Reducing Losses from Apple Pests with Alternative Control Strategies

LEAD RESEARCHER

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This research is working to reduce apple crop losses from pests such as apple maggot, ambrosia beetles and leafrollers. The research team has been investigating a protocol for sterile insect release for control of apple maggot (SIR for AM). Ambrosia beetles are being identified in apple orchard agroecosystems, along with new methods to manage the pest. Researchers are also working to find a sustainable non-pesticide tool for management of leafrollers. These projects are all meant to identify a non-pesticide option for control of apple pests across Canada.

The final ratio experiments were completed in March 2026 for SIR for apple maggot control research. With the ratio experiments finished, the research team now has a better understanding of the mass rearing needs for this strategy to be used in the field.

The biocontrol for leafrollers research is in its final year with field trials at four commercial sites—two in Nova Scotia and two in Quebec. The research teams are working to complete biocontrol agent releases and conduct damage assessments at each site.

There is still one more year to go for the landscape management for ambrosia and bark beetles research. Identification of species captured during summer 2025 has happened. Landscape factors were recorded for orchards in Ontario with modification strategies being developed. Sampling for bark beetles in British Columbia and Ontario orchards will continue over the remaining research time, along with identification of beetles. Landscape modifications will be implemented as required.

KEY TAKEAWAYS:

- The final ratio experiments were completed in March 2026 for SIR for apple maggot control research.
- The biocontrol for leafrollers research is in its final year. Field trials are happening at commercial sites in Nova Scotia and Quebec.
- There is still another year remaining for the landscape management for ambrosia and bark beetles research. Sampling for bark beetles in British Columbia and Ontario orchards will continue, along with identification of beetles.

An apple maggot on Aug. 6, 2026.

Apples damaged by codling moths at a Nova Scotia orchard on Aug. 6, 2026. The biocontrol for leafrollers is providing codling moth control also. Photos: Toban Dyck