

Self Learning Program



B-QUAL

Unit 1 – Exercise 2, FSP/RMP Implementation

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PREPARING YOUR FOOD SAFETY PROGRAM

1. Work through the Self-Learning Program at your own pace.
2. Read each objective and instructions thoroughly before putting pen to paper
3. Follow the instructions
4. **KEEP IT SIMPLE**
5. Use the self-checks and sample documentation to guide your thoughts and help you develop your system and procedures.

Although this booklet will not be your FSP, the exercises that you do could be if you choose. If it is possible, the worked examples that you do should be the contents of your quality system – doing your own system as you go will save you time.

UNDERSTANDING FOOD SAFETY

Overview

When you have completed this section, you should be able to demonstrate an understanding of Hazard Analysis Critical Control Point (HACCP) systems and how they are used within the Australian Honey Bee Industry.

Documenting procedures ensures that jobs and tasks are completed the same way every time, and provides a backup for when the person normally responsible for ensuring jobs are completed is not available.

Instruction

In Exercise 3, we will concentrate on having 'clean equipment in place'. This will require a revision of food safety and food handling principles that you will learn in this exercise.

In this exercise you are required to:

- Address each of the sections as per the instructions provided;
- Complete your own quality system at the same time (optional);
- At the end of Exercise 2, you should complete the relevant sections of the assessment booklet.

THE FOOD SAFETY PLAN

Objective:

When you have completed this section, you should be able to construct a FSP and demonstrate through written assessment tools a competent understanding of the component parts of a FSP.

Purpose:

The purpose of the section is to provide information on the principles of FSP development, and provide practical examples and explanation of the FSP in and its application in producing clean and safe honey and honey products.

Scope

This section will deal separately with each component part of the FSP.

That is:

- Quality Policy Statement
- Contents Page
- Plant Layout and Locality Map
- The HACCP Team
- Scope and Purpose
- Raw Materials
- Hazards
- Process Flow Charts
- Verification Statement
- Hazard Management Table
- Decision Tree (Determination of CCP's)
- Hazard Audit Table

- Verification Plan

Presentation

Each section of the FSP will have a standardised presentation so that this B-QUAL Self Learning Program may be used when time is available to you. In this way, a repetitive style is employed. The steps that are used are as follows:

- 1) FSP component name.
- 2) Overview of the subject which is cross referenced so that you can read further on the subject if you wish.
- 3) Instruction of what you are required to do.
- 4) Subject break up where we discuss each part of the task and provide a reason for its position in the FSP.
- 5) You complete the task.
- 6) You do a self check of the task.
- 7) Move to the next task when you have time.

Methodology

Each of the FSP parts is presented in the Self Learning Program in the same order as the B-QUAL Approved Suppliers Manual.

Note that this sequence may vary from other FSP sequences that you are familiar with. To maintain consistency, the order of tasks/components will therefore be maintained according to the B-QUAL Standard format.

Tools

You will need the:
B-QUAL Approved Suppliers Manual
B-QUAL HACCP Workbook

QUALITY POLICY STATEMENT

Overview

The quality policy statement is a method of addressing company commitment within the quality system. Read Step 1 of the 14 Steps to Implement HACCP.

Instruction

You are required to address all areas of the quality policy statement. See the worked version below:

QUALITY POLICY STATEMENT

I, *B. Keeper*, ensure that all honey bee products produced from this business comply with the B-Qual Australia Pty Ltd Approved Supplier Program requirements. This is achieved through compliance with the standards in the following table:

Standard	Objective	Check (✓)
Apiary	To manage a sustainable apiary business efficiently and profitably.	✓
Extraction	To produce a safe and wholesome product to meet packer expectations.	✓
Packer & Sales direct to public	To supply safe, wholesome quality products to the public.	✓
Biosecurity	To minimise the risk of honey bee disease outbreaks and spread and product contamination.	✓
Organic	To produce organic honey that is compliant with the National Standard for Organic and Biodynamic Product.	
Pollination	To provide a high standard of bee pollination services.	
Queen Bee	To produce high quality queen bees and queen cells through good management practices.	
Other*	To produce Pollen [], Comb Honey [], Propolis [], Royal Jelly [], Package Bee [] product/s compliant with B-Qual Australia Pty Ltd standards.	

* Tick appropriate specialised activity.

The registration number of this business is *X123* and it consists of up to *500* hives. Site work activities are documented in the relevant Work Folder. A list of all maintained sites is provided in the reference section of this manual.

Queen bees are only purchased from B-Qual accredited suppliers. Storage and transport requirements associated with this business comply with the B-Qual standards.

Biosecurity standards that meet Animal Health Australia requirements have been implemented.

Quality hazards that cause an adverse affect on honey quality or the production process and hence profitability have also been addressed. Management strategies are in place to minimise these hazards.

This manual incorporates a Food Safety Program in accordance with B-Qual Australia Pty Ltd and Food Standards Australia New Zealand requirements. This business aims to minimise chemical, physical and biological food safety hazards and to meet legislative and consumer requirements.

I have registered my business with B-Qual Australia Pty Ltd and I agree to maintain and review the program as outlined in this manual on an on-going basis.

Signed (Owner): *B. Keeper*

Date: *00/00/00*

Address: *123 Beekeeper Place,*

Phone: *(00) 12345678*

FAMILY MEMBERS / WORKERS	I understand & agree with the requirements outlined in this quality manual (✓)	SIGNATURE	DATE
<i>B. Hive</i>	✓	<i>B. Hive</i>	<i>00/00/00</i>

▶▶ GO TO –

the B-QUAL Approved Supplier Manual, section 2.2 and complete this task

SELF CHECK

Have you:

- **Named the person responsible for the quality system;**
- **Ticked those areas of the Standard that are relevant to your operation;**
- **Included the registration number of your business (this will usually be the State registration number);**
- **Indicated the number of hives that you have in production;**
- **Signed and dated the form;**
- **Included your address and phone number;**
- **Checked that all workers and family members have been included within the attached table and have signed and dated the form.**

If you have ticked all points; you have completed this section.

