



National Unit specification: general information

Unit title: Grassland Production (SCQF level 6)

Unit code: H285 12

Superclass: SD

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Summary

This Unit enables candidates to develop knowledge and skills in growing and managing grassland in the UK and to identify and understand the key features of grassland production and utilisation. Candidates will develop their knowledge of a range of grassland species for grassland production and will be able to select grasses and mixes suitable for grazing and cutting in low ground, upland and hill environments.

This is a mandatory Unit within the National Certificate in Agriculture (SCQF level 6) but is also available as a free-standing Unit. This Unit is suitable for candidates who have no previous knowledge in this area.

Outcomes

- 1 Identify species within grassland at various stages of growth.
- 2 Select and describe how to establish a grassland mixture for a given situation.
- 3 Plan the production and use of a sward.
- 4 Evaluate a sward.

Recommended entry

Entry is at the discretion of the centre.

Credit points and level

1 National Unit credit at SCQF level 6: (6 SCQF credit points at SCQF level 6*)

**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.*

General information (cont)

Unit title: Grassland Production (SCQF level 6)

Core Skills

Achievement of this Unit gives automatic certification of the following Core Skills component:

Complete Core Skill None

Core Skill component Critical Thinking at SCQF level 5

There are also opportunities to develop aspects of Core Skills which are highlighted in the Support Notes of this Unit specification.

National Unit specification: statement of standards

Unit title: Grassland Production (SCQF level 6)

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 SQA.

Outcome 1

Identify species within grassland at various stages of growth.

Performance Criteria

- (a) Identify the main production grasses and other common sward species.
- (b) Identify a range of growth stages of production grasses and other common sward species.
- (c) Identify a range of common weeds found in grassland.

Outcome 2

Select and describe how to establish a grassland mixture for a given situation.

Performance Criteria

- (a) Select a suitable grass mixture and seed rate.
- (b) Describe the optimal field conditions required to establish the crop.
- (c) Describe a suitable sequence of field operations for a given site.

Outcome 3

Plan the production and use of a sward.

Performance Criteria

- (a) Outline suitable fertiliser plans for given grazing systems.
- (b) Describe grazing systems suitable for given situation.

Outcome 4

Evaluate a sward.

Performance Criteria

- (a) Describe the ideal height of a sward for a range of livestock.
- (b) Assess the density and visual quality of a given sward.
- (c) Suggest appropriate actions based on observation of sward.

National Unit specification: statement of standards (cont)

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Evidence Requirements for this Unit

Written and/or oral evidence is required to demonstrate that the candidates have achieved all of the Outcomes and Performance Criteria. Evidence must be obtained under supervised conditions at appropriate points throughout the Unit. Evidence can be holistic or Outcome by Outcome.

For Outcome 1, candidates must provide evidence of the following, under closed-book conditions:

- ◆ identification of the main production grasses and other common sward species.
- ◆ identification of the range of growth stages for production grasses, to include: vegetative, transition, reproductive.
- ◆ identification of common weeds found in grassland.

For Outcome 2, candidates must provide evidence of the following:

- ◆ selection of a suitable grass seed mixture.
- ◆ calculation of the quantity of seed required for a given situations from: under-sowing, direct reseeding, stitching- in grass seed and direct drilling.
- ◆ description of the field operations required to establish a given crop and soil type must include ground preparation, sowing, fertilising, rolling.

For Outcome 3, candidates must plan for the production of a sward. Evidence must include:

- ◆ selection of an appropriate fertiliser for a particular grazing system.
- ◆ description of the timing of fertiliser applications for the grazing system.
- ◆ calculation of the quantity of fertilisers required for a particular field.
- ◆ description of grazing systems for a given situation, to include strip grazing, set stocking, paddock and rotation.

For Outcome 4, candidates must provide evidence of the following:

- ◆ description of the ideal height of a sward for cattle and sheep.
- ◆ assessing the density and quality of a given sward by identification of weeds, damage caused by livestock and machinery, compaction, winter-kill, poor establishment in young swards.
- ◆ suggestion of a minimum of two appropriate actions to be taken, based on observation of sward.

National Unit specification: support notes

Unit title: Grassland Production (SCQF level 6)

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 is a mandatory Unit within the National Certificate in Agriculture at SCQF level 6, but is also available as a free-standing Unit. In this Unit candidates are required to identify grasses and other sward plants such as red and white clover, and common weeds associated with grassland. Candidates will develop skills in selecting seed mixes, identifying different sources of nutrients and calculating nutrient values. Candidates should be given the opportunity to assess different sward types, ages and condition.

