



B – QUAL

Australia Pty Ltd

APPROVED SUPPLIER PROGRAM MANUAL

2.3 Work Instructions

INTRODUCTION

Work Instructions provide a list of activities for workers to follow so that the business operates smoothly and effectively whilst minimising the risk to food safety. The Work Instructions in this manual are only examples of what might be included in a quality manual. Individual businesses will need to alter these work instructions to suit their business operation.

The key issue for Work Instructions in this section is that they adequately support the apiary, extraction and biosecurity requirements for B-Qual Australia Pty Ltd.

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Work Instruction 01	APIARY OPERATION	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To ensure the best possible management practices for effective apiary operation.

Introduction: Beehives are maintained at various locations. Workers visit sites as required and check for production and disease status. Harvesting and any treatment are completed and monitored at each site and hives are relocated to different sites as required. Activities are recorded.

Water supplies for apiary sites are checked. Adequate floats are available if required for the prevention of drowning.

Artificial feed is used to maintain hives when required. Details of products and use are recorded. Observations determine effectiveness and management strategies.

Action

Owner / Manager

- Responsibility for staff employment and all training needs.
- Discuss quality assurance requirements with all workers and ensure that they sign the quality policy statement.
- Monitors all procedures / records and ensures Corrective Action (Record 10) is used when necessary.
- Reviews procedures on an on-going basis.
- Orders materials as required.
- Maintains the Apiary Site Record (Record 01).

All Workers

- Become familiar with the quality assurance program.
- Undertake training as required.
- Perform tasks only after appropriate training.
- Observe hives for disease symptoms as part of daily work routine and notify the manager if problems occur.
- Maintain truck, bobcat and pallets in a clean condition (vital to minimise seed spread).
- Remove external foreign objects from hives and repair or replace broken hives.
- Replace and recondition or discard broken boxes/frames and hive components.
- Move hives to new sites as required (Record 01).
- Harvest honey when ripe. Ensure that at least two thirds of the total comb is sealed. Moisture content must be low enough to avoid fermentation.
- Use bee brushes for brushing combs (wash brushes regularly in clean water to prevent contamination).
- Clear bees from supers with a clearer board and blower. Use smoke sparingly. No use of bee repellents. Phenol is prohibited.
- Direct exhaust from motors away from air intake of bee blowers.
- Maintain hive components in a clean condition.
- Prevent frames from coming into contact with the ground by using inverted hive lids or clean metal / plastic. Cover supers top and bottom to prevent robbing and avoid contamination of honey from dust, rain and insects.
- Remove physical contamination from frames of combs by brushing and scraping.
- Use clean water for washing hands.
- Wash hands with water and soap after ablutions and before handling hives or hive products.
- Replace combs used for honey storage at regular intervals. It is important to replace brood nest combs.
- If necessary use Queen excluders to separate brood from honey storage combs.
- Record activities and complete action lists as required.
- Air supers that have been chemically treated for wax moth control before placing them back onto hives.
- Observe hive strength, food resources and queen age. Take corrective action when required (Record 10).

Work Instruction 02	APIARY HEALTH	Version: 1.0 Page: 1 of 2	Approved: Date:
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Purpose: To prevent disease problems or treat existing diseases.

Introduction: Hives have a good health status with few disease problems. Management procedures minimise the risk of disease outbreak and spread and the health of beehives is monitored. The procedure for disease and pest management includes the following steps:

1. Identify hives & stored equipment for treatment.
2. Choose management option for any treatments.
3. Order antibiotics & chemicals as required.
4. Purchase, transport and store antibiotics/chemicals.
5. Calculate dosage and treat identified problem.
6. Observe treatment and, if unsuccessful, return to management options.
7. Complete treatment documentation.

Antibiotics are selected based on Government or vet advice and dose rates are calculated according to professional advice and label instructions. Scales are calibrated. Hives are observed during normal work procedures and corrective action is taken if treatments are not successful.

All treatments of antibiotics/chemicals must be documented so that the purchaser of the honey will know if there is any likelihood of residues above their MRL. If a vendor declaration is not completed the batch will be rejected or retained until documentation is completed.

Antibiotics are ordered in quantities to match usage to minimise stocks passing their use-by date. If any antibiotics or chemicals do pass their use-by date they are disposed of through the local veterinarian.

Action

Owner / Manager

- Liaise with workers regarding all apiary management and veterinary issues, including treatments and any amendments to the Agricultural and Veterinary Chemical List (Ref. 01). The Disease Monitoring Record (03) is also maintained.
- Order agricultural and veterinary chemicals as required.
- Train staff in all work procedures.
- Monitor the disease status of hives (Record 02, 03) and the Honey Super & Extraction Record (Record 04) prior to sale of product.
- Ensure that all veterinary correspondence and treatment records are filed correctly.
- Monitor all procedures / records and ensure Corrective Action (Record 10) is applied when necessary.
- Review procedures on an on-going basis.
- Monitor visitors (Work Instruction 10).
- Monitor purchaser feedback (customer correspondence).

