

## 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

AHCPHT405	Manage mushroom substrate preparation
<b>Application</b>	<p>This unit of competency describes the skills and knowledge required to manage mushroom substrate preparation, including: confirming status of system requirements, quality and consistency of phase II outputs, monitoring and manipulating spawning and spawn run, and managing clean-up procedure.</p> <p>The unit applies to individuals who apply specialist skills and knowledge to manage mushroom substrate preparation. 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>
<b>Prerequisite Unit</b>	Nil
<b>Unit Sector</b>	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. Confirm status of system requirements for mushroom substrate preparation	1.1 Determine details of quantities of substrate required, dates and times to be achieved for each process stage and inform personnel 1.2 Determine availability, quality, serviceability, and cleanliness of all rooms, work areas, machinery, equipment and materials for mushroom substrate preparation 1.3 Allocate staff duties and responsibilities 1.4 Follow site quarantine protocols and workplace and personal hygiene requirements 1.5 Identify hazards and assess risks in the workplace and implement control measures to manage risks according to workplace health and safety procedures
2. Confirm quality and consistency of Phase II outputs	2.1 Ensure Phase II process conforms to required production schedule and workplace procedures 2.2 Record key factors and critical points 2.3 Take random samples of end product and dispatch for analysis 2.4 Record test results, compare to standards and take remedial action
3. Monitor and manipulate spawning and spawn run	3.1 Assess condition and quality of compost before spawning and take remedial action 3.2 Take temperature readings and record and adjust if required 3.3 Measure, record and control carbon dioxide content 3.4 Monitor spawn growth and appearance of mycelium during spawn run period 3.5 Select product and its rate of application where supplement is to be added to substrate at spawning 3.6 Monitor room hygiene and occurrence of pests and diseases and implement control measures

<b>Elements</b>	<b>Performance Criteria</b>
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
4. Manage clean-up procedure	4.1 Manage clean-up activities at the end of each process stage 4.2 Conduct cook-out or chemical disinfestations treatment before removal of spent substrate 4.3 Return tools and equipment to storage area after cleaning, basic preventative maintenance and checking for future serviceability 4.4 Report faults to maintenance personnel 4.5 Complete workplace records

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<b>Foundation Skills</b>	
<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>	
<b>Skill</b>	<b>Description</b>
Reading	<ul style="list-style-type: none"> <li>Identify and interpret information regarding requirements for managing mushroom substrate preparation</li> </ul>
Writing	<ul style="list-style-type: none"> <li>Use clear language, accurate industry terminology and logical structure to record test results and complete workplace records</li> </ul>
Oral Communication	<ul style="list-style-type: none"> <li>Use clear language to inform staff of substrate preparation activities and allocate duties and responsibilities</li> <li>Use clear language to report faults or variations from required settings to maintenance personnel</li> </ul>
Numeracy	<ul style="list-style-type: none"> <li>Record temperature readings</li> <li>Measure carbon dioxide content</li> </ul>

<b>Unit Mapping Information</b>			
<b>Code and title current version</b>	<b>Code and title previous version</b>	<b>Comments</b>	<b>Equivalence status</b>
AHCPHT405 Manage mushroom substrate preparation Release 2	AHCPHT405 Manage mushroom substrate preparation Release 1	Performance criteria clarified Foundation skills added Assessment requirements updated	Equivalent unit

<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72</a>
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<b>TITLE</b>	<b>Assessment requirements for AHCPHT405 Manage mushroom substrate preparation</b>
<b>Performance Evidence</b>	
<p>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 substrate preparation on at least two occasions and has:</p> <ul style="list-style-type: none"> <li>• applied relevant workplace health and safety, and environmental and biosecurity legislation regulations and workplace procedures</li> <li>• established and reviewed workplace procedures for mushroom substrate preparation</li> <li>• monitored and manipulated all interactions between inputs, conditions and outputs for each stage of substrate process</li> <li>• set and monitored productivity standards for mushroom substrate and rest of production cycle</li> <li>• recorded and analysed production data.</li> </ul>	
<b>Knowledge Evidence</b>	
<p>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:</p> <ul style="list-style-type: none"> <li>• principles and practices for managing mushroom substrate preparation and casing production, including: <ul style="list-style-type: none"> <li>• casing function, application, required depth and required surface structure</li> <li>• detailed knowledge of all stages in Phase II substrate preparation process</li> <li>• Hazard Analysis Critical Control Point (HACCP), quality systems, emergency procedures, organisational structure and workplace communication channels and protocols</li> <li>• how mushrooms are grown, with a focus on interaction between compost, environmental factors such as temperature, water, relative humidity, carbon dioxide and ammonia, and mushroom growth</li> <li>• industry and workplace awards and conditions</li> <li>• key parameters to be recorded and monitored and appropriate ranges in relation to temperature, ammonia, relative humidity, moisture content, carbon dioxide and time</li> <li>• overview of mushroom production cycle and possible impact of deviations from workplace standards on substrate and rest of production cycle</li> <li>• overview of Phase I compost production</li> <li>• food safety standards, legislation and industry codes of practice relevant to managing mushroom substrate preparation</li> </ul> </li> <li>• workplace requirements applicable to health and safety in the workplace for managing mushroom substrate preparation</li> <li>• environmental impacts associated with mushroom substrate preparation</li> <li>• industry and workplace biosecurity procedures applicable to managing mushroom substrate preparation.</li> </ul>	
<b>Assessment Conditions</b>	
<p>Assessment of skills must take place under the following conditions:</p> <ul style="list-style-type: none"> <li>• physical conditions: <ul style="list-style-type: none"> <li>• a workplace setting or an environment that accurately represents workplace conditions</li> </ul> </li> <li>• specifications: <ul style="list-style-type: none"> <li>• food safety standards, legislation and industry codes of practice relevant to managing mushroom substrate preparation</li> <li>• workplace requirements applicable to health and safety in the workplace for managing mushroom substrate preparation</li> <li>• industry and workplace biosecurity procedures applicable to managing mushroom substrate preparation</li> </ul> </li> <li>• relationships: <ul style="list-style-type: none"> <li>• staff and maintenance personnel</li> </ul> </li> <li>• timeframes: <ul style="list-style-type: none"> <li>• according to job requirements.</li> </ul> </li> </ul>	

<b>Assessment Conditions</b>	
Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.	
<b>Links</b>	Companion Volumes, including Implementation Guides, are available at VETNet: <a href="https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72">https://vetnet.education.gov.au/Pages/TrainingDocs.aspx?q=c6399549-9c62-4a5e-bf1a-524b2322cf72</a>

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