



Australian Government

AHCPHT416 Manage mushroom crop development

Release: 1

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Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 6.0.

Application

This unit of competency describes the skills and knowledge required to manage mushroom crop development, including the selection, application and management of the mushroom casing and all activities up to the end of the harvesting period.

The unit applies to individuals who apply specialist skills and knowledge to manage mushroom crop development. This includes applying and communicating non-routine technical solutions to predictable and unpredictable problems.

All work is carried out to comply with workplace procedures, health and safety in the workplace requirements, legislative and regulatory requirements, 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

Production Horticulture (PHT)

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. Manage casing application	1.1 Select casing materials and recipe 1.2 Assess condition and quality of spawn run before casing 1.3 Select product and rate of application where supplement is to be

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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	added to substrate at casing, and instruct appropriate personnel 1.4 Confirm casing mixture is checked against workplace standards for moisture, structure and depth, and confirm remedial action has been taken if required
2. Control environment during casing colonisation growth phase	2.1 Install crop in growing room according to workplace procedures 2.2 Set up growing room air conditioning system and check for correct functioning 2.3 Measure, record and adjust temperature, relative humidity and carbon dioxide content as required 2.4 Assess mycelium growth and determine timing and quantity of water to be applied 2.5 Monitor and record pest and disease status and take remedial action as required
3. Initiate fruit body formation and manage pinning and pre-picking growth phases	3.1 Assess growth and make changes to temperature and ventilation to initiate fruit body formation according to workplace procedures 3.2 Record and adjust temperature, relative humidity and carbon dioxide content 3.3 Identify and analyse variations from expected or required ranges of temperature, relative humidity and carbon dioxide content, and take appropriate remedial action 3.4 Assess mycelium development and pin development, and determine timing and quantity of water and additives to be applied to water 3.5 Monitor and record pest and disease status, and take remedial action as required
4. Assess crop maturity, flush development and quality, and monitor the harvesting process	4.1 Assess crop maturity to determine when and what to pick 4.2 Instruct pickers on tasks to be performed 4.3 Monitor picking results to ensure instructions continue to be appropriate and are being carried out 4.4 Consult markets to ensure product meets market needs and specifications 4.5 Monitor crop quality, recognise disorders stimulated by environmental conditions, and implement remedial action as required 4.6 Monitor and record pest and disease status during this stage of

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<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	crop development, and take remedial action as required 4.7 Plan daily work schedule for waterers, and coordinate picking and watering schedules 4.8 Review harvest process for compliance with quality standards, and identify, document and implement areas for improvement as appropriate 4.9 Provide feedback to pickers on individual and team performance

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	Identify and interpret information regarding requirements for managing mushroom crop development
Writing	Use clear language, accurate industry terminology and logical structure to document harvest process and areas for improvement

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPHT416 Manage mushroom crop development	AHCPHT407 Manage mushroom crop development	Performance criteria clarified Foundation skills added Assessment requirements updated	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 AHCPTH416 Manage mushroom crop development

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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 managed mushroom crop development on at least two occasions, and has:

- maintained environment within parameters for production
- recorded, analysed and adjusted temperature, relative humidity and carbon dioxide content
- monitored and managed growing room conditions, watering and flush development of mushroom crops
- identified stages of growth and development, and factors impacting on yields and mushroom quality
- identified the interdependency of stages of growth, and impact of early stages of production cycle on production results
- recorded pest and disease status, and documented harvest process and areas for improvement
- developed work schedules.

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:

- principles and practices of mushroom crop development, including:
 - available options of additives to irrigation water to promote mushroom quality, and the main considerations of their use
 - basic understanding of air conditioning principles, particularly relative humidity
 - casing function, application and depth and surface structure requirements
 - desirable physical, biological and chemical characteristics of casing
 - Hazard Analysis and Critical Control Points (HACCP), quality systems, emergency procedures, organisational structure and workplace communication channels and protocols

- goals and sub-stages of Phase II substrate preparation, and impact of Phase II on yields and quality
- growth phases of a mushroom crop, and interactions that occur between the compost, casing, environmental factors, such as temperature, water, relative humidity and carbon dioxide, and growth of the mushroom
- how nature of casing and the appearance and quantity of mycelium growth in casing affect the number, distribution and quality of fruit bodies formed
- impact of mushroom numbers and size on picking and quality
- industry and workplace awards and conditions
- management impacts of supplementing at spawning or casing
- management requirements of casing, including Compost Added at Casing (CAC) or Casing Inoculums (CI)
- overview of Phase I substrate production and its impact on yields and quality
- food safety standards, legislation and industry codes of practice relevant to managing mushroom crop development
- site quarantine protocols.

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
- specifications:
 - food safety standards, legislation and industry codes of practice relevant to managing mushroom crop development
 - site quarantine protocols
- relationships:
 - appropriate personnel, pickers, waterers
- timeframes:
 - 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.

Links

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