

National Unit Specification: General Information

UNIT Practical Forest Nursery Techniques (Higher)

NUMBER D885 12

COURSE

SUMMARY

Assisting in the raising of forest trees being grown from seed or as a result of vegetative propagation.

OUTCOMES

- 1 Describe the techniques involved in seed storage and seed germination.
- 2 Assist in the production of forest tree seedlings.
- 3 Explain the methods of handling, transporting and storing planting stock.
- 4 Apply vegetative propagation techniques.

RECOMMENDED ENTRY

There is no access statement for this module but a knowledge of trees and plant physiology would be beneficial.

CREDIT VALUE

1 Credit at Higher.

CORE SKILLS

Information on the automatic certification of any core skills in this unit is published in *Automatic Certification of Core Skills in National Qualifications* (SQA, 1999).

Administrative Information

Superclass: SG

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National unit specification: statement of standards

UNIT Practical Forest Nursery Techniques (Higher)

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 the Scottish Qualifications Authority.

OUTCOME 1

Describe the techniques involved in seed storage and seed germination.

Performance Criteria

- a) The description of the methods of handling and storage of seeds in the nursery is accurate.
- b) The description of the methods of overcoming dormancy is accurate and appropriate to the examples chosen.
- c) The description of the methods necessary for successful germination is accurate and appropriate to the examples chosen.
- d) The description of the method of calculating germination percentage is accurate.

Note on range for the outcome

The range for this outcome is fully expressed within the performance criteria.

Evidence Requirements

Written and/or oral evidence of the candidate's ability to produce the descriptions as detailed in Performance Criteria (a) to (d), across the range.

OUTCOME 2

Assist in the production of forest tree seedlings.

Performance Criteria

- (a) The preparation of seed beds, transplant beds and containers is in accordance with standard nursery practice.
- (b) The sowing of seed is correct as regards method, depth and density.
- (c) The recording of the operations is comprehensive with regard to species, origin and dates.
- (d) The lifting and grading of planting stock is correct as regards method and category.
- (e) The transplanting of stock is correct with respect to method.

Note on range for the outcome

The range for this outcome is fully expressed within the performance criteria.

National unit specification: statement of standards (cont)

UNIT Practical Forest Nursery Techniques (Higher)

Evidence Requirements

Performance evidence of the candidate's ability to:

- a) prepare seed beds, transplant beds and containers in accordance with standard nursery practice;
- b) sow seed correctly;
- c) lift and grade planting stock correctly;
- d) transplant stock correctly.

Written and/or oral evidence of the candidate's ability to keep records of the operations.

OUTCOME 3

Explain the methods of handling, transporting and storing planting stock.

Performance Criteria

- a) The description of the methods available for handling, transporting and storing planting stock is accurate.
- b) The comparison between different methods is valid in terms of minimising stock deaths in given circumstances.

Note on range for the outcome

The range for this outcome is fully expressed with the performance criteria.

Evidence Requirements

Written and/or oral evidence of the candidate's ability to describe and compare the methods available for handling, transporting and storing planting stock.

OUTCOME 4

Apply vegetative propagation techniques.

Performance Criteria

- a) The selection of materials for vegetative propagation is appropriate to the technique to be applied.
- b) The application of propagation through grafting is correct.
- c) The application of propagation through cuttings is correct.

Evidence Requirements

Performance evidence of the candidate's ability to:

- a) select appropriate materials for vegetative propagation across the range;
- b) apply the correct propagation technique across the range.

National unit specification: support notes

UNIT Practical Forest Nursery Techniques (Higher)

This part of the unit specification is offered as guidance. None of the sections of the support notes is mandatory.

GUIDANCE ON CONTENT AND CONTEXT

This module is designed to give candidates within the landbased sector the ability to understand and apply the methods using in the raising of trees.

Corresponding to Outcomes 1-4.

- 1 Seed storage - cool, shady, refrigeration.
Methods of breaking dormancy - stratification, low temperature, low humidity.
Germination requirements - correct and sterile medium, humidity, temperature. Use of chitting.
Calculation of germination %.
- 2 Preparation of beds and containers.
Sowing - broadcast, drill, single.
- depth, density.
- 3 Lifting, preparation and handling of - bare rooted and containerised (including unitised) stock.
Transporting - co-extruded bags, boxes.
- careful loading, stacking, unloading.
Storage - cold stores, cool shades, sheughs, bee hives.
- 4 Propagation materials - rootstock; scions from soft, semi-ripe and hard wood.

Propagation techniques - striking of cuttings, notch grafting, bud grafting, layering (air and ground).

GUIDANCE ON TEACHING AND LEARNING APPROACHES

Much of the time will be spent on practical work. However visits should also be made to local forest nurseries.

GUIDANCE ON APPROACHES TO ASSESSMENT

Centres may use the instruments of assessment which are considered by tutor/trainers to be the most appropriate. Examples of instruments of assessment which could be used are as follows:

OUTCOME 1 The candidate could be set 10 restricted response questions to cover all the performance criteria with at least 2 questions on each performance criterion.

Satisfactory achievement will be based on 8 correct responses.

National unit specification: support notes (cont)

UNIT Practical Forest Nursery Techniques (Higher)

OUTCOME 2 A practical exercise to be carried out, to cover all the performance criteria in this outcome. An observation checklist could be used.

Satisfactory achievement will be based on all the performance criteria being met.

OUTCOME 3 The candidate could be set 5 restricted response questions to cover all the performance criteria with at least 2 questions on each performance criterion.

Satisfactory achievement will be based on 4 correct responses.

OUTCOME 4 A practical exercise to be carried out, to cover all the performance criteria in this outcome. An observation checklist could be used.

Satisfactory achievement will be based on all the Performance Criteria being met.

SPECIAL NEEDS

This unit specification is intended to ensure that there are no artificial barriers to learning or assessment. Special needs of individual candidates should be taken into account when planning learning experiences, selecting assessment instruments or considering alternative outcomes for units. For information on these, please refer to the SQA document *Guidance on Special Assessment and Certification Arrangements* (SQA, 1998).