



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

Animal Biosecurity

Honey Bee Biosecurity Checklist





Section 1: Bee Health Management

1.1 Bee Sources

- ☐ bees are purchased / introduced from local, certified, and recognized suppliers
- ☐ when purchasing / introducing bees, all federal and provincial acts and regulations are followed and recorded
- ☐ introductions are inspected and assessed for the presence of pests – appropriate actions are taken
- ☐ introductions are placed in new or disinfected hives, and handled with clean and disinfected equipment
- ☐ treatments comply with federal and provincial acts and regulations, and product labels are followed
- ☐ bee health is monitored and recorded after introduction

1.2 Prevention: Minimizing Susceptibility to Pests

- ☐ weather and environmental conditions, both in the field and in the hive, are monitored and measures are taken to promote bee health
- ☐ bees have access to quality water and feed supplies
- ☐ measures are taken to avoid disturbances when bees are handled, transported, placed, and stored
- ☐ direct and indirect exposure to pesticides is minimized through situational awareness and by monitoring bee health
- ☐ cultural control techniques and monitoring of pests are used to maintain strong colonies
- ☐ preventative chemical treatments are limited and used according to provincial recommendations

1.3 Prevention: Minimizing Exposure to Pests

- ☐ hive equipment is designed, used, and maintained to reduce exposure to pests
- ☐ apiaries are placed, oriented, and monitored to reduce exposure to pests
- ☐ management techniques are used to prevent robbing, drifting, and swarming

Preventative measures and caution are used to reduce exposure to pests during

- ☐ transportation
- ☐ splitting
- ☐ uniting or equalizing colonies
- ☐ collecting supers
- ☐ extracting

1.4 Diagnosis and Monitoring of Pests

A monitoring program is in place and considers

- ☐ current knowledge of area risks
- ☐ coordination of monitoring with treatment periods
- ☐ bee lifecycles
- ☐ pest lifecycles
- ☐ seasonal operation activities
- ☐ record keeping and tracking
- ☐ early recognition of concerns
- ☐ sampling/collection
- ☐ handling of pests
- ☐ use of laboratory to confirm diagnosis of disease and pests
- ☐ treatment efficacy
- ☐ training

1.5 Standard Response Plan

- ☐ provincial treatment recommendations are obtained and followed
- ☐ the recommended Canadian Integrated Pest Management Program for honey bees is followed

Chemical treatments are used, together with cultural management methods:

- ☐ chemical resistance is avoided
- ☐ treatments are rotated (if applicable)
- ☐ chemical interactions and buildup are avoided
- ☐ treatment thresholds are monitored and followed, if applicable
- ☐ provincial apiarists or bee specialists are consulted for test result interpretation
- ☐ label directions are followed
- ☐ applications are thorough and consistent
- ☐ applications are timed to seasons and life stages
- ☐ bee health is monitored after treatment

Non-chemical (cultural) techniques for managing equipment with live bees are incorporated:

- ☐ strong colonies are maintained
- ☐ infected or infested colonies are segregated
- ☐ healthy bees are introduced to uncontaminated equipment
- ☐ queen excluders are used
- ☐ comb interchange between colonies is minimized
- ☐ at least 20% of brood frames are replaced each year
- ☐ colonies are requeened every 2 years with stock with desirable traits
- ☐ screened bottom boards are used
- ☐ drone brood trapping is practiced to manage *Varroa* mites
- ☐ bottom boards are scraped at least annually

1.6 Elevated Response Plan

A communications/notification plan is in place for

- ☐ staff
- ☐ bee authorities (Provincial Apiarists, inspectors)
- ☐ associations
- ☐ other
- ☐ risk-based communication triggers are in place

Bee management protocols are in place:

- ☐ colony and equipment movement, sales, and introductions are suspended
- ☐ affected colonies are segregated
- ☐ access to affected colonies is restricted
- ☐ personal and equipment biosecurity measures are followed
- ☐ quarantine measures are followed
- ☐ visitor protocols are followed, and signage is posted



Section 2: Operations Management

2.1 Obtaining Production Inputs

- ☐ clean water, carbohydrates, protein feed, and treatments are provided to the bees as required.
- ☐ sucrose or high fructose corn syrup suitable for bees are used
- ☐ alternate water source(s) are provided
- ☐ pollen and protein supplements are irradiated
- ☐ treatment products are registered, and label instructions are followed

2.2 Handling and Disposal of Production Inputs

- ☐ honey spills are cleaned up as soon as possible
- ☐ feeders and containers are new or disinfected
- ☐ closed feeders are used
- ☐ feeders, feed, and water containers are sealable and constructed of material that is easily cleaned and disinfected
- ☐ pail feeders are labelled for feed and/or treatments
- ☐ feed is stored away from bees and processing
- ☐ feed and water that has been in contact with infected or infested bees is sealed and disposed of
- ☐ dead bees are routinely removed from water sources and feeders
- ☐ chemical treatments are stored according to label instructions
- ☐ supply inventory is used "first in/first out"
- ☐ expired and excess products are disposed of according to label instructions
- ☐ reuse of pesticide strips is avoided

2.3 Obtaining Bee Equipment

Acquired used equipment

- ☐ is avoided if it has a history of disease
- ☐ is purchased from local, trusted, and certified suppliers that are ideally with a pest control program; unfamiliar suppliers are investigated before buying used equipment
- ☐ is accompanied with a health/inspection certificate
- ☐ is isolated and monitored for one year if used hive equipment includes live bees
- ☐ with an unknown health status is isolated and disinfected – irradiation, heat treatment, hot paraffin wax, or chemical (bleach)

Imported used bee equipment:

- ☐ current federal and provincial import and transport regulations are followed
- ☐ provincial registration requirements are followed
- ☐ records are kept and maintained
- ☐ permits are acquired
- ☐ if ordered, methods and times for quarantine, treatments, and disposal are followed

Selection or construction of new hive equipment:

- ☐ hive bodies are clean with tight joints and tight-fitting parts
- ☐ hive boxes can be tightly stacked but do not bind
- ☐ galvanized metal parts and nails are used
- ☐ equipment is constructed with clean smooth wood cuts
- ☐ pressure-treated wood and toxic materials are avoided
- ☐ new or irradiated plastic foundations are used

2.4 Management and Maintenance of Bee Equipment, Dead Bees, and Bee Products

- ☐ an equipment identification system is used – numbering, colour, maps, dates, or Global Positioning System
- ☐ provincial regulations concerning identification of hives and apiaries may apply
- ☐ routine inspections of structures and for the presence of pests are performed
- ☐ suspect colonies are visited last

Equipment exchange and replacement is

- ☐ segregated
- ☐ minimized
- ☐ routine
- ☐ follows cultural management practices and incorporates biosecurity methods
- ☐ apiaries and equipment are maintained and repaired as required
- ☐ equipment is disinfected before reintroducing bees

When storing equipment

- ☐ supers are dried before storing
- ☐ pollen and propolis are removed from stored comb
- ☐ supers are wrapped
- ☐ sufficient space and orientation to ducts is provided to promote air circulation

Dead bees, bee products, and contaminated equipment are properly

- ☐ handled
- ☐ stored
- ☐ disposed of

Honey extraction is avoided from

- ☐ contaminated equipment
- ☐ brood combs
- ☐ infected colonies (unless extracted last – followed by disinfection of used equipment)

2.5 Personal Sanitation

- ☐ hands are washed after handling contaminated equipment or bee products
- ☐ hands are washed between apiaries
- ☐ disposable or reusable gloves are carried and worn
- ☐ reusable gloves are washed and disinfected after use or between apiaries
- ☐ gloves are changed routinely
- ☐ contaminated gloves are disposed of carefully
- ☐ hands are washed before putting on gloves
- ☐ clothing is routinely washed with a bleach solution and thoroughly dried
- ☐ extra clean and disinfected hive tools are carried
- ☐ tools are disinfected after handling diseased or infested equipment or bee products
- ☐ tools are cleaned and disinfected when moving between apiaries
- ☐ visible debris is removed from tools before disinfecting
- ☐ used personal gear and tools are disposed of in the landfill or by burning

2.6 Design of Facilities

- ☐ loading areas are paved
- ☐ roadways and pathways are graded and drained
- ☐ spring loaded self-closing doors are used
- ☐ smooth structural materials that are impervious to rust, corrosion, and rot are used
- ☐ surfaces are easily cleaned
- ☐ exteriors are maintained to deter pests
- ☐ air circulation is promoted
- ☐ concrete floors are sealed
- ☐ facilities are bee tight and, ideally, insect and rodent proof
- ☐ one-way exit methods are used that allow bees to escape
- ☐ appropriate temperature- and humidity-controlled storage is provided
- ☐ temperature and humidity are monitored
- ☐ adequate ventilation and air circulation is provided in wintering facilities to remove heat, moisture, and carbon dioxide
- ☐ lighting is minimized in facilities where bees are stored

Segregated storage areas are provided for

- ☐ receiving bees
- ☐ infected, infested, or suspect hives
- ☐ hives from different apiaries (wintering facilities) or destined for pollinating crops in pest-free areas
- ☐ toxic products
- ☐ disinfection
- ☐ storage and repairs of hive equipment

2.7 Maintenance of Premises, Buildings, Vehicles, and Other Equipment

- ☐ new apiary sites are inspected and assessed for risks before placing bees
- ☐ transportation and operational equipment and surfaces are clean of debris and honey spills
- ☐ honey spills are cleaned daily
- ☐ the premises, buildings, vehicles, and equipment are routinely inspected for risks
- ☐ areas used for cleaning and disinfection are located away from apiaries and other production facilities
- ☐ drainage water is contained or controlled to minimize biosecurity risks

2.8 Control of Weeds and Nuisance Pests

Monitoring includes

- ☐ weeds
- ☐ nuisance pests
- ☐ disturbances to hives and surrounding area
- ☐ dead bees
- ☐ nests
- ☐ weakened colonies

Management:

- ☐ facilities and apiaries are kept free of attractive environments for pests
- ☐ facilities and apiaries are kept free of presence of dogs or cats
- ☐ bees are moved to a new location, or measures are taken if pests are discovered
- ☐ facilities and hives are maintained in good condition – pest proofing
- ☐ areas around apiaries and hives are mowed
- ☐ selected sites are away from wildlife habitats
- ☐ fencing is used
- ☐ predators are trapped
- ☐ Poison (permitted) is used appropriately for pests requiring this treatment
- ☐ colonies are raised off the ground
- ☐ wasps are monitored and nests removed
- ☐ hives are located in areas where they cannot be easily vandalized or subject to theft
- ☐ if possible, surveillance cameras are used

2.9 Training and Education

A training/education program includes

- ☐ joining local associations
- ☐ accessing government resources and professionals
- ☐ developing Standard Operating Procedures (SOPs) for operational processes

A training plan includes knowledge of

- ☐ biosecurity principles, risks, and importance
- ☐ bee health
- ☐ monitoring
- ☐ record keeping
- ☐ recommended management practices
- ☐ treatment
- ☐ sanitation processes
- ☐ acts and regulations

The training plan includes

- ☐ training schedules, key training times, and updates
- ☐ in-house training
- ☐ on-the-job training
- ☐ self study
- ☐ formal qualification
- ☐ translation if applicable