



Australian Government

AHCORG403 Manage organic soil improvement

Release: 1

AHCORG403 Manage organic soil improvement

Modification History

Release	TP Version	Comment
1	AHCv1.0	Initial release

Application

This unit of competency describes the skills and knowledge required to manage organic soil improvement.

All work must be carried out to comply with workplace procedures, work health and safety, animal welfare and biosecurity legislation and codes, and sustainability practices.

This unit applies to managers on farms that are managed according to the principles of organic agriculture. Work is likely to be done independently and according to the requirements of the National Standard for Organic and Biodynamic Produce.

All work is done in an environmentally appropriate manner and according to workplace information, principles of organic agriculture and/or agro-ecology, work health and safety requirements and enterprise guidelines.

This unit applies to individuals who take responsibility for their own work and for the quality of the work of others within known parameters and use discretion and judgment in the selection, allocation and use of available resources.

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

Organic Production (ORG)

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. Monitor indicators of	1.1 Undertake work in an environmentally appropriate manner and

Element	Performance criteria
soil fertility	according to the principles of organic agriculture, work health and safety requirements and enterprise guidelines 1.2 Sample and test soil at reference sites according to organic industry standards to develop baseline data to monitor soil health and fertility 1.3 Assess and record soil pH, mineral balances, and organic matter levels 1.4 Assess and record soil texture, structure, salinity and sodicity 1.5 Assess and record soil biological activity 1.6 Assess soil condition for drainage, compaction, aeration and water infiltration in relation to requirements for desired plant growth for selected species 1.7 Analyse results to identify trends in soil health and fertility and areas for improvement
2. Assess soil-related factors for selected plants	2.1 Identify nutritional requirements of selected plant species 2.2 Select soil analyses to be conducted using a suitable lab facility 2.3 Conduct plant tissue sample collection according to requirements of testing facility if applicable 2.4 Combine results of soil or tissue testing with observations of plant vigour and productivity to determine management and input requirements of the farming system
3. Select, design and implement allowable systems, techniques and inputs to optimise soil fertility	3.1 Identify range of allowable inputs according to requirements of the National Standard for Organic and Biodynamic Produce 3.2 Identify and implement cultural practices to enhance soil fertility, function and health 3.3 Calculate appropriate inputs based on soil/plant analyses, crop removal and plant/animal observations 3.4 Select and manage cover crop and pasture systems where applicable 3.5 Develop, apply and monitor mulching and composting systems where required 3.6 Design and implement crop rotations and grazing management systems to optimise soil fertility where appropriate

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 AHCORG403A Manage organic soil improvement.

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 AHCORG403 Manage organic soil improvement

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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:

- implement principles of organic agriculture and agroecology
- implement knowledge of interrelationships between soil fertility, animals, plants, pests and diseases
- devise and implement a soil improvement plan to correct imbalances and maintain soil fertility
- sample soils and analyse soil test results for a range of indicators of soil fertility
- work with natural processes and allowable inputs to improve and maintain soil fertility
- apply enterprise work health and safety policies and guidelines
- implement enterprise environmental sustainability practices

Knowledge Evidence

The candidate must demonstrate knowledge of:

- availability, use and definition of organic fertilisers
- structural properties of soils
- factors contributing to soil acidity, sodicity and salinity
- factors promoting soil and plant water-holding capacity
- importance of soil biological activity
- major nutrient elements and their role in plant growth
- methods and inputs that can be used to correct imbalances and maintain soil fertility
- principles of organic agriculture
- processes and practices that impact on soil structure, biological activity, water-holding capacity and weed patterns
- processes of aggregate and colloid formation
- range of soil analyses available and principles of each

- relationship between soil structure, water holding capacity and nutrient availability
- role of organic matter, humus and micro-organisms
- role of livestock in enhancing soil fertility
- role of macro and micro-elements in soil and plants
- role of weeds
- significance of levels and balance of soil fertility indicators
- soil food chains and food webs
- soil textural types and determinants
- when and how to take soil samples to test for indicators of soil fertility
- principles, practices and inputs allowable under the National Standard for Organic and Biodynamic Produce

Assessment Conditions

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

Assessors must satisfy current standards for RTOs.

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