



**Beekeeping Certificate III**  
**Participants Learning Guide**

**RTE3901A Comply with industry quality assurance requirements**



**Australian Government**  
**Department of Agriculture,  
Fisheries and Forestry**



**Australian Honey Bee  
Industry Council**

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Judith Nettleingham and Bruce White assert their moral rights to be identified as the authors of this publication.

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## What this learning guide covers

This learning guide will help you meet the requirements of the unit of competency:

- *RTE3901A Comply with industry quality assurance requirements*

You may also wish to undertake the following units of competency which are also relevant to quality assurance and food safety:

- *FDFCORFSY2A Implement the food safety program and procedures*
- *FDFCORQAS2A Implement quality systems and procedures*
- *FDFOPTHCP3A Participate in a HACCP team*

## Resources you will need for this unit

For this unit of competency, you should have:

- Participants Learning Guide (this booklet)
- Participants Assessment Workbook
- Templates and other materials for the quality assurance program your enterprise is using.

**The Participants Learning Guide** is designed to introduce the topics and to provide you with some practical and written activities which will allow you to develop both your knowledge and skills in each area.

**The Participant Assessment Worksheets** include activities that you will be completing as part of your formal assessment for this unit.

Please record as much detail as you can as your responses to these activities will form part of your assessment.

You will need to send the Participants Assessment Worksheets to your assessor. Check with your assessor to find out if they need you to submit this Participants Learning Guide as well.

## Introduction to this unit

### **In this unit, you will learn about:**

- implementing quality assurance practices on food safety and quality, biosecurity and animal welfare
- implementing standard operating procedures
- reporting problems that affect quality.

### **Before you start this training you should be confident about your skills to:**

- implement quality assurance practices on food safety and quality, biosecurity and related areas
- implement standard operating procedures
- report problems that affect quality.

### **You should know about:**

- industry QA requirements, such as those included in B-Qual and Bee Sure
- HACCP (Hazard Analysis Critical Control Point) approach to quality assurance
- enterprise policies, guidelines and standard operating procedures (SOP's) relating to food safety quality, biosecurity, and other areas.
- enterprise OHS requirements.

# 1. Apiary industry quality assurance programs

## What is quality?

'Quality' is a word that has many meanings. Some of the most relevant are:

- a distinguishing property or characteristic
- a degree or standard of, for example, excellence.

These meanings imply that a quality product has particular characteristics and is of an identifiable standard. This does not necessarily mean that a 'quality product' must be of the highest or most excellent standard. It means that it is consistently and reliably of a known standard.

Formal standards are set for some products and processes, for example those included in B-Qual, others administered by Standards Australia or the National Standard for Organic and Bio-Dynamic Produce administered by the Australian Quarantine and Inspection Service. Other products do not have a formal standard but producers can still manage their processes so that they are able to produce a quality product.

## What is quality assurance?

According to the Quality Assurance Association of Australia, 'Quality Assurance is the planned and systematic pattern of all actions necessary to provide adequate confidence that the product optimally fulfils customer's expectations. It is the set of activities ensuring that requirements are clearly established and the defined process complies to these requirements.'

Quality assurance allows you and your customers to be confident that in all aspects of your business you follow a consistent and systematic approach designed to produce a quality product. For some enterprises such as beekeeping businesses, a quality product also means one that meets all food safety requirements.

Beekeepers and honey producers can use one of a number of quality assurance programs that are designed for businesses engaged in the production of food for human consumption.

There are two programs of particular relevance to beekeepers and honey producers. These are:

- B-Qual
- B-Safe.

There will be other options available to you, but at present, these are the only QA programs that have been developed specifically for the apiary industry with templates written to suit apiary businesses. As the B-Qual materials are all available from the B-Qual website, this Learning Guide uses B-Qual as an example. It is strongly recommended that you look at the manuals and other documents that are available on the B-Qual website. B-Qual has also provided a set of learning materials which are very useful.

### **What is in a typical QA program?**

A typical quality assurance program consists of:

- quality standards to be achieved
- a systematic approach to carrying out work so that work processes and products are likely to meet the standards
- documents that will guide the enterprise in implementing and managing its quality assurance program
- record keeping that help the enterprise demonstrate that it is working towards complying with those standards
- periodic reviews and audits, either by the producer or by an independent auditor, to check where the work processes comply with the standards and where improvements can be made.

Enterprises will never be able to put a quality system in place in 'one go'. It is usually a matter of making small systematic improvements to work processes over time.

**Activity**

What do you think are the benefits of implementing a QA program?

