



Australian Government

AHCBEK409 Rear queen bees

Release: 1

AHCBEK409 Rear queen bees

Modification History

Release	Comments
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.

Application

This unit of competency describes the skills and knowledge required to rear queen bees and queen cells through the manipulation of hives.

The unit applies to experienced beekeepers who exercise judgement to complete a range of specialist activities requiring a thorough understanding in honey production. They have accountability for the work of others and analyse, design and communicate solutions to a range of complex problems.

All work must be carried out to comply with workplace procedures, state and territory legislation, regulations and local government by laws that apply to the ownership and registration of bee hives and compliance with industry biosecurity codes of practice. The transport and cross border movement of livestock including queen bees must comply with state and territory transport, quarantine and biosecurity legislation, regulations and codes of practice.

Pre-requisite Unit

Nil

Unit Sector

Beekeeping (BEK)

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. Establish breeding stock and obtain requirements for queen bee rearing	1.1 Select and obtain queen bee breeding stock according to breeding program 1.2 Identify health and safety hazards, risks and implement controls

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	according to workplace requirements 1.3 Select, fit and use personal protective equipment 1.4 Select and safely use tools and equipment required to rear queen bees 1.5 Confirm site quarantine and other biosecurity protocols and ensure that they are followed
2. Assess condition of colonies and nurse bees and prepare queen cups with larvae	2.1 Ensure hives and colonies used for queen bee and drone production are in a clean and healthy condition 2.2 Select larvae from the breeder queen bee cells for grafting according to specification 2.3 Select and prepare queen cups according to workplace procedures and production method 2.4 Transfer larvae from worker cells into queen cell cups according to workplace procedures 2.5 Ensure an adequate number of nurse bees are present in cell raising colonies
3. Establish and monitor the queen mating process	3.1 Transfer ripe queen cells into the nucleus after grafting according to workplace procedures 3.2 Provide drones during mating period according to workplace standards and specifications 3.3 Monitor and maintain hives in a healthy pest and disease free condition 3.4 Maintain records of grafting and queen rearing activities according to workplace procedures
4. Package queen bees for transport	4.1 Select type of queen cage suitable for transport according to workplace procedures and method of production 4.2 Capture mated queen bee and transfer to queen cage supported by young escort bees according to cage type and workplace procedures 4.3 Ensure queen cage is stocked with food and secured for transport 4.4 Prepare package with queen bee cage and contents according to transport method and according to workplace and transport company 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
Reading	Interpret queen bee breeding procedures and specifications to determine requirements
Writing	Accurately record and complete workplace documents and using clear language and correct spelling, grammar and terminology
Navigate the world of work	Take responsibility for following policies, procedures, legislative requirements and industry codes of practice relevant to queen bee rearing
Get the work done	Take responsibility for planning, sequencing and prioritising tasks for queen bee production

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK409 Rear queen bees	AHCBEK407 Rear queen bees	Element 1 split into two elements for clarity New element on packaging queen bees Changes to Performance Criteria for clarity Updated Performance Evidence and Knowledge Evidence	No equivalent unit

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 AHCBEK409 Rear queen bees

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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 on at least one occasion the individual has demonstrated that they have reared queen bees including:

- obtained queen bee breeding stock according to breeding program
- assessed safety hazards, risks and implemented controls
- obtained tools, equipment and personal protective equipment (PPE) required for breeding manipulations and ensured serviceable for use
- conducted all bee manipulations and activity according to biosecurity and quarantine protocols
- ensured hives used for queen rearing are clean and healthy
- prepared queen using desired method and assessed, selected and grafted larvae into queen cells according to workplace procedures
- assessed and maintained nurse bee population to support developing queens
- monitored and maintained hive nutrition and health
- transferred ripe queen cells into nucleus
- monitored the queen mating process and provided drones according to workplace procedures
- maintained records according to workplace and industry procedures
- selected queen bee cage type and packaging requirements and ensured adequate food and escort bees for transport
- prepared package for transport according to workplace procedures and transport company requirements.

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 rearing queen bees
- basic genetics, breeding and evaluation for selecting queen bee stock

- techniques and timing for queen cell production including queenright and queen less starter and finishers
- grafting techniques including the use of kits
- making, placement and use of nucleus hives (nucs) for queen rearing
- capturing and handling techniques for queen bees
- holding and securing queen bees, including:
 - queen cages
 - queen banks
- transport, postage and handling queen bees
- labelling and identifying queens including international colour codes
- monitoring and recognising brood and adult bee health, diseases, pests and other disorders and required action
- optimum conditions and timing for queen rearing activities
- required number of mature, healthy and genetically suitable drones
- standards and protocols for selecting and manipulating bees and larvae for queen bee production.

Assessment Conditions

Assessment of skills must take place under the following conditions:

- physical conditions:
 - skills must be demonstrated in an active apiary
- resources, equipment and materials:
 - live bees and queen bee stock
 - hive manipulation and larvae grafting tools
 - PPE
- specifications:
 - workplace procedures and specifications for rearing queen bees
 - access to legislation and codes of practice for biosecurity and queen bee breeding.

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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