▶▶ GO TO – Contents Page

CONTENTS PAGE

Overview

To get around a quality system it is important to provide a description of where to find certain parts of the system. To do this it is important to make sure your contents page is correct. B-QUAL has provided a contents page for your use.

Instruction

For the purposes of the B-QUAL Self Learning Program, you may use the contents page as it is presented. There is no need to amend this page, unless there are areas of the B-QUAL Approved Supplier Program that have been deleted. Remember you need to maintain justification if you have deleted any sections.

CONTENTS

HACCP No.	Title
	Floor Plan
	HACCP Food Safety Plan Prerequisites
01	Team
02	Scope & Purpose - product description & intended use
03	Raw Materials
04	Hazards
05	Process Flow Charts
	- Overview
	- Handling, Transport & Extraction
	- Honey Storage & Packing
06	Verification of Process Flow Charts
	HACCP Plan
07	Hazard Management Table
08	Determination of Critical Control Points
09	Hazard Audit Table
10	HACCP Plan Verification & Implementation

SELF CHECK

Have you:

- **Made amendments to the CONTENTS table if there has been sections of the FSP that have been deleted.**
- **If amendments to the FSP have been undertaken; have records and justification been maintained.**

If you have ticked all points; you have completed this section.

▶▶ GO TO — Plant Layout and
locality Map

PLANT LAYOUT AND LOCALITY MAP

Overview

The plant layout and locality map allows you to demonstrate the key components of your processing facilities. This means that a simple diagram is required so that your facilities are defined.

Instruction

If you have plans for your processing facility it is OK to cross reference your quality system to these plans. Alternatively you may want to take a copy and attach. If you do not have plans for your enterprise in another form, provide a sketch to the best of your ability. You should include as much detail as possible. You are required to approve them by initialling and dating the top right hand corner of the

REFERENCE	HONEY PROCESSING PLANT LAYOUT	Version: 1.0 Page: 1 of 1	Approved: Date:
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FLOOR PLAN
Insert YOUR design

LOCALITY MAP

Insert YOUR design

SELF CHECK

Have you:

- **Provided a plan of the processing facility.**
- **Provided a locality map of the enterprise.**
- **Completed the header with your initials and the date of approval.**

If you have ticked all points; you have completed this section.

▶▶ GO TO — The HACCP Team

THE HACCP TEAM

Overview

As described in ‘Step 2: Set up a HACCP Team in the HACCP Workbook’; the HACCP team is pulled together from within the enterprise and/or brought in from outside of the organisation to address the FSP. In the case of B-QUAL, the Australian Honey Bee Industry through B-QUAL Australia Pty Ltd has implemented the B-QUAL Standards. The B-QUAL Standards and the B-QUAL Approved Supplier Program have addressed the generic requirements of normal honey production. This means that the emphasis on the ‘HACCP Team’ may not be as critical as would normally be the case. This work has been done for you if you produce honey according to these Standards.

Instruction

Read ‘Step 2: Set up a HACCP Team in the HACCP Workbook’.

Complete the HACCP Team table in Section 2.7 of the B-QUAL Approved Supplier Program Manual. If you do not sell honey direct to the public, you may choose to complete the same table in Section 2.6 (ie. Form HACCP 01).

When you are happy with the ‘Team’ initial and date the header.

HACCP 01	TEAM	Version: 1.0 Page: 1 of 1	Approved: <i>B. Keeper</i> Date: 00/00/00
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Function in team	Name	Position in company	Skills
Chairman	<i>B. Keeper</i>	Manager/ owner	Apiary & people management, computer skills, HACCP skills.
Member		Member	Bee industry skills.
Member		Consultant	Bee industry, HACCP, Food Safety & QA skills.
B-Qual Facilitator			

Note: Mr Keeper is a sole operator.

SELF CHECK

Have you:

- **Completed the HACCP team table.**
- **Amended the table to reflect your operation.**
- **Completed the header with your initials and the date of approval.**

If you have ticked all points; you have completed this section.

▶▶ GO TO — Scope and Purpose

SCOPE AND PURPOSE

Overview

Note that for further reading on the Scope and Purpose, turn to the B-QUAL HACCP Workbook at:

‘Step 3: Define the Scope of the HACCP System’; and

‘Step 4: Describe the Product and the Intended Consumer’.

You should not be confused with the variation in the headings. The combined approach taken by B-QUAL has compressed the requirements into a single form. All relevant areas to honey have been addressed in full.

If you are preparing an RMP; you are required to prepare a scope and purpose. It follows that the detail in an RMP may not be as great as in a FSP.

Instruction

Read the HACCP theory as noted in the overview above. Read the scope, purpose and product description in the B-QUAL Manual at HACCP 02 as shown below. Amend the sections as required. Complete the header.

HACCP 02	SCOPE & PURPOSE	Version: 1.0 Page: 1 of 1	Approved: <i>B. Keeper</i> Date: <i>00/00/00</i>
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Scope:

The HACCP plan covers all areas of honey production. It applies to honey producer/packers and packers who produce, prepare and sell honey for human consumption, directly to other honey buyers and/or direct to the general public and/or export. This Food Safety Program does not include use of honey for infants.

Purpose:

The purpose of the HACCP plan is to minimise the risk of chemical, physical and biological food safety hazards in the honey industry and to meet legal obligations.

Product Description:

Common name:	Honey
Characteristics:	Honey must contain no less than 60% reducing sugars and no more than 21% moisture (FSANZ Standard 2.8.2).
How is it to be used:	<ul style="list-style-type: none"> • Spread or drink for human consumption. • Ingredient in manufacture of other foods. • Medication treatment for humans. • Stock food (low-grade product).
Storage	Honey is stored in clean containers, preferably under shelter to minimise honey deterioration.
Type of package:	Glass, food grade plastic, or galvanised/plastic drums.
Shelf life:	Indefinite under ideal conditions but colour, flavour and aroma and appearance (granulation) may deteriorate over time. Honey is best consumed within 12 months of hive extraction.
Where will it be sold:	Various packers and the general public. <ul style="list-style-type: none"> • •
Labelling instructions:	Labelled prior to transport and/or sale.
Special distribution control:	Not applicable
Important food safety characteristics:	<ul style="list-style-type: none"> • No chemicals, antibiotics or heavy metals above MRL. • Minimal contamination through sound hygienic practices. • Minimal carriage of pathogens.
Sensitive Customers	<ul style="list-style-type: none"> • Allergic reactions to Royal Jelly, Pollen and Propolis. • Food for infants under six months must not contain honey unless a culture test reveals an absence of <i>C botulinum</i> spores.

