness
Creative thinkers	asking questions to extend their thinking during lectures and practical sessions trying out alternatives or new solutions to animal healthcare Adapting ideas as circumstances change eg changes to animal welfare legislation
Reflective learners	identifying opportunities for animal healthcare changes and their own achievements setting goals for themselves eg conquering a fear of handling an animal reviewing progress in practical tasks and coursework
Team workers	working with others to carry out health checks, exercise and husbandry routines of animals reaching clear agreements regarding who is doing which task working together in an emergency situation
Self-managers	showing initiative and commitment with animals and their healthcare dealing with pressures in an emergency first aid situation managing emotions when it comes to animal welfare and healthcare
Effective participators	discussing issues of concern when health checking an animal or finding an animal in a less than ideal welfare situation identifying improvements to current animal welfare regimes influencing others on their animal healthcare regimes and standards

● Functional skills – Level 2

Skill	When learners are ...
ICT – Use ICT systems	
Select, interact with and use ICT systems independently for a complex task to meet a variety of needs	using ICT to complete their course work using Smart boards and PCs in class using interactive materials for teaching and learning, researching subjects on the internet.
Use ICT to effectively plan work and evaluate the effectiveness of the ICT system they have used	
Manage information storage to enable efficient retrieval	
Follow and understand the need for safety and security practices	
Troubleshoot	
ICT – Find and select information	
Select and use a variety of sources of information independently for a complex task	
Access, search for, select and use ICT-based information and evaluate its fitness for purpose	
ICT – Develop, present and communicate information	
Enter, develop and format information independently to suit its meaning and purpose including: <ul style="list-style-type: none"> ■ text and tables ■ images ■ numbers ■ records. 	
Bring together information to suit content and purpose	
Present information in ways that are fit for purpose and audience	
Evaluate the selection and use of ICT tools and facilities used to present information	
Select and use ICT to communicate and exchange information safely, responsibly and effectively including storage of messages and contact lists	

Skill	When learners are ...
Mathematics	
Understand routine and non-routine problems in a wide range of familiar and unfamiliar contexts and situations	suggesting weights of animals and medication to suit their needs calculating dosages of supplements per size of animal, gathering and analysing weights of animals for healthcare evaluations and calculating weights of rations.
Identify the situation or problem and the mathematical methods needed to tackle it	
Select and apply a range of skills to find solutions	
Use appropriate checking procedures and evaluate their effectiveness at each stage	
Interpret and communicate solutions to practical problems in familiar and unfamiliar routine contexts and situations	
Draw conclusions and provide mathematical justifications	
English	
Speaking and listening – make a range of contributions to discussions and make effective presentations in a wide range of contexts	reading material on the subject from a variety of sources for their assignment work producing clear and concise documents using correct animal health terminology for the unit. presenting information to a group of, ideally in a classroom situation with their peers.
Reading – compare, select, read and understand texts and use them to gather information, ideas, arguments and opinions	
Writing – write documents, including extended writing pieces, communicating information, ideas and opinions, effectively and persuasively	