



Unit 10: Farm Livestock Husbandry

Delivery guidance

Approaching the unit

This unit covers the underpinning principles of livestock production and practical actions involved in maintaining welfare standards and productivity of livestock species. Learners wishing to follow a career working on farms with livestock will be able to use the knowledge and skills gained in this unit to work in a range of production systems; it is important that they have access to a variety of livestock to gain the experience required.

Work experience in a relevant setting will be invaluable to learners. Local employers and placement providers should be encouraged to take an active part in assessing learners' capabilities. Witness statements can and should be used to provide evidence of meeting assessment criteria.

A virtual learning environment (VLE) can allow learners to share their knowledge of working with different livestock species and breeds. This is an excellent way of drawing on the resources learners can bring to their learning experience.

Local employers could be approached to take small groups of learners on tours of their livestock units, to show learners the reality of different approaches to dealing with a range of livestock in different production systems.

Delivering the learning aims

Learning aim A begins with the background of livestock species and breeds. This is an immediate opportunity to engage learners. Learners may incorporate their own experiences of different livestock, which will give them a basis for exploring the differences and similarities between familiar and unfamiliar production systems.

It is likely that learners will be working with and around livestock during the unit delivery. Make use of this, reinforcing the knowledge and planning aspects of the unit – along with opportunities for gathering evidence of learners' skill development – by making links with the work they are carrying out on a daily basis. This may influence the order in which you deliver the learning aims as well. Learning aim C introduces the health and safety requirements for working with livestock, so it might be more appropriate to deliver this aim at the beginning of the unit, to ensure learners maintain their personal safety.

Learners are likely to find the methods for calculating balanced rations for livestock species challenging. Do not introduce this content until learners are confident with the basics of providing different types of feed to livestock. Ask learners who have a good understanding of this to mentor those who find it more difficult; this can be a useful way to engage the class and promote a deeper understanding of the requirements and processes involved.

Assessment model (in internally assessed units)

Learning aim	Key content areas	Recommended assessment approach
<p>A Understand the production systems used for farm livestock</p>	<p>A1 Farm livestock types and breeds A2 Production systems</p>	<p>An illustrated report/essay examining the common and unconventional farm livestock species, and how these are produced.</p>
<p>B Explore the nutritional needs of farm livestock in order to maintain good standards of health</p>	<p>B1 Nutrition for farm livestock B2 Feeding and watering regimes and equipment B3 Feed ration formulation</p>	<p>Portfolio of evidence relating to the practical handling, feeding, watering and husbandry of farm livestock species. A report examining feeds and composition, equipment, methods and techniques of feeding and watering.</p>
<p>C Carry out handling and routine husbandry of farm livestock to meet current standards</p>	<p>C1 Health and safety requirements when working with farm livestock C2 Animal health checks prior to handling common species C3 Practical animal handling techniques and equipment for common farm livestock species C4 Farm animal accommodation</p>	



Getting started

This provides you with a starting place for one way of delivering the unit, based around the recommended assessment approach in the specification.

Unit 10: Farm Livestock Husbandry

Introduction

This unit will help to prepare learners for a career in livestock management. Employer engagement will provide many benefits; this engagement may come in the form of:

- guest speakers
- technical workshops around planning for and managing the nutritional needs of production livestock
- contribution of ideas to unit assignments
- assessment of practical skills in livestock handling and husbandry
- opportunities for observation during work experience
- support and mentoring.

Previous BTEC learners who have successfully completed the course could also be asked to share their experiences or act as mentors.

Learning aim A – Understand the production systems used for farm livestock

To introduce the unit, facilitate class discussions of what livestock are and establish learners' current levels of experience.

- Learners can work in pairs to discuss purposes and products of livestock production, and identify particular breeds that are both conventional and unconventional.
- Learners can research breeds of livestock, covering ideas such as:
 - common traits, e.g. ease of handling
 - need for adaptations such as specialist equipment or accommodation
 - primary products and by-products of production.
- Learners can work in small groups according to the species they have researched, producing competitive card games for other groups to complete.
- Learners can take part in quizzes on livestock breeds, species and production to consolidate learning.
- Tutor can give a presentation to learners on the ways in which animal welfare is addressed in different types of production system. Include formal guidelines that cover welfare of livestock and discuss how they are interpreted practically for different livestock species.
- Learners will benefit from a guest speaker discussing the challenges and benefits of the production system they use. If possible, this could be extended to visiting one or more local producers to see them in action.
- Learners should be given a clear brief of the assessment requirements and use independent study time to practise their report production skills. If drafts are submitted on time, give learners feedback and guidance prior to completion of the full assignment.

Learning aim B – Explore the nutritional needs of farm livestock in order to maintain good standards of health

- Tutor could give a presentation and incorporate a Q&A session to explain what feeding plans are, how they are put together, and their purposes in production and maintenance.
- Allow learners access to unlabelled samples of livestock feeds, to stimulate discussion of the different feed components and their suitability for different livestock species and production requirements.
- Learners could look at case studies outlining the production systems, animal requirements and feed availability and costs. They could then plan how to meet the needs of the animal and its required production levels.
- Show learners video clips of the practical processes involved in producing forage on-farm and ask them to consider the logistical and financial issues around producing and purchasing feeds.
- Learners should carry out independent research into the production of other feed types, linked to their quality, safety and nutritional content.
- Learners would benefit from visiting the centre's livestock unit or a local livestock producer, to:
 - assess how feed and water is stored, prepared and presented to livestock
 - consider planning for the frequency, type and amount of feed required for individual animals and groups
 - consider how and why good hygiene needs to be maintained
 - observe any requirements for personal protective equipment (PPE) throughout the process of storing and providing feeds.
- Learners could prepare group presentations discussing the advantages, disadvantages and suitability of methods and practices involved in providing feeds to livestock.
- Learners should be given supported frameworks to help them understand the different methods for calculating balanced rations for different livestock species. Provide worked examples for each method and allow learners to develop their skills using manual and computerised methods through scenarios. Learners should review their own work and the work of their peers, identifying where errors may have taken place and how to correct them.
- Discuss with learners why it is necessary to analyse feeds, especially those produced on-farm. Demonstrate how to provide samples of feed for laboratory analysis and give learners access to different types of feed so they can practise taking and preparing samples. Consider the time of year and availability of feeds to do this effectively.
- Learners could be given the results of a laboratory analysis of forage and asked to identify how the feed meets the needs of the livestock species for which it is intended. They should be able to make informed recommendations about how the needs of the livestock species – within a particular production system and at a given level – can be met by this feed. Link back to their ration calculations, giving guidance if necessary.
- Show learners photographs or videos of animal with varying condition scores and common nutritional deficiencies or excesses. Discuss with learners how these issues could have been avoided and how they can be rectified.
- Learners should make plans to meet the nutritional needs of at least four different species of livestock, to maintain high standards of animal welfare and to meet production requirements. They could do this in terms of case studies about fictional livestock producers, which provide information about: the production systems the producer is using; the feeds available and the producer's budget; the producer's storage facilities and capacity. Learners will need to carry out independent research to complete their plans and meet the relevant assessment criteria.



Learning aim C – Carry out handling and routine husbandry of farm livestock to meet current standards

Depending on learners' programme of study and their access to livestock, the health and safety aspect of this learning aim could be covered before the rest of the content.

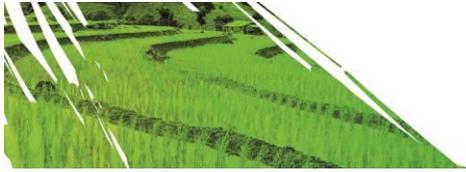
- Learners can discuss the hazards particular to working with different:
 - livestock species and breeds
 - production systems
 - husbandry tasks.

This can be extended to discuss the risks of accidents taking place and ways to help prevent injury to learners, other people and the livestock animals.

