

Title	Implement a pest and disease management plan for queen bee rearing		
Level	4	Credits	5

Purpose	<p>This unit standard is intended for people working in a queen bee rearing context.</p> <p>People credited with this unit standard are able to: implement a pest and disease management plan and control methods for a queen bee rearing operation; and maintain disease compliance requirements, including record keeping and reporting, and describe compliance procedures for American foulbrood (AFB).</p>
----------------	---

Classification	Agriculture > Apiculture
-----------------------	--------------------------

Available grade	Achieved
------------------------	----------

Guidance Information

- 1 Legislation and standards relevant to this unit standard includes but is not limited to:
 - Agricultural Compounds and Veterinary Medicines Act 1997;
 - Animal Products Act 1999;
 - Biosecurity Act 1993;
 - Biosecurity (National American Foulbrood Pest Management Strategy) Order 1998;
 - Food Act 2014;
 - Food Standards Code and Food Standard: Tutin in Honey 2016;
 - Health and Safety at Work Act 2015;
 - and any subsequent amendments.

- 2 Definitions

American foulbrood (AFB) is a bacterial disease of honey bees.

Workplace procedures refer to the policies and procedures on safety and operation set down by the employer or organisation.

- 3 References

Frost, Elizabeth, *Queen Bee Breeding: Ag Guide – A Practical Handbook* (NSW Agriculture, 2016).

Goodwin, Mark, *Elimination of American Foulbrood Disease Without The Use of Drugs: A Practical Manual for Beekeepers* (Otaki, New Zealand: National Beekeepers Association of New Zealand Inc., revised edition 2018) (also referred to as *The Beekeeper's Manual*).

Goodwin, Mark and Taylor, Michelle, *Control of Varroa—A Guide for New Zealand Beekeepers* (Wellington, New Zealand: New Zealand Ministry of Agriculture and Forestry, revised edition 2007).

All references are available from Apiculture NZ, PO Box 25207, Wellington 6146, New Zealand or email info@apinz.org.nz ph + 64 4 471 6254.

- 4 Candidates are expected to have completed an industry approved American Foulbrood disease recognition and destruction course. Information on courses is available from info@apinz.org.nz.
- 5 For the purposes of assessment:
 - evidence for the practical components of this unit standard must be supplied from the workplace;
 - evidence must be presented in accordance with workplace procedures.

Outcomes and performance criteria

Outcome 1

Implement a pest and disease management plan and control methods for a queen bee rearing operation.

Performance criteria

1.1 Conduct inspections for AFB.

1.2 Conduct sampling for varroa mite.

Range sampling types must include alcohol washing; and may include – sugar shake, drone brood inspection, 24 varroa treatment with sticky boards, ether roll, varroa strip in a jar, mesh bottom board; evidence is required for at least one additional type.

1.3 Conduct treatment of hives for varroa mite, including applying integrated pest management techniques.

Range must conduct at least two treatments for a minimum treatment period of six weeks and a maximum of eight weeks.

1.4 Assess beehives for ongoing disease presence and feed hives to maintain and improve hive health.

Range diseases may include but are not limited to – AFB, chalkbrood, sacbrood, halfmoon syndrome, parasitic mite syndrome; feeding may include – sugar syrup, pollen substitutes/supplements.

1.5 Inspect queen bee cells, virgin queen bees, mated queen bees, brood and drones for abnormalities, and queen related diseases and conditions.

Range may include but is not limited to – halfmoon syndrome, black queen cell virus, catalepsy, deformed wing virus, queen defects, drone or sterile egg laying, abnormal egg laying pattern, speckled brood.

- 1.6 Identify nutritional factors that affect queen bees as they relate to pests and diseases.

Range halfmoon syndrome, queen cell size and shape.

Outcome 2

Maintain disease compliance requirements, including record keeping and reporting, and describe compliance procedures for AFB.

Performance criteria

- 2.1 Maintain disease compliance requirements.

Range registration of hives, identification of bee registration code in apiary, registration of apiary and location.

- 2.2 Maintain disease records and carry out all reporting requirements.

Range diary of disease activities, completion of Annual Disease Return (ADR) or completion of ADR and Certificate of Inspection (Col).

- 2.3 Describe compliance procedures where AFB is identified.

Planned review date	31 December 2025
----------------------------	------------------

Status information and last date for assessment for superseded versions

Process	Version	Date	Last Date for Assessment
Registration	1	24 January 2019	31 December 2022
Review	2	24 September 2020	N/A

Consent and Moderation Requirements (CMR) reference	0052
--	------

This CMR can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.

Comments on this unit standard

Please contact the Primary Industry Training Organisation standards@primaryito.ac.nz if you wish to suggest changes to the content of this unit standard.