

BMPS FOR ONTARIO'S TOP 5 INSECT PESTS



Thrips



Whiteflies



Aphids



Spider mites



Mealybug

**Dr. Sarah Jandricic, OMAFRA
Greenhouse Floriculture IPM Specialist**

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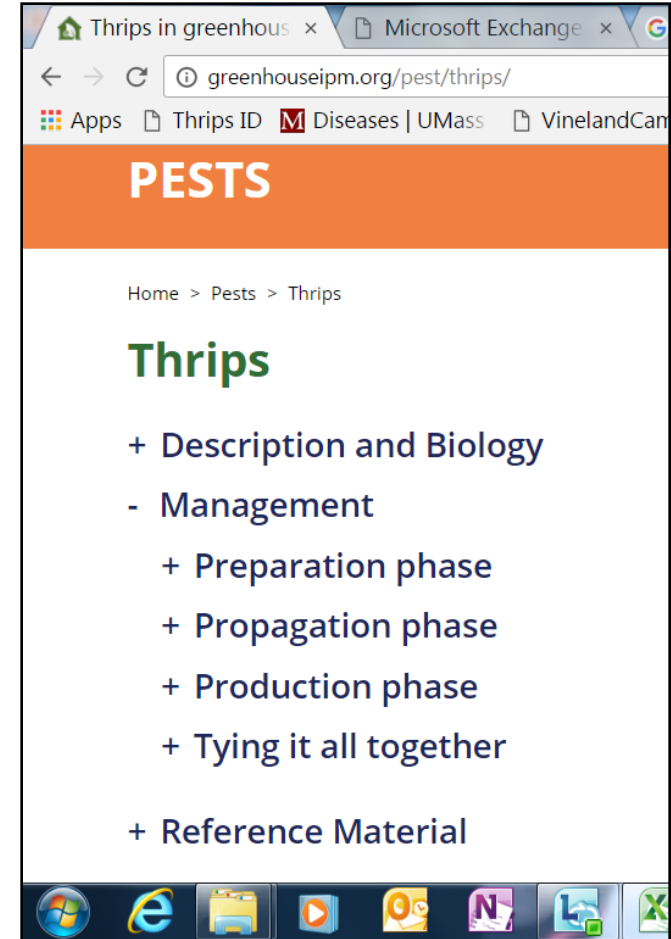
BMPs for Floriculture IPM

GREENHOUSEIPM.ORG

- OMAFRA, VRIC, FCO, PMC and IPM Consultant collaboration



The screenshot shows the homepage of Greenhouseipm.org. The browser's address bar displays "greenhouseipm.org/pest/thrips/". The website features a dark blue navigation bar with links for HOME, ABOUT, IPM, PESTS, and CONTACT. Below the navigation bar is a large orange banner with the word "PESTS" in white. Underneath, a breadcrumb trail reads "Home > Pests". Two photographs of thrips are displayed side-by-side: one is a close-up of a thrips on a green leaf, and the other is a thrips with its wings spread, showing a pinkish hue.



The screenshot shows the "Thrips" page on Greenhouseipm.org. The browser's address bar displays "greenhouseipm.org/pest/thrips/". The page has an orange header with the word "PESTS" in white. Below the header, a breadcrumb trail reads "Home > Pests > Thrips". The main heading is "Thrips" in green. Below the heading is a list of topics with expandable/collapsible icons:

- + Description and Biology
- Management
 - + Preparation phase
 - + Propagation phase
 - + Production phase
 - + Tying it all together
- + Reference Material

BMPs are Continually Evolving...

VRIC: series of “how to” articles in Greenhouse Canada Magazine



PRACTICAL information:

- Prevention of pests
- Mass trapping & trap plants
- Using Biopesticides and nematodes
- Optimizing predatory mites
- Etc.

BMPs are Continually Evolving...

