

IPM Option – Summary from the Blueberry Certification Program (BCP) – controlling BBM for import of blueberries into Canada

Not intended to replace or be a substitute for the complete Blueberry Certification Program requirements document. <http://www.inspection.gc.ca/plants/plant-pests-invasive-species/directives/horticulture/d-02-04/eng/1320046578973/1320046655958>

This summarizes the “IPM option”, which is supported by NEWA’s blueberry maggot degree day model. The “IPM option” decision must be made at the time the application for approval in the BCP is submitted.

Blueberry growers in regulated areas that are participating in the BCP should follow state recommendations for controlling blueberry maggot and also implement appropriate cultural practices for blueberry maggot, such as good weed suppression, proper disposal of culled blueberries, and other measures as recommended. Participants in the BCP must apply blueberry maggot control measures, fruit grading, sampling and testing to ensure blueberries they ship are free of blueberry maggot.

Integrated Pest Management (IPM) Program for Blueberry Maggot, *Rhagoletis mendax*

Participants that select the Integrated Pest Management (IPM) option must monitor the designated production areas for blueberry maggot flies using yellow sticky traps baited with ammonium acetate.

Use the NEWA blueberry maggot DD model to time the placement of traps at least two weeks prior to the earliest expected emergence of blueberry maggot flies.

Traps should be distributed evenly inside the perimeter of the managed production area, within 26 feet of the field edge.

- For lowbush blueberry, the traps should be placed 4 to 6 inches above the plants.
- In highbush fields, the traps should be placed at mid-canopy height.



Figure 1. V-shaped placement of blueberry maggot trap on a blueberry branch. The yellow capsule is the blueberry maggot bait enhancer.

Place traps in a 45-degree-angle "V" shape, with the apex and the yellow sticky surface facing the ground. Twigs and foliage in the vicinity of each trap must be removed to optimize trap catch. Replace traps a minimum of once every 3 weeks – more frequently if traps are damaged, filled with debris, or removed for identification of suspect flies.

Minimum Required Trapping Densities in Managed Blueberry Fields	
Size of production area	Minimum number of traps
5 acres or less	4 traps
7½ to 12½ acres	6 traps
15 to 40 acres	15 traps
over 40 acres	1 trap per 2½ acres to a maximum of 20 traps

Inspect traps for blueberry maggot flies a minimum of once a week starting when the traps are placed in the fields and continuing until the end of harvest. The frequency of trap monitoring must be increased to twice weekly starting just before first fruit coloring and continuing until the first blueberry maggot fly is caught, triggering fruit protection activities.

Keep monitoring records, which may be requested by the National Plant Protection Organization (NPPO).

- **Keep Trapping Records:** Dates when traps were placed, checked and replaced; who inspected the traps; trap catch data (including date of all inspections, location of traps and number of suspect flies on each trap); and which traps were submitted for further identification.

The person inspecting the traps must be able to identify fruit flies in the genus *Rhagoletis*, which includes blueberry maggot. Every *Rhagoletis* fly that is caught on a yellow sticky trap in a blueberry field is considered to be blueberry maggot unless an authorized expert confirms that it is a different species.

Identifying *Rhagoletis* flies to the species level may only be done by submitting traps with suspect flies on them to a state entomologist, or NPPO designated expert for further identification – *within five days*.

- **Keep Pest Identification Records:** A copy of the *Rhagoletis* identification report from the authorized expert or identification results in writing from the NPPO.

An insecticide application will be required unless the insect is confirmed by the expert to not be blueberry maggot within five days.

If one blueberry maggot fly is found in a trap, apply an insecticide registered for use against blueberry maggot to the managed area within five days of trap catch. A second spray must be applied five to twelve days later, depending on the insecticide.

If another blueberry maggot fly is trapped within the managed production area after the second application, spray again within five days and this time, insecticides must be applied at the rates and intervals specified on the pesticide label and according to provincial or state recommendations until shipping under the BCP ceases.

- **Keep Pesticide Spray Records:** Date of insecticide application; name of insecticide and application rate; description of area treated.

If no blueberry maggot flies are found on any of the traps, chemical controls are not required.