



Australian Government

AHCPCM305 Implement a plant nutrition program

Release: 1

AHCPCM305 Implement a plant nutrition program

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to implement a plant nutrition program, including preparing for the nutrition program, monitoring and controlling the nutritional requirements of plants, preparing fertilisers and application equipment, applying products to plants, and completing plant nutrition program activities.

The unit applies to individuals who implement a plant nutrition program under broad direction, and take responsibility for their own work and for the quality of the work of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Pre-requisite Unit

Nil

Unit Sector

Plant Culture and Management (PCM)

Elements and Performance Criteria

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Prepare for implementation of the plant nutrition program	1.1 Identify goals, target site, plant species and varieties for implementing the program 1.2 Locate services using site plans or consultation with supervisor 1.3 Identify potential hazards and risks, and identify safe working practices to manage risks 1.4 Confirm environmental and biosecurity implications associated

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	with plant nutrition program activities, and minimise impact 1.5 Select, fit use and maintain personal protective equipment applicable to the task
2. Identify and assess soil or growing media characteristics	2.1 Assess site soil or growing media characteristics, including pH, in relation to plant nutrition 2.2 Identify, compare, select and source ameliorants to improve soil or growing media characteristics or fertility 2.3 Assess product application methods according to product type and growing media
3. Determine nutritional problems in plants	3.1 Conduct a visual inspection and identify common nutrient deficiency and toxicity problems in plants 3.2 Determine causes of nutritional or toxicity problems, and confirm with supervisor or horticulturalist, as required
4. Prepare to use fertilisers	4.1 Select a fertiliser that is compatible with plant species and growing media according to nutrition program 4.2 Assess fertiliser application methods, taking into account the fertiliser type, soils and environmental implications according to nutrition program
5. Prepare application equipment	5.1 Select tools, equipment and machinery appropriate for the plant application being performed, and check for safe operation 5.2 Calibrate and adjust tools, equipment and machinery
6. Apply specific products at appropriate rates	6.1 Calculate product application rates to optimise plant benefit and minimise environmental impact according to nutrition program 6.2 Apply products with the correct rate, timing and method according to the product type, plant needs and with consideration of the environmental implications and according to nutrition program 6.3 Apply fertilisers appropriate to the plant growing cycle, workplace fertiliser schedule and nutrition program 6.4 Record product applications according to workplace procedures 6.5 Monitor, document and report target plant response to the plant nutrition program, as well as non-target effects or responses according to workplace procedures
7. Complete plant	7.1 Remove and dispose of waste material according to workplace and

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
nutrition program activities	environmental requirements 7.2 Clean, maintain and return tools, equipment and machinery to required location 7.3 Identify and report unserviceable tools, equipment and machinery according to workplace procedures 7.4 Record and report plant nutrition program activities

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential for performance in this unit of competency but are not explicit in the performance criteria.

Skill	Description
Reading	Interpret textual information from a range of sources to identify relevant and key information about the plant nutrition program
Writing	Use clear language, accurate industry terminology and logical structure to complete product application and plant nutrition program activity records
Oral communication	- Initiate discussions with supervisor using clear language to confirm site services, and report target plant response, non-target effects or responses, and unserviceable tools, equipment and machinery - Initiate discussions with supervisor or horticulturalist using clear language to confirm plant nutritional or toxicity problems
Numeracy	Calculate soil ameliorant, fertiliser and product ratios, quantity and application rates

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHPCPM305 Implement a plant	AHPCPM301 Implement a plant	Minor changes to application	Not equivalent

Code and title current version	Code and title previous version	Comments	Equivalence status
nutrition program	nutrition program	Major changes to performance criteria Foundation skills added Assessment requirements updated	

Links

Companion Volumes, including Implementation Guides, are available at VETNet: -
<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHCP305 Implement a plant nutrition program

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Performance Evidence

An individual demonstrating competency must satisfy all of the elements and performance criteria in this unit.

There must be evidence that the individual has implemented a plant nutrition program on at least one occasion, and has:

- applied workplace health and safety requirements, including a site hazard identification and risk control assessment
- minimised environmental and biosecurity impacts associated with the plant nutrition program
- identified appropriate products and application methods according to nutrition program
- determined nutritional problems in plants
- selected, calibrated and operated plant nutrition program tools, equipment and machinery, and checked for safe operation
- calculated treatment and product requirements, material sizes and quantities
- applied specific products at appropriate rates
- recorded product applications and plant nutrition program activities
- reported target plant response, non-target effects or responses, and unserviceable tools, equipment and machinery
- removed and disposed of waste material
- cleaned, maintained and stored tools, equipment and machinery.

Knowledge Evidence

An individual must be able to demonstrate the knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- workplace health and safety requirements applicable to implementing a plant nutrition program
- industry and workplace environmental and biosecurity procedures applicable to implementing a plant nutrition program
- principles and practices of plant nutrition, including:

- methods of nutrient uptake by plants
- nutrient cycling and its practical relevance to the specific plants and growing media
- common nutrients requirements applicable to plants grown in the workplace
- ameliorants commonly used to treat soil or growing media problems
- the effects of nutrient deficiency and toxicity on plant species and varieties
- the environmental implications of ameliorant and fertiliser use
- the main simple and compound fertiliser products available to the workplace, including analysis, solubility, salt index, application rates and costs
- the relationship between soil characteristics and the availability of nutrients
- plant nutrition tools, equipment and machinery operating instructions and safe work procedures.

Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - plant nutrition tools, equipment and machinery
 - soil ameliorants, fertiliser and plant nutrition products commonly used to treat soil problems
 - personal protective equipment applicable to plant nutrition
- specifications:
 - plant nutrition tools, equipment and machinery operating instructions and safe work procedures
 - industry and workplace environmental and biosecurity procedures applicable to implementing a plant nutrition program
 - workplace health and safety requirements applicable to implementing a plant nutrition program
- relationships:
 - supervisor and horticulturalist
- timeframes:
 - according to job requirements.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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