



National Unit Specification: general information

UNIT Turf Grass Identification and Production (SCQF level 5)

CODE F6TP 11

SUMMARY

This Unit is designed for candidates who are pursuing a career in the greenkeeping and sportsturf industries and will enable them to identify the fundamental characteristics of common turf grass species and to produce and maintain new grass areas.

OUTCOMES

- 1 Identify grass plants and seed used in turf grass production.
- 2 Describe the growth and development of the grass plant.
- 3 Select appropriate seed mixtures for given situations.
- 4 Prepare a site and establish an area of turf grass from seed or turf.

RECOMMENDED ENTRY

Entry is at the discretion of the centre.

CREDIT VALUE

1 credit at SCQF level 5 (6 SCQF credit 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: SF

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National Unit Specification: general information (cont)

UNIT Turf Grass Identification and Production (SCQF level 5)

CORE SKILLS

Achievement of this Unit gives automatic certification of the following:

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 Turf Grass Identification and Production (SCQF level 5)

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 grass plants and seed used in turf grass production.

Performance Criteria

- (a) Correctly identify external parts of the grass plant and flower structure.
- (b) Correctly identify external parts of the grass seed.
- (c) Correctly identify grass species used in turf production as plants and seeds.

OUTCOME 2

Describe the growth and development of the grass plant.

Performance Criteria

- (a) Correctly describe the environmental requirements of grasses for growth and development.
- (b) Correctly describe the essential physiological processes which enable the grass plant to grow and develop.

OUTCOME 3

Select appropriate seed mixtures for given situations.

Performance Criteria

- (a) The role of individual grass species within a seed mixture should be correctly described.
- (b) A selection of seed mixtures for given situations are correctly identified.

OUTCOME 4

Prepare a site and establish an area of turf grass from seed or turf.

Performance Criteria

- (a) Correctly prepare the ground to an appropriate standard.
- (b) Correctly sow seed or lay turf as instructed.
- (c) Carry out after care operations up to and including the first cut.

National Unit Specification: statement of standards (cont)

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EVIDENCE REQUIRMENTS FOR THIS UNIT

All relevant operational procedures undertaken in this Unit must adhere to current legislation, regulations, codes of practice and manufacturers' recommendations where appropriate.

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

The evidence will be gathered by means of closed-book, short answer, written questions, identification exercises and practical tasks utilising observation checklist.

Outcome 1 — Written and/or oral recorded evidence

The candidate must:

- ◆ correctly identify 10 external flower parts of grass plant, flower and seed; any seven parts from the plant/flower and any three parts from the seed
- ◆ correctly identify five grass plants and five grass seed using correct botanical nomenclature

Outcome 2 — Written and/or oral recorded evidence

The candidate must answer a minimum of eight short answer questions on the environmental requirements for grass growth and development and the essential physiological processes which enable grass plants to grow and develop.

Outcome 3 — Written and/or oral recorded evidence

The candidate must complete five short answer questions on each of the following:

- ◆ The function of grass species as components of seed mixtures
- ◆ The selection of grass seed mixtures for given situations and provide reasons for their suitability

Outcome 4 — Performance evidence

The candidate must:

- ◆ cultivate and prepare an area
- ◆ sow grass seed or lay turf
- ◆ carry out a minimum of three aftercare operations

Practical exercise using Assessor Observer Checklists covering all Performance Criteria relating to ground preparation and grass establishment.

National Unit Specification: statement of standards (cont)

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The Assessment Support Pack for this Unit provides appropriate instruments of assessment, assessor checklists and assessor guidance. Centres wishing to develop their own assessments should refer to the assessment support pack to ensure a comparable standard.

Centres must be satisfied that the evidence submitted is the work of individual candidates.

When using Performance Evidence, assessor observation checklists and other assessment records should be maintained and kept up to date to keep track of candidate progress and to provide evidence for internal and external verification purposes.

National Unit Specification: support notes

UNIT Turf Grass Identification and Production (SCQF level 5)

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 a mandatory Unit of the National Certificate in Greenkeeping, but may also be taken as a free-standing Unit.

