



# Invasion: Facing the Plague of New Pests

**November 7, 2023**

**Victoria Park East Golf Course  
1096 Victoria Road South**

**Full Program: <https://www.ontariopmc.ca/program>**

## **Organizing Committee**

**Kristen Obeid**, Chair - OPMC, Ontario Ministry of Agriculture, Food and Rural Affairs  
**Chris Duyvelshoff**, Ontario Fruit and Vegetable Growers Association  
**Melanie Filotas**, Ontario Ministry of Agriculture, Food and Rural Affairs  
**Katie Goldenhar**, Ontario Ministry of Agriculture, Food and Rural Affairs  
**Kristy Grigg-McGuffin**, Ontario Ministry of Agriculture, Food and Rural Affairs  
**Justin Renkema**, Agriculture and Agri-Food Canada  
**Rachel Riddle**, University of Guelph  
**Julie Schipper**, Valent Canada  
**Sean Westerveld**, Ontario Ministry of Agriculture, Food and Rural Affairs

OPMC Logo and Banner Design by Doug Schaefer

## AGENDA

**8:30 a.m**      **Registration and Coffee, Poster Set Up**

### MORNING SESSION

**Chair:** Rachel Riddle, University of Guelph

**9:00 am**      **Welcome and Opening Remarks: Kristen Obeid**, Chair, OPMC

**9:05 am**      Adaptation of AgRobotics for root and bulb vegetable production in high organic matter soils. **Geoff Farintosh**, University of Guelph. (Invited Speaker)

**9:25 am**      Soil microbiome and calcium content in relation to the risk of cavity spot on carrots. **Umbrin Ilyas**, University of Guelph. (Student Competition)

**9:40 am**      Emerging threat of ring nematode in Ontario's fruit crop production: What we know so far. **Jerry Akanwari**, Brock University. (Student Competition)

**9:55 am**      Resistance to two SDHI fungicides in *Stemphylium vesicarium*, 2023. **Emily McFaul**, University of Guelph. (Student Competition)

**10:10 am**      Optimization and scalability of regenerative in situ electrochemical hypochlorination for closed-loop hydroponics. **Serge Lévesque**, University of Guelph. (Student Competition)

**10:25 am**      **Coffee Break and Poster Viewing**

**10:55 am**      **PLENARY PRESENTATION - Spotted lanternfly past, present and future: Impacts and management of this invasive pest.** **Dr. Julie Urban**, Pennsylvania State University

**11:40 am**      OMAFRA CropIPM demonstration. **Susan Murray**, OMAFRA. (Invited Speaker)

**12:00 pm - 1:00 pm**      **Lunch and Poster Viewing**

### AFTERNOON SESSION

**Chair:** Cassie Russell, OMAFRA

**1:00 pm**      Examining two *Dicyphus* species (Hemiptera: Miridae) for their potential use as biological control agents on greenhouse crops. **Carly Demers**, University of Windsor. (Student Competition)

**1:15 pm**      Mitigating apple replant disease with biocontrol soil treatments. **Meaghan Mechler**, University of Guelph. (Student Competition)

**1:30 pm**      **PLENARY PRESENTATION - Palmer amaranth: Biology, ecology, management and lessons learned from Georgia, California and New York.** **Dr. Lynn Sosnoskie**, Cornell AgriTech

**2:15 pm**      **Coffee Break and Poster Viewing**

**2:45 pm**      **PLENARY PRESENTATION - A plague on all our houses: Plant viruses**  
**Dr. Jonathan Griffiths**, Agriculture and Agri-Food Canada

**3:30 pm**      Viatude, a new fungicide for management of white mould in soybean in Eastern Canada. **Jamshid Ashigh**, Corteva Agriscience. (Industry Speaker)

**3:50 pm**      Presentation of Student Competition Award Winners – **Kristen Obeid**, OMAFRA  
**Closing Remarks and Adjourn**

