



Canadian Food
Inspection Agency

Agence canadienne
d'inspection des aliments

Animal Biosecurity

Bumblebee Biosecurity Checklist





Section 1: Bee Health Management

1.1 Bumble Bee Sources

- ☐ bees are purchased from inspected and certified suppliers and distributors
- ☐ new hives are appropriately transported with screens, in enclosed vehicles (suppliers)
- ☐ hives being sent to non-native regions have queen excluders and are not placed in field
- ☐ hives are placed appropriately, including hive entrances exposed to the morning sun
- ☐ records are created and maintained for every new hive

1.2 Prevention: Minimizing Susceptibility to Pests

- ☐ temperature, humidity, ventilation and carbon dioxide in the greenhouse are monitored
- ☐ hive boxes are kept in partial or full shade
- ☐ operational disturbance is minimized
- ☐ only recommended pesticides are used and applied with caution
- ☐ one-way entrance tubes keep bees inside hive and minimize pesticide exposure

1.3 Prevention: Minimizing Exposure

- ☐ hives are placed away from greenhouse entrances
- ☐ pollination stocking rate recommendations are followed
- ☐ where possible greenhouse doors and entrances are designed to reduce risk of bee escapes
- ☐ hives are placed near a tall object (landscape feature)

Recommended practices outside of *Bombus impatiens* native range include:

- hives are not placed in fields
- queen excluders are used during transport (suppliers) and for entire production cycle

1.4 Diagnosis and Monitoring

- ☐ pests are recognized early through monitoring of signs of pests and pollination activity
- ☐ monitoring records are created and maintained

1.5 Standard Response Plan

- ☐ if pests are suspected, protocols for hive removal and disposal are followed
- ☐ disposal begins with immediate bagging, followed by killing of the colony and appropriate disposal of entire hive
- ☐ records are kept and maintained

1.6 Elevated Response Plan

- ☐ communication occurs with staff, provincial apiarists and inspectors, suppliers, other growers
- ☐ management protocols are in place and are implemented if an elevated response is triggered (may include suspension of hive movement, restricted access, heightened monitoring and sampling)
- ☐ all requirements of a quarantine order or protocol are followed
- ☐ personal, equipment, and disposal biosecurity protocols are followed
- ☐ records are kept and maintained



Section 2: Operations Management

2.1 Obtaining Production Inputs

- ☐ supplies are obtained from certified, inspected and recognized suppliers (growers)
- ☐ feeding of bee products is avoided; if supplemental carbohydrate is required, it consists of sugar water or high fructose corn syrup (HFCS) (suppliers)

2.2 Handling and Disposal of Production Inputs (suppliers)

- ☐ appropriate feeders are used, cleaned and disinfected
- ☐ label instructions are followed for use and disposal of treatment products

2.3 Obtaining Bee Equipment (suppliers)

- ☐ only new hive boxes are purchased

2.4 Handling and Disposal of Bee Equipment (suppliers)

- ☐ the entire hive is disposed of either at the end of the production cycle or earlier if pests are suspected

The entire hive is bagged and disposed of by one of the recommended methods:

- disposal by bee supplier/pollination service provider
- freezing (contained and landfill)
- carbon dioxide (contained and landfill)
- drowning (contained and landfill)
- burial at appropriate depth
- burning of entire hive
- disposal records are kept and maintained

2.5 Personal Sanitation (suppliers)

- ☐ hands are washed after handling contaminated equipment or bee products
- ☐ hands are washed with water and soap, hand sanitizer or other appropriate solution
- ☐ disposable gloves are worn or reusable gloves are routinely washed and disinfected

2.6 Design of Facilities

- ☐ bumblebee suppliers adhere to facility design requirements and control access (suppliers)
- ☐ over-boxes for transport are clearly labeled with the required information
- ☐ where possible greenhouse entrances are designed to prevent escape
- ☐ greenhouse light, temperature, carbon dioxide, humidity and ventilation are monitored and controlled

2.7 Maintenance of Premises, Buildings, Vehicles and Other Equipment (suppliers)

- ☐ new sites are inspected before placing bees
- ☐ buildings and equipment are regularly cleaned and disinfected
- ☐ buildings are checked annually for protection from pests and risk of escape

2.8 Control of Weeds and Nuisance Pests (suppliers)

- ☐ facilities and hives are kept free of attractive environments for pests
- ☐ wasps are monitored and nests removed

2.9 Training and Education

- ☐ a biosecurity training/education program is implemented