Work Instruction 02	APIARY HEALTH	Version: 1.0 Page: 2 of 2	Approved: Date:
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Action

Government Apiary Officer (or veterinarian)

- Monitor hive performance and treatments in conjunction with the manager when required.
- Generate a report to document the apiary health status and recommend any treatment schedules that are deemed necessary.
- Amend the Agricultural and Veterinary Chemical List and prescribe permit use if required.

All Workers

- Observe hives for disease symptoms as part of daily work routine (Work Instruction 01) and notify the manager if problems occur.
- Monitor performance (Record 03) and treatments (Record 02).
- Identify and isolate diseased hives and determine what treatment is appropriate (Record 02).
- If treatment is required, ensure that the dose is placed in the brood chamber under the queen excluder.
- When required, preferably use prepacked antibiotics for hive treatments.
- Calculate treatment dose rates, when required, according to label instructions and treat diseased hives (Record 02; Safety Data Sheets).
- Inform authorities of any notifiable diseases.
- Do not treat hives during honey flow periods.
- Record all treatments of antibiotics and chemicals (Record 02) and observe all withholding periods.
- Identify treated hives (Record 03).
- Take corrective action if treatments are unsuccessful (Record 10).
- Dispose of antibiotics / chemicals past their use-by date.

Work Instruction 03	AGRICULTURAL & VETERINARY CHEMICALS	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To purchase, handle and store agricultural and veterinary chemicals according to industry best practice.

Introduction: All agricultural and veterinary chemicals are purchased through the veterinarian or local rural stores and are stored according to label instructions. Records of use are maintained on the Treatment Record.

Action

Owner / Manager

- Purchase agricultural and veterinary chemicals according to usage requirements and industry best practice.
- Monitor usage of agricultural and veterinary chemicals (Record 02).
- Ensure agricultural and veterinary chemical storage facilities and equipment are appropriate for use.
- Dispose of out-of-date product.
- Obtain Material Safety Data Sheets for all chemicals from their suppliers.

All Workers

- Ensure that cleaning agents, pesticides and baits are stored appropriately and away from honey processing and storage areas.
- Only use agricultural and veterinary chemicals from the approved list (Ref. 01).
- Comply with label instructions or veterinary advice (if required) when using agricultural and veterinary chemicals.
- Maintain accurate records of all use of agricultural and veterinary chemicals (Record 02).
- Store and transport OTC at a constant cool temperature.
- Ensure that storage conditions provide adequate protection for agricultural and veterinary chemicals from moisture.

Work Instruction 04	HIVE IDENTIFICATION & MOVEMENT	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To ensure that all hive and honey movements are documented correctly.

Introduction: For product identification and traceability it is important that every hive is identified. The Apiary Site Record, the Honey Super & Extraction Record and the Packer sale docket are used to monitor all hive and honey movements.

Action

Owner / Manager

- In the event of a disease outbreak, identify supers with brood chambers (a 'Barrier System is recommended).
- Ensure that all documentation required by authorities for the transport of hives and bee products is complied with, for example, interstate movement certificates and irradiation of plants.
- Maintain registration requirements.
- Brand hive materials with the registered brand.

All Workers

- Check that all hives and honey containers are appropriately identified.
- Use a marker for immediate identification of hives requiring treatment.
- Cover & secure loads of supers during transport.
- Use straps to prevent movement of hive parts during apiary transport.
- Ensure that all hives are maintained in good condition and appropriately disinfected if required.
- Record all details of apiary movements (Record 01).
- Complete the Honey Super & Extraction Record (Record 04) as required.
- Practise barrier management techniques where appropriate to prevent disease spread.

Work Instruction 05	EXTRACTION PROCESS	Version: 1.0 Page: 1 of 2	Approved: Date:
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Purpose: To produce a safe, wholesome, quality product that meets consumer needs.

Introduction: Supers are received from apiary sites and stored in a suitable storage area or hot room prior to processing. Honey is extracted, processed, stored and forwarded to a packer. Wax is also stored ready for sale. Maintenance, pest control and hygiene are of paramount importance for the processing of honey.

Water supplies are adequate for peak demands and extended periods of hot, dry weather. The supply is tested for quality when required. Water test reports are kept on file.

Action

Owner / Manager

- Ensure compliance with relevant authority requirements.
- Supply and maintain appropriate building/s and equipment for honey processing.
- Ensure bee escapes are operational to prevent faecal contamination from flying bees.
- Ensure clean water supply has adequate quantity for peak demands and extended periods of hot weather.
- Test water quality if required and file test results.
- Monitor all procedures / records and ensures Corrective Action (Work Instruction 11; Record 10) is applied when necessary.

