



National Unit specification: general information

Unit title: Organic Gardening: Edible Crops (SCQF level 4)

Unit code: H1X8 10

Superclass: SD

Publication date: July 2012

Source: Scottish Qualifications Authority

Version: 01

Summary

This Unit is designed to enable candidates to develop basic skills and knowledge required to grow an edible organic crop. Candidates will develop an understanding of the principles of organic gardening while planning, producing and maintaining an organic crop. The Unit is aimed at candidates with little or no experience of edible organic gardening.

This Unit is part of the National Certificate in Introduction to Horticulture at SCQF level 4 but can be delivered as a freestanding Unit.

Outcomes

- 1 Assist in planning the production of an edible crop using organic methods.
- 2 Assist with the production of an edible crop using organic methods.
- 3 Assist with maintenance of an edible crop using organic methods.

Recommended entry

Entry is at the discretion of the centre. Candidates doing this Unit do not need prior knowledge or experience of horticulture, however enthusiasm for working outdoors using practical horticultural skills would be an advantage.

Credit points and level

1 National Unit credit(s) 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.*

General information (cont)

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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

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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 SQA.

Outcome 1

Assist in planning the production of an edible crop using organic methods.

Performance Criteria

- (a) Describe the principles of sustainable organic gardening.
- (b) Assist in the selection of a suitable crop to be produced organically.
- (c) Apply organic principles to select a suitable growing system for the crop.

Outcome 2

Assist with the production of an edible crop using organic methods.

Performance Criteria

- (a) Prepare for the growing of an organic crop.
- (b) Assist with establishing growth using organic methods.

Outcome 3

Assist with maintenance of an edible crop using organic methods.

Performance Criteria

- (a) Select the appropriate tools, materials and equipment for maintaining a crop using organic methods.
- (b) Select and use a range of cultural/biological methods to promote crop growth using organic methods.
- (c) Clean and store tools and equipment after use.

National Unit specification: statement of standards (cont)

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Evidence Requirements for this Unit

Written and/or oral evidence and performance evidence is required to demonstrate that candidates have achieved all Outcomes and Performance Criteria. Evidence will be generated under open-book supervised conditions. Practical activities undertaken must comply with current health and safety regulations including wearing PPE where necessary.

In Outcome 1 candidates must:

- ◆ describe at least four principles of sustainable organic gardening out of a possible five
- ◆ select and describe a suitable crop to be produced organically
- ◆ select and describe a suitable growing system for the crop using organic principles

In Outcome 2 candidates must, under supervision:

- ◆ select a suitable growing media and site to grow the crop,
- ◆ clear the site of weeds or previous crop
- ◆ prepare the growing media
- ◆ assist with establishing growth using organic methods by planting out in beds, pots or containers, watering, feeding and providing plant protection and support

In Outcome 3 candidates must, under supervision:

- ◆ select four appropriate tools, one material and one item of equipment for maintaining a crop, using organic methods
- ◆ select and use two cultural or two biological methods to promote crop growth using organic methods
- ◆ clean and store tools and equipment safely after use, in accordance with instructions

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 aligned to the following LANTRA National Occupational Standards (NOS):

- ◆ CU61 Assist with planting and establishing plants
- ◆ CU62 Assist with maintaining plants
- ◆ CU63 Assist with the vegetative propagation of plants
- ◆ CU64 Assist with the propagation of plants from seeds
- ◆ CU70 Assist with identifying the presence of, and controlling, common pests and diseases
- ◆ CU71 Assist with the preparation of the growing media

Performance evidence supported by assessor observation checklist together with written and/or oral evidence is required to demonstrate that all Outcomes and Performance Criteria have been achieved. Evidence will be collected at appropriate points throughout the Unit.

Outcome 1

Candidate should show an understanding of the main principles of organic gardening as set out by the Soil Association:

- ◆ work with nature rather than against it
- ◆ feed the soil rather than plants
- ◆ recycle all organic waste as much as possible
- ◆ encourage natural predators
- ◆ avoid the use of chemicals including fertilisers and chemicals

The candidate will be involved in the planning of an edible organic crop; this could be by sourcing certified organic seed, seedlings or cuttings or by sourcing certified plant/tree stock. Organic growing systems could be located under glass, polythene, cold frames, cloches and crop cover such as fleece or netting using a vegetable patch/allotment or an orchard. Candidates should be able to use one of these facilities to plan the production of their edible crop.

Outcome 2

Candidate should be able to select a suitable growing location and initiate the growth of the crop by either sowing seeds, taking cuttings, transplanting seedlings or by planting plants/trees. The candidate should establish growth by carrying out activities such as watering, feeding, soil cultivation or heating.

National Unit specification: support notes (cont)

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Outcome 3

Candidates should be able to select the appropriate tools, equipment and materials to maintain the organic crop. Maintenance activities could include cultural methods such as weeding, pruning, mulching, using plant supports and training growth, providing shelter and plant protection or alternatively biological methods could be incorporated. Candidates should demonstrate their ability to clean and store tools appropriately after use.

Although the main focus of this Unit is on edible crops, the Unit contents can be equally applied to non-edible, ornamental crops.

