



Australian Government

Department of Education, Employment and Workplace Relations

AHCSOL501A Monitor and manage soils for production

Release: 1

AHCSOL501A Monitor and manage soils for production

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers the process of monitoring and managing soils in an agricultural or horticultural production environment and defines the standard required to: interpret soil analytical data for the purposes of developing management or production plans; develop and conduct soil improvement programs; review and analyse ongoing soil monitoring programs; document the soil management plan or production plan.
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Application of the Unit

Application of the unit	This unit of competency applies to the role of land managers in agriculture and horticulture production systems and covers the improvement and ongoing management of soils.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Research information about soil	<p>1.1. Soil type, characteristics and properties are researched and analysed for relevance to enterprise requirements.</p> <p>1.2. Particular soil properties, identified as relevant to the enterprise, are researched for further enquiry.</p> <p>1.3. Acceptable soil physical and chemical parameters for a specified crop are determined from published data and historical records.</p> <p>1.4. Relevant properties of soils and areas of homogenous soils are identified for testing.</p> <p>1.5. Soil sampling is conducted across a representative sampling area of the whole production area.</p> <p>1.6. Soil samples are collected, packaged, accurately labelled and dispatched according to testing agency requirements.</p>
2. Apply information from soil testing to production and/or management plan	<p>2.1. Soil types of the sample area are classified according to standards for soil classification.</p> <p>2.2. Results from soil testing are compared with the identified soil physical and chemical parameters for the specified crop.</p> <p>2.3. Results from soil testing are compared with soil records and production history.</p> <p>2.4. The comparative results are reviewed and differences recorded and charted.</p> <p>2.5. Production or management plan is developed and testing results and comparative results are recorded.</p>
3. Develop soil amendment practices	<p>3.1. Soil properties capable of being ameliorated are identified for action.</p> <p>3.2. Relevant soil ameliorants or cultural practices are identified and included in production/management plan.</p> <p>3.3. Soil ameliorants are quantified and purchased.</p> <p>3.4. Soil ameliorating activities are costed and included in production/management plan.</p>
4. Monitor soil amendment practices	<p>4.1. Areas of ameliorant activities are sampled for testing across a representative sampling area.</p> <p>4.2. Results are analysed to measure the performance of soil amelioration activities.</p> <p>4.3. Monitoring program is recorded and included in the production/management plan.</p>
5. Review and	5.1. Analysis of the sampling methods is recorded and

ELEMENT	PERFORMANCE CRITERIA
document the soil management plan	<p>methods amended as required.</p> <p>5.2. Monitoring program is reviewed, amended for effectiveness and recorded.</p> <p>5.3. Production/management plan is documented incorporating reviews and reports.</p>

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- research information
- prepare production/management plans for crops/plants
- collect soil/media samples
- interpret results from laboratory tests
- record and store information
- review methods and practices
- use literacy skills to fulfil job roles as required by the organisation. The level of skill may range from reading and understanding documentation to completion of written reports
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record complex workplace measures
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- soil types
- soil physical properties
- soil chemical properties
- plant nutrition through soil management
- soil conservation strategies and sustainable production techniques
- basic soil field tests
- soil sampling techniques
- interpreting laboratory results

REQUIRED SKILLS AND KNOWLEDGE

- techniques to ameliorate soil properties
- record keeping.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • interpret soil analytical data for the purposes of developing management or production plans • develop and conduct soil improvement programs • review and analyse ongoing soil monitoring programs • document the soil management plan or production plan.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Soils may include:	<ul style="list-style-type: none"> • all types of soils and growing media used for commercial production.

Unit Sector(s)

Unit sector	Soils and media
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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