



**Australian Government**

# **AHCPCM505 Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs**

**Release: 1**

# AHCPCM505 Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs

## Modification History

| Release | TP Version | Comment         |
|---------|------------|-----------------|
| 1       | AHCv1.0    | Initial release |

## Application

This unit of competency describes the skills and knowledge required to conduct an environment and food safety risk assessment on established or developing plant nutrition and soil fertility programs develop a nutrient management plan.

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

Plants 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. Maintain currency of environment and food safety information relating to fertilisers and soil ameliorants | 1.1 Research, identify and document community, government and agricultural industry concerns and legislative requirements in relation to fertiliser and soil ameliorant environmental stewardship and define initiatives to address them<br>1.2 Identify and document local information relating to nutrient |

| Element                                                                                                                                             | Performance criteria                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                     | <p>management, particularly in a catchment or regional context, by communicating with local organisations</p> <p>1.3 Research, identify and document national and local information and standards relating to food safety associated with fertiliser and soil ameliorant use</p> <p>1.4 Research, identify and document information and standards relating to transporting, handling, storing and applying fertilisers and soil ameliorants</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <p>2. Evaluate environmental risks and develop a nutrient management plan</p>                                                                       | <p>2.1 Identify and document environmentally significant features of fertiliser, soil ameliorants, soil, landscape and climate that are likely to influence environmental risks associated with plant nutrition and soil fertility programs</p> <p>2.2 Identify and document agronomic and operational activities associated with fertiliser and soil ameliorant programs and associated environmental risk categories</p> <p>2.3 Evaluate and prioritise environmental risks and impacts associated with agronomic and operational activities</p> <p>2.4 Identify and evaluate management options to appropriately address environmental risks</p> <p>2.5 Develop a plant nutrition and soil fertility management plan and present to the land owner or manager</p> <p>2.6 Discuss appropriate management options to address any identified environmental risks with client and gain agreement</p> <p>2.7 Use nutrient management tools in conjunction with land owner or manager to monitor effectiveness of management decisions over time</p> <p>2.8 Identify opportunities to improve efficiency and effectiveness of plant nutrition and soil fertility program, including use of fertilisers and soil ameliorants and modify operational and agronomic recommendations accordingly</p> |
| <p>3. Identify and communicate relevant best practice in transport, handling and storage for environmental stewardship to land owner or manager</p> | <p>3.1 Identify key environmental product stewardship issues in transport, handling and storage of fertilisers and soil ameliorants relevant to the plant nutrition and soil fertility program as contained in codes of practice and legislation</p> <p>3.2 Develop a report on the identified key environmental stewardship issues and present to the land owner or manager</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## 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 AHCPCM505A Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs.

## 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 AHCPCM505 Conduct environment and food safety risk assessment of plant nutrition and soil fertility programs

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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:

- Research, identify and document community, government and agricultural industry information, concerns and requirements in relation to fertiliser and soil ameliorant use and environmental stewardship
- Research, identify and document information and standards relating to transporting, handling, storing and applying fertilisers and soil ameliorants
- identify and evaluate probability and severity of identified environmental risks associated with plant nutrition and soil fertility programs
- calculate areas, ratios, proportions and application rates
- liaise with managers and landowners, local and national organisations
- develop a nutrient management plan
- monitor effectiveness of plant nutrition and soil fertility management decisions over time
- identify opportunities to improve efficiency and effectiveness of plant nutrition and soil fertility program
- estimate treatment and product requirements, material sizes and quantities

## Knowledge Evidence

The candidate must demonstrate knowledge of:

- principles and practices of food safety risk assessment
- environmental implications for environment of soil amendment and fertiliser use, that may include nutrient mining, run-off, nutrient loading of soil and water, toxicity, noise and dust
- food safety issues relating to the use of fertilisers and soil ameliorants
- law of the minimum and importance of nutrient interactions
- methods and pathways of nutrient uptake by plants and loss from soil

- nutrient cycling and its practical relevance to specific plants and soils encountered in local area, including role of soil biology
- nutrients required by plants grown within enterprise and effects of nutrient deficiency and toxicity on individual plant species and varieties
- relationship between soil characteristics and the availability of nutrients, including macro and micro elements, to plants
- single nutrient and complete fertiliser products encountered in local area, including physical attributes, nutrient analysis, solubility, salt index, application rates and costs, and appropriate application techniques and equipment
- soil amendments commonly used to treat local soil problems
- soil and water sampling techniques to adapt activities and instructions to a range of environmental contexts
- techniques for interpreting laboratory results and making fertiliser and amendment recommendations
- techniques to assess effects of fertiliser and amendment recommendations on soil, plants and water

## Assessment Conditions

Assessors must satisfy current standards for RTOs.

## Links

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