



## **National Unit specification: general information**

**Unit title:** Plant Health (SCQF level 4)

**Unit code:** H1X9 10

**Superclass:** SE

**Publication date:** July 2012

**Source:** Scottish Qualifications Authority

**Version:** 01

### **Summary**

This Unit is designed to introduce candidates to some of the key plant health issues in horticulture. Candidates will study a range of weeds and common garden invertebrates and identify some plant diseases. Candidates will also assist in general plant health procedures such as weeding, companion planting, feeding, mulching, watering and picking off pests.

This Unit is aimed at candidates with little or no experience of plant health.

This is an optional Unit in the National Certificate in An Introduction to Horticulture at SCQF level 4. It is also suitable to be taken as a free-standing Unit.

### **Outcomes**

- 1 Identify common organisms associated with horticultural plant health.
- 2 Assist with weed, pest and disease control activities.

### **Recommended entry**

Entry is at the discretion of the centre.

It is expected the candidate will have little or no knowledge of horticulture before starting this Unit.

## **General information (cont)**

**Unit title:** Plant Health (SCQF level 4)

### **Credit points and level**

1 National Unit credit at SCQF level 4: (6 SCQF credit points at SCQF level 4\*)

*\*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.*

### **Core Skills**

Opportunities to develop aspects of Core Skills are highlighted in the Support Notes of this Unit specification.

There is no automatic certification of Core Skills or Core Skill components in this Unit.

## **National Unit specification: statement of standards**

**Unit title:** Plant Health (SCQF level 4)

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 common organisms associated with horticultural plant health.

#### **Performance Criteria**

- (a) Identify weeds using their common name.
- (b) Identify garden invertebrates using their common name.
- (c) Identify common plant diseases using their common name.

### **Outcome 2**

Assist with weed, pest and disease control activities.

#### **Performance Criteria**

- (a) Assist with maintaining the health of plants.
- (b) Assist with weed control activities.
- (c) Assist with pest and disease control activities.

## National Unit specification: statement of standards (cont)

**Unit title:** Plant Health (SCQF level 4)

### Evidence Requirements for this Unit

Performance, written, oral or product evidence is required to show that candidate has achieved all Outcomes and Performance Criteria.

#### Outcome 1

Evidence for this Outcome is required to show the candidate has correctly identified a range of horticultural weeds, garden invertebrates and plant diseases by their common name on at least one occasion.

The candidate must identify at least 10 weeds including the following:

- ◆ dandelion
- ◆ daisy
- ◆ chickweed
- ◆ couch grass

The candidate must identify at least five garden invertebrates using their common name, including the following:

- ◆ ladybird
- ◆ aphid

The candidate must identify at least three plant diseases using their common name.

#### Outcome 2

Performance evidence is required to show the candidate has carried out under supervision at least two of the following activities:

- ◆ feeding or pH correction
- ◆ mulching and/or adding organic matter
- ◆ watering
- ◆ pruning and/or dead heading

Performance or product evidence is required to show the candidate has assisted with weeding on more than one occasion.

Performance evidence is required to show the candidate has carried out, under supervision, at least five different control measures

Tasks must be completed in a safe manner at all times and comply with current Health and Safety legislation.

Photographic and electronic evidence is acceptable for both Outcomes.

## National Unit specification: support notes

**Unit title:** Plant Health (SCQF level 4)

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 aligned to the following National Occupational Standards set by the Sector Skills Council, LANTRA.

CU70 Assist with identifying the presence of, and controlling, common pests and diseases  
CU62 Assist with maintaining plants

#### Outcome 1

Here the candidate should observe and experience as many different weeds, pests, beneficial insects and diseases as is practicable. The candidate needs to become familiar with what is around them, being able to distinguish between weeds and cultivated plants. The weeds should be locally common and selected because the candidate is likely to come across them in routine horticultural activities. The weeds covered could include:

- ◆ scented mayweed
- ◆ shepherds purse
- ◆ annual meadow grass
- ◆ groundsel
- ◆ clover
- ◆ plantain
- ◆ pearlwort
- ◆ hairy bittercress
- ◆ nettle
- ◆ dock

The candidate should recognise common pests and distinguish them from beneficial organisms. These pests should be locally common and be representative of those the candidate might come across in routine horticultural activities. Examples of pests used for identification might include:

- ◆ vine weevil
- ◆ white fly
- ◆ red spider mite
- ◆ wire worm
- ◆ mealy bug
- ◆ slugs and snails

## National Unit specification: support notes (cont)

### Unit title: Plant Health (SCQF level 4)

The candidate should be able to identify diseases and distinguish them from other factors such as deficiencies or disorders. The diseases should be locally common and relevant to the particular horticultural activities being undertaken. Examples of plant diseases might include:

- ◆ mildews
- ◆ backspots
- ◆ grey moulds
- ◆ rusts

While evidence is required only for the proper identification of these subjects, it does not preclude discussions on factors surrounding the specimens and subjects studied. In fact this is to be encouraged. Issues surrounding the pros and cons of weeds could be discussed. Causal factors and remedies for pests and diseases can be covered.

