



Australian Government

Department of Education, Employment and Workplace Relations

AHCPHT407A Manage mushroom crop development

Release: 1

AHCPT407A Manage mushroom crop development

Modification History

Not Applicable

Unit Descriptor

Unit descriptor	This unit covers managing mushroom crop development and defines the standard required to: recognise stages of growth and development, and factors impacting on yields and mushroom quality; recognise the interdependency of stages of growth and impact of early stages of production cycle on production results; monitor and manage growing room conditions, watering and flush development of mushroom crops.
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Application of the Unit

Application of the unit	This unit applies to staff on a mushroom farm who 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.
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Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Not Applicable

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA

ELEMENT	PERFORMANCE CRITERIA
1. Manage casing application	<p>1.1. Casing materials and recipe are selected and instructions are given to appropriate personnel.</p> <p>1.2. Occupational Health and Safety (OHS) requirements and hazards are identified and appropriate action is taken to minimise the risks to self and others.</p> <p>1.3. Personal Protective Equipment (PPE) and clothing are selected and used according to farm OHS procedures.</p> <p>1.4. Condition and quality of spawn run are assessed before casing and, if required, remedial action is taken according to farm procedures.</p> <p>1.5. 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.</p> <p>1.6. Casing mixture is checked against farm standards for moisture, structure and depth, and remedial action is taken if required.</p>
2. Control environment during casing colonisation growth phase	<p>2.1. Crop is installed in growing room according to farm procedures.</p> <p>2.2. Air conditioning system in the growing room is set up and checked for correct functioning.</p> <p>2.3. Temperature, relative humidity and carbon dioxide content are measured, recorded, and where required, adjusted.</p> <p>2.4. Mycelium growth is assessed and decisions are made on the timing and quantity of water to be applied.</p> <p>2.5. Pest and disease status is monitored and recorded and, where required, remedial action is taken.</p>
3. Initiate fruit body formation and manage pinning and pre-picking growth phases	<p>3.1. Growth is assessed and changes are made to temperature and ventilation to initiate fruit body formation according to farm procedures.</p> <p>3.2. Temperature, relative humidity and carbon dioxide content are measured, recorded and adjusted.</p> <p>3.3. Variations from expected or required ranges of temperature, relative humidity and carbon dioxide content are identified and analysed, and appropriate remedial action is taken.</p> <p>3.4. Mycelium development and pin development are assessed and timing and quantity of water and additives to be applied to water are determined.</p> <p>3.5. Pest and disease status are monitored and recorded, and remedial action is taken where required.</p>

ELEMENT	PERFORMANCE CRITERIA
	3.6. OHS requirements and hazards are identified and appropriate action is taken to minimise the risks to self and others.
4. Assess crop maturity, flush development and quality, and monitor the harvesting process	4.1. Crop maturity is assessed to determine when and what to pick. 4.2. Pickers are given instructions about tasks to be performed. 4.3. Picking results are monitored to ensure instructions continue to be appropriate and are being carried out. 4.4. Markets are consulted to ensure product meets market needs and specifications. 4.5. Crop quality is monitored, disorders stimulated by environmental conditions are recognised, and remedial action is implemented if required. 4.6. Pest and disease status during this stage are monitored and recorded, and remedial action is taken where required. 4.7. Daily work schedule for waterers is planned and picking and watering schedules are coordinated. 4.8. Harvest process is reviewed for compliance with quality standards and areas for improvement are identified where appropriate, documented and implemented. 4.9. Feedback is provided to pickers on individual and team performance.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- maintaining environment within parameters for production
- accepting responsibility for quality of own work
- contributing to productive work environment
- developing work schedules
- managing own work and supervising work of others
- maintaining safety of self and others

REQUIRED SKILLS AND KNOWLEDGE

- implement and review QA procedures including food safety
- observing employment requirements
- promoting workplace cooperation
- use literacy skills to read, interpret and follow organisational policies and procedures, develop sequenced written instructions, record accurately and legibly information collected and select and apply procedures to a range of tasks
- use oral communication skills/language competence to fulfil the job role as specified by the organisation including questioning, active listening, asking for clarification, negotiating solutions and responding to a range of views
- use numeracy skills to estimate, calculate and record routine and more complex workplace measures and data
- use interpersonal skills to work with others and relate to people from a range of cultural, social and religious backgrounds and with a range of physical and mental abilities.

Required knowledge

- 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
- farm standards and procedures, including those relating to OHS, food safety, 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
- overview of Phase I substrate production and its impact on yields and quality
- management impacts of supplementing at spawning or casing
- management requirements of casing - Compost Added at Casing (CAC) and/or Casing Inoculum (CI)
- OHS and environmental legislation, industry codes of practice and enterprise procedures
- site quarantine protocols.

Evidence Guide

EVIDENCE GUIDE	
The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>The evidence required to demonstrate competency in this unit must be relevant to workplace operations and satisfy holistically all of the requirements of the performance criteria and required skills and knowledge and include achievement of the following:</p> <ul style="list-style-type: none"> • recognise stages of growth and development, and factors impacting on yields and mushroom quality • recognise the interdependency of stages of growth and impact of early stages of production cycle on production results • monitor and manage growing room conditions, watering and flush development of mushroom crops.
Context of and specific resources for assessment	Competency requires the application of work practices under work conditions. Selection and use of resources for some worksites may differ due to the regional or enterprise circumstances.

Range Statement

RANGE STATEMENT	
The range statement relates to the unit of competency as a whole.	
Mushrooms may include:	<ul style="list-style-type: none"> • all species and cultivars of fungi.
Farm standards and procedures may include:	<ul style="list-style-type: none"> • those relating to: • OHS, food safety • HACCP • quality systems • emergency procedures • organisational structure • workplace communication channels and protocols.

Unit Sector(s)

Unit sector	Production horticulture
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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