



National Unit Specification: general information

UNIT Plant Husbandry: Common Disorders (SCQF level 5)

CODE D878 11

SUMMARY

The Unit is designed to meet the needs of candidates following a range of programmes and is particularly suitable for the land-based sector. It is appropriate for candidates wishing to acquire an introductory knowledge of plant protection. On completion of the Unit candidates will be able to identify a range of common weeds, pests, diseases and non-pathogenic disorders and of appropriate techniques to control common infestations.

OUTCOMES

- 1 Identify a range of common weeds, pests, diseases and non-pathogenic disorders.
- 2 Describe a range of common weeds, pests, diseases and non-pathogenic disorders and their effects on plants.
- 3 Outline appropriate methods of control of a range of common infestations.

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: SC

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National Unit Specification: general information (cont)

UNIT Plant Husbandry: Common Disorders (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 4

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 Plant Husbandry: Common Disorders (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 a range of common weeds, pests, diseases and non-pathogenic disorders.

Performance Criteria

- (a) Common weeds are identified correctly.
- (b) Common pests are identified correctly.
- (c) Common diseases are identified correctly.
- (d) Common non-pathogens are identified correctly.

OUTCOME 2

Describe a range of common weeds, pests, diseases and non-pathogenic disorders and their effects on plants.

Performance Criteria

- (a) The features of given plant species resulting in them being considered as weeds are described accurately.
- (b) The features of given animal species resulting in them being considered as pests are described accurately.
- (c) The features of given organisms resulting in them being considered as species causing diseases are described accurately.
- (d) The characteristics and effects of given non-pathogenic disorders are described accurately.

OUTCOME 3

Outline appropriate methods of control of a range of common infestations.

Performance Criteria

- (a) Physical control methods for given infestations are outlined accurately.
- (b) Cultural control methods for given infestation are outlined accurately.
- (c) Chemical control methods for given infestations are outlined accurately.
- (d) Biological control methods for given infestations are outlined accurately.

National Unit Specification: statement of standards (cont)

UNIT Plant Husbandry: Common Disorders (SCQF level 5)

EVIDENCE REQUIREMENTS FOR THIS UNIT

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

Outcome 1

Written and/or oral recorded evidence of the candidate's ability to identify 20 infestations by common name is required. A minimum of eight weeds, three pests, three diseases and two non-pathogenic disorders should be identified correctly to cover Performance Criteria (a) to (d).

Outcome 2

Written and/or recorded oral evidence of the candidate's ability to describe the key features of 20 given agents of infestations is required. A minimum of eight weeds, three pests, three diseases and two non-pathogenic disorders should be described accurately to cover Performance Criteria (a) to (d).

Outcome 3

Written and/or oral recorded evidence of the candidate's ability to outline appropriate methods for controlling common infestations is required. The appropriate control of a minimum of 12 common weeds, pests and diseases should be outlined accurately to cover Performance Criteria (a) to (d). The control methods outlined should include examples of physical, cultural, chemical and biological approaches.

National Unit Specification: support notes

UNIT Plant Husbandry: Common Disorders (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 is a mandatory Unit within the National Certificate in Greenkeeping at SCQF level 5, 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:

- (L5) Maintain the Health of Sportsturf
- (CU2) Monitor and Maintain Health and Safety

The context for this Unit should be determined by candidates' areas of interest and could be agriculture, forestry, horticulture or plants growing in their natural environment.

Identification should be by common name only at this stage. The term 'weeds' should be interpreted as any plant growing in a situation where it is not required. Annual and perennial species should be covered. Although insects at various stages in their life cycles will make up most of the pest species, some other groups such as slugs, birds and mammals should be included. Similarly some bacteria and viruses should be included to complement fungal diseases. Non-pathogenic disorders could include various types caused by weather (for example, frost and wind-burn), mineral deficiencies, drought, mechanical damage and root nodules.

The same examples could be used for this Outcome. Although the study of the weeds, pests and diseases should focus on the aspects of their biology that make them successful with respect to infestation, it should be helpful in consolidating the knowledge and understanding required for Outcome 1. Features of common weeds such as rosette-type growth habit, tap root, seed production and dispersal methods and means of vegetative propagation could be covered. The descriptions of pests should focus on the appropriate stage in the life cycle (for example, caterpillar or grub) only. Diseases should include modes of infection and spread and any vectors involved. Non-pathogenic disorders need not be covered in detail at this stage.

It is not necessary to cover each control method for every category of infestation. The emphasis on particular control methods will vary according to context. Chemical methods should include reference to pesticide as a generic term and herbicide, insecticide and fungicide as specific terms. Contact, systematic and residual modes of action should be introduced as appropriate.

National Unit Specification: support notes (cont)

UNIT Plant Husbandry: Common Disorders (SCQF level 5)

GUIDANCE ON LEARNING AND TEACHING APPROACHES FOR THIS UNIT

Formal teaching and discussion sessions could be used to introduce relevant concepts. Delivery of most of the Unit should, however, be strongly candidate-centred and should be carried out by investigating living plant materials growing in situ wherever possible. Candidates could make collections of given weeds for laboratory study and to research aspects not present due to growth stage and seasonality. This approach could be supplemented by the use of museum collections, slides and videos, as appropriate.

OPPORTUNITIES FOR CORE SKILL DEVELOPMENT

In this Unit, candidates may have the opportunity to develop the following Core Skills:

- ◆ *Working with Others* (SCQF level 4), through group research of particular pest or disease problems

GUIDANCE ON APPROACHES TO ASSESSMENT FOR THIS UNIT

Time should be allowed for any necessary re-assessment.

Centres may use the instruments of assessment which are considered by teachers/lecturers to be the most appropriate. Outcome 1 can be assessed by an appropriate level of attainment in practical identification exercises. Outcomes 2 and 3 can be assessed by an appropriate level of attainment in an integrated end-of-Unit test with questions covering all Performance Criteria. Outcomes 2 and 3 can be assessed by multi-choice questions offering the opportunity of e-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