



Australian Government

Department of Education, Employment and Workplace Relations

RTF4014A Plan a growing-on program

Release: 1

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Modification History

Not applicable.

Unit Descriptor

This competency standard covers the process of developing a growing-on plan in production nurseries. The development of the growing-on plan is likely to be undertaken without supervision, with only general guidance on progress sought by senior management. The work requires detailed knowledge about quality assessment, production scheduling and crop requirements such as growing media, environmental parameters and plant treatments.

Application of the Unit

Not applicable.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

Not applicable.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

Elements and Performance Criteria

Element	Performance Criteria
1 Identify issues affecting the growing-on program	1.1 Production requirements are determined in consultation with management. 1.2 Factors, which could limit the production of nursery plants, are identified. 1.3 OHS hazards are identified, risks assessed and controls implemented. 1.4 The environmental implications in relation to a growing-on program are considered.
2 Develop the growing-on plan	2.1 Activities involved in the growing-on program are identified. 2.2 Labour, materials, tools and equipment needs are identified. 2.3 Environmental parameters are selected and altered to meet plant needs and production plans. 2.4 Growing media requirements are determined according to the needs of the plant and production plans. 2.5 Planting dimensions and layout are determined according to production plans. 2.6 Treatments required for the growing-on program are identified. 2.7 Hygiene requirements for the growing-on program are identified according to industry best practice.
3 Document the growing-on plan	3.1 The growing-on plan is documented according to enterprise policy and includes all the information identified in the development stage. 3.2 A budget supporting the plan is documented and approval sought by management. 3.3 A schedule of activities is organised according to production plans.

- 3.4 The growing-on plan and schedule of activities are communicated clearly to staff.
- 4 Oversee and monitor the growing-on program
 - 4.1 The health of the plants are monitored to ensure they are at optimum growth.
 - 4.2 Treatments are modified as required to maintain optimum growth.
 - 4.3 Plants ready for dispatch are checked to ensure they meet **customer specifications**.

Required Skills and Knowledge

Not applicable.

Evidence Guide

What evidence is required to demonstrate competence for this standard as a whole?

Competence in planning a growing-on program requires evidence that production issues can be identified and addressed, a schedule of growing-on operations can be developed, and the performance of growing-on activities can be overseen and monitored.

The skills and knowledge required to plan a growing-on program must be **transferable** to a different work environment. For example, this could include different plant species, growing-on techniques and enterprise guidelines.

What specific knowledge is needed to achieve the performance criteria?

Knowledge and understanding are essential to apply this standard in the workplace, to transfer the skills to other contexts, and to deal with unplanned events. The knowledge requirements for this competency standard are listed below:

Worksafe Australia criteria for the labelling and handling of 'Hazardous Substances'

enterprise and industry hygiene standards required for growing-on activities, including State Nursery Industry Association (NIAA) Best Practice Guidelines

environmental implications of the disposal of chemicals or chemical containers, and the drainage of high nutrient effluent

optimal growing requirements of nursery plants

enterprise and industry quality standards of nursery plant production

common problems that may occur while performing growing-on activities in a controlled environment and preventative/corrective action that may apply

processes and techniques for preparing, costing and documenting plans for and scheduling growing-on activities

testing methods applied to propagation media

preferred types of propagation media for

different species

chemical, cultural and biological pest, weed and disease control techniques

application techniques for chemical and non-chemical intervention or treatments.

What specific skills are needed to achieve the performance criteria?

To achieve the performance criteria, appropriate literacy and numeracy levels as well as some complementary skills are required. These include the ability to:

conduct literature and consultative research to obtain information about production requirements, growth conditions, and marketing implications

negotiate and document plans

write reports for the understanding of staff, supervisors, clients and contractors

calculate the cost, spatial and logistical requirements of all aspects of the growing-on program.

What processes should be applied to this competency standard?

There are a number of processes that are learnt throughout work and life, which are required in all jobs. They are fundamental processes and generally transferable to other work functions. Some of these are covered by the **key competencies**, although others may be added. The questions below highlight how these processes are applied in this competency standard. Following each question a number in brackets indicates the level to which the key competency needs to be demonstrated where 0 = not required, 1 = perform the process, 2 = perform and administer the process and 3 = perform, administer and design the process.

1. How can **communication of ideas and information** (3) be applied?

Production requirements, environmental parameters and controls, growing techniques and budgetary considerations may be communicated with management orally and in writing. There is likely to be negotiation between the planner of the growing-on program and management to achieve objectives.

2. How can **information be collected, analysed and organised** (3)?

Some information may need to be researched and/or obtained from test results. Information addressing the specific requirements of the growing-on program may be analysed and outcomes discussed with management and other members of the work team. Information about the growing-on program may be organised and presented as documented plans, written work procedures, timeline chart and schedules for growing-on activities.