SELF CHECK

Have you:

- **Completed the scope and purpose.**
- **Amended the scope; purpose and product description to reflect your operation.**
- **Completed the header with your initials and the date of approval.**

If you have ticked all points; you have completed this section.

▶▶ GO TO — Raw Materials

RAW MATERIALS

Overview

Raw materials are addressed within B-QUAL so as to provide traceability on inputs to the production process. If there is a contamination issue with the likes of heavy metals, the raw materials inventory should allow you to trace where it was purchased from so the problem may be solved.

The raw materials list should evolve over time. If a supplier does not meet the product specification and a new supplier is engaged, the old supplier should be ruled out and the new supplier included. This list is often used by beekeepers to keep contact information for suppliers as well. We all tend to forget phone numbers of suppliers from time to time.

Instruction

List the common raw material inputs to the beekeeping operation in the table below. For the likes of general hardware items, an item heading of General Hardware is fine. Specific hardware items such as timber for frames and boxes should be listed separately.

Don't forget to complete the header.

HACCP 03	RAW MATERIALS	Version: 1.0 Page: 1 of 1	Approved: Date:
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ITEM	PRODUCT SPECIFICATIONS	APPROVED SUPPLIERS
Foundation comb	Plastic	ABC foundation supplies
Foundation	Beeswax	Roll and Co
Wood preservatives	Copper Napthanate	Stable timber Co

Queen Bees	Laying	Queen Bee Co
General Hardware	Fasteners (staples and nails, glue, thinners, nails, etc	

SELF CHECK

Have you:

- **Completed the raw products list with the item name; product specification and the approved supplier.**
- **Completed the header with your initials and the date of approval.**

If you have ticked all points; you have completed this section.

▶▶ GO TO — Hazards

HAZARDS

Overview

The B-QUAL Standards have addressed hazards within the honey bee industry. As a rule; most beekeepers will operate within the normal practices of Australian beekeepers and if this is the case for you, the hazards identified within HACCP 04 at section 2.7 of the B-QUAL Approved Supplier Program will have addressed most of these requirements for you.

For further reading on Hazards you should read ‘Step 7: Conduct a hazard analysis of the process (P1). P1 stands for Principle 1. There are 14 Steps and 7 principles within the B-QUAL HACCP Workbook.

Remember at this stage you are only identifying potential hazards. It is better to have a wide net than to be too narrow and miss an important hazard. Granotoxins are a good example of this. It does little harm to leave hazards in the hazard table. You may be able to eliminate them later in the process of HACCP.

It is important to note that B-QUAL deals with hazards ahead of the flow diagram to link hazards in with the physical product and also the other raw product inputs. The B-QUAL HACCP Workbook is not in this order as it has remained in the same order as Codex HACCP. There is no right or wrong way to deal with these steps.

Instruction

It is important for you to read Step 7 in the HACCP Handbook to appreciate the process of performing this step. We will be dealing with the flow diagram and hazard management tables soon. If you are unsure, it is OK at this point to move ahead and read about these requirements so that you appreciate how HACCP 04 (Hazard Table) fits in.

You are required to address this section and ensure the hazards as identified are relevant to you. For example, the likes of Granotoxins that are derived from Rhododendrons may not be relevant to you if there are no large plantings of these shrubs near your apiary locations. If you are not sure, it is best to leave the hazard in place.

Move through HACCP 04, HAZARDS as shown below. Remember that this is a wide net to ensure all possible hazards are addressed in an organised way. We are identifying the hazards along with their controls. You need to make sure that this applies to your enterprise.

Complete the header with your initials and date of approval.

We will deal with the significance of hazards and preventive measures later when the Hazard management table is addressed.

HACCP 04	HAZARDS	Version: 1.0 Page: 1 of 2	Approved: Date:
Hazard	Control		
1. Chemical			
Antibiotics Alkaloids Granotoxins	<ul style="list-style-type: none"> ◆ Compliance with B-Qual Standards and quality assurance program. ◆ Treatment, Site, Disease Monitoring and Vendor Declarations completed. ◆ Completed Vendor Declarations if hives from other beekeepers. ◆ Honey from hives treated with Oxytetracycline is processed separately. ◆ Honeys are identified according to floral source to minimise the risk of chemicals such as alkaloids (eg. Patersons Curse, Heliotrope, Fireweed, Potato weed etc). Product with high levels are discarded or blended. In the case of granotoxins, sites with rhododendrons are avoided. Vendor Declarations are completed. ◆ Food handling, maintenance, hygiene, cleaning, sanitation and pest control procedures minimise chemical contamination in processing areas. 		
Agric. Sprays	<ul style="list-style-type: none"> ◆ Hive location minimises risk of contamination from agricultural sprays. 		
Metal	<ul style="list-style-type: none"> ◆ Food grade equipment generally used. Equipment not constructed with food grade material is covered with an approved food grade paint or protective covering. ◆ Soldered joints are covered with food grade paints. ◆ Galvanised drums are not used for long term storage to minimise the risk of zinc contamination. Internal surfaces of drums are inspected before use for cleanliness and corroded or worn surfaces. 		
Chemical Storage	<ul style="list-style-type: none"> ◆ Chemical storage areas are separated from processing areas. No chemicals are used or stored in processing areas. ◆ Chemical storage areas maintained in a clean and tidy state. 		
Traceback	<ul style="list-style-type: none"> ◆ All hives are identified. In the event of a disease outbreak, supers are identified in accordance with brood chambers (barrier system). 		
2. Biological			
Microbial	<ul style="list-style-type: none"> ◆ Bee escapes in processing areas minimise faecal contamination. ◆ Food handling, maintenance, hygiene, cleaning, sanitation and pest control procedures minimise microbial contamination in processing areas. 		
<i>C. botulinum</i>	<ul style="list-style-type: none"> ◆ This Food Safety Program does not include use of honey for infants. This is the responsibility of a processor's food safety program if honey is to be processed for use in infant foods. 		
GMO's	<ul style="list-style-type: none"> ◆ Hives normally located away from GMO crops. Proximity of GMO crops recorded and product labelled accordingly when appropriate. 		

