

AHPCPM3~~XX~~ Implement a plant nutrition program

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Modification history

Release	Comments
Release 1	<u>This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.</u>

Deleted: Initial release

AHPCPM3 XX	Implement a plant nutrition program
Application	<p>This unit of competency describes the skills and knowledge required to <u>implement a plant nutrition program, including: preparing for the nutrition program, monitor and control the nutritional requirements of plants, preparing fertilisers and application equipment and applying products to plants.</u></p> <p><u>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.</u></p> <p>No <u>licensing, legislative or certification requirements apply to this unit at the time of publication.</u></p>
Prerequisite Unit	Nil
Unit Sector	Plants culture and management (PCM)

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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, soils, plant species and varieties for implementing the program 1.2 Identify materials for soil and plant treatments and locate the storage site or supplier details 1.3 Locate services using site plans and <u>confirm, with supervisor</u> 1.4 Identify <u>potential hazards and risks and implement safe working practices to manage risks,</u> 1.5 <u>Identify environmental and biosecurity implications associated with plant nutrition program activities and minimise impact</u> 1.6 <u>Select, fit, use and maintain personal protective equipment applicable to the task.</u>
2. Monitor soil pH	2.1 Monitor <u>site soil pH and relation to plant nutrition</u> 2.2 Identify, select, compare and source products <u>required to change soil pH</u> 2.3 Assess product application methods according to product type and <u>growing media</u>
3. Determine nutritional problems in plants	3.1 <u>Visually inspect and identify common nutrient deficiency and toxicity problems in plants.</u> 3.2 <u>Determine causes of nutritional or toxicity problems, and confirm, with supervisor or horticulturist, as required.</u> 3.3 Identify, compare, select and source soil ameliorants to improve soil fertility
4. Prepare to use fertilisers	4.1 Select a fertiliser that is compatible with plant species and <u>growing media</u> 4.2 Assess fertiliser application methods, taking into account the fertiliser type, soils and <u>environmental implications</u> 4.3 Apply fertilisers appropriate to the plant growing cycle and <u>workplace, fertiliser calendar</u>
5. Prepare application equipment	5.1 Select tools, equipment and machinery <u>appropriate for the plant application being performed and check for safe operation</u> 5.2 <u>Calibrate and adjust tools, equipment and machinery</u>

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Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
6. Apply specific products at appropriate rates	<p>6.1 <u>Analyse and select products to meet plant needs</u></p> <p>6.2 Calculate product application rates to optimise plant benefit and minimise environmental impact</p> <p>6.3 Apply products at the correct rate, timing and method according to the product type, <u>plant needs</u> and <u>with</u> consideration of the environmental implications</p> <p>6.4 Record product applications <u>according to workplace procedures</u></p> <p>6.5 Monitor, document and report target plant response to the plant nutrition program, as well as non-target effects responses including environmental impacts or pests <u>according to workplace procedures</u></p>
<u>7. Complete plant nutrition program activities</u>	<p><u>7.1 Remove and dispose of waste material according to workplace and biosecurity requirements</u></p> <p><u>7.2 Clean, maintain and return tools, equipment and machinery to required location</u></p> <p><u>7.3 Identify and report unserviceable tools, equipment and machinery according to workplace procedures</u></p> <p><u>7.4 Record and report plant nutrition program activities</u></p>

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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
<u>Reading</u>	<ul style="list-style-type: none"> Interpret textual information from a range of sources to identify relevant and key information about workplace operations and procedures.
<u>Writing</u>	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to prepare product application records and plant nutrition program activities.
<u>Oral communication</u>	<ul style="list-style-type: none"> Initiate discussions with supervisor using clear language to confirm site services, and report target plant response, non-target effects responses, and unserviceable tools, equipment and machinery. Initiate discussions with supervisor or horticulturist using clear language to confirm plant nutritional or toxicity problems.
<u>Numeracy skills</u>	<ul style="list-style-type: none"> Calculate soil pH Calculate soil ameliorant, fertiliser and product ratios, quantity and application rates

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Use sentence case (i.e. commence with upper case) for each bullet point but do not put a full stop at the end¶
See *Guidelines* for the skills to be described, the order in which to list them and hints on writing descriptions

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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHPC3XX Implement a plant nutrition program <u>Release 1</u>	AHPC301 Implement a plant nutrition program <u>Release 1</u>	<p>Minor changes to <u>application</u></p> <p>Major changes to <u>performance criteria</u></p> <p><u>Foundation Skills added</u></p> <p><u>Assessment requirements updated.</u></p>	No equivalent unit

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Links

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

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TITLE	Assessment requirements for AHPCPC3XX 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 two occasions and has:

- identified goals, target site, soils and plants for implementing the program
- identified materials and their supply source
- 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
- followed industry and workplace biosecurity procedures
- monitored target site soil pH
- identified appropriate products and application methods appropriate to implementing nutrition program
- estimated treatment and product requirements, material sizes and quantities
- determined nutritional problems in plants
- plant nutrition program specifications
- selected, calibrated and operated plant nutrition program tools, equipment and machinery and checked for safe operation
- applied specific products at appropriate rates and recorded their application
- removed and disposed of waste material
- cleaned, maintained and stored tools, equipment and machinery
- reported target plant response, non-target effects responses, and unserviceable tools, equipment and machinery
- recorded product applications and plant nutrition program activities

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<#>The candidate must be assessed on their ability to integrate and apply the performance requirements of this unit in a workplace setting. Performance must be demonstrated consistently over time and in a suitable range of contexts.¶
<#>The candidate must provide evidence that they can:¶

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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:

- plant nutrition tools, equipment and machinery operating instructions and safe work procedures
- industry and workplace environment and biosecurity procedures applicable to implementing a plant nutrition program
- workplace health and safety requirements applicable to implementing a plant nutrition program
- principles and practices of plant nutrition, including:
 - botany and plant physiology
 - methods of nutrient uptake by plants
 - nutrient cycling and its practical relevance to the specific plants and soils
 - nutrients required by plants grown within the workplace
 - soil ameliorants commonly required to treat the soil problems experienced by the workplace
 - the effects of nutrient deficiency and toxicity on plant species and varieties
 - the environmental implications of soil 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.

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The candidate must demonstrate knowledge of:

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Assessment Conditions

Assessment of skills 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
 - personal protective equipment applicable to plant nutrition
 - principles and practices of plant nutrition
- specifications:
 - plant nutrition tools, equipment and machinery operating instructions and safe work procedures

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Assessment Conditions

- industry and workplace environment 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 horticulturist
- 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.

Links

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