All Workers

Extraction Plant Operation

- Store full supers in a suitable storage area or hot room.
- Cover supers when supers are not stored in the hot room or in a bee proof room. Remove covers to allow bees to escape before moving supers into the hot room or extracting area.
- Ensure 'hot room' temperature is adequate for honey processing. Temperature should be approximately 35°C (use a thermostat).
- Avoid long storage periods to minimise moisture absorption and comb damage.
- Ensure Personal Hygiene & Food Handling Procedure (Work Instruction 06) and the Maintenance, Cleaning & Sanitation Procedure (Work Instruction 07) are adhered to.
- Transfer & debox supers, uncap & convey combs and extract honey according to best industry practice.
- Use food grade grease for equipment lubrication for equipment that is above the food level.
- Wash hands at entry and on a regular basis.
- Wash surfaces with cold water first and then hot water before extracting honey.
- Prevent steam and hot water from contaminating honey and cappings.
- Reject combs containing brood or infested with wax moth.
- Ensure that the hopper collects wax and honey from uncapper. Spilt honey is to be processed separately and not used for human consumption.
- Ensure no build up of foreign matter that occurs on equipment is regularly cleared and that honey safety and quality is not compromised.
- Label, store, process, clean and store honey as required.
- Repair supers and frames in preparation for return to apiary sites.
- Process and store wax to prevent contamination eg mouse and rat droppings, urine, chemicals.
- Ensure that no fuels or chemicals are stored in the processing plant.
- Vehicles (other than electric or gas forklifts) are excluded from extracting room.

Work Instruction 05	EXTRACTION PROCESS	Version: 1.0 Page: 2 of 2	Approved: Date:
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Action

Waste Disposal (Code of Practice – 2000)

- Ensure that waste material is managed to avoid contamination of honey, clean water, equipment and spread of disease to foraging bees. Discharge wastewater through an S or P bend.
- Provide adequate garbage facilities.
- Remove waste daily or as required from the processing areas.
- Ensure that honey for disposal is clearly identified.

Extracted Super Management

There is no perceived food safety risk during the management of extracted supers. The maintenance procedure (Work Instruction 07) and Pest Control Procedure (Work Instruction 08) ensure good handling practices and minimal residue risk. Steps in the process include:

1. Transfer to rebox area.
 2. Rebox extracted frames.
 3. Cull or repair frames.
 4. Store and use pest control procedures as required.
 5. Transport hives to apiaries as required.
- Wash honey supers with a damp cloth and dry before transfer to the cool room.
 - Cover the stacks of supers containing extracted combs with metal trays to prevent condensation from contaminating honey combs.
 - Maintain the air temp. at <math><10^0\text{C}</math> to prevent wax moth damage or use fumigants according to label instructions.
 - Cover empty supers during storage to prevent physical and bacterial contaminants.
 - Check combs regularly for wax moth damage and retreat if necessary.

Cappings Management

There is no perceived food safety risk during the management of wax processing. Steps in the process include:

1. Cappings removal.
2. Honey extraction as outlined in extraction process.
3. Separate wax.
4. Cool, remove and store wax.
5. Transport wax for sale.

To maintain production of quality product with minimal contamination, equipment is constructed of food grade material and food grade grease is used for lubrication above the food line. Honey from the cappings processing is collected in the honey sump. The cleaning procedures outlined in Work Instruction 07 minimise the contamination risk.

- Reject combs containing brood or wax moth infestation.
- Wash hands before handling frames.
- Prevent steam and hot water from contaminating honey and wax.
- Process spilt honey separately and do not allow for use for human consumption.
- Do not store or transport fuels and chemicals near the extraction area.

Work Instruction 06	PERSONAL HYGIENE AND FOOD HANDLING	Version: 1.0 Page: 1 of 2	Approved: Date:
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Purpose: To maintain a high standard of personal hygiene and cleanliness.

Introduction: All persons who enter the extraction or packing plant are required to follow the personal hygiene instructions outlined in this Work Instruction. It is essential to minimise the risk of contaminating honey.

Action

Owner / Manager

- Train staff in all work procedures.
- Monitor all procedures / records and ensure Corrective Action is applied when necessary (Record 10).
- Review procedures on an on-going basis.
- Monitor purchaser feedback (Customer Correspondence).

All Workers (and visitors)

- Maintain personal cleanliness.
- Notify the manager of any personal sickness or suspect food contamination. Suspect staff do not handle honey.
- Do not work with honey processing if affected by or capable of transmitting communicable diseases.
- Wear protective clothing and head covering in the extraction or packing plant as required.
- Practice hygienic behaviour in honey processing areas, for example,
 - no smoking or spitting,
 - no eating,
 - cover mouth and nose when coughing or sneezing,
 - use a face mask to manage respiratory illnesses,
 - do not enter food areas during periods of intestinal illness such as diarrhoea or vomiting, and
 - use disposable implements for any taste testing.
- Wash hands with non scented, germicidal liquid hand soap and dry hands using a paper towel before commencing work as you enter, immediately after using the toilet and at other times as required.
- Preferably use mixer taps as these are cost effective.
- Use coloured buckets and acceptable bucket stands for holding cleaning water.
- Protect cuts and wounds with a waterproof covering which is firmly secured and conspicuous in colour. Workers suffering from infected wounds, boils or skin problems do not work directly with honey or honey contact equipment.
- Do not wear jewellery that may accidentally contaminate the honey.
- Use clean containers but do not use chipped, broken or cracked utensils for honey handling.
- Protect honey from contamination at all times.
- Store chemicals in separate areas.
- Keep honey preparation areas clean.
- Apply Corrective Action when required (Record 10).