For the owner of the business

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For the employee of the business

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For the honey consumer

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## **Documenting the program**

Each business should have its own quality manual. This will include:

- the areas of the enterprise's activities that are covered by the quality assurance program
- the quality goals that the enterprise wishes to achieve
- standard operating procedures (SOP)
- work instructions
- examples or templates that can be used to record necessary information.

The purpose of a SOP is to document how a process is to be performed and so to help you identify when something is not as it should be – either in the way that it is operating (e.g. temperature to be maintained) or in the end result (e.g. water content of honey).

A work instruction is a list of activities for workers to follow so that work is carried out efficiently while minimising the risk to food safety. In B-Qual, for example, there are work instructions covering many areas of operations, including extracting honey, pest control and honey grading. These work instructions can be adapted to suit each business.

## 2. Identifying hazards and critical control points

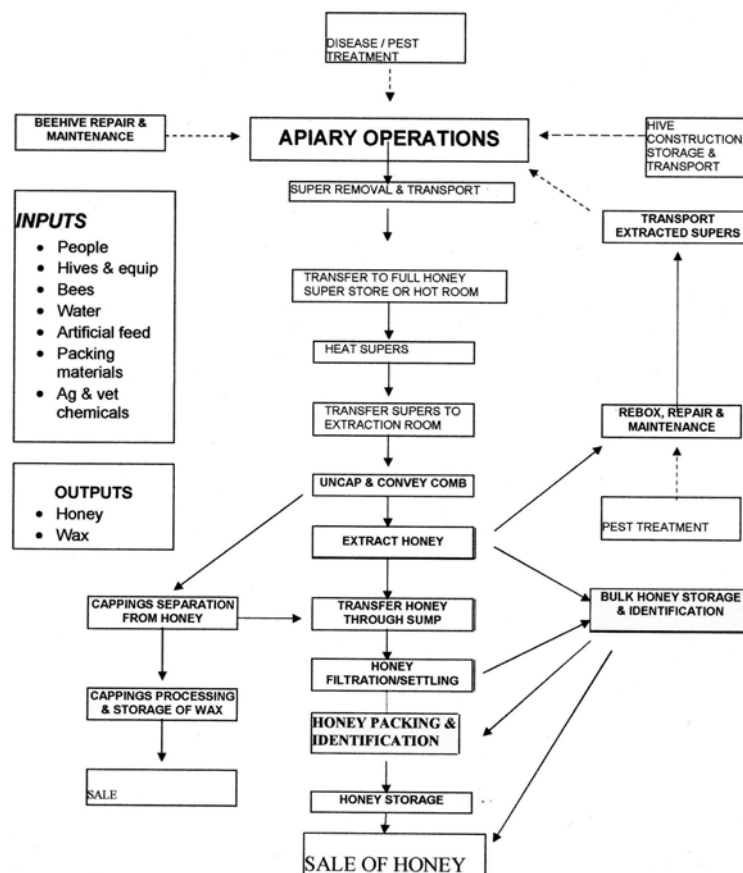
### What is a hazard?

Hazards are commonly classified as:

- Physical hazards where foreign objects such as broken needles, nails or wire are present in the product begin processed.
- Chemical hazards are most likely to result from residues such as antibiotics, pesticides, cleaning agents and other substances used in honey production.
- Biological hazards such those that arise from contamination from other animals (e.g. mice, rats, cats), poor storage/transport conditions, and dirty water affects food quality.

Food quality hazards may result from any or all of the above.

