



Australian Government

AHCPER225 Assist with garden soil health and plant nutrition

Release: 1

AHCPER225 Assist with garden soil health and plant nutrition

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 9.0.

Application

This unit of competency describes the skills and knowledge required to assist with garden soil health and plant nutrition using simple methods and without costly equipment. It requires knowledge of simple soil testing techniques and how to improve soil health and plant nutrition organically.

The unit applies to individuals who work under general supervision and exercise limited autonomy with some accountability for their own work. They undertake defined activities and work in a structured context.

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

Pre-requisite Unit

Nil

Unit Sector

Permaculture (PER)

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. Undertake simple soil assessment tests	1.1 Collect and prepare soil samples for testing according to instructions 1.2 Determine basic soil characteristics and health using field test techniques 1.3 Observe and assess basic soil conditions from plant growth and health characteristics

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
2. Apply approved organic soil supplements to improve soil	2.1 Identify probable soil improvement needs from tests, and confirm with supervisor 2.2 Apply soil supplements to improve soil condition according to supervisor instructions and permaculture principles 2.3 Use permaculture planting techniques to improve soils and plant nutrition 2.4 Apply mulch to maintain moisture and discourage unwanted growth according to workplace procedures
3. Monitor soil health	3.1 Monitor soil health and moisture according to workplace procedures 3.2 Monitor use of reclaimed water for signs of toxicity according to supervisor instructions 3.3 Conduct observations for signs of problems in plant health 3.4 Conduct basic tests for soil health where signs are found 3.5 Report observations and basic test results to supervisor 3.6 Record soil improvement activity according to workplace procedures

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.

Foundation Skills essential to performance are explicit in the performance criteria of this unit of competency.

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPER225 Assist with garden soil health and plant nutrition	AHCPER215 Assist with garden soil health and plant nutrition	Minor changes to Application, Elements and Performance Criteria for clarity and to better reflect	Equivalent

		AQF level Changes to Performance Evidence, Knowledge Evidence and Assessment Conditions for clarity	
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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 AHCPER225 Assist with garden soil health and plant nutrition

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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, on at least one occasion, assisted with maintaining garden soil health and plant nutrition in a permaculture system and has:

- collected soils samples and conducted field tests to determine basic soil conditions, which must include each of the following tests:
 - texture
 - pH
 - organic matter
 - soil life
- conducted observations of plant growth to identify possible soil and health problems, which must include:
 - health of plant growth
 - insect activity
 - animal activity
 - symptoms of organisms
 - common nutrient deficiencies in leaves
 - common signs of plant pathogens, including fungal, bacterial or viral
- applied soil additives to improve soil according to organic and permaculture practices
- protected soil to maintain moisture and overall soil health.

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:

- permaculture principles and practices related to soil health and plant nutrition, including:
 - working with natural soils rather than importing soil
 - soil as an ecosystem

- soil as biomass and carbon capture and storage
- principles of sustainable horticultural practices
- soil testing techniques, including:
 - jar test for texture
 - ribbon test and ball test
 - pH testing
 - surface evaporation test
 - worm count
- basic plant nutrition
- waste water and plant health, including:
 - types of waste water
 - plant problems from waste water
 - common symptoms
 - basic tests and observations for waste water issues
- allowable additives to improve soils, including:
 - compost and worm castings
 - compost teas
 - rock dust
 - gypsum
 - green manures
 - manures/animal bedding materials
 - leaf mould
 - plants – green manures, nurse plants
 - companion planting
 - dynamic accumulators
 - chop and drop
 - nutrient trapping systems
 - greywater use
 - organically certified products
- permaculture planting techniques to improve plant growth, including:
 - guilds
 - nurse plants
- common soil-borne pests, diseases and nutrient problems and their symptoms
- methods of waste disposal causing minimal impact on the environment.
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Assessment Conditions

Assessment of the skills in this unit of competency must take place under the following conditions:

- physical conditions:

- skills must be demonstrated in a permaculture garden system or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - hand tools and equipment
 - soil amendments and additives
 - basic test equipment and consumables
- specifications:
 - workplace instructions and procedures
- relationships:
 - supervisor.

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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