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**APICULTURE**  
**Describe the role of bees in pollination**

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<b>level:</b>	<b>3</b>
<b>credit:</b>	<b>3</b>
<b>final date for comment:</b>	October 2007
<b>expiry date:</b>	December 2008
<b>sub-field:</b>	Agriculture
<b>purpose:</b>	People credited with this unit standard are able to describe; the contribution of bees in crop, orchard, and pasture pollination; the factors affecting the numbers of beehives required for crop or orchard pollination, their conditioning requirements, location, and arrangement; the management of bees for pollination.
<b>entry information:</b>	Open.
<b>accreditation option:</b>	Evaluation of documentation and visit by NZQA, industry and teaching professional in the same field from another provider.
<b>moderation option:</b>	A centrally established and directed moderation system has been set up by the Agriculture Industry Training Organisation.
<b>special notes:</b>	None.

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**Elements and Performance Criteria**

**element 1**

Describe the contribution of bees in crop, orchard, and pasture pollination.

Range: self-pollination, cross-pollination.

**performance criteria**

1.1 The contribution of bees in crop and orchard pollination is described in terms of current production methods.

Range: apples, plums, strawberries, kiwifruit, citrus, peaches, persimmons, cherries, blackcurrants.

1.2 The contribution of bees in meat and dairy production is described in terms of their effect on production.

**element 2**

Describe the factors affecting the numbers of beehives required for crop or orchard pollination, their conditioning requirements, location, and arrangement.

**performance criteria**

2.1 The description details the relationship between foraging strength and beehive size, and the number of beehives required to pollinate a specified crop or orchard, and location.

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2.2 The factors determining the number of beehives required per hectare of crop or orchard is described for a specified location.

Range: number of bees and other pollinators already present, size of the crop or orchard, presence of competing crops or orchards of the same or different species.

2.3 The factors determining the conditioning requirements of beehives are described for a specified crop or orchard.

2.4 The factors determining the arrangement of beehives in the crop or orchard are described for a specified location.

Range: amounts of nectar and pollen available, weather conditions, physical features of the area.

**element 3**

Describe the management of bees for pollination.

Range: bees - alkali bee, bumble bees, lucerne leafcutter bee.

**performance criteria**

3.1 Bees are described in terms of the crops they pollinate, management requirements for enhancing populations, the attributes which make them good pollinators, the factors which limit their usefulness, and the factors which limit their presence.

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**Comments on this unit standard**

Please contact the Agriculture Industry Training Organisation [standards@agricultureito.ac.nz](mailto:standards@agricultureito.ac.nz) if you wish to suggest changes to the content of this unit standard.

**Please Note**

Providers must be accredited by the Qualifications Authority or a delegated inter-institutional body before they can register credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by the Qualifications Authority before they can register credits from assessment against unit standards.

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Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.

Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for providers wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

This unit standard is covered by AMAP 0052 which can be accessed at <http://www.nzqa.govt.nz/framework/search/index.do>.