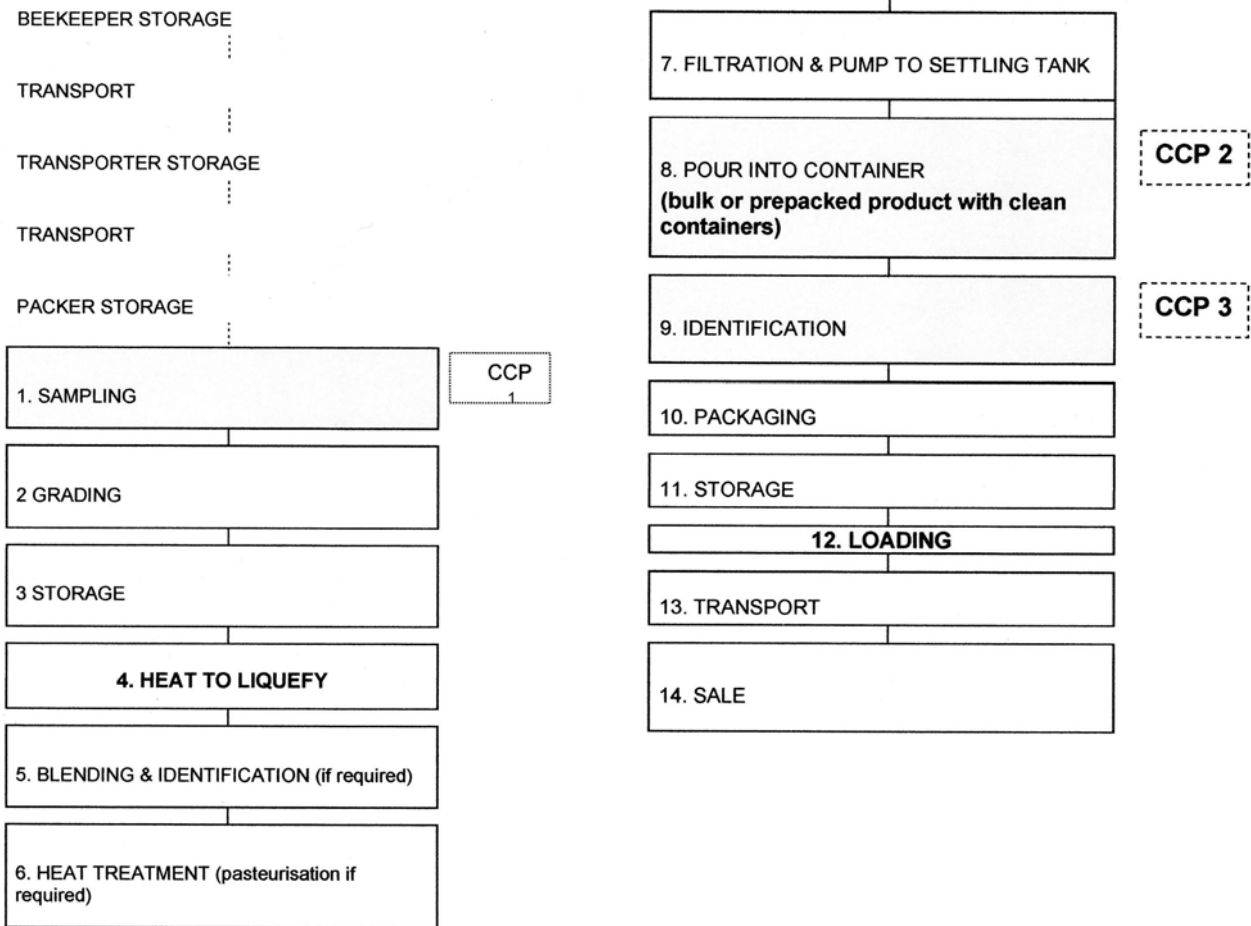
One way to identify hazards is to develop a process flow chart. The following example has been taken from the B-Qual manual and shows all the main steps in the process of producing honey for sale:



### **What is a critical control point?**

A critical control point is a point in the process where a hazard may occur and where quality can be affected. For example, one critical control point in the production of honey would be when the extracted honey is being drained into containers. At this point, it is possible for physical contaminants to be accidentally drained into the containers with the honey, by draining the tank to the bottom into containers this will result in froth and small pieces of wax being put into the last containers filled if the top of the honey in the tank has not been skimmed correctly.

The chart on the next page, also taken from the B-Qual manual, shows where critical control points (CCP) have been identified for the process from the point when the honey is put into storage at the packer's premises. These are the points where the enterprise would need to establish means of controlling and monitoring the risks and recording observations or data from the process, such as the identification numbers of each batch of honey.



**Activity**

Review your process and identify the hazards and the critical control points where the quality of your honey may be affected.

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### 3. Observing and reporting non-conformances

Now that you have identified the main hazards and the critical control points, you should be able to decide where standard operating procedures (SOP) would be useful for you and your employees or work colleagues.

When you are carrying out your work routines, you should be following a standard operating procedure. If you find that you cannot carry it out, because circumstances have changed or something has gone wrong, then you are observing a non-conformance. For example, you would observe a non-conformance when the uncapping machine fails to uncap all the cells because the blades have been set at the wrong depth or frames with too much brood were being extracted.

The most important non-conformances will be those that directly affect either the quality of the product, including its suitability for human consumption, or those that endanger worker safety.

**Activity**

Identify one area where you have observed the potential for an important non-conformance.

Develop a short standard operating procedure that specifies how the task is to be carried out consistently and safely.