Guidance on learning and teaching approaches for this Unit

The learning environment could be outdoors or indoors using a vegetable patch, raised beds or containers. An indoor environment could be a glasshouse or polytunnel and could involve the use of bed system such as raised beds or containers. Candidates could be paired up or work as part of a team to grow their organic crop. The activities listed below would be supported by the lecturer/teacher demonstrating any practical activities and knowledge and understanding should be supported by lecture notes or handouts. It may be possible to integrate many of the activities below in order to achieve this Unit more holistically.

Outcome 1

- ◆ Five principles of organics: to work with nature rather than against it, to feed the soil rather than plants, to recycle all organic waste as much as possible, to encourage natural predators, to avoid the use of chemicals including fertilisers and chemicals.
- ◆ Crops could include: vegetable crops, soft fruit, tree fruit, protected crops such as tomatoes and cucumbers, herbs and salad crops.
- ◆ Activities could include: planning the layout of a small-scale orchard, raised bed or vegetable patch, planning the growth of vine tomatoes or cucumbers under glass or polythene, growing salad crops/ mini vegetables in containers and growing strawberries or herbs in planters.

Outcome 2

- ◆ Suggested locations for initiating the growth of a crop could be direct sowing or planting into seed trays, modules, root trainers, plant pots, raised beds, vegetable patch, orchard, planters and containers.
- ◆ Equipment could include the use of a propagator or misting bench, cloche or cold frame to provide a suitable growing temperature.
- ◆ Activities to establish growth could include: general watering, weeding, the use of feeds such as seaweed extract, comfrey based liquid feed, bone meal, chicken manure pellets and transplanting of vegetable seedlings into their growing location.

National Unit specification: support notes (cont)

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Outcome 3

- ◆ Activities for plant protection could include: the use of barrier materials such as fleece and netting, the use of pheromone traps for apple codling moths, the use of sticky traps under glass or polythene, beer traps for slug control and the use of companion planting to attract beneficial insects.
- ◆ Activities for pruning could include: summer pruning of wall-trained fruit such as apples and pears and winter pruning of top fruit. Pruning to a framework in order to establish cordons, espaliers and fan-trained fruit. Pruning of soft fruit could include the removal of strawberry runners and pruning of raspberry canes and blackcurrant bushes.
- ◆ Activities for mulching could include: mulching with straw under strawberry plants, mulching with organic manure/bark below fruit trees and soft fruit.
- ◆ Activities for biological control could include: companion planting using marigolds next to carrots and nasturtiums next to cabbages. Biological control could include: releasing *Encarsia* wasps to control aphids on protected crops and using nematodes to control slug and snail populations.
- ◆ Plant support could include: the use of canes, pea sticks and beanpoles to create wigwams and frames to support climbing vegetables or young fruit trees. Plant support such as obelisks, pea and bean netting, rope and wire and trellis could also be used.
- ◆ All garden tools should be washed, dried, oiled, sharpened and stored appropriately.

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

- ◆ Employability — this Unit provides transferable practical skills, which can be used in an employment situation.
- ◆ Citizenship and Enterprise — this Unit has the potential for candidates to raise funds through the sale of produce to raise money for student funds, community projects or charity. There is an opportunity for candidates to be involved in a community allotment project or to give produce they have grown to a worthy cause such as a community kitchen.
- ◆ Sustainability — this Unit raises an awareness of sustainability issues such as the growing of food without the use of chemical inputs and provides the skills to do this successfully.

Guidance on approaches to assessment for this Unit

It is important to understand that this Unit should be achieved as holistically as possible using a portfolio to record and build up evidence of the candidates' achievements through the use of a range of assessment recording methods which are accessible to the candidate. This can include the use of a dictaphone, photographic evidence, job log sheets, e-portfolio or blogging. The following assessment methods are therefore a guide:

Outcome 1 — in order to demonstrate an understanding of the principles of organic gardening, the selection of an edible crop and growing system, evidence could be supported by the production of a written piece of evidence and/or oral recorded evidence covering each Performance Criteria.

National Unit specification: support notes (cont)

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This would include detail at least four of the five principles of sustainable organic gardening. It should involve selecting and describing a suitable crop to be produced organically and selecting and describing a suitable growing system for the crop using organic principles. These could consist as short notes, a mindmap or poster.

Outcome 2 — Observation checklists should be used to detail the individual activities and Performance Criteria. These can be supported by pictures and job log sheets as further evidence.

Outcome 3 — Observation checklist as above.

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)*.

Opportunities for developing Core Skills

In this Unit candidates will develop skills in planning and maintaining an edible crop under supervision.

Candidates will:

- ◆ describe the principles of sustainable organic gardening
- ◆ apply organic principles to select a suitable growing system for the crop
- ◆ select the appropriate tools, materials and equipment for maintaining a crop using organic methods
- ◆ select and use a range of cultural/biological methods to promote crop growth using organic methods

This means that as candidates are doing the Unit they will be developing aspects of the Core Skills of *Communication*, *Problem Solving* and *Working with Others*.

In addition candidates may develop aspects of the Core Skill of *Information and Communication Technology (ICT)* where written evidence is prepared using word processing software.

National Unit specification: support notes (cont)

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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

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