



**Australian Government**

# **AHCBEK402 Perform queen bee artificial insemination**

**Release: 2**

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## Modification History

Release	Comments
Release 2	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 3.0.
Release 1	This version released with AHC Agriculture, Horticulture and Conservation and Land Management Training Package Version 1.0.

## Application

This unit of competency describes the skills and knowledge required to determine suitable method for artificial breeding objectives and develop a program to collect semen from drone honey bees and artificially inseminate a queen bee.

The unit applies to advanced beekeepers who analyse information and exercise judgement to complete specialised bee breeding activities. They work autonomously and have accountability for the work of others. They research, analyse, design and communicate solutions to a range of complex problems.

State and territory legislation, regulations and local government by-laws apply in some jurisdictions to beehive ownership and compliance with biosecurity 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. Determine breeding method	1.1 Review options for artificial breeding to determine the most suitable and affordable method in line with breeding objectives 1.2 Select an artificial breeding option according to workplace

Elements	Performance Criteria
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
	<p>breeding program and queen and drone management program</p> <p>1.3 Identify, source and arrange resource requirements for breeding program</p> <p>1.4 Prepare program schedules based on available resources</p> <p>1.5 Identify health and safety in the workplace hazards and hygiene practices, assess risks and implement control measures</p> <p>1.6 Select, ensure serviceability, fitted and used personal protective equipment during insemination process</p>
2. Implement breeding method	<p>2.1 Obtain genetic material ensuring its health, reliability and legitimacy according to required bee characteristics and breeding objectives</p> <p>2.2 Receive, check and store genetic material to ensure maximum viability for program outcomes</p> <p>2.3 Manage rearing times to ensure age and condition of breeding bees occurs according to schedule</p> <p>2.4 Collect semen from drones according to workplace hygiene and collection procedures</p> <p>2.5 Prepare queen and inseminate ensuring minimal risk of contamination according to workplace protocols</p> <p>2.6 Place queen in a colony of suitable strength and monitor colony development and health according to workplace procedures</p>
3. Monitor and maintain program	<p>3.1 Review genetic material transfer and management practices to inform future breeding programs</p> <p>3.2 Document performance data in progeny resulting from genetic material transfer programs</p> <p>3.3 Calculate and use success rates from breeding objectives to determine success of artificial insemination program</p> <p>3.4 Identify and record modifications to queen and drone management program to assist continuous improvement processes</p>

## 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	<ul style="list-style-type: none"><li>Critically analyse scientific texts and extract technical information for bee breeding</li></ul>
Writing	<ul style="list-style-type: none"><li>Documents outcomes and changes to breeding programs using industry relevant terminology</li></ul>
Numeracy	<ul style="list-style-type: none"><li>Performs mathematical calculations to analyse queen and hive performance following breeding program</li></ul>
Navigate the world of work	<ul style="list-style-type: none"><li>Takes full responsibility for following policies, procedures and legislative requirements for safety and hygiene</li></ul>
Get the work done	<ul style="list-style-type: none"><li>Accepts responsibility for planning and sequencing bee breeding tasks and workload</li></ul>

## Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
AHCBEK402 Perform queen bee artificial insemination Release 2	AHCBEK402 Perform queen bee artificial insemination Release 1	Minor changes to Performance Criteria for clarity  Updated Performance Evidence and Knowledge Evidence	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>