In Outcome 1 candidates will learn how to identify growth stages and production characteristics of grasses and other sward species. They will also be able to identify common weeds found in grass swards, including both seedling and mature stages.

In Outcome 2 candidates will learn the reasons for selecting a mixture for a given situation and why certain grass species are included (or other sward species). They will determine the quantity of seed required for a given situation and provide a description of the field operations required for the establishment for a grass seed mixture on a particular situation and soil type. Situations may include under-sowing, direct reseeding, stitching- in grass seed and direct drilling.

In Outcome 3 candidates will learn the definition of inorganic and organic nutrient sources and examples of the range within each source including artificial fertiliser, farmyard manure and slurry. The NPK nutritional values in terms of Units/kg, etc should be explained and calculated in the context of availability from the source. The importance of timing of fertiliser applications for early spring application and to synchronise with the stocking system and farm type will be covered as well as types of grazing: strip grazing, set stocking, paddock and rotation, zero grazing and use of clean grazing.

In Outcome 4, candidates will learn the ideal grazing heights for cattle and sheep. In addition they will identify weeds, damage caused by livestock and machinery, compaction, winter-kill, and poor establishment in young swards.

This Unit is aligned to the following National Occupational Standards (NOS) from Lantra:

- AgC5 Prepare for planting and plant extensive crops
- AgC6 Monitor and maintain the healthy growth of extensive crops
- AgC9 Prepare, monitor and cultivate sites for planting

National Unit specification: support notes (cont)

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Guidance on learning and teaching approaches for this Unit

This Unit should be delivered in as practical a context as possible. Delivery should take place both in the field to investigate sward composition and identification of grass and weeds, and in a classroom/lab setting, for example, to identify different grasses, other sward species and weeds. The emphasis should always be on the practical application of knowledge and understanding.

Candidates would benefit from a balanced approach to learning by undertaking field visits to farms with a range of grassland systems and participating in classroom activities to develop crop nutrition knowledge and understanding.

By adopting the above learning and teaching approaches and/or through the Outcomes and corresponding Evidence Requirements, the Unit should provide candidates with an opportunity to develop the following essential skills for life, learning and work:

- ◆ Employability — through developing practical skills to industry standards and working on time limited tasks.
- ◆ Sustainability — through considering the use of resources, soil additives, etc.
- ◆ Technical skills — through evaluating a grass sward.
- ◆ Organisational skills — in terms of personal management through punctuality, record keeping, organising portfolio work, etc.
- ◆ Interpersonal skills — through contact with farm staff supervisors and class teams.

Guidance on approaches to assessment for this Unit

The following approaches to assessment are suggested.

Outcome 1: A practical exercise, including closed-book identification of live specimens or from photographic evidence. Main production grasses and sward species would normally include: perennial rye grass, Italian rye grass, cocksfoot, timothy, white clover, red clover. Common weeds would normally include: docks, chickweed, thistles, speedwells and nettles.

Outcome 2: An oral or written exercise.

Outcome 3: Candidates could compile a portfolio and an assessor checklist could be used.

Outcome 4: A practical exercise, oral or written.

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)*.

National Unit specification: support notes (cont)

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Opportunities for developing Core Skills

In this Unit, candidates will learn about grassland production and use, develop knowledge of grassland species, consider grasses and mixes suitable for grazing and cutting in low ground, upland and hill environments and learn how to plan and monitor a sward.

Candidates will:

- ◆ identify grasses and other common sward species at different growth stages.
- ◆ make decisions about suitable grass mixtures and field conditions and field operations.
- ◆ explain the purpose of field operations.
- ◆ make recommendations about fertiliser use.
- ◆ describe a grazing system.
- ◆ take measurements and calculate seed and fertiliser requirements.
- ◆ advise on appropriate actions.

This means that as candidates are doing this Unit they may develop aspects of the Core Skills of *Communication*, *Numeracy* and *Problem Solving*.

In addition aspects of the following Core Skills could be developed where particular learning and teaching approaches are adopted:

- ◆ *Working with Others* — through group work, eg to collect data in relation to crop evaluation of weeds, pest, sward damage, etc.
- ◆ *ICT* — through use of information technology, eg in recording data electronically.

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

History of changes to Unit

Version	Description of change	Date
03	Minor amendment to Outcome 1 Evidence Requirements.	07/10/2015
02	Core Skills Component Critical Thinking at SCQF level 5 embedded.	09/10/2012

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