

# TECHNICAL DATA SHEET



COMMERCIAL PCOs



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FORESTRY



GREEN SPACES & HORTICULTURE



INVASIVE EXOTIC SPECIES

## APPLE MAGGOT (*Rhagoletis pomonella*)

**Adult:** The Apple Maggot is smaller (5 to 6 mm) than the housefly. It is easily recognized by the four irregular or zigzag-shaped black stripes on its wings.

\* This species is morphologically very similar to the blueberry maggot.

**Egg:** 0.9 mm, elliptical in shape, creamy-white and semi-opaque.

**Larva:** 6.5 to 8 mm at maturity, cream-colored

**Pupae:** oval, ochre-colored, approximately 5 mm long.

**Distribution:** Across Canada

**Hosts:** This insect is found in all apple-growing regions and can attack the fruit of apple, crab apple, and hawthorn trees.

**Damage:** The Apple Maggot is one of the main pests of North American apple orchards. The development of larvae inside the fruit causes a considerable reduction in its value. In addition, the holes created when the eggs are laid facilitate the entry of secondary pathogens.



Figure: Adult of the Apple Maggot. Source: Laboratoire de diagnostic en phytoprotection, MAPAQF



Larve. Source : Larva. Source: <https://reseau.pommier.irda.qc.ca/?p=646>

Figure: Pupae. Source: <https://reseau.pommier.irda.qc.ca/?p=646>

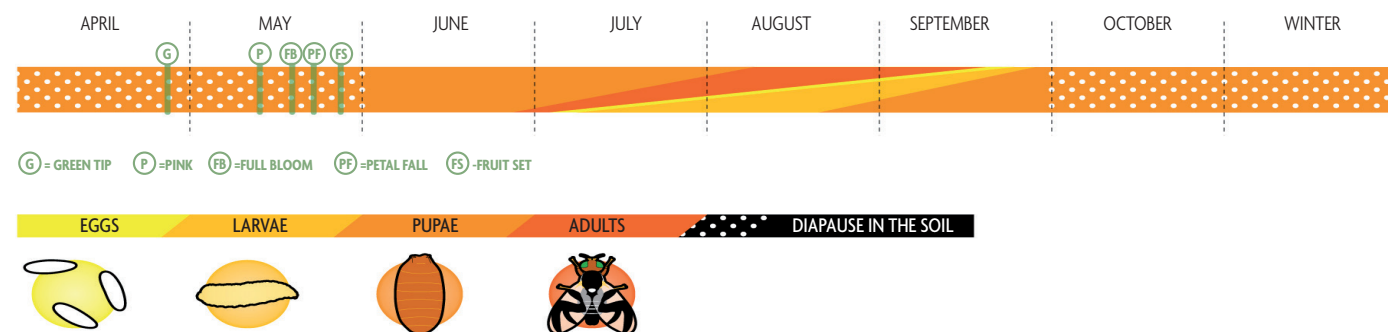


Figure: Internal feeding damage caused by larvae. Source: [https://www.edmonton.ca/programs\\_services/pests/apple-maggot](https://www.edmonton.ca/programs_services/pests/apple-maggot)

## GENERATIONS AND LIFE CYCLE

The Apple Maggot produces only one generation per year. Adults generally appear in late June or early July (peak emergence in mid-to-late July). The eggs laid by the females are found under the skin of the fruit. Only one egg is laid per fruit. Then, 3 to 7 days later, the larvae hatch and feed on the fruit pulp. Generally speaking, it's only once the fruit falls to the ground that the fully-developed larvae emerge from the fruit and burrow into the soil. They can remain dormant throughout the winter and persist in the soil for several years as pupae. Then, the life cycle begins again.

### Life Cycle of the Apple Maggot (J. Veilleux, IRDA)



\*Note: Diapause can last from six months to five years.



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## RECOMMENDED MONITORING TOOLS

### Pièges jaunes

Yellow traps attract immature adults seeking foliage to feed on, while the red ball trap attracts mature adults that prefer to breed on fruit. This is why the two types of trap are often used in conjunction. In commercial orchards, the red ball is the only type of trap used.

Hang yellow traps at head height, clearly visible on the outer edge of the tree canopy. To determine fly emergence, traps should be set in mid-June and checked 1-2 times a week thereafter. Replace traps as needed.

### Red Ball Traps

To monitor fly activity, we recommend placing red ball traps without attractants on the peripheral rows and traps with attractants in apple trees located away from the block. It is not necessary to use attractants in small orchards of a few apple trees: place 1 to 2 traps per dwarf tree, 2 to 4 traps per medium-sized tree, and 4 to 8 traps for very large trees. In commercial orchards, place 6 to 12 traps per acre (or 15 to 30 traps per hectare) on the peripheral row. Traps should be placed clear of foliage so that they are easily visible.

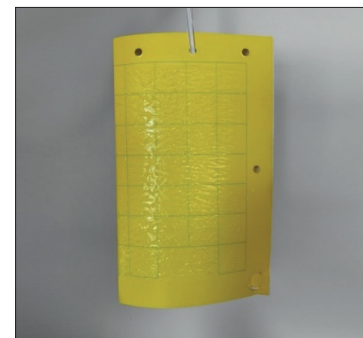
Note that you may wish to wrap the red ball traps in plastic film (Saran Wrap style) before coating them with TAD glue. The wrap can then be easily removed and discarded, and the procedure repeated throughout the season.

### Attractant (A)

Product #40CT217 (field life of 12 weeks)

### Trap Coating (B)

TAD Trap Coating: (various formats available) 1 can of 237ml brush-on trap coating covers 10 red balls.



Yellow AM Trap, product #301Y302



Red Ball Trap, product #301Y400

Figure: Red ball trap coated with glue. Source: Y. Morin, IRDA



### Useful Links:

<https://inspection.canada.ca/en/plant-health/invasive-species/insects/apple-maggot/fact-sheet>

[https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/alerts/apple\\_maggot\\_alert.pdf](https://www2.gov.bc.ca/assets/gov/environment/plants-animals-and-ecosystems/invasive-species/alerts/apple_maggot_alert.pdf)

