

Modification history

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 5.0.
Release 1	Initial release

AHCPHT407	Manage mushroom crop development
Application	<p>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.</p> <p>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.</p> <p>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.</p> <p>No licensing, legislative or certification requirements apply to this unit at the time of publication.</p>
Prerequisite Unit	Nil
Unit Sector	Production horticulture (PHT)

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 Where supplement is to be added to substrate at casing, product and its rate of application are selected and instructions are given to appropriate personnel 1.4 Confirm casing mixture is checked against workplace standards for moisture, structure and depth, and remedial action has been taken if required
2. Control environment during casing colonisation growth phase	2.1 Crop is installed in growing room according to workplace procedures 2.2 Air conditioning system in the growing room is set up and checked for correct functioning 2.3 Temperature, relative humidity and carbon dioxide content are measured, recorded, and adjusted as required 2.4 Mycelium growth is assessed and decisions are made on the timing and quantity of water to be applied 2.5 Pest and disease status is monitored and recorded and remedial action is taken as required

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
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 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	
<i>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.</i>	
Skill	Description
Reading	<ul style="list-style-type: none"> Identify and interpret information regarding requirements for managing mushroom crop development
Writing	<ul style="list-style-type: none"> Use clear language, accurate industry terminology and logical structure to record pest and disease status, and document harvest process and areas for improvement
Oral Communication	<ul style="list-style-type: none"> Use clear language to instruct appropriate personnel, pickers and waterers on tasks to be performed
Numeracy	<ul style="list-style-type: none"> record and analyse temperature, relative humidity and carbon dioxide content

Unit Mapping Information			
Code and title current version	Code and title previous version	Comments	Equivalence status
AHCPT407 Manage mushroom crop development Release 2	AHCPT407 Manage mushroom crop development Release 1	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

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

TITLE	Assessment requirements for AHCPHT407 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:

- applied relevant workplace health and safety procedures
- developed work schedules
- maintained environment within parameters for production
- 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, analysed and adjusted temperature, relative humidity and carbon dioxide content
- recorded pest and disease status, and documented harvest process and areas for improvement.

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 Critical Control Point (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
- workplace requirements applicable to health and safety in the workplace for managing mushroom crop development
- industry and workplace biosecurity procedures applicable to managing mushroom crop development.

Assessment Conditions

Assessment of skills 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

Assessment Conditions	
<ul style="list-style-type: none">• workplace requirements applicable to health and safety in the workplace for managing mushroom crop development• industry and workplace biosecurity procedures applicable to managing mushroom crop development• relationships:<ul style="list-style-type: none">• appropriate personnel, pickers, waterers• timeframes:<ul style="list-style-type: none">• according to job requirements. <p>Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.</p>	
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