Work Instruction 07	MAINTENANCE, CLEANING & SANITATION	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To prevent contamination of honey, equipment and facilities.

Introduction: An effective cleaning schedule is displayed, maintained and monitored. It is displayed in an appropriate location.

Action

Owner / Manager

- Monitor cleaning procedures during extraction plant use and at regular intervals when not in use (Record 06). Ensure that food-processing areas are clearly separated from all other activities.
- Ensure that the extraction room is maintained to minimise contamination of food from flaking paint, timber, broken glass, leaking pipes, etc.
- Purchase equipment from reliable suppliers.
- Ensure that all hive materials are maintained in good condition and that construction procedures are followed.

All Workers

Cleaning

- Regularly tidy outside of premises to prevent invasions by pests. Document any use of pesticides (Record 05).
- Wash honey processing equipment, if required, prior to processing a new batch of honey. If the system is washed, discard the first fraction of honey before filling containers.
- Maintain cleaning procedures for each batch of honey that is processed. The following cleaning procedure for floors, benches, sink wash basin, honey tanks and other extracting equipment is adhered to:
 - Remove any solid dirt.
 - Cold water wash to remove honey residue and beeswax.
 - Clean with hot water or steam.
 - Apply detergent as required (Ref. 01) and rinse cleaned surfaces.
 - Apply sanitiser if required as per label instructions.
 - Rinse surfaces with warm clean water.
 - Drain and dry surfaces.
 - Pre-run sanitising if required.
- Ensure that the sink is connected to plumbing and drainage system.
- Provide adequate portable stands at appropriate locations in the processing plant with buckets for hand rinsing. Ensure that water is replaced regularly.
- Use identifiable rubbish bins in the processing plant. Do not use plastic honey pails.
- Ensure that water used for sanitising is a minimum of 77⁰C by checking the temperature with a thermometer. Allow a contact time of at least 30 seconds for utensils and contact surfaces. Equipment is cleaned and dried before use.
- Ensure that hot water / steam pipes and equipment are not leaking.
- Ensure uncapping equipment and extractors are dry before use.
- Do not use steam or hot water on combs in an effort to speed extraction.
- Clean drums with hot water / steam and drain (when required). Ensure drums are dry before use.
- Apply Corrective Action when required (Record 10).

Hive Construction (equipment purchased from reliable suppliers)

- Paint any timber that has been treated with wood preservatives.
- Store wooden hive components and foundation wax away from chemicals.
- Do not use lead-based paints.

Work Instruction 08	PEST CONTROL	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To prevent pest infestation and possible contamination of honey.

Introduction: Honey extraction premises must be continually checked for pest infestations and appropriate action taken to minimise the risk of honey contamination.

Action

Owner / Manager

- Observe levels of pest presence in and around the processing plant and apiary sites during normal work procedures. Also, monitor the level of chemical usage (Record 05).

All Workers

- Take all practical measures to prevent and/or eradicate pests from the processing plant (Record 05).
- Check bait stations regularly to check for signs of activity and replace baits as required.
- Locate bait stations in appropriate locations but never in the honey processing area. Wax bait blocks are preferable as they can be secured into the rodent bait stations.
- Record bait station locations and ensure sites are identified with a sign on the wall (eg Bait Station 1).
- Rotate bait types to avoid becoming ineffective.
- Be on the alert for nesting locations of rodents and other pests.
- Ensure appropriate safety precautions are observed when handling pesticides (Ref 01, Safety Data Sheets, label instructions).
- Complete pest treatment records (Record 05).
- Maintain fly screens and fly wire doors in good order.
- Ensure that bee escapes are effective and allow bees to exit from the processing area.
- Cover processing equipment and stored honey if pesticides are used in the extraction room. Clean the room thoroughly after spraying. Only use short life chemicals and avoid spraying in the processing area.
- Maintain premises in a tidy condition and ensure that areas do not provide a source of food or places for pests to nest.
- Do not allow live animals into the honey processing area.
- For apiary sites, determine pest control risk. Use registered chemical products after discussing the control program with the property owner, or move hives to alternative sites if necessary. Only use AQIS approved chemicals that are listed in the Agricultural & Veterinary Chemical table.

Work Instruction 09	HONEY STORAGE, BULK SALE & RECALL	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To ensure that honey storage, sale and recall procedures are followed and documented correctly for effective traceback and recall if required.

Introduction: Honey is stored to minimise the risk of contamination and quality deterioration. Adequate honey storage space is provided that is protected from adverse environmental conditions. Food grade containers with food grade seals are used. Records are maintained to allow quick and accurate traceback of product.

Action

Manager

- Monitor Cleaning & Sanitising Check (Record 06), customer complaints, corrective actions (Record 10).