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## POSTER PRESENTATIONS

### -Graduate Student Poster Presentations-

- GP1** Disease forecasting models for management of *Stemphylium* leaf blight of onion. **Julia Scicluna**, University of Guelph. **(Time of judging 9:00-9:10 am)**
- GP2** Characterizing beta-tubulin dsRNA for RNAi control of an aggressive *Neopestalotiopsis* species. **Sarah Koeppe**, University of Guelph **(Time of judging 9:12-9:22 am)**
- GP3** Effect of soil pH and calcium base saturation on severity of clubroot on canola, 2023. **Kirsten Holy**, University of Guelph. **(Time of judging 9:24-9:34 am)**
- GP4** Estimating *Fusarium* head blight severity in winter wheat using deep learning and a spectral index. **Riley McConachie**, University of Guelph. **(Time of judging 9:36-9:46 am)**
- GP5** American ginseng: multi-pathogen interactions in ginseng replant disease. **Andrew Rabas**, Western University. **(Time of judging 9:48-9:58 am)**
- GP6** *Tetranychus urticae* adaptation to phenylpropanoid defensive compounds in *Arabidopsis thaliana*. **Alexander Harrison**, Western University. **(Time of judging 10:00-10:10 am)**
- GP7** Engineering RNA interference precursors to induce silencing of hop latent viroid in hop (*Humulus lupulus* L.). **Taylor Atsaidis Royal**, University of Guelph. **(Time of judging 10:12-10:22 am)**
- GP8** Managing *Verticillium* stripe in canola through genetics, omics, and understanding the *Brassica napus* - *Verticillium longisporum* interaction. **Ayomi Thilakarathne**, Wilfred Laurier University. **(Time of judging 11:40-11:50 am)**
- GP9** Pathogenicity of *Ilyonectria mors-panacis* on American ginseng using chlorophyll fluorescence measurements. **Anka Colo**, Western University. **(Time of judging 11:52-12:02 pm)**
- GP10** Screening for *Neopestalotiopsis* spp. in Ontario strawberry varieties and F1 hybrids. **Justin McNally**, University of Guelph. **(Time of judging 1:00-1:10 pm)**
- GP11** A CRISPR platform for controlling *Fusarium* dry rot in potato. **Narges Atabaki**, University of Guelph. **(Time of judging 1:12-1:22 pm)**

**\* Judging time - Students must be present at their poster at the time indicated and during the morning and afternoon breaks.**

### -Undergraduate Student Poster Presentations-

- UP1** The influence of cannabis plant tissue type, trichome density and cultivar on cannabis aphid (*Phorodon cannabis*) behaviour. **Carter Mikkelsen**, University of Guelph. **(Time of judging 9:00-9:10 am)**
- UP2** Phosphate solubilizing microbes *Pseudomonas poae* (I186) and *Pantoea eucalypti* (I77)

demonstrating dual potential as bio-fertilizer and bio-fungicide. **Ryan Joyce**, Western University. **(Time of judging 9:12-9:22 am)**

- UP3** Potential companion plants to protect against *Thrips parvispinus* in greenhouse ornamental crops. **Avery Johnson**, Vineland Research and Innovation Centre. **(Time of judging 9:24-9:34 am)**
- UP4** The potential of *Pseudomonas fluorescens*, I336 and *Bacillus velezensis*, I113 to restore garlic seed stocks with latent fusarium infections. **Anna Hawkins**, Western University. **(Time of judging 9:36-9:46 am)**
- UP5** Biocontrol of fungal plant pathogens in cannabis using *Bacillus amyloliquefaciens* I113. **Hayden Hornick-Martyk**, Western University. **(Time of judging 9:48-9:58 am)**
- UP6** Fungal endophyte *Beauveria bassiana* suppresses clubroot (*Plasmodiophora brassicae*) on cabbage under controlled environment conditions. **Kelly Ruigrok**, University of Guelph. **(Time of judging 10:00-10:10 am)**

*\* Judging time - Students must be present at their poster at the time indicated and during the morning and afternoon breaks.*

### **-Regular Poster Presentations-**

- RP1** Assessment of pesticide resistance of *Tetranychus urticae* populations from southwestern Ontario. **Joseane Moreira do Nascimento**, Western University.
- RP2** Switchgrass gall midge, an emerging Ontario pest. **Rebecca Hallett**, University of Guelph.
- RP3** Assessing the ecological interactions between invasive and endemic species of gall midge pests of canola. **Rebecca Hallett**, University of Guelph.
- RP4** Initial testing of weeding robots in vegetable production systems in Ontario Canada. **Kristen Obeid**, OMAFRA.
- RP5** Available genetic testing enables early detection and mitigation of herbicide resistant weeds. **Kristen Obeid**, OMAFRA.
- RP6** Harmonized surveillance of common waterhemp (*Amaranthus tuberculatus*): A model of national collaboration. **Kristen Obeid**, OMAFRA.
- RP7** Invasive insects to watch out for: A Canadian Plant Health Council initiative. **Tracey Baute**, OMAFRA.

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## Conference Sponsors

The OPMC wishes to thank the conference sponsors for their financial support of the conference.

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The OPMC would also like to gratefully acknowledge additional financial support from the School of Environmental Sciences, University of Guelph.

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## CropLife Student Competition Judging Panel

The OPMC wishes to thank the members of the judging panel for generously volunteering their time to help make this competition happen.

### **Graduate Oral**

Jason Deveau, OMAFRA  
Hannah Fraser, OMAFRA  
John Purdy, Abacus Consulting Services  
Marty Vermey, Grain Farmers of Ontario

### **Graduate Poster**

Tyler Blauel, U of G  
Travis Cranmer, OMAFRA  
Katie Goldenhar, OMAFRA  
Amanda Tracey, OMAFRA

### **Undergraduate Poster**

Meghann Garlough, Bayer CropScience  
Erica Pate, OMAFRA

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## Post Conference Survey

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