



Australian Government

AHCPCM402 Develop a soil health and plant nutrition program

Release: 1

AHCPCM402 Develop a soil health and plant nutrition program

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to develop a soil health and plant nutrition program.

It applies to individuals who analyse information and exercise judgement to complete a range of advanced skilled activities and demonstrate deep knowledge in a specific technical area. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems. All work is carried out to comply with workplace procedures.

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

Pre-requisite Unit

Nil.

Unit Sector

Plant culture and management (PCM)

Elements and Performance Criteria

Element	Performance criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1.Determine relevant regional data and site characteristics	1.1 Define goals and target site for assessment and development of program 1.2 Access and review relevant climate data, environmental context information and site data 1.3 Determine appropriate soil, plant and water tests, taking into account plant species, climatic conditions and prevailing growth media

Element	Performance criteria
	1.4 Develop a soil, plant and water testing program that defines sampling, field testing, off-site analysis activities, task responsibilities, involvement of contractors, scheduling and desired information outcomes 1.5 Implement and monitor soil, plant and water testing tasks, supervise liaison procedures with outside testing agencies and take remedial action where necessary 1.6 Compile data and readings and present in a form that can be easily understood 1.7 Determine seasonal variations and requirements from published data on species, historical records and own experience 1.8 Determine characteristics, condition and nutritional status of soils and plant species by analysing collected data and comparing to accepted standards
2. Define the requirements for plant nutrition	2.1 Identify different nutritional requirements of the plant during the growing cycle and growing conditions, using published data on species, historical records and own experience 2.2 Develop program to achieve appropriate soil conditions and nutrient availability for plant growth 2.3 Determine soil amendments, management practices and fertiliser requirements 2.4 Identify and cost resources, tools, equipment and machinery required for program and confirm availability with suppliers, contractors and appropriate personnel 2.5 Determine cost-effective approach to soil management, soil amendment and provision of plant nutrients 2.6 Identify work health and safety hazards associated with program, assess risks and develop and document control measures 2.7 Identify and document environmental implications of program
3. Document the soil health and plant nutrition program and specifications	3.1 Establish a detailed soil health and plant nutrition plan, objectives, specifications and associated costs based on program requirements 3.2 Develop and document detailed on-site procedures and schedules required for program
4. Monitor plant growth and evaluate the program	4.1 Monitor program implementation and results by testing soil, plants and produce 4.2 Review and refine program to ensure it is responsive to changing conditions 4.3 Identify non-compliance with documented objectives and specifications and implement remedial actions to alleviate or overcome identified shortcomings in program

Element	Performance criteria
	4.4 Take remedial action to improve plant nutrition and document 4.5 Incorporate agreed changes into a detailed plan

Foundation Skills

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Range of Conditions

Unit Mapping Information

This unit is equivalent to AHPCPM402A Develop a soil health and plant nutrition program.

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72>

Assessment Requirements for AHPCPM402 Develop a soil health and plant nutrition program

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Performance Evidence

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:

- access and analyse information on regional site factors
- assess the physical, chemical and biological characteristics of soils
- assess the physical, nutritional and health requirements of plants
- develop a soil, plant and water testing program
- develop a program to achieve appropriate soil conditions and nutrient availability for plant growth, incorporating a soil health and plant nutrition plan
- research and analyse findings on plant nutritional requirements, nutrients available from soils and other growth media, and environmental implications of program
- select suitable management practices, soil amendments, additives and fertilisers

Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of soil health and plant nutrition
 - characteristics of soil and other growth media types, uses and additives to enhance available nutrition for specific plants
 - main simple and compound fertiliser products available to enterprise, including analysis, solubility, salt index, application rates and costs
 - methods of nutrient uptake by plants and favourable conditions for effective uptake to occur
 - nutrients and water required by plants grown within enterprise and effects of nutrient deficiency and toxicity on individual plant species and varieties
 - visual and other symptoms of nutrient deficiency and toxicity on individual plant species and varieties
 - organic matter, pest and disease, and nutrient interactions in soil and nutrient cycling

- environmental issues associated with selecting nutritional materials, implementing a plant nutrition program, legislation compliance requirements and ensuring minimal impact on environment
- the following types of relationships between soil and growth media characteristics and availability of nutrients to plants: macro and micro elements
- the following types of site evaluation techniques: methods of sampling and analysing soils and other growth media
- soil amendments commonly required to treat soil problems experienced by enterprise

Assessment Conditions

Assessors must satisfy current standards for RTOs.

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