- Give learners partially-completed risk assessments and ask them to consider what else needs to be present for them to be effective. Ask learners to consider the control measures that should be followed to minimise risks for the husbandry tasks they are likely to be completing.
- Show learners different types of PPE and discuss how PPE is selected and used for particular situations.
- Give a presentation that outlines the relevant legislation in terms of rights and responsibilities when working with livestock. Summarise the key points for learners.
- Learners could work in pairs to create a risk assessment for tasks involving particular livestock species, to cover:
 - identifying any hazards
 - deciding who could be harmed and how
 - evaluating risks and deciding on precautions
 - recording and implementing findings
 - reviewing the risk assessment and updating it if necessary.
- Learners can work in groups to assess important situations requiring adaptations to husbandry and handling, using photographs, videos or written descriptions of livestock and contexts. They could discuss:
 - how appropriate it would be to handle the animal at all
 - specialist equipment that might be required
 - potential versus desired consequences of the choices that could be made.

Learners could discuss this first within their groups and then as part of a class discussion.

- Demonstrate good practice when handling animals and carrying out husbandry tasks. This could be enhanced through the use of audio-visual materials. Learners could film their peers demonstrating good practice. These clips could then form part of the evidence towards meeting assessment criteria, and may be useful as future class resources.
- A guest speaker such as a farm manager, stock person or agricultural building contractor could come in to explain the practical, legal and financial considerations that surround providing suitable accommodation to livestock.
- Learners could then visit the livestock accommodation to survey the types, structures and materials of accommodation, handling systems and equipment, and their suitability for different livestock species, ages and production systems.



- Learners should spend a significant length of time addressing the husbandry and nutritional needs of different species of livestock, through practical activities and duties on the farm. Learners should gain evidence for their portfolio through videos, witness statements and professional discussions with stock persons. They should be aware that their attention to health and safety and professional working responsibilities is a key part of meeting the assessment criteria to pass the unit. It would be useful for learners to keep a reflective diary throughout the unit, as this will help them to compile evidence for their portfolios later.
- Learners will need to spend some time compiling their portfolio and organising the evidence into a logical format for submission. They will also need to spend time ensuring they have reflected on the handling and husbandry techniques, equipment and systems they have used, paying attention to both the practical and theoretical aspects. Some evidence of this could be in the form of a semi-structured interview.



Details of links to other BTEC units and qualifications, and to other relevant units/qualifications

This unit links to:

- Unit 5: Operational and Environmental Activities in Land-based Enterprises
- Unit 7: Work Experience in the Land-based Sectors
- Unit 15: Livestock Health and Diseases

Resources

In addition to the resources listed below, publishers are likely to produce Pearson-endorsed textbooks that support this unit of the BTEC International Qualifications in Agriculture/Horticulture/Land-based subjects. Check the Pearson website (<http://qualifications.pearson.com/endorsed-resources>) for more information as titles achieve endorsement.

Textbooks

Grandin, T., *Livestock Handling and Transport* (4th edition), CABI Publishing, 2014, ISBN 978-1-780-64321-2 – A practical guide to evidence-based insights and practices for promoting high standards of welfare and productivity in livestock.

McDonald, P., Greenhalgh, J., Morgan, C., Edwards, R., Sinclair, L. and Wilkinson, R., *Animal Nutrition* (7th edition), Benjamin Cummings, 2011, ISBN 978-1-408-20423-8 – A comprehensive text covering all animal nutrition basics, from biological molecules to dietary planning requirements.

Journals

International Journal of Livestock Production (Academic Journals) – This journal is useful for tutors to keep up to date with current research in matters of livestock production.

Journal of Applied Animal Nutrition (Cambridge University Press) – This journal is useful for tutors to keep up to date with current research in applied animal nutrition.

Livestock Science (Elsevier) – This journal is useful for tutors to keep up to date with current research in matters of livestock production.

Videos

Visit video-sharing website and search for, for example, 'The Funky Farmer' channel. Video-sharing websites often have playlists which include many authentic vlogs discussing livestock management and challenges on a livestock farm, including the process of silage production.

Websites

BASF Animal Nutrition – The BASF website is a good starting point for looking at livestock feed additives.

Food and Agriculture Organization of the United Nations (FAO) – The article 'A classification of livestock production systems' provides classifications of livestock production systems as surveyed by the FAO.

MSD Veterinary Manual – This is a well-organised and easy-to-read guide on managing animals and their nutrition.

Pearson is not responsible for the content of any external internet sites. It is essential for tutors to preview each website before using it in class so as to ensure that the URL is still accurate, relevant and appropriate. We suggest that tutors bookmark useful websites and consider enabling learners to access them through the school/college intranet.