Modification history

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

AHCCFP4X1	Increase carbon in soil
Application	This unit of competency describes the skills and knowledge required to identify the benefits of increasing carbon in soil and to implement a project to increase soil carbon. The unit applies to individuals who participate in farming and/or land management activities. It may, or may not, lead on to participation in an approved carbon farming project to generate carbon credits. No occupational licensing, legislative or certification requirements apply to this unit at the time of publication.
Prerequisite unit	Nil
Unit sector	Carbon Farming

Elements	Performance Criteria
Elements describe the essential outcomes.	*Performance criteria describe the performance needed to demonstrate achievement of the element.*
1. Identify benefits of increasing soil carbon	1.1 Identify the role, and forms, of carbon in soil 1.2 Identify carbon as a component of soil organic matter 1.3 Analyse the benefits of increasing carbon in soil 1.4 Identify the role of photosynthesis in increasing soil carbon 1.5 Determine land management practices that store, or sequester, carbon
2. Identify co-benefits of increasing soil carbon	2.1 Identify land management practices to increase soil carbon 2.4 Consider the social and cultural, environmental and economic benefits and co-benefits of increasing soil carbon
3. Plan project to increase soil carbon	3.1 Identify plot for project 3.2 Identify strategy or method to increase soil carbon 3.3 Identify equipment and resources required 3.4 Carry out cost benefit analysis of implementing the project 3.5 Plan strategy to measure carbon in soil and record results
4. Implement project	4.1 Identify potential soil carbon project method 4.2 Measure carbon in soil as baseline for project 4.3 Implement project in line with project method 4.4 Monitor soil to maintain soil health through changing conditions

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	• Engage with written material focussed on increasing carbon in soil
Numeracy	• Use formulae to calculate soil organic matter (SOM)

Unit mapping information			
Code and title current version	**Code and title previous version**	**Comments**	**Equivalence status**
AHCCFP4X1 Increase carbon in soil		New unit	No equivalent unit

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

TITLE	Assessment requirements for AHCCFP4X1 Increase carbon in soil

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 increased carbon in soil for a designated plot of land, including:

- identified the benefits and co-benefits of increasing carbon in soil
- planned and implemented a project to increase soil carbon.

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:

- how land use and management practices impact on soil health
- physical, chemical and biological properties of healthy soil
- opportunities presented by degraded soil
- land management practices that have the potential to increase soil health and agricultural productivity, including:
  - no till or conservation tillage
  - cover crops
  - crop rotation
  - perennial based systems
  - organic fertilisers
  - retain crop residue
  - integrate pest and weed management
  - manage movement of water
- co-benefits of increased carbon in soil, including:
  - environmental benefits: improved biodiversity above and below ground, improved air, water and soil quality, reduced greenhouse gas emissions, improved movement of water across landscape, reduced salinity/erosion/acidification/compaction, increased resilience to drought, increased land versatility
  - social benefits of carbon farming including: increased resilience to drought, more stable and diverse income, healthier people and communities, improved succession planning
  - economic benefits of carbon farming, including diversified income streams, increased farm productivity, access to finance, increased land versatility, new skills and career development, less income spent on supplements and fertilizers.
- informal methods for measuring soil carbon, including percentage tests across a paddock
- baseline measurements should allow scope for improvement
- approved methods for soil-based carbon farming projects
- soil quality calculators at: soilquality.org.au
- subsidies available for increasing soil carbon levels.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- resources, equipment and materials:
  - designated plot of land
  - equipment and resources relevant to method
  - access to information about soil carbon farming methods and practices.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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