HACCP 04	HAZARDS	Version: 1.0 Page: 2 of 2	Approved: Date:
Hazard	Control		
3. Legal			
Moisture ($\leq 21\%$)	<ul style="list-style-type: none"> ◆ Honey is checked for ripeness before removal from hives. ◆ Honey is generally not packed above 18.6% moisture as there is financial penalty for high moisture content. However, there are markets for higher moisture content honeys but these still less than 21%. ◆ Honey not stored for long periods, particularly during periods of wet weather. ◆ Packers record moisture contents of honey (pfund reading). ◆ High moisture content honeys are often blended with lower moisture content honeys. ◆ In processing areas, covers are fitted where appropriate to prevent steam and water from contaminating honey. Pipes and fittings are checked before use. ◆ Lids or bungs of storage containers have effective moisture proof seals. Drums can be stored on their sides to minimise moisture entry through the bung. 		
Labelling	<ul style="list-style-type: none"> ◆ Compliance with Food Standards Code labelling requirements. ◆ Honey graded and checked prior to identification/labelling. Grading equipment is calibrated. A small sample of honey is stored for recall purposes. 		
4. Quality	<p>Quality does not impact on food safety but it is critical to the production of honey. Therefore, some quality issues are addressed in this program.</p> <ul style="list-style-type: none"> ◆ Short storage periods minimise moisture build up in honey and high levels of HMF. ◆ Temperature-time for optimal processing conditions is not exceeded for the production of quality honey. ◆ Sufficient heat, which is within temperature limits, is provided to ensure that the honey flows. ◆ Experienced honey graders used to grade honey for colour, moisture and flavour. 		
5. Contaminated Honey	<ul style="list-style-type: none"> ◆ Spilt honey is processed separately and not used for human consumption. ◆ Contaminated honey is labelled and disposed of according to council requirements. 		

SELF CHECK

Have you:

- **Completed the further reading in the B-QUAL HACCP Workbook as directed.**
- **Read and amended the hazards within HACCP 04.**
- **Completed the header with your initials and the date of approval.**

If you have ticked all points; you have completed this section.

▶▶ GO TO — Process Flow Charts

PROCESS FLOW CHARTS

Overview

The flow charts should reflect what is actually done. They are a useful tool to provide an overview of your operation and those critical steps that take place. It is often the case that what we think we do can be broken down to more meaningful detail so that we can better control the processes.

The steps in the flow diagram provided are for a generic beekeeper that sells honey direct to the public. **If you sell to a packer/s, you only need to complete an RMP.**

For further reading you should revert to ‘Step 5: Construct a detailed process flowchart and verify the flowchart’ in the B-QUAL HACCP Workbook.

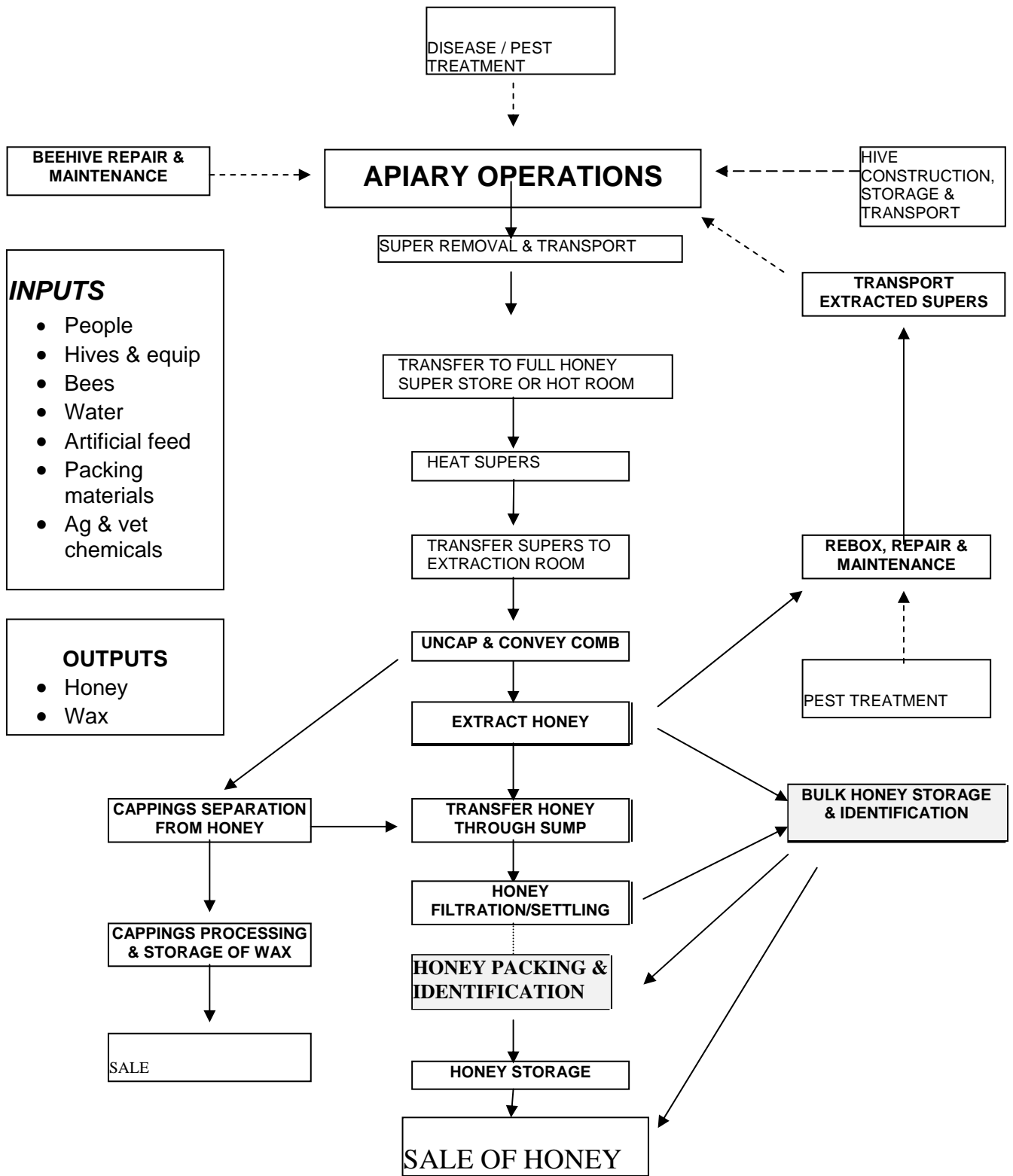
Instruction

Read the relevant section of the B-QUAL HACCP Workbook. Note that you are required to address both HACCP 04 and HACCP 05 flow diagrams. The first flow diagram shows the flow of product through to sale. The Control Points (CPs) are then identified on the second flow diagram. You need to ensure that if you modify one diagram, that you modify the other, or you will be out of step. The boxes that are marked with dotted lines around them with CCP in the middle show the decision to include these as Critical Control Points (CCPs). Don't get too concerned with this at this stage. Later, at the Hazard Management Table (HACCP 07) we will

apply the decision tree and risk assessment techniques to classify the HAZARDS at these CCPs and CPs.

Complete the header (initial and date of approval) when you are satisfied that the flow diagrams reflect your operation.

HACCP 04: PROCESS FLOW CHARTS HONEY & BEESWAX PRODUCTION OVERVIEW	Version: 1.0 Page: 1 of 1	Approved: Date:
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Note: The B-Qual Food Safety Program begins at the process step 'Honey Storage and Identification' and ends with the process step 'Sale of Honey.' The critical areas of processing in the Food Safety Plan are shaded and are expanded in the following flow diagrams with comments provided in the corresponding hazard analysis.

HACCP 05: PROCESS FLOW CHARTS HONEY STORAGE & PACKING	Version: 1.0	Approved:
	Page: 1 of 1	Date:

BEEKEEPER STORAGE



TRANSPORT



TRANSPORTER STORAGE



TRANSPORT



CHEC

PACKER STORAGE



1. SAMPLING

CCP
1

2 GRADING

3 STORAGE

4. HEAT TO LIQUEFY

5. BLENDING & IDENTIFICATION (if required)

6. HEAT TREATMENT (pasteurisation if required)

7. FILTRATION & PUMP TO SETTLING TANK

8. POUR INTO CONTAINER
(bulk or prepacked product with clean containers)

CCP 2

9. IDENTIFICATION

CCP 3

10. PACKAGING

11. STORAGE

12. LOADING

13. TRANSPORT

14. SALE

SELF CHECK

Have you:

- **Completed the further reading in the B-QUAL HACCP Workbook as directed.**
- **Read and amended the flow diagrams as required.**
- **Completed the header with your initials and the date of approval for each flow diagram.**

If you have ticked all points; you have completed this section.

**▶▶ GO TO — Verification
Statement**

VERIFICATION STATEMENT

Overview

For further reading go to 'Step 5: Construct a detailed process flowchart and verify the flowchart'.

The flowchart verification step is important. It is essential that the process flowchart be verified as accurate and complete. It means that you have stepped through your operation and checked that the flowchart is accurate.

Instruction

Read the relevant area of the B-QUAL HACCP Workbook as noted above.

Read the verification statement; you should not change this statement unless you have a justifiable reason to do so. The elements of the statement are required by B-QUAL.

Complete the verification process for the flow charts.

Note that the verification statement asks you to sign off on the procedures etc at this point. If the procedures/work instructions have not been completed, it is OK to complete this page at a later date. You should place a reminder on the page so that you don't forget.

Complete the header with your initial and the approval date.

HACCP 06: VERIFICATION OF PROCESS FLOW CHARTS	Version: 1.0 Page: 1 of 1	Approved: Date:
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The accuracy of the HACCP flow diagrams, work procedures and production records have been verified by members of the HACCP team visually inspecting operational procedures in the production and sale of honey.

Signed:

Chairman -

Member -

Date:

SELF CHECK

Have you:

- **Completed the further reading in the B-QUAL HACCP Workbook as directed.**
- **Read and amended the verification statement as required. If you have amended the statement, do you have written justification.**
- **Completed the header with your initials and the date of approval.**

If you have ticked all points; you have completed this section.

▶▶ GO TO — Hazard Management Table

HAZARD MANAGEMENT TABLE

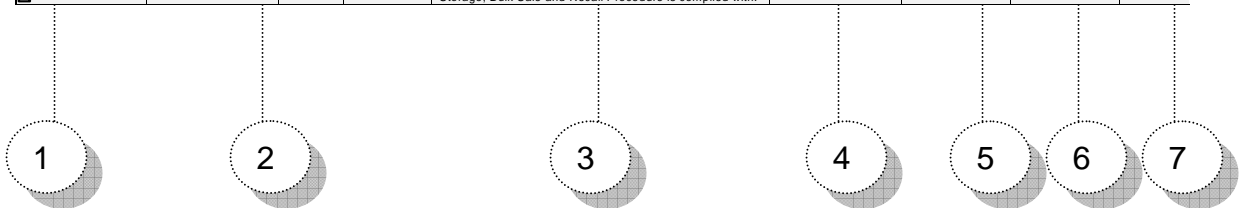
Overview

The hazard management table is often the place in a HACCP manual that a lot of the tasks are performed. That is, it is a good place to deal with a lot of issues on the same page. Although this too simplistic, you will find in this section that we will deal with:

1. Each of the process steps (from the flow diagram);
2. Hazard assessment;
3. Preventive measures ;
4. Critical limit (for that Control Point);
5. Monitoring (how you check what is happening);
6. Corrective action (what happens if critical limits are not met);
7. Verification records (the records you keep to demonstrate control at a later date).

HAZARD MANAGEMENT TABLE – THE PARTS

HACCP 07: HAZARD MANAGEMENT TABLE HONEY PACKING						Version: 1.0	Approved:	
PROCESS STEP	HAZARDS: C = Chemical B = Biological P = Physical L = Legal	SIGNIFICANCE		PREVENTIVE MEASURE (Control)	Critical Limit	Monitoring	Corrective Action	Records
		Severity (Illness)	Risk (Likelihood)					
1. Receiving and Sampling CCP 1	L = Traceability labelling	High	Med	To ensure every batch is sampled and correctly identified. Food for infants under six months must not contain honey unless a culture test reveals an absence of <i>Clostridium botulinum</i> spores (Standard 2.9.2). Test results are kept on file. (Work Instruction 16). Work Instruction 09, Honey Storage, Bulk Sale and Recall Procedure is complied with.	Compliance B-Qual Standards & Work Instructions.	Workers sample each batch and ensure correct identification	Product retained until correctly labelled and/or test results clear the batch	10, 12



By placing these elements together, they are easily managed, and it prevents any overlaps in your system.

For further reading you should go to the B-QUAL HACCP Workbook. You need to read steps 7 – 11 and Step 13.

Also, the B-QUAL Approved Suppliers Manual section 2.4, includes the prescribed records that you may use if they suit your operation.

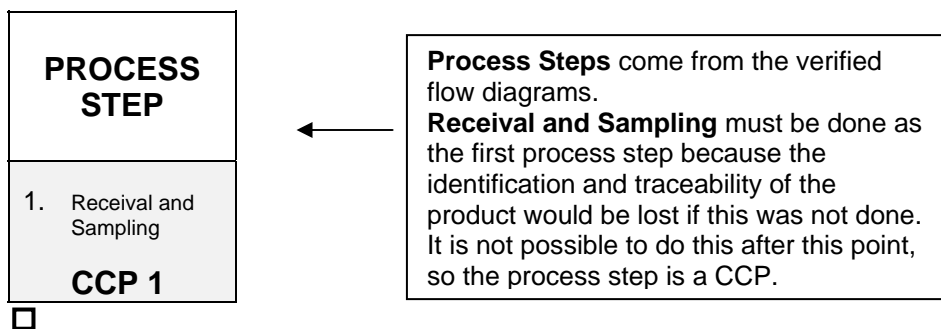
Instruction

Read the text as noted above. It is important to understand how these steps sit together and how they relate to each other within the Hazard Management Table.

For each of the Process Steps, undertake each of the steps from the left of the table to the right of the table. Keep the seven (7) sections separate as you go. Following is a basic instruction on how to deal with each section.

1

Process steps (from the flow diagram); this should not require explanation. They are repeated here to ensure all process steps are considered. They remain in the same order as the flow diagrams.



2 Hazard assessment; this section requires you to rate each of the identified hazards at that process step. Rating significance is addressed in the HACCP Workbook at Step 7, c).

Remember, each of the steps have hazard/s, this is just a way of deciding how important (significant) that hazard is to the safety of the product.

At this stage, try not to be distracted with the determination of Critical Control Points (CCP). We will address the Decision Tree after this section.

If a hazard has a high level of significance, it follows that the control of the hazard becomes more important. If it can not be controlled further down the process, it is regarded as a CCP.

HAZARDS: C = Chemical B = Biological P = Physical L = Legal	SIGNIFICANCE	
	Severity (Illness)	Risk (Likelihood)
L = Traceability labelling	High	Med
L = Incorrect labelling.	High	Low

Significance is assessed by you using two parameters being severity and risk.
Severity relates to the consequence of the hazard if it were to occur and normally relates to illness.
Risk relates to the chance or the likelihood of the hazard occurring.

Hazards are classified as either **Chemical**; **Biological**; **Physical**; or **Legal**.

This information comes from the Hazard Table.

3 Preventive measures

Preventive measures are the every day tasks that you do to prevent the hazard from becoming out of control. In this case samples are taken and the sample is correctly identified and tested. The work instructions are called up so that an operator may read the instructions prior to commencement of the task.

In the B-QUAL Approved Suppliers Manual, the work instructions are numbered and these numbers are called up in this section of the Hazard Management Table.

PREVENTIVE MEASURE (Control)
<p>To ensure every batch is sampled and correctly identified. Food for infants under six months must not contain honey unless a culture test reveals an absence of <i>Clostridium botulinum</i> spores (Standard 2.9.2). Test results are kept on file. (Work Instruction 16). Work Instruction 09, Honey Storage, Bulk Sale and Recall Procedure is complied with.</p>
<p>Product graded and checked for identification. Experienced honey graders used to grade honey for colour, moisture and flavour (Work Instruction 16). Work Instruction 09, Honey Storage, Bulk Sale and Recall Procedure is complied with. Grading equipment is calibrated (Work Instruction 15).</p>

4

Critical limit

A critical limit (for that Control Point) must be set. This does not have to be a numerical tolerance. In this case it is a statement.

Critical Limit
Compliance B-Qual Standards & Work Instructions.
Compliance B-Qual Standards & Work Instructions.
Compliance ≤ 21% moisture (Ref. Standard 2.8.2).

Note that at Process Step 2; at Hazards, there is a L (legal) hazard where moisture must be below 21%.

5

Monitoring

At monitoring you are documenting how you check that the process is still in control.

Monitoring
Workers sample each batch and ensure correct identification
Workers check each batch before identification.

6

Corrective action

Corrective action is what happens if critical limits are not met. The specific action that is taken must be documented in the hazard management table. As shown below, at times this can be quite specific.

Corrective Action
Product retained until correctly labelled and/or test results clear the batch
Product retained until correctly labelled.

Record details and notify supplier. Return honey. Blend honey. Discard fermented honey. Spilt honey processed separately & labelled.

In the case of a critical limit not being met for moisture content, the action is more extensive. You just need to detail what you do. If this is what you do there is no need to change.

7

Verification records

Verification records allow your processes to be verified at a later date.

Records
10, 12
10, 12, 17
10, 12 Moisture test

It is OK to just record your record number. In many cases though, you will not use the prescribed record sheets from the B-QUAL Approved Suppliers Manual. In this case you should write down where the record is kept. This might be in a diary or in the case of moisture tests they might be in a moisture test file, there might also be other commercial records that you maintain that address the record keeping requirements of B-QUAL. Good examples of this would be your Delivery Docket and Vendor Declaration (Record 08) and the information supplied to you by your Packer ie. Colour, moisture, and sample test results for AFB etc.