### Outcome 2

Assist with weed, pest and disease control activities.

It is expected here that the candidate will undertake a range of general plant maintenance and pest and disease control activities. Tasks can be varied and range from dead heading to maintain vigour, pruning to remove diseased parts of a plant, watering, fertilising or mulching. In the first part of this Outcome, the focus is on activities that keep plants healthy. Discussions should take place about how healthy and well maintained plants can shrug off pest and disease attacks more successfully. The importance of general garden hygiene should be made clear.

The second part of this Outcome focuses on weed control activities. This can be done in any way that is normal and accepted practice in the particular centre, but here the focus could be on the techniques and approach taken when weeding different plants and different situations.

The third part of this Outcome focuses on pest and disease control activities; these activities are mainly cultural and can cover any aspect of horticulture. The candidate would be expected to undertake at least five different tasks some of which might include:

- ◆ hand picking pests
- ◆ companion planting
- ◆ release of biological control agents
- ◆ use a barrier against pest attack
- ◆ use preventative control measures (eg Grease Bands)
- ◆ removing of infected parts of a plant
- ◆ cleaning or sterilising materials or equipment

The use of chemicals is not a requirement of this Unit. However if all current legal and safety requirements can be met then it would be an advantage to the candidate to gain some understanding of this activity.

## **National Unit specification: support notes (cont)**

### **Unit title:** Plant Health (SCQF level 4)

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.

**Citizenship** — the Unit could provide opportunities to demonstrate citizenship skills if the Unit is delivered as part of a community project for a local school, hospice or charity.

**Sustainability** — the Unit could develop skills in sustainable development as it focuses on recognising imbalance within the environment and asks candidates to work towards actively improving it while introducing candidates to the options for doing this.

### **Guidance on learning and teaching approaches for this Unit**

#### **Outcome 1**

With weeds, the candidate should see the plant growing in a familiar environment. Plants may be studied individually over a period of time with an identification test at the end, or the candidate could undertake a collection exercise and present a project that contains pressed and labelled specimens.

With pests and diseases, the candidate should come into physical contact with the subjects and specimens they are to cover. They need to experience and see for themselves the issues surrounding each pest or disease. The candidate could therefore maintain some sort of diary or log-book in which it is possible to record what pests and diseases have been found as the course of study progresses.

#### **Outcome 2**

A practical approach is encouraged here, with the candidate observing techniques and then practicing them. It is only necessary for the candidate to assist with activities and supervision would be encouraged so that feedback can be offered in a meaningful way.

## **National Unit specification: support notes (cont)**

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### **Guidance on approaches to assessment for this Unit**

#### **Outcome 1**

This Outcome could be assessed by means of a weed identification test, where samples of the plants studied are laid out and numbered and the candidate must name each one. Alternatively a project or study may be undertaken requiring the candidate to collect, press and mount a range of weeds, labelling the specimens in the project correctly. Pests and diseases are more difficult to record in this physical way and also tend only to appear at varying times throughout the course delivery period. Photographic and other electronic forms of recording are acceptable here, with the candidate recording what has been found and correctly identifying it. It may be beneficial to undertake a class or group project where specimens can be recorded, collated and identified together, however this should be augmented with individual identification tests to assess each candidate's understanding. There may be scope for e-assessment here with online identification tests but the centres are encouraged to use live specimens where possible.

#### **Outcome 2**

Assessment evidence here could take the form of practical diaries in which candidates records their efforts and this is endorsed by the assessor or qualified observer. A practical checklist could be used which would ensure that the candidate works to the required standard and covers the range necessary.

### **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)

**Unit title:** Plant Health (SCQF level 4)

### Opportunities for developing Core Skills

In this Unit candidates will be introduced to some of the key plant health issues in horticulture. These issues range from weeds to common garden invertebrates, both pests and beneficial, as well as plant diseases. Candidates will learn to identify these issues and will then assist in general plant health activities such as weeding, companion planting, feeding, mulching, watering, picking off pests, etc.

Candidates will:

- ◆ produce evidence to show they have identified a range of weeds, invertebrates and plant diseases
- ◆ evaluate the threat posed by a range of weeds, invertebrates and plant diseases and select control measures to undertake

This means that as candidates are doing this Unit they will be developing aspects of the Core Skills in *Problem Solving* and *Communication*.

### 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](http://www.sqa.org.uk/assessmentarrangements)

## History of changes to Unit

Version	Description of change	Date

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