



Australian Government

AHCHYD303 Implement a maintenance program for hydroponic systems

Release: 1

AHCHYD303 Implement a maintenance program for hydroponic systems

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Release 11.0.

Application

This unit of competency describes the skills and knowledge required to implement a maintenance program for hydroponic growing systems.

The unit applies to individuals who implement a maintenance program for hydroponic systems under broad direction and take responsibility for their own work.

All work must be carried out to comply with workplace procedures, according to state/territory health and safety regulations, legislation and standards that apply to the workplace, and sustainability and biosecurity practices.

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

Pre-requisite Unit

Nil

Unit Sector

Hydroponics (HYD)

Elements and Performance Criteria

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
1. Monitor plant health	1.1 Interpret workplace information about the existing hydroponic system 1.2 Assess growth rate of plants against targets set in the production plan

Elements	Performance Criteria
Elements describe the essential outcomes.	Performance criteria describe the performance needed to demonstrate achievement of the element.
	1.3 Assess plants for overall health 1.4 Assess plants for onset of fruit according to production plan
2. Monitor the hydroponic environment	2.1 Monitor environmental parameters according to the production plan and environment and biosecurity legislation and regulations, and make adjustments as required 2.2 Collect samples and send off for analysis to identify potential sources of contamination 2.3 Monitor and adjust hygiene procedures 2.4 Monitor disposal of materials according to workplace procedures
3. Monitor nutrient solution	3.1 Identify hydroponic nutrient solution ingredients 3.2 Take samples for testing and analysis 3.3 Perform titration test to determine electrical conductivity (EC) and pH of diluted nutrient solution 3.4 Interpret and discuss results with manager 3.5 Modify nutrient solution to ensure correct balance of ingredients
4. Perform routine maintenance checks	4.1 Inspect and clean filters and injection components to ensure they are clean and free of debris 4.2 Check nutrient solution delivery equipment 4.3 Check equipment controlling the atmospheric and root zone environments
5. Complete monitoring activities	5.1 Report work activities, faulty and unserviceable equipment and materials, and problems to the manager 5.2 Record checks 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.

Skill	Description
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Reading	Identify and interpret workplace information and production plan to identify relevant and key information about hydroponic system maintenance
Writing	Use clear language, accurate industry terminology and logical structure to record routine maintenance checks
Oral communication	- Use clear language to report work activities, problems, and malfunctions, faults, wear or damage to equipment and materials - Respond to questions and clarify information

Unit Mapping Information

Code and title current release	Code and title previous release	Comments	Equivalence status
AHCHYD303 Implement a maintenance program for hydroponic systems	AHCHYD301 Implement a maintenance program for hydroponic systems	Minor changes to application Minor changes to elements and performance criteria Foundation skills added Assessment requirements updated	Not equivalent

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 AHCHYD303 Implement a maintenance program for hydroponic systems

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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 implemented a maintenance program for hydroponic systems on at least one occasion, and has:

- applied relevant workplace environment and biosecurity legislation, regulations and workplace procedures
- monitored and assessed plant health
- performed titration test
- read nutrient analysis information
- administered nutrients to a hydroponic system as instructed
- monitored hydroponic maintenance programs
- undertaken hydroponic system maintenance and repair inspection
- completed checks and records.

Knowledge Evidence

An individual must be able to demonstrate knowledge required to perform the tasks outlined in the elements and performance criteria of this unit. This includes knowledge of:

- environment and biosecurity legislation and regulations and workplace practices relevant to implementing a maintenance program for hydroponic systems
- principles and practices for implementing a hydroponic maintenance program, including:
 - characteristics of healthy and unhealthy plants
 - environmental implications of the disposal of chemicals or chemical containers, and the drainage of high nutrient effluent
 - equipment used in hydroponic systems
 - plant growing media choices and their properties
 - potential problems associated with a range of crops grown in a hydroponic environment

- properties of a nutrient solution
- recirculated and non-recirculated systems
- testing methods for a hydroponic nutrient solution, including titration tests and their purpose
- testing methods for the gauging of environmental parameters.

Assessment Conditions

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

- physical conditions:
 - a workplace setting or an environment that accurately represents workplace conditions
- resources, equipment and materials:
 - work instructions and workplace procedures applicable to implementing a maintenance program for hydroponic systems
 - sampling tools and equipment, and materials, tools and equipment applicable to implementing a maintenance program for hydroponic systems
 - titration testing equipment and materials
- specifications:
 - environment and biosecurity legislation and regulations and workplace practices applicable to implementing a maintenance program for hydroponic systems
- relationships:
 - manager
- time frames:
 - according to job requirements.

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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