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| Title | Describe flowering plants and their role in beekeeping | | |
| Level | 4 | Credits | 3 |

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| Purpose | People credited with this unit standard are able to describe: the relationship between flowering plants and bees, the function of nectar and pollen, and practical applications of moving bees; the way in which factors relating to weather, seasons, and soil influence flowering patterns and honey flows; nectar and pollen, and their contribution to bee nutrition; and flowering plants which are common sources of honey and pollen. |
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| Classification | Agriculture > Apiculture |
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| Available grade | Achieved |
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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 Plan) 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

Flowering plants – can also be referred to as angiosperms.

Symbiotic relationship – a relationship of mutual benefit between two or more species.

- 3 Reference

Morrison, Andrew, *Practical Beekeeping in New Zealand*, (Auckland, New Zealand) 5th Edition, April 2018, ISBN13 978177559362.

Outcomes and performance criteria

Outcome 1

Describe the relationship between flowering plants and bees, the function of nectar and pollen, and practical applications of moving bees.

Performance criteria

- 1.1 Describe the symbiotic relationship between flowering plants and bees.
- 1.2 Describe the function of nectar and pollen in the symbiotic relationship.
- 1.3 Describe the link between flowering plants, the types of honey produced and the practical applications for the beekeeper of moving bees into a new area.

Outcome 2

Describe the way in which factors relating to weather, seasons and soil influence flowering patterns and honey flows.

Performance criteria

- 2.1 Describe factors related to weather and seasons in terms of the way in which they influence flowering patterns and honey flows.

Range evidence of five factors is required.
- 2.2 Describe the relationship between soil factors, and flowering patterns and honey flows.

Range three soil factors from – soil acidity (pH), soil aeration, soil temperature, soil moisture.

Outcome 3

Describe nectar and pollen, and their contribution to bee nutrition.

Performance criteria

- 3.1 Describe the function of nectar and pollen in the flower.
- 3.2 Describe the process by which nectar and pollen are produced in the flower and gathered by bees.
- 3.3 Describe the contribution of nectar and pollen to bee nutrition.

Outcome 4

Describe flowering plants which are common sources of honey and pollen.

Performance criteria

- 4.1 Identify and describe flowering plants which are common sources of honey and pollen in terms of their features.

Range common name, scientific name, occurrence in a specified area, flowering time, nectar and or pollen yield, features of honey produced;
evidence of five tree or shrub sources, five pasture or seed plants, five weeds are required.

4.2 Describe flowering plants which contribute to the production of poisonous honey and honeydew or are toxic to bees in terms of their mode of production, effect on bees and people, and management to avoid toxic effects.

Range karaka, kowhai, tutin.

4.3 Describe how plant pests and diseases affect flowering plants ability to produce honey and pollen in terms of the potential impact on the apiculture industry.

Range evidence of three pests or diseases is required.

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| Planned review date | 31 December 2025 |
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Status information and last date for assessment for superseded versions

| Process | Version | Date | Last Date for Assessment |
|--------------|---------|-------------------|--------------------------|
| Registration | 1 | 14 December 2017 | 31 December 2022 |
| Review | 2 | 24 September 2020 | N/A |

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| Consent and Moderation Requirements (CMR) reference | 0052 |
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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.