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## 4. Record keeping

Records are important for audit purposes so you can trace all the steps taken by you to provide a product that the public has confidence in. Every QA program will have a number of records that need to be kept to demonstrate that the enterprise and its procedures comply with the standards. Few people get excited about making and keeping records and as beekeepers are very practical people, any records that are to be kept must be essential, easy to do, add obvious value to the enterprise and be relevant to the quality system.

### **Training**

In a quality system, all personnel should receive the training they need in order to be able to carry out their responsibilities.

Records should be kept of the training that people have done. One advantage of competency-based training and assessment is that participants who complete the assessments will receive a nationally recognised statement of attainment. This would be an excellent record of training. Not all training need be accredited – for example, your supervisor might show you how to check that the frames have been loaded correctly into the uncapping machine and then check that you could do this yourself without help. They would then make a note of this. This note would be evidence of training

## 5. Selecting a QA program to suit you

- Research the programs and compare them.
- Identify what features are most important to you.
- Compare prices and support available.
- What commercial benefits will there be in selecting one rather than another one?
- What are the audit requirements?
- Can these be combined with other inspections and audits e.g. for organic certification?

## Final activities and assessment

Now that you have completed all the activities in this Learning Guide, take some time to familiarise yourself with how an industry QA program should operate in your workplace and what your role is in complying with the requirements.

When you are ready, you can complete the assessment tasks that are listed in the Participants Assessment Workbook for this unit of competency.

## Useful references

*Bee Agskills: A Practical Guide to Farm Skills*, 2007, NSW Department of Primary Industries

*The Bee Book: Beekeeping in Australia*, 2nd edition, 2005, Peter Warhurst and Roger Goebel, Queensland Department of Primary Industries and Fisheries available from <https://www.publications.qld.gov.au/>, or phone 1800 801 123.

B-Qual <http://www.b-qual.com.au/>

*Food safety and quality consultants* - a register maintained by Seafood Services Australia <http://www.seafood.net.au/portal/listings.php?pid=637>

Standards Australia <http://www.standards.org.au/default.asp>

## Appendix – Food safety agencies and legislation

**Note:** You must check that you know the most recent regulations that apply in the state and/or territory in which you are working. In some states and territories, primary production enterprises are not required to comply with all the proviso of the relevant state food safety legislation.

The following website will take you to all the relevant legislation and regulations for all states and territories:

<http://www.ausfoodnews.com.au/db/foodlaw/legislation>

### **Australian Capital Territory**

*Food Act 2001*

The ACT Department of Health administers this Act.

<http://health.act.gov.au/c/health?a=da&did=10192956>

### **New South Wales**

*Food Act 2003*

The NSW Food Authority is the NSW government agency responsible for regulating food production and food safety throughout the state. Under the *Food Act 2003*, the role of the Food Authority is to ensure that food in NSW is safe, correctly labelled and consumers have sufficient information in choosing the food they eat.

<http://www.foodauthority.nsw.gov.au/index.asp>

### **Northern Territory**

*Food Act*

The Act is administered by the Department of Health and Community Services

[http://www.nt.gov.au/health/healthdev/environs\\_health/environmental/food\\_safety.shtml](http://www.nt.gov.au/health/healthdev/environs_health/environmental/food_safety.shtml)

### **Queensland**

*Food Act 2006*

The Act is administered by the Queensland Department of Health.

<http://www.health.qld.gov.au/industry/food/>

The Department of Primary Industries and Fisheries is responsible for the *Food Production (Safety) Act 2000*

[http://www.dpi.qld.gov.au/cps/rde/xchg/dpi/hs.xsl/4790\\_4822\\_ENA\\_HTML.htm](http://www.dpi.qld.gov.au/cps/rde/xchg/dpi/hs.xsl/4790_4822_ENA_HTML.htm)

Safe Food Queensland looks after the operational aspects of food safety.

<http://www.safefood.qld.gov.au/index.php>

### **South Australia**

*Food Act 2001 and Food Regulations 2002*

The Act is administered by the Department of Health

<http://www.health.sa.gov.au/pehs/food-index.htm>

### **Tasmania**

*Food Act 2003*

This Act is administered by the Department of Health and Human Services.

<http://www.dhhs.tas.gov.au/agency/pro/foodsafety/index.php>

### **Victoria**

*Food Act 1984*

The Act is administered by the Department of Human Services

<http://www.health.vic.gov.au/foodsafety/>

### **Western Australia**

*Health Act (WA) 1911*

The Act is administered by the Department of Health. It is being replaced.

<http://www.health.wa.gov.au/envirohealth/food/foodsafety.cfm>