The LATEST news in Floriculture IPM:

ONfloriculture



[Home](#) [About](#) [Additional Resources](#) [Authors](#) [Photo Gallery](#) [Terms of Use](#)

[← Thrips workshop info up on web](#)

[Summer student positions available at Vineland! →](#)

How are pesticides registered in Canada?

Posted on [January 5, 2016](#) by [Sarah Jandric, Greenhouse Floriculture IPM Specialist, OMAFRA](#)

*Ever wonder what, exactly, is involved in getting a pesticide registered for use in Canadian greenhouses – and why it seems to take so long? This **guest post** by Cary Gates (Director of Pest Management, Flowers Canada) lifts the curtain on the process.*



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ONfloriculture Topics

[Aphids](#) [Beauveria bassiana](#)
[biological control](#) [Black root rot](#) [broad mite](#)
[chrysanthemums](#) [consumer trends](#) [diseases](#) [Events](#)
[fungus gnats](#) [insect pests](#) [IPM Blogs](#) [IPM tools](#) [Microbial products](#)
[Nematodes](#)

BMPS FOR ONTARIO'S TOP 5 4 INSECT PESTS

I'm Number One!
I'm Number One!



1. BMP for Thrips, e.g. in Mums

Integrated Use of Biocontrol Agents from Propagation to Shipping

Planning



Propagation



Production



Finishing



Research plant risks
Choose resistant plants
“Use” susceptible plants
Reduce fertilizer

Broadcast *Cucumeris*
Microbials
Nematodes
Hypoaspis
Atheta

Use Mite sachets
Microbials
Nematodes

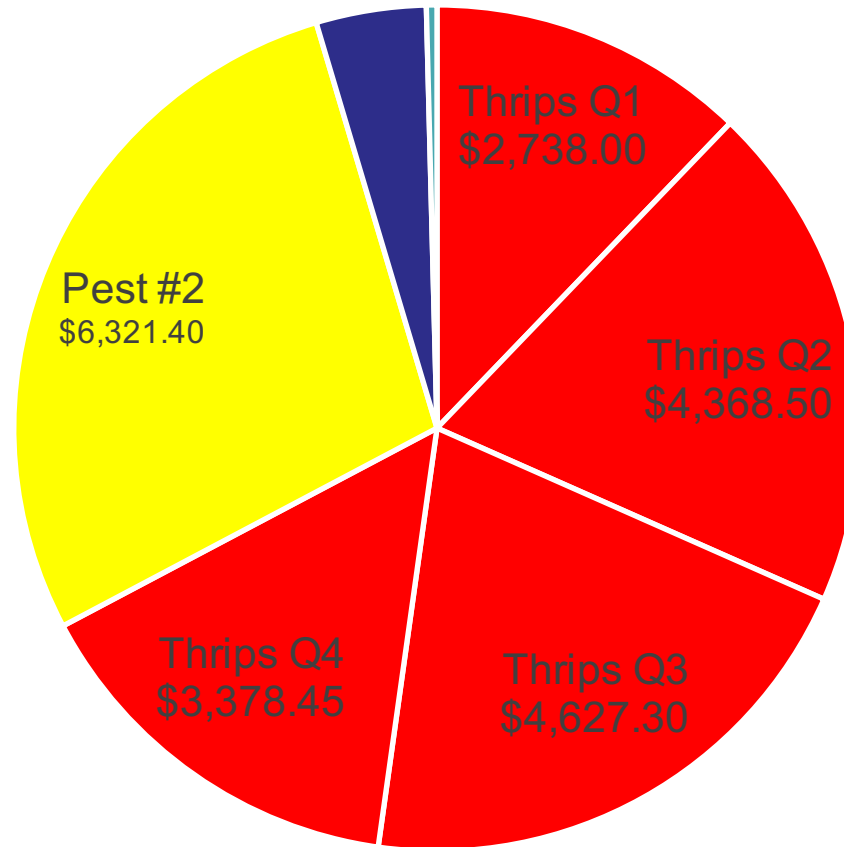
Swirskii sachets
Microbials

SEE THE DETAILS: [GREENHOUSE CANADA WEBINAR](#) and [GREENHOUSEIPM.ORG](#)