3. How are **activities planned and organised** (3)?

The planning process may need to proceed in an orderly and efficient manner. Timely and appropriate information needs to be available for decision-making. The growing-on plan may reflect the activities required to implement the program.

4. How can **team work** (3) be applied?

Planning a growing-on program may involve working with other members of a team to achieve the desired outcomes.

5. How can the use of **mathematical ideas and techniques** (3) be applied?

Mathematical concepts may be required to measure quantities and calculate production records, resources, costs, ratios, scales, planting, and application rates.

6. How can **problem-solving skills** (3) be applied?

Problems relating to the supply of materials and stock, growing environment, plant

health, workplace safety, tools, equipment and machinery, team members, hazardous situations and environmental issues, may arise during the growing-on works.

7. How can the **use of technology (3)** be applied?

Technology may be required to record, store and communicate ideas and information. It will also be used to research relevant information, obtain and analyse data from soil tests and production statistics, and to produce the plan.

Are there other competency standards that could be assessed with this one?

This competency standard **could** be assessed on its own or in combination with other competencies relevant to the job function.

There is essential information about **assessing this competency standard for consistent performance** and **where and how it may be assessed**, in the Assessment Guidelines for this Training Package. All users of these competency standards must have **access** to the **Assessment Guidelines**. Further advice may also be sought from the relevant **sector booklet**.

Range Statement

Range of Variables

The Range of Variables explains the contexts within which the performance and knowledge requirements of this standard may be assessed. The scope of variables chosen in training and assessment requirements may depend on the work situations available

What production requirements may impact on the growing-on program?	Production requirements may include budget, plant species, plant characteristics, growth habits and cultural requirements, growing environment, the purpose or intended use of the plants, materials, after-care, and timelines for the growing-on program.
What factors may limit the growing-on program?	Limiting factors may include market fluctuation, budget, and availability of stock or materials, service or equipment failure, infection and personnel problems.
What nursery plants may apply to growing-on operations?	Nursery plants may include seedlings, bulbs, divisions, containerised plants, field-grown plants, flowering plants, foliage plants, grafted plants, tissue culture plants and stock plants.
What OHS hazards may be identified in the work area?	Hazards may include hazardous chemicals; potentially hazardous pot media, composts and organic products; water, dust and splashed or windborne inoculum; manual handling, moving equipment and vehicles, sharp hand tools, noise, pests, and slippery or uneven surfaces.
What environmental implications are likely to be considered when planning a growing-on program?	Environmental considerations may include drainage and the effective management of high nutrient effluent situations, the safe disposal of unused growing media and treatment materials, chemicals and chemical containers, and the control of contaminants from soil, water or vegetable matter.
What materials, tools and equipment may be required for growing-on activities?	Materials, tools and equipment may include pots and containers, plant supports, ties, secateurs, knives and other cutting instruments, shovel, trowel, bins, trailers, wheelbarrow, trolley, mechanical trolley, small tractors, rubbish bins, potting machine,

	and media mixing equipment.
What environmental parameters may be relevant to this unit?	Environmental parameters may include temperature, humidity, light, moisture, atmospheric gases and airflow.
What growing media requirements may need to be determined in order to meet plant needs?	Growing media requirements may need to be determined using recognised testing procedures for pH, drainage, aeration, salinity, nitrate levels and water repellence to ensure that it meets the needs of the growing-on plan. Media components may include sand, potting mix, gravel, gro-wool, sawdust, pine bark, perlite, vermiculite, foam, peat, amendments, nutrients, ameliorants, ash, rice hulls, sphagnum moss, scoria, commercial mixes, and water (hydroponics). Mixing of growing media components and disinfestation may also be required.
What treatments are likely to be carried out?	Treatments may include environmental intervention in controlled environment structures, chemical intervention such as fertiliser, pest controls, and growth regulators, and mechanical intervention such as root and foliage pruning, formative pruning and staking.
What hygiene requirements may apply to industry best practice?	Hygiene requirements may include removing all dirt and organic matter from production surfaces, tools and equipment, disinfecting production surfaces, tools and equipment, disinfestation and removal of plant and media waste, hand washing, footbaths, access restrictions, and handling practices which minimise cross contamination.
What customer specifications need to be checked before plants are dispatched?	Customer specifications may be verbal or written and include detailed descriptions of required plant attributes such as species, size, shape, colour, shipping quality; delivery details such as labelling, time and place, and any other special conditions.
For more information on contexts, environment and variables for training and assessment, refer to the Sector Booklet.	

Unit Sector(s)

Not applicable.