YOUR ARE NOT REQUIRED TO USE THE B-QUAL RECORDS THAT ARE PROVIDED AS EXAMPLES; BUT, YOU MUST KEEP VERIFICATION RECORDS.

It is important to remember that if it isn't recorded – it didn't happen.

SELF CHECK

Have you:

- **Completed the further reading in the B-QUAL HACCP Workbook as directed.**
- **Read and amended the HACCP Management Table as required.**
- **Completed the header with your initials and the date of approval for each page of the Table..**

If you have ticked all points; you have completed this section.

▶▶ GO TO — Decision Tree

DECISION TREE

Overview

'Step 8: Identify the Critical Control Points in the process for each hazard (P2)' addresses the use of a decision tree. You need to read this Step in detail. Don't despair if it takes a few readings to understand. Conceptually it is a difficult subject.

Decision trees take several forms. The B-QUAL Approved Supplier Manual at section 2.7, puts the decision process in a table format with the process described from left to right at the top as shown below.

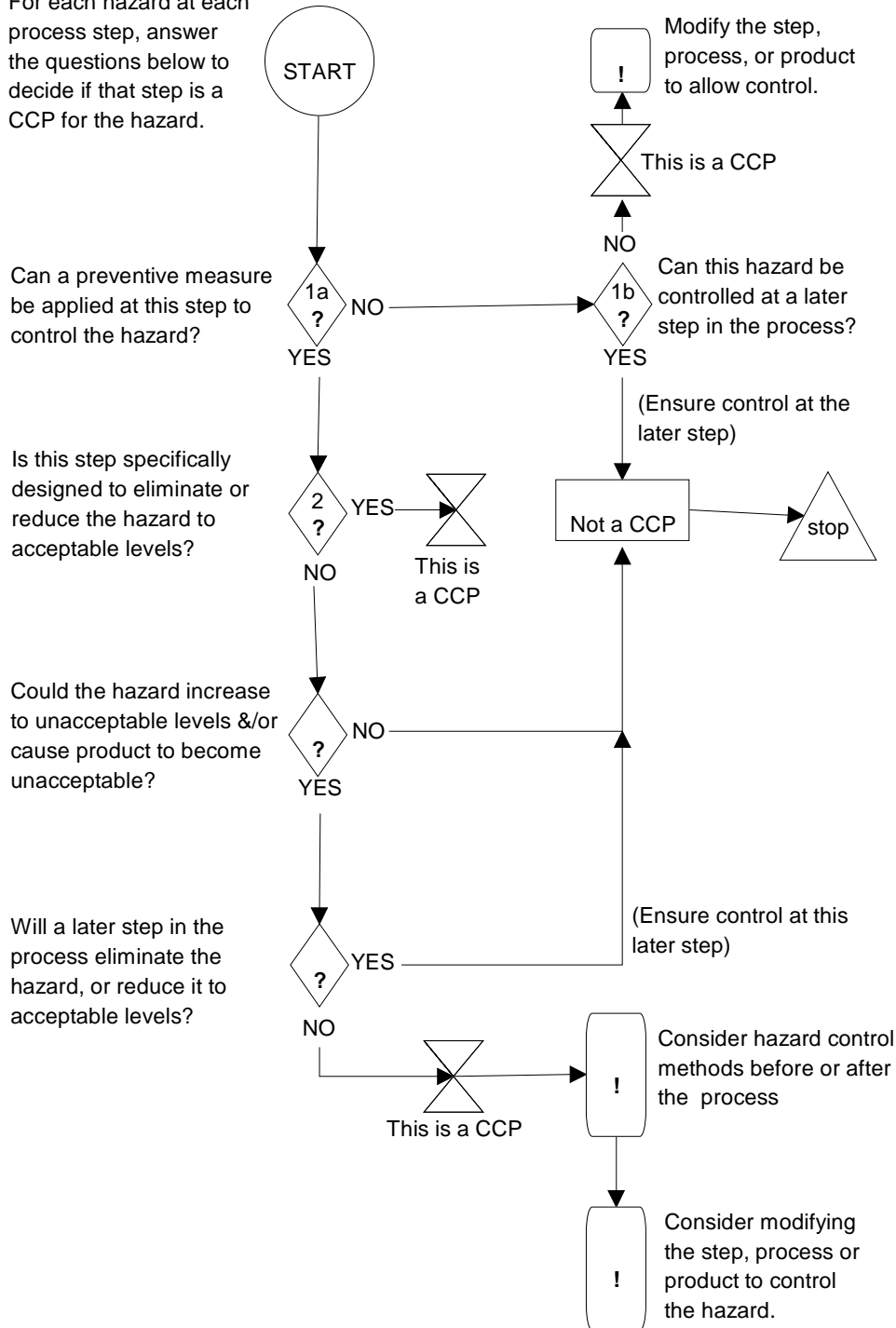
	Process Step	Q1 - Does a hazard exist for this step?	Q2 - Do preventive measures exist for the identified hazard?	Q3 - Is the step specifically designed to eliminate or reduce the likely occurrence of a hazard to an acceptable level?	Q4 - Could contamination with identified hazard (s) occur in excess of acceptable level (s) or could these increase to an unacceptable level?	Q5 - Will a subsequent step eliminate identified hazard (s) or reduce the likely occurrence to an acceptable level?	CCP

This may be easier for you if you put the questions above into a flow diagram. A decision tree in a flow diagram is included for you to follow.

Importantly the end result is the same; we are making a decision as to the status of a hazard within a process step and whether or not that hazard is significant and if it would be controlled later in the process flow.

Decision Tree: Is this step a CCP?

For each hazard at each process step, answer the questions below to decide if that step is a CCP for the hazard.



Instruction

Read the further reading as described in the overview. Address each of the process steps in the table labelled HACCP 08 Determination of CCPs. For each of the process steps B-QUAL has completed the table with suggested decisions. These decisions are considered normal for most beekeepers that are selling honey direct to the public and therefore require a FSP.