BioControl Costs by Pest

Numbers courtesy. G. Murphy,
BioLogical Consulting

2014



Total thrips cost for
2014:
\$ 15,112.25 (64%),
Up to 80 cents/pot

Current Thrips Projects

1. OMAFRA: The Power of Sticky Tape



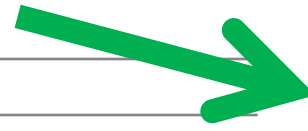
2. VRIC : Improving Efficacy of Microbial Applications



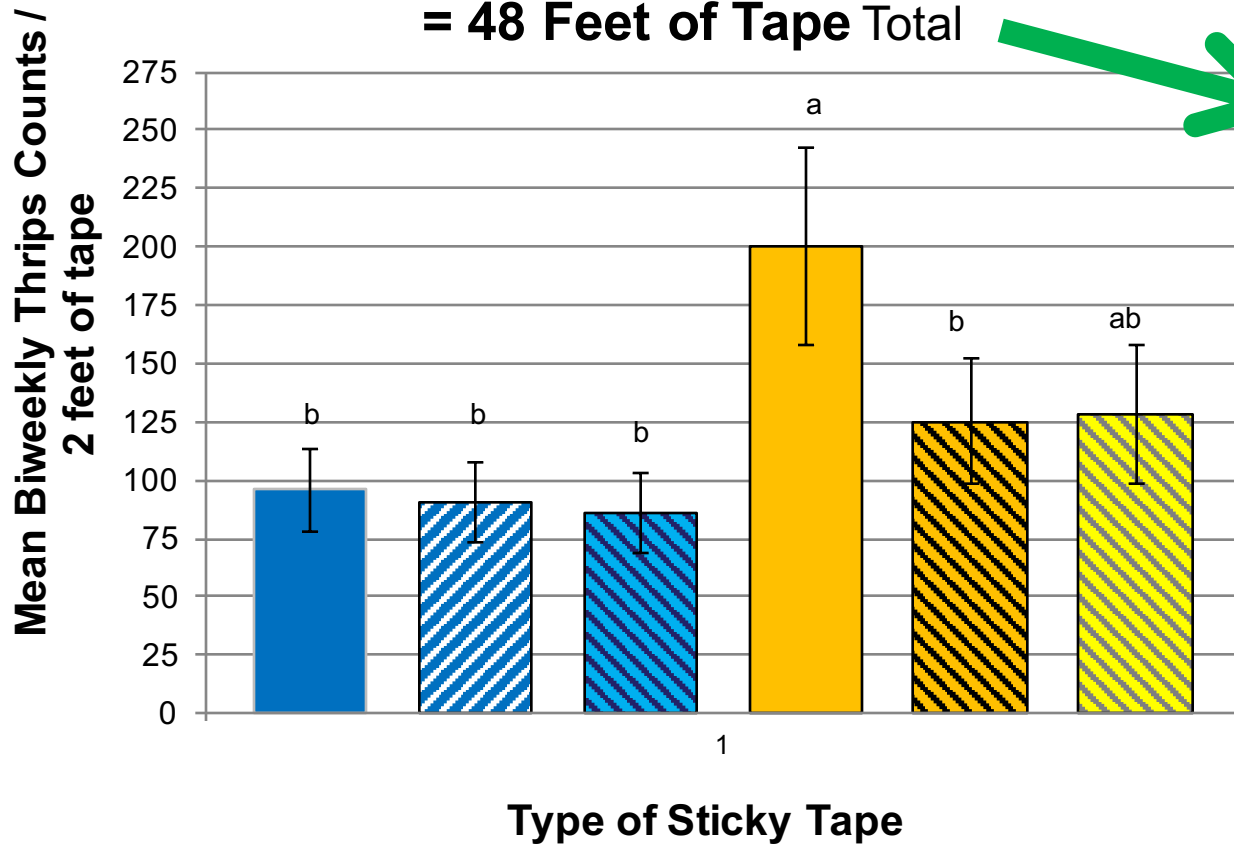
The Power of Sticky Tape!