All Workers

- Store honey drums/containers out of direct sunlight to reduce the heat load and HMF levels. Preferably use covered storage areas.
- Store chemicals away from honey processing areas.
- Do not use containers previously used for toxic materials.
- Avoid storing honey at temperatures above 45⁰C.
- Clean and dry storage containers before use. Preferably use hot water pressure washers. Note that residues in unwashed galvanised drums can contain high levels of zinc contamination.
- Ensure that drum bungs seal correctly to prevent moisture uptake. Use non-perishable food grade bung rubber gaskets.
- Do not store honey in galvanised drums for extended periods.
- Clean any spills immediately.
- Rotate stock as required.
- Maintain transport vehicles in a clean condition and cover loads when required.
- Ensure that all honey consignments to a honey packer are accompanied by a vendor declaration (Record 08).
- Retain a 150 ml sample of honey for 12 months from each days extraction.

Labelling

- Label storage containers in a permanent way with name and address.
- Label storage containers in a semi-permanent way with harvest date, floral source and withholding period.
- Label containers with name, address, phone number, weight and date packed for traceability purposes.
- Maintain accurate records and include product batch numbers as appropriate. Records are to include date, location and apiary site code of each honey batch and the date of each honey batch extraction.

Customer/Packer Complaints

- Collect and review any reports or documents that provide product feedback. Apply Corrective Action procedures when complaints are received.
- If required, refer to the sample of honey from each extraction stored for a reference analysis.

Work Instruction 10	BIOSECURITY	Version: 1.0 Page: 1 of 3	Approved: Date:
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- Purpose:**
1. To minimise the risk of
 - disease outbreaks in apiaries,
 - disease spread within and between apiaries, and
 - product contamination.
 2. To ensure a rapid response in the event of an emergency situation that may compromise product quality or suitability for sale.

Introduction:

A biosecurity program is a collection of measures to minimise the risk of entry and spread of disease and parasites in apiaries. They are designed with the emphasis on managing risk without affecting profitability through excessively strict precautions.

Targeted diseases and parasites include not only exotic diseases but also endemic diseases that have a significant impact on production or trade. Under the Deed, which will apply to Cost Sharing Arrangements for Exotic Disease, the honeybee industry is required to develop a Biosecurity Plan.

A biosecurity program is based on:

- understanding the targeted diseases and parasites,
- their modes of transmission,
- risk factors for each mode,
- methods to exclude the disease and parasites,
- a system to ensure that the program is used,
- joint on-going surveillance of colony health, and
- jointly maintained state response teams to assist government in the event of an incursion of an exotic disease or parasite.

The biosecurity plan aims to minimise the risk of introducing pathogens into the bee colony. It should also ensure a rapid response to prevent disease and parasites spreading within or between colonies.

The B-Qual program recognises that the entry of new pathogens, or new strains of existing pathogens, can devastate performance and profitability. It encourages beekeepers to implement management practices that reduce the potential for the introduction, production and spread of disease and parasites.

The generic biosecurity plan should be followed wherever possible, although practices may differ across Australia. Beekeepers must be aware of their obligations under the various State Apiaries Act. However, in the event of an incursion of an exotic disease, the AUSVETPLAN comes into operation.

Advantages of implementing a biosecurity plan in the honey industry are:-

- Reducing the possibility of entry and spread of disease and parasites in bees and weed outbreaks.
- Lessening the social and financial impacts of an outbreak.
- Reducing the possibility of substantial losses being incurred in a disease and/or parasite outbreak.
- Reducing the beekeepers' liability in any disease and / or parasite outbreak.

Biosecurity of this apiary operation is maintained through compliance with all operation procedures outlined in this quality assurance manual. This Work Instruction highlights key areas that relate specifically to biosecurity and provides an action plan in the event of an emergency. Procedures are reviewed as part of corrective action activities.

Work Instruction 10	BIOSECURITY	Version: 1.0 Page: 2 of 3	Approved: Date:
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Action

Owner / Manager

- Ensure that all staff understand and implement biosecurity policies and procedures.
- Ensure that the extraction plant and apiaries are maintained to minimise any biosecurity risk.
- Review biosecurity strategies according to industry best practice and any deficiencies are highlighted by corrective actions.

All Workers

All workers are responsible to comply with the biosecurity policies and procedures outlined in this manual. Activities essential to ensure biosecurity include compliance with:

- Minimal contact with other apiary hives and products.
- Industry standards.
- Training requirements.
- All Work Instructions.
- Diligent completion of all records.
- Ensuring security of extraction plant when unattended.
- Minimal visitors to extraction plant and apiary sites, as far as practicable.
- Minimal vehicle movements in and around the extraction plant and apiary sites.
- *Purchase of Bees:*
 - Where feasible, only purchase queens, packaged bees, or hives of bees from B-Qual certified suppliers within Australia.
 - Make every effort to assess health status before purchase and inspect again upon arrival.
 - Where feasible, isolate and manage hives separately as required.
 - Place hives under surveillance for at least six months or until satisfied of their status.
- *Hive Assessment:*
 - Contact authorities if a notifiable disease or parasite is suspected.
 - Report cases of unusual sickness or death to authorities.
 - Upon advice undertake appropriate measures.
 - Record details of any treatments.
 - Take action to reduce incidences of external bee activity, for example, robbing of weak hives.
- *Feed:*
 - If not positive of the disease status, do not feed any non-irradiated bee derived products, except in the production of organic products which can only be fed organic feeds.
 - Buy feed from suppliers who operate under a quality assurance program that has a biosecurity component.
 - Reduce the incidence of external bees foraging at feeding sites if unsure of the disease status of surrounding hives.
 - Discourage the feeding of honey to birds.
- *Vehicle movements:*
 - Be aware of possible contamination from visiting vehicles with bees robbing from both equipment and spilt honey.
 - Minimise vehicle movements around the extraction plant and apiary sites.
 - If contamination of vehicles is suspected ensure vehicles are cleaned.
- *People movements:*
 - Be aware of potential for hive contamination from unwelcome visitors.
 - Ensure security of extraction plant when unattended.
 - Ensure hive material/honey is not left on the site unsecured.