This Unit is aligned to the following Lantra, Sector Skills Council's National Occupational Standard (NOS) Units:

- ◆ (CU2) Monitor and Maintain Health and Safety
- ◆ (L2) Establish plants outdoors
- ◆ (L5) Maintain the Health of Sportsturf
- ◆ (CU5) Develop personal performance and maintain working relationships

Outcome 1

External grass plants and flower parts to be identified in this Outcome could include:

- ◆ Inflorescence
- ◆ Spikelet
- ◆ Glume
- ◆ Floret
- ◆ Culm
- ◆ Leaf blade
- ◆ Leaf sheath
- ◆ Ligule
- ◆ Auricles
- ◆ Tillers
- ◆ Rhizomes
- ◆ Stolons,
- ◆ Crown
- ◆ Roots

The external seed parts to be identified in this Outcome could include:

- ◆ Rachilla
- ◆ Awn
- ◆ Pales (lemma and palea)

The identification test may be carried out using live plant material or photographic material. The seed identification should use seed samples where possible.

National Unit Specification: support notes (cont)

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Outcome 2

The basic environmental requirements for grass growth could include the following:

- ◆ Light
- ◆ Moisture
- ◆ Air
- ◆ Adequate temperature.

The internal physiological processes covered in this Outcome could include:

- ◆ Photosynthesis
- ◆ Transpiration
- ◆ Translocation
- ◆ Respiration
- ◆ Osmosis

These topics should be covered at a basic level and related wherever possible to practical issues, for example fertiliser scorch, need for irrigation in summer, absorption and movement of applied nutrients and agrochemicals within the plant, shade related problems.

Outcome3

For a range of given mixtures the role of individual grass species could be identified with regard to, for example;

- ◆ Durability
- ◆ Texture
- ◆ Drought resistance
- ◆ Shade tolerance
- ◆ Recovery rate
- ◆ Establishment rate
- ◆ Colour
- ◆ Mowing tolerance to specified height

This assessment could take the form of a matching exercise where a range of standard mixtures are selected for a list of given situations.

National Unit Specification: support notes (cont)

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Outcome 4

This practical Outcome should involve all candidates in all stages of the operation. Each candidate should have experience in all elements of each task.

Aftercare operations may include- bird scaring, irrigation, weed control operations, patching/over sowing/repairing, stone picking, edge establishment, rolling, first cut with rotary mower.

There should be an emphasis on working collectively in a team, but evidence should be available to show that individual candidates have passed all Performance Criteria.

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

It is envisaged that the candidates should observe the botanical parts of grass plants, flowers and seeds in live specimens wherever possible. Similarly the grass seed and plants for identification should be live specimens if possible. It is acceptable to use graphical material if no fresh material is available.

In all identification exercises an emphasis should be placed on using botanical names from the outset.

The physiological processes and environmental requirements covered in Outcome 2 should wherever possible be related to practical issues which may be encountered in the workplace, keeping any in-depth theory to a minimum. Communication of the basic broad concepts should be adequate.

It is important in Outcome 3 to emphasise the role played by individual grass species within seed mixture, and how they contribute to a mixture's suitability for a given use. Trade catalogues, internet resources and visits to Greenkeeping related trade fairs would contribute to a candidate's understanding of this.

Outcome 4 is a practical Outcome where each candidate experiences every stage in the site preparation and establishment of a new grass area from seed or turf. Both hand tools and machinery could be used and all operations should reflect good horticultural/greenkeeping practise. Seasonality is an important issue in this Outcome. It should be timetabled at a time of year suitable for seed sowing and germination, turf laying and the appropriate aftercare for both.

It is suggested that this Unit is timetabled at a time of year appropriate to the tasks being undertaken.

National Unit Specification: support notes (cont)

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OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

In the Unit, candidates will have the opportunity to develop aspects of the following Core Skills:

- ◆ *Communication* (SCQF level 4) could be developed in the research and interpretation of sources relating to grass seed mixtures.
- ◆ *Numeracy* (SCQF level 4) could be enhanced in the measuring and calculating of areas; sowing rates; quantities of seed required or the quantities of turf required. Graphical skills could be used in the form of drawings and sketches to aid the candidates understanding of the botanical parts of grass plants and seeds, and in the identification of plants and seeds.

The practical tasks in Outcome 4 would provide an opportunity to develop *Working with Others* (SCQF level 4), *Communication* (SCQF level 4) and *Problem Solving* (SCQF level 4).

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Time should be allowed for any necessary re-assessment.

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