



National Unit Specification: general information

UNIT Livestock Production (SCQF level 5)

CODE F6AJ 11

SUMMARY

This Unit allows candidates to develop some of the basic knowledge and skills in relation to farm livestock production in the UK. The Unit will cover the basic production practices and associated husbandry skills for one type of livestock. Candidates will also learn about the use of equipment and machinery in livestock production. This Unit is designed for candidates who want to develop or further develop their knowledge of livestock production systems and practices and is suitable for candidates with no previous knowledge of agriculture

OUTCOMES

- 1 Demonstrate knowledge of the main livestock production systems in the UK.
- 2 Describe basic livestock husbandry practices over a production cycle.
- 3 Identify equipment and machines for livestock production and describe their main uses.
- 4 Carry out practical livestock husbandry skills.

RECOMMENDED ENTRY

While entry is at the discretion of the centre, it would be beneficial if candidates had previous experience of working with farm livestock and some knowledge of the main livestock production systems.

CREDIT VALUE

1 credit at SCQF level 5 (6 SCQF points at SCQF level 5*).

**SCQF credit points are used to allocate credit to qualifications in the Scottish Credit and Qualifications Framework (SCQF). Each qualification in the Framework is allocated a number of SCQF credit points at an SCQF level. There are 12 SCQF levels, ranging from Access 1 to Doctorates.*

Administrative Information

Superclass: SH

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CORE SKILLS

There is no automatic certification of Core Skills in this Unit

The Unit provides opportunities for candidates to develop aspects of the following Core Skills:

- ◆ *Communication* (SCQF level 4)
- ◆ *Working with Others* (SCQF level 4)
- ◆ *Problem Solving* (SCQF level 4)

These opportunities are highlighted in the Support Notes of this Unit Specification.

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Acceptable performance in this Unit will be the satisfactory achievement of the standards set out in this part of the Unit Specification. All sections of the statement of standards are mandatory and cannot be altered without reference to the SQA.

OUTCOME 1

Demonstrate knowledge of the main livestock production systems in the UK.

Performance Criteria

- (a) Describe correctly the main features of ruminant production systems.
- (b) Describe correctly the main features of pig and poultry production systems.
- (c) Identify correctly the uses of the main livestock products.

OUTCOME 2

Describe basic livestock husbandry practices over a production cycle.

Performance Criteria

- (a) Describe correctly appropriate feeding practices for one type of livestock.
- (b) Describe correctly appropriate breeding practices for the given livestock.
- (c) Describe correctly measures to maintain animal health and welfare for the given livestock.
- (d) Select an appropriate housing system for the given livestock.

OUTCOME 3

Identify equipment and machines for livestock production and describe their main uses.

Performance Criteria

- (a) Identify correctly major pieces of feeding equipment and machinery and describe their uses.
- (b) Describe correctly the uses of livestock handling equipment.
- (c) Identify correctly equipment for livestock waste disposal and describe its uses.
- (d) Identify correctly the main pieces of equipment in milk production.

OUTCOME 4

Carry out practical livestock husbandry skills.

Performance Criteria

- (a) Identify and visually assess the quality of common feeds.
- (b) Effectively restrain and handle given livestock.
- (c) Examine correctly an animal for recognised signs of health and disease.
- (d) Measure correctly the body temperature of an animal.
- (e) Demonstrate safe working practices at all times.

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EVIDENCE REQUIREMENTS FOR THE UNIT

Evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria.

Written and/or oral evidence is required which demonstrates that the candidate has achieved Outcomes 1, 2 and 3 to the standard specified in the Outcomes and Performance Criteria. Evidence will be gathered at appropriate points throughout the Unit under supervised closed-book conditions. Evidence must be gathered in an appropriate context where live animals are kept in working environments or simulated working environments.

For Outcome 1, the candidate should demonstrate knowledge of the main farm livestock systems in the UK, to include dairy cattle, beef cattle, sheep, pigs and poultry. Uses should include both food and one other use, eg fibre, leather.

For Outcome 2, the candidate is required to describe the changing husbandry practices for either one animal or a small group of animals over a production cycle.

Outcome 3 should cover machinery and equipment for different types of livestock, and candidates should be able to identify two types of feeding equipment or machines, two types of waste handling pieces of equipment, two types of handling equipment and two parts of a milking installation.

Performance evidence, supplemented by an assessor observation checklist, is required for Outcome 4 to demonstrate that the candidate has carried out the livestock husbandry practical skills to the standards stated in the Outcome and Performance Criteria. Identification and visual assessment of feeds should involve three feeds selected from grass, silage, straw, hay and cereal grains. Candidates should correctly restrain, examine and take the body temperature of one suitable animal on one occasion.

The Assessment Support Pack for this Unit provides sample assessment material. Centres wishing to develop their own assessments should refer to the Assessment Support Pack to ensure a comparable standard.

National Unit Specification: support notes

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This part of the Unit Specification is offered as guidance. The support notes are not mandatory.

While the exact time allocated to this Unit is at the discretion of the centre, the notional design length is 40 hours.

GUIDANCE ON THE CONTENT AND CONTEXT FOR THIS UNIT

This Unit is an optional Unit in the National Progression Award in Rural Skills at SCQF level 5 but can also be used as a free-standing Unit. This Unit should be delivered within a practical farming context as far as possible and maximum use should be made of visits to local livestock production units. In most areas, it should be possible to visit at least two types of production enterprise. Visits to pig and poultry units can be constrained by biosecurity precautions, but it may be possible to see outdoor pigs and free-range chickens. The teaching and assessment of Outcome 2 should be based on one type of livestock which is locally important. In many cases it will be cattle or sheep, but pigs or poultry would also be suitable.

It is important that the practical aspects of the learning takes place involving livestock production in either a work setting or simulated work setting. Partnerships with Land-based colleges, training providers or employers are likely to provide the most appropriate settings.

It is important that the deployment of appropriate learning environments is preceded by a valid risk assessment, particularly identifying any protective personal equipment which the candidate may require.

A range of suitable topics is shown below:

Outcome 1

Systems of production: dairy, beef breeding, finishing beef, breeding sheep, finishing lambs, breeding pigs, finishing pigs, extensive versus intensive pig systems, intensive layers, extensive (free range) layers, broilers.

Features: location in relation to availability of main feedstuffs, differences in digestion and feeds used, requirements for housing, efficiency in converting feed to product, size of production units.

Products: foods — meats, milk, processed dairy products, eggs; others — wool, hides, by-products.

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Outcome 2

Feeds and feeding practices will vary with the type of animal, but could include bulky feeds, concentrate feeds, feed supplements, ad lib v restricted feeding, and method of presentation of feed to animals.

Breeding practices also vary, but could include breeding cycle, natural service, AI, heat detection, gestation, parturition; improvement by selection.

Health and Welfare: diseases should be restricted to no more than three common diseases for the type of livestock. Methods of controlling health should be mentioned, eg: vaccination, good housing and feeding, biosecurity precautions, isolation, clean grazing, use of pharmaceuticals.

Housing: specific to the type of livestock, eg bedded courts, cubicles, slats for cattle.

Outcome 3

Feeding: troughs, hoppers, bunkers, ring feeders, feeding trailers, creep feeders, in-parlour feeders, mixer wagons, forage boxes, electronic feeders, conveyor belts, loading equipment.

Handling: collecting areas, races, crates, weighers, shearing trailers, dippers, transporters.

Waste disposal: scrapers (mounted, automatic) slurry stores, slurry spreaders, dung loaders, dung spreaders.

Milking: parlours, robotic milkers, milking machine, vacuum pump, cleaning system, milk storage tank, heat exchanger.

Outcome 4

Feeds: silage, hay, grass, straw, cereal grains.

Restraint: Manual handling of a small animal (eg: a calf or sheep) and use of a crate/weigher.

Health check (eg: on a calf): visual appearance of eyes, nose, posture, skin, body condition, appetite, scouring, joints, check for respiration rate, body temperature, behaviour.

Candidates might be given the opportunity to carry out other basic livestock tasks such as injecting, dosing, foot trimming but these would not be assessed.

In all Outcomes, reference should be made to Health and Safety issues and to relevant legislation, eg: notifiable diseases.

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GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Maximum use should be made of planned visits to farms, shows, to give candidates the opportunity to see live animals and real production systems. Centres should be encouraged to adopt a candidate centred approach to the learning and teaching and this should include group discussion and team working activities. Risk assessments for visits and practical classes are required and appropriate biosecurity procedures should be followed. In particular with reference to the specialised nature of poultry production whereby access to a live setting may be very restricted candidates should have access to suitable video/DVD resources and/or visits by poultry production farmers who can give candidates an insight into this area of livestock production. Visits to farms and other livestock production settings should be supplemented by classroom-based sessions using computers, DVDs, books, catalogues and other visual materials.

Outcome 2 could be delivered in the context of monitoring the progress of an animal or a group of animals through as much of the production cycle as is possible. It would be beneficial for candidates to understand the need to be able to inspect the animals, and where possible be able to have opportunities to participate in the inspection of animals in order to check on their production levels and discuss the practices required in future days and weeks, eg in feeding, breeding, health care and housing. Such visits could be supplemented by classroom sessions to address aspects not covered in the visits — ideally using up-to-date visual materials, eg DVDs.

Outcome 3 could also be partially covered by farm visits as a range of machines and equipment will normally be in use. This could be supplemented by a visit to a machinery dealership or agricultural show to include a wider range of machines.

Outcome 4 should involve a live animal of appropriate size such as a calf or a sheep. This could be combined with Outcome 2 during a farm visit.

OPPORTUNITIES FOR CORE SKILLS DEVELOPMENT

This Unit presents opportunities to develop *Communication* skills, *Problem-Solving* skills and *Working with Others*. Oral communication skills can be developed through interactive discussions of many of the topics covered in this Unit. Many aspects of livestock production involve *Problem-Solving* skills — gathering information, organising it and using it to achieve a desired end-point. Team working skills could be developed within Outcomes 2 and 4 as some of the tasks are suited to a team approach, eg: restraining and examining an animal.

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

For Outcomes 1, 2 and 3, a holistic approach to assessment should be adopted. There are opportunities to integrate assessments, but these will vary according to local conditions, particularly the type and availability of livestock for Outcome 2. A suitable instrument of assessment would be a case study with associated restricted response questions.

For Outcome 4, a suitable instrument of assessment would be a practical assignment with candidate performance recorded on a checklist.

National Unit Specification: support notes (cont)

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Opportunities for the use of e-assessment

E-assessment may be appropriate for some assessments in this Unit. By e-assessment we mean assessment which is supported by Information and Communication Technology (ICT), such as e-testing or the use of e-portfolios or e-checklists. Centres which wish to use e-assessment must ensure that the national standard is applied to all candidate evidence and that conditions of assessment as specified in the Evidence Requirements are met, regardless of the mode of gathering evidence. Further advice is available in *SQA Guidelines on Online Assessment for Further Education (AA1641, March 2003)*, *SQA Guidelines on e-assessment for Schools (BD2625, June 2005)*.

DISABLED CANDIDATES AND/OR THOSE WITH ADDITIONAL SUPPORT NEEDS

The additional support needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments, or considering whether any reasonable adjustments may be required. Further advice can be found on our website www.sqa.org.uk/assessmentarrangements