Work Instruction 10	BIOSECURITY	Version: 1.0 Page: 3 of 3	Approved: Date:
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Action

All Workers (cont.)

- *Feral bees:*
 - Take precautions against bees swarming as this could contribute to the feral bee population.
 - Take extra precautions against robbing bees if a disease hot spot is suspected.
 - Isolate captured swarms for six months.
- *Transport and Storage*
 - Consider each load of bees as one unit.
 - Bee-proof honey and bee materials during transport.
 - Ensure adequate storage conditions to prevent robbing by external sources of bees.
- *Site and Hive Management:*
 - Be aware of the increased potential for disease spread in concentrated areas such as pollination sites.
 - Inspect hives before placement at sites.
 - Where possible, avoid placing apiaries near honey packing or beeswax rendering factories.
 - Avoid placing apiaries near rubbish tips or known areas where the open feeding of honey to birds occurs.
 - Avoid placing apiaries near neglected apiaries or stored used beekeeping materials and notify the relevant Government agency of their presence.
 - A broad-based barrier management system for disease control is recommended.
 - Clean smoker and hive tool before commencing work at each new apiary and after being used on suspect diseased hives.
 - Abide by Codes of Practice for conserved lands.
 - Keep honey spillage covered to prevent robbing. Honey processing plants should be bee-proofed or control measures in place to avoid robbing.
 - Sentinel hives are maintained through joint industry and Government cooperation.
- *Equipment:*
 - If the disease is not known all second hand beekeeping hive equipment is irradiated (excluding equipment used in organic production) or a vendor declaration is obtained.
 - Clean all second hand extracting equipment.
 - Ensure honey containers are cleaned inside and out, dried and sealed.
 - Wastewater is disposed of in a safe manner through a digester or other appropriate method.
- *Biosecurity for other Industries:*
 - Beekeepers may be required to comply with biosecurity plans for other industries including those developed by the Plant Committee, for example, Fireblight control.

Emergency procedures

Immediate

- Take immediate action to rectify situation.
- Notify manager, staff, veterinary officer and government authorities as required, for example, AFB.
- Notify purchaser if required.
- Withdraw product from sale.

Preventive

- Ensure a notice is placed near all phones that includes locality map and the emergency contact numbers:
- Review biosecurity measures:
 - ❖ As part of corrective action procedures on an on-going basis.
 - ❖ According to industry best practice.
 - ❖ Train/retrain staff as required.

Work Instruction 11	CORRECTIVE ACTION PROCEDURE	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To take action when the results of monitoring at critical points in production indicate a loss of control.

Introduction: On recognising a possible problem all staff must prevent the situation from deteriorating. It is then necessary to notify management immediately if a problem arises. This is particularly important in the event of a possible violation of withholding periods due to incorrect agricultural and veterinary chemical use or violation of any of the B-Qual standards.

Action

Owner / Manager

- Monitor corrective actions (Record 10).
- Set procedures in place to prevent the situation from arising again
- Make alterations to the quality manual.
- Destroy superseded manual documents or sections of documents.
- Establish new procedures as normal work practice.
- Discuss new procedures with workers.

Preventive Corrective Action

- Review corrective action measures:
 - As part of corrective action procedures on an on-going basis.
 - According to industry best practice.
- Train/retrain staff as required.

All Workers

Immediate Corrective Action

- Take immediate action to rectify situation.
- Notify manager, staff, veterinary officer, government authorities as required.
- Notify purchaser if required.
- Withdraw product from sale.
- Record details of the incident on the Corrective Action Record (Record 10). Describe the sequence of events and remedial actions taken.

Work Instruction 12	PACKER OPERATION PROCEDURE	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To produce safe, quality product that meets consumer needs.

Introduction: Honey is received from bee keepers and is stored in a suitable storage area prior to processing. Honey is heated as required, processed, blended, packed and stored ready for sale. Maintenance, hygiene and pest control are of paramount importance for the processing of honey.

Action

Manager

- Ensure compliance with relevant authority requirements.
- Supply and maintain appropriate building/s and equipment for honey processing.
- Ensure bee escapes are operational to minimise faecal contamination from flying bees.
- Ensure clean water supply has adequate quantity for peak demands and extended periods of hot weather.
- Test water quality if required and file test results.
- Monitor all procedures / records and ensure Corrective Action (Work Instruction 11; Record 10) is applied when necessary.
- Review business operation during internal audits (Work Instruction 17; Record 11).

All Staff

Packer Plant Operation

- Ensure processing temperature is adequate for honey processing (use a thermostat).
- Where practical, use oldest stock first for processing.
- Avoid long storage periods to minimise problems of excess moisture and HMF.
- Ensure Personal Hygiene & Food Handling Procedure (Work Instruction 06) and the Maintenance, Cleaning & Sanitation Procedure (Work Instruction 07) are adhered to.
- Use food grade grease for equipment lubrication.
- Use stainless steel filters where possible.
- Wash hands before handling processing equipment.
- Ensure that surfaces are clean before processing honey.
- Prevent steam and hot water from contaminating honey.
- Spilt honey is not to be used for human consumption.
- Ensure no build up of foreign matter occurs on processing equipment and that honey safety and quality is not compromised.
- Grade, store, blend, process, filter and store honey as required.
- Ensure that no fuels or chemicals are stored in the honey processing area.
- Ensure new honey containers and lids are clean before use.
- Ensure that honey drums/containers are washed prior to reuse if required.
- Use food grade jars/containers with tamper resistant seals for sale of honey.

Waste Disposal

- Ensure that waste material is managed to avoid contamination of honey, clean water supply and equipment.
- Provide adequate garbage facilities.
- Remove waste daily or as required from the processing areas.
- Ensure that honey for disposal is clearly identified.

Work Instruction 13	RECORD KEEPING & DOCUMENT CONTROL PROCEDURE	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To ensure that all records are maintained and stored correctly.

Introduction: It is important to retain apiary records for four years for food safety program requirements, however, it may be longer for tax requirements.

Action

Manager

- Store duplicate records off site.
- Ensure records are maintained accurately.
- Approve each record template before use.
- Number each quality assurance manual and provide contact details.
- Ensure that only current approved records are in use.
- Discard superseded documents.
- Store records and reports for a minimum of four years.

All Staff

- Complete records accurately and make suggestions for improved templates as appropriate.

Work Instruction 14	PURCHASE & RECEIVAL PROCEDURE	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To ensure the correct quality and quantity of all goods purchased.

Introduction: To maintain a high product health status, it is important for newly received honey to be checked for previous treatments with antibiotics and chemicals to determine their residue status. Correct procedures will minimise the purchase of stock of unknown antibiotic/chemical and disease residue status.

Records are maintained of all orders of stock and delivered goods are stored in an appropriate location. Any goods failing to conform to specified order requirements are classed as non-conforming goods.

Action

Manager

- Order goods as required from an approved supplier (Record 07).
- Monitor delivered goods and initial order book.
- Vendor Declaration (Record 08) to be checked and Honey Appraisal Record (Record 12) to be completed
- Identify and take remedial action in the event of delivery of non-conforming products.
- Ensure that stock is stored according to label instructions.
- Ensure that storage facilities are adequate to minimise the potential for product contamination or deterioration.
- Monitor storage temperatures and pest control status as required.
- Update records when new suppliers are used.

Non conforming product

Remedial action may include:

- Return goods to the supplier to exchange for correct and/or acceptable standard goods.
- Hold goods until discussions are held with the supplier and adjustments to the order made.
- Accept goods if unavailable ordered goods resulted in substitution of equally acceptable goods.

All Workers

- Be familiar with order and receipt procedures.

Work Instruction 15	EQUIPMENT CALIBRATION PROCEDURE	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To ensure that all equipment used for measuring or weighing is calibrated correctly.

Introduction: All equipment used for measuring or weighing packaged products is routinely checked for accuracy, ensuring that neither under or over weight product can result.

Action

Manager

- Ensure that check weights are available for scales.
- Arrange for the servicing of scales as required.
- Record service details on the Calibration Record (16).
- Check accuracy of thermometers in ice and boiling water during internal audit.
- Comply with weighing requirements of relevant authorities.
- Ensure that the quality of scales used is sufficient to meet the accuracy of weighing required.

All Workers

- Use check weights prior to use of weighing equipment.
- Calibrate the Pfund colour grades and density refractometer as required.

Work Instruction 16	STOCKTAKE PROCEDURE	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To complete a yearly Stocktake.

Introduction: A Stocktake is completed to monitor movement of bee products and packaging, available resources and the use of purchased goods.

Action

Manager

- Conduct a Stocktake and determine the amount of stock on hand of all materials and equipment.
- Check for discrepancies of stock on hand with usage.
- Record all Stocktake details on the Inventory Record (13).
- Apply corrective action procedures (Work Instruction 11; Record 10) when significant discrepancies that may impact on product safety or quality occur.

Work Instruction 17	INTERNAL AUDIT PROCEDURE	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To check that the quality system activities and related results comply with planned arrangements. Also, to check that these arrangements are implemented effectively and are suitable to achieve objectives.

Introduction: An internal audit is conducted every 12 months to ensure that the business is operating effectively. Plan the internal audit to be just prior to the external audit and allow sufficient time to make adjustments to the system if required.

Action

Manager

- Conduct an internal audit every 12 months.
- Ensure that corrective action (Work Instruction 11; Record 10) is completed when required.
- Review corrective actions, customer feedback and any residue violation results.
- Discuss audit results, possible process changes and any training requirements with staff.
- Document any changes to the Quality Manual.
- Train staff if required.
- File audit documentation.

Work Instruction 18	STAFF TRAINING PROCEDURE	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To ensure that staff are suitably trained to enable effective, efficient completion of work procedures.

Introduction: On commencing employment, staff undergo a skills check and training is provided where necessary. Training may also be required when job descriptions for staff members are altered. The risk of employing unsuitable workers that may impinge on the food safety is considered to be low due to the owner/manager experience and selection skills. The procedure that is followed for employing staff are:

1. Select worker
2. Entry on duty for new worker
3. Induction training
4. Identify training needs & train as required
5. New worker commences work
6. Work tasks are observed & assessed
7. Worker finishes and departs

The beekeeping operation is maintained through daily work routines for the extraction plant and apiary sites in accordance with the quality manual. New workers are monitored on an on-going basis and where skills are inadequate, Corrective Action Procedures are complied with. Workers are either retrained if they have inadequate competency or alternative tasks are provided or the dismissal process is undertaken.

Workers depart from the apiary or processing plant site following completion of daily tasks. Before departure the site is checked for any abnormalities.

Action

Manager

- Employ staff.
- Check skills of new staff (Record 17).
- Provide the new staff member with access to a copy of the Quality Manual and discuss its contents to ensure a comprehensive understanding of the document. Biosecurity protocols are emphasised.
- Ensure that staff agree to abide by the requirements outlined in this manual and sign the Quality Policy Statement.
- Provide training appropriate to skills required for the particular position.
- Complete a Training Register (Record 18) form for all new staff. This form lists relevant qualifications and new training courses and qualifications are documented on this form following their completion.
- Give the new staff member a guided tour of the processing plant, highlighting relevant chemical usage procedures and showing the location of management and health references.
- Encourage new staff to undertake training that will enhance their skills and/or personal development as required.

Work Instruction 19	OCCUPATIONAL, HEALTH & SAFETY PROCEDURE	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To ensure that staff are suitably trained in OH&S issues to enable effective, efficient and safe completion of work procedures.

Introduction: On commencing employment, staff undergo a skills check and training is provided where necessary. Training may also be required when job descriptions for staff members are altered.

Action

Manager

- Comply with relevant state and national OH&S legislation.
- Ensure that staff are trained in and comply with safe work practices.
- Ensure that premises, plant, equipment and systems of work are effective, safe and cater for minimal risk to operators.
- Ensure that staff are trained in the use of equipment and that equipment is effectively maintained.
- Provide a first aid kit (which contains EpiPen or equivalent) and appropriate emergency procedures for staff to follow.
- Provide first aid training as required.
- Provide clean personal protective equipment and clothing to staff as required. Items include suitable clothing, boots, hair covering, for example, nets and gloves.
- Provide Material Safety Data Sheets for use of hazardous substances.
- Ask all employees whether they have any allergic reactions to bee stings or any other item/product related to beekeeping.

All Workers

- Be alert to hazardous situations, assess the risk and make appropriate changes as required.
- Use a common sense approach to manual handling to avoid injuries, for example, lighten loads.
- Do not work alone if possible and maintain regular contact with work colleagues, especially when working in isolated locations.
- Comply with label instructions for use of hazardous chemicals.
- Comply with equipment safety features.

An example of a basic procedure to treat bee stings:

- For a small reaction, scratch the bee sting out (do not squeeze it), run the affected area under cold water.
- For a mild allergic reaction, give a fast acting oral antihistamine (Zrytec 10mg) from the first aid kit and also apply dissolving aspirin (solprin) to the sting location. A mild reaction includes sensations of profound itching, especially on the hands and feet, mild outer lip swelling, anxiety, asthma and rash.
- For a moderate to severe allergic reaction, call an ambulance. If it is likely that there will be a 15 to 20 minute delay, seek emergency assistance wherever possible.
- In an emergency, allow the patient to use EpiPen (remove from tube casing, remove safety cap, place black tip on the outer thigh and push hard until EpiPen works and hold down for ten seconds).

Work Instruction 20	HONEY GRADING	Version: 1.0 Page: 1 of 1	Approved: Date:
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Purpose: To provide a set of actions for the correct measurement of the colour of honey using a Pfund Grader if required.

Introduction: Colour measurement of honey is taken at appropriate intervals as determined by the manager.

Action

Manager

- Ensure that honey measurements recorded at appropriate intervals.

All Workers

- Ensure that the honey is monitored and given a grading once for each batch of honey processed and recorded on the Honey Appraisal Record in the comments column.
- Remove a random sample of honey from each batch for use in the Pfund Grader.
- Adjust the glass vessel within the Pfund Grader along a scale by turning the required knob until a colour match is viewed in the window between the actual honey sample and the colour spectrum and note the measurement.