



Australian Government

AHCSOL505 Monitor and manage soils for production

Release: 1

AHCSOL505 Monitor and manage soils for production

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 4.0.

Application

This unit of competency describes the skills and knowledge required to research soil information, apply soil testing information to production or management plan, develop and monitor soil amendment practices, review and document soil management plan.

The unit applies to individuals who apply specialised skills and knowledge to the monitoring and management of soils for production, and take personal responsibility and exercise autonomy in undertaking complex work. They analyse and synthesise information and analyse, design and communicate solutions to sometimes complex problems.

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

Pre-requisite Unit

Nil

Unit Sector

Soils and media (SOL)

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. Research information about soil	1.1 Research and analyse soil type, characteristics and properties 1.2 Identify particular soil properties that are relevant to the workplace and research for further enquiry 1.3 Determine, from published data and records, acceptable soil physical and chemical parameters for a specified crop 1.4 Identify relevant properties of soils and areas of homogenous soils

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	for testing 1.5 Take soil samples from the land under production 1.6 Collect, package, label and dispatch soil samples according to testing agency requirements
2. Apply information from soil testing to production or management plan	2.1 Classify soil types from the sample area according to standards for soil classification 2.2 Compare results from soil testing with the identified soil physical and chemical parameters for the specified crop 2.3 Compare results from soil testing with soil records and production history 2.4 Review the comparative results and record differences 2.5 Develop production or management plan and record testing and comparative results
3. Develop soil amendment practices	3.1 Identify soil properties capable of being ameliorated 3.2 Identify relevant soil ameliorants or cultural practices and include in production plan 3.3 Cost soil ameliorating activities and include in production plan 3.4 Quantify and purchase soil ameliorants
4. Monitor soil amendment practices	4.1 Sample areas of ameliorant activities for testing across a representative sampling area 4.2 Analyse results to measure the performance of soil amelioration activities 4.3 Record monitoring program and include in the production plan
5. Review and document the soil management plan	5.1 Record analysis of the sampling methods and amend methods as required 5.2 Review monitoring program, amend for effectiveness and record 5.3 Document production plan incorporating reviews and reports

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	Identify and interpret information regarding soil types, characteristics and properties
Numeracy	- Access and analyse published data regarding soil physical and chemical parameters for specified crops - Interpret soil test data results and compare with published data - Calculate and document soil ameliorant activity costs
Navigate the world of work	Identify and describe own workplace requirements associated with own role and area of responsibility

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCSOL505 Monitor and manage soils for production	AHCSOL501 Monitor and manage soils for production projects	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

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 AHCSOL505 Monitor and manage soils for production

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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 monitored and managed soils for at least one product project and has:

- interpreted soil analytical data for the purposes of developing management or production plans
- identified particular soil properties that are relevant to the workplace and researched for further enquiry
- applied information from soil testing to production or management plan
- documented the soil management plan or production plan
- developed soil improvement programs
- reviewed ongoing soil monitoring programs.

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:

- principles and practices for managing soils for production, including:
 - basic soil field tests
 - interpreting laboratory results
 - soil chemical properties
 - soil conservation strategies and sustainable production techniques
 - soil physical properties
 - soil sampling techniques
 - soil types
 - strategies to ameliorate soil properties.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - a workplace setting or an environment that accurately represent workplace conditions
- resources, equipment and materials:
 - published data and records
 - production history
 - soil sampling equipment
 - soil test results
- specifications:
 - testing agency requirements
- timeframes:
 - according to the 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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