HACCP 08: DETERMINATION OF CCP's					Version: 1.0	Approved:	
					Page: 1 of 1	Date:	
	Process Step	Q1 - Does a hazard exist for this step?	Q2 - Do preventive measures exist for the identified hazard?	Q3 - Is the step specifically designed to eliminate or reduce the likely occurrence of a hazard to an acceptable level?	Q4 - Could contamination with identified hazard (s) occur in excess of acceptable level (s) or could these increase to an unacceptable level?	Q5 - Will a subsequent step eliminate identified hazard (s) or reduce the likely occurrence to an acceptable level?	CCP
BEEKEEPER RISK MANAGEMENT PLAN	Handling, Transport & Extraction						
	1. Remove super	Y	Y	N	Y	N	CCPA
	2. Unload	Y	Y	N	Y	Y	
	3. Full super storage	Y	Y	N	Y	Y	
	4. Transfer to extraction	Y	Y	N	Y	Y	
	5. Transfer & debbox	Y	Y	N	Y	Y	
	6. Uncap, convey	Y	Y	N	Y	Y	
	7. Extraction	Y	Y	N	Y		
	8. Transfer strain	Y	Y	N	Y	Y	
	9. Pump honey	Y	Y	N	Y	Y	
	10. Identification	Y	Y	N	Y	N	CCP B
11. Store	Y	Y	N	Y	Y		

HACCP 08: DETERMINATION OF CCP's (continued)

		<i>Honey Packing</i>					
FOOD SAFETY PLAN	1. Receiving/Sampling	Y	Y	N	Y	N	CCP1
	2. Grading	Y	Y	N	Y	Y	
	3. Storage	Y	Y	N	Y	Y	
	4. Liquefying	Y	Y	N	Y	Y	
	5. Blending	Y	Y	N	Y	Y	
	6. Heat treatment	Y	Y	N	Y	Y	
	7. Filtration & pump	Y	Y	N	Y	Y	
	8. Pour into container	Y	Y	N	Y	N	CCP 2
	9. Identification	Y	Y	N	Y	N	CCP 3
	10. Packaging	Y	Y	N	Y	Y	
	11. Storage	Y	Y	N	Y	Y	
	12. Loading	Y	Y	N	Y	Y	
	13. Transport	Y	Y	N	Y	Y	
	14. Sale	Y	Y	N	Y	Y	

SELF CHECK**Have you:**

- **Completed the further reading in the B-QUAL HACCP Workbook as directed.**
- **Read and amended the determination of CCPs table as required.**
- **Completed the header with your initials and the date of approval for each flow diagram.**

If you have ticked all points; you have completed this section.

▶▶ GO TO — Hazard Audit Table

HAZARD AUDIT TABLE

Overview

The Hazard Audit Table describes your process for auditing. It is the verification path to what you do and includes a process approach to how the HACCP system is audited.

For further reading go to ‘Step 12: Establish audit and verification procedures (P6)’.

HACCP 09		HAZARD AUDIT TABLE			Version: 1.0	Page: 1 of 2	Approved:	Date:	
CCP Process Step	Hazard	Critical Limit	Corrective Actions as required	Validation	Monitor	Frequency	Responsibility	Work Instruction / Reference	Record
CCP 1: Process Step 1 Receival & Sampling	L = Traceability Incorrect labelling	<ul style="list-style-type: none"> All product and samples correctly labelled. Compliance with B-Qual Standards & Work Instructions. 	Immediate <ul style="list-style-type: none"> Retain product until labelled and content verified. Relabel if required. Preventive <ul style="list-style-type: none"> Procedures not followed - staff training. Review procedures if required. 	<ul style="list-style-type: none"> B-Qual standards. Food Code 	<ul style="list-style-type: none"> Manager responsible for monitoring records and checking labels. All staff responsible for work procedures. All staff responsible for the immediate CA as noted. 	<ul style="list-style-type: none"> To ensure every container is sampled and correctly identified. 	<ul style="list-style-type: none"> Staff responsible for work procedures and manager responsible for monitoring. 	09 Honey Storage and Recall. 11 Corrective Action. 14 Purchase & Receival Procedure 18 Training Procedure.	08 Vendor Declaration 10 Corrective Action. 11 Internal Audit. Ensure Vendor Declaration and labels checked. 12 Honey Appraisal Record 18 Training Register.

Instruction

Read the further reading noted above.

Read and amend the Hazard Audit Table so that your system is reflected in the table. Pay particular attention to the work instructions and records area as these areas are the most likely to have been changed by you.

Complete the header with your initial and the approval date.

SELF CHECK

Have you:

- **Completed the further reading in the B-QUAL HACCP Workbook as directed.**
- **Read and amended the flow diagrams as required.**
- **Completed the header with your initials and the date of approval for each flow diagram.**

If you have ticked all points; you have completed this section.

▶▶ GO TO — Verification Plan

VERIFICATION PLAN

Overview

The verification plan is addressed in the HACCP Workbook at Step 12 and Step 14.

The verification plan keeps the HACCP system alive. It provides for an opportunity to continually revise the system to reflect what you do.

The importance of this section can not be overstated.

<p>HACCP 10:</p> <p style="text-align: center;">HACCP PLAN VERIFICATION & IMPLEMENTATION</p>	<p>Version: 1.0</p> <p>Page: 1 of 1</p>	<p>Approved:</p> <p>Date:</p>
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Verification Procedure

- HACCP Team meeting each 12 months.
- Internal and external quality audits every 12 months.
- Review of all corrective actions since the previous audit.
- Review customer feedback, including residue violation results.

Instruction

Read Step 12 and Step 14 from the B-QUAL HACCP Workbook. Confirm that the verification procedure above fits within your operation. Complete the header with your initial and date of approval.

SELF CHECK

Have you:

- **Completed the further reading in the B-QUAL HACCP Workbook as directed.**
- **Read and agreed the verification plan.**
- **Completed the header with your initials and the date of approval on each relevant page.**

If you have ticked all points; you have completed this Exercise.

▶▶ GO TO — Unit 1, Exercise 3