



Australian Government

Assessment Requirements for AHCSOL502 Manage soils to enhance sustainability

Release: 2

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Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 2.0.
Release 1	This version released with AHC Agriculture, Horticulture, Conservation and Land Management Training Package Version 1.0.

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 information on soils
- assess soil type, texture and structure in the paddock
- diagnose areas with soil problems or potential soil problems
- diagnose and interpret soil sample test results and determine priorities for improving soil health
- consider and select alternatives including organic products and methods for improving soil health
- calculate amounts of nutrients required and prepare a fertiliser program which reflects needs and priorities
- record and store information
- develop, implement and evaluate a plan to achieve healthy soils through application of soil science
- monitor soil health from the application of soil science.

Knowledge Evidence

The candidate must demonstrate knowledge of:

- physical, chemical and biological properties of soils
- soil biota – types, role in cycling nutrients and improving soil structure

- basic chemistry concepts related to interpreting soil test analysis: symbols, elements and compounds; valency, anions, cations; reactions; EC (electrical conductivity), CEC (Cation Exchange Capacity); organic matter; pH and its importance in the availability of nutrients; role of macronutrients and micronutrients in plant nutrition. Concept of limiting factors for production
- basic biology: the chemical basis of plants and animals; basic plant structure and function; plant nutrition; water, proteins, sugar, nitrate, lignin content; extent and nature of soil micro organisms
- natural cycling of nutrients: carbon, nitrogen, phosphorous and the role of soil biota in the cycles.
- factors affecting soil biota: moisture, temperature, aeration, nutrient supply, pH, and organic matter
- possibility of problems with the use of conventional chemical fertilisers including acidification contamination of soil and associated water contamination and harm to soil biota
- alternative methods to improve soil fertility, including products and use of machinery for aeration and mulching.

Assessment Conditions

Competency is to be assessed in the workplace or simulated environment that accurately reflects performance in a real workplace setting.

Assessors must satisfy current standards for RTOs.

Links

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