–E.g. Pot Mum Production

= 48 Feet of Tape Total



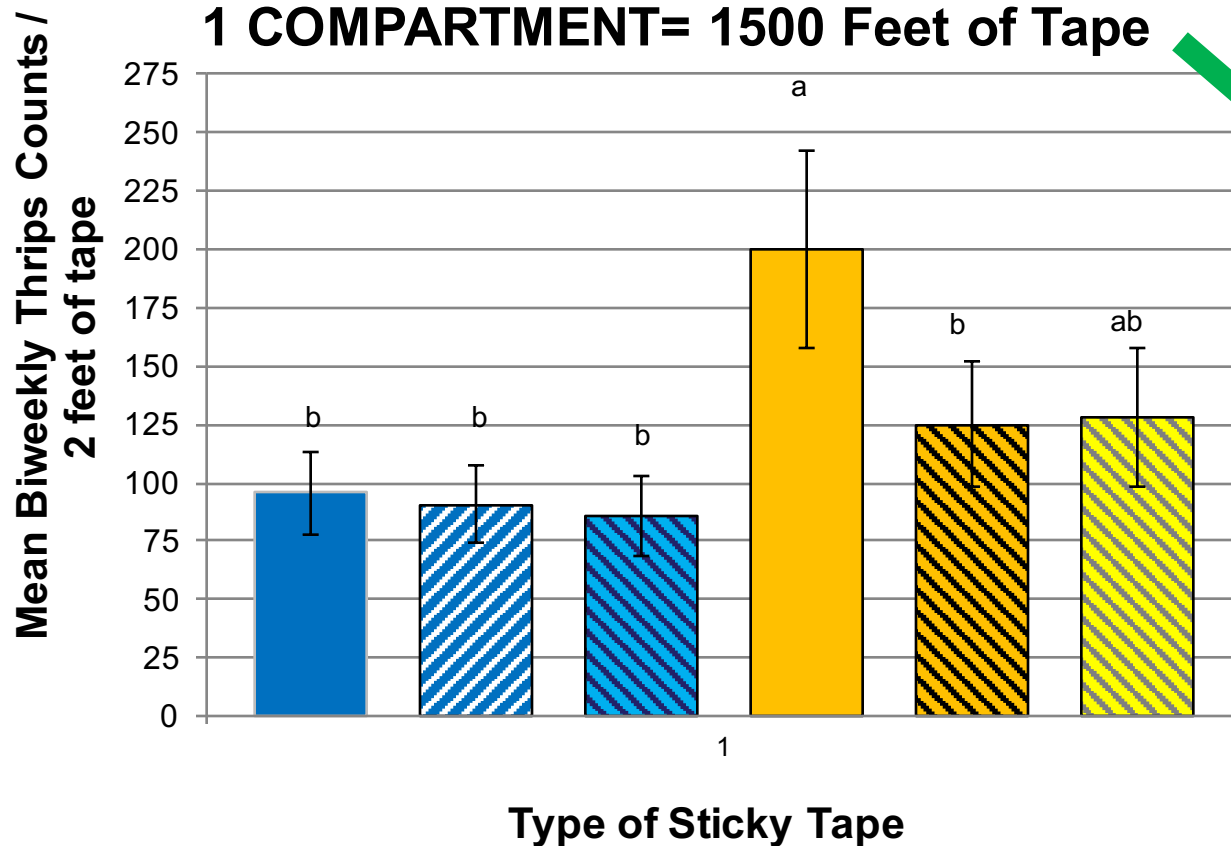
June 1-Aug 15:
**= 10,123 Thrips
Removed!**



See more details on ONFLORICULTURE and an upcoming issue of GREENHOUSE CANADA MAGAZINE

The Power of Sticky Tape!

–E.g. Pot Mum Production



June 1-Aug 15:
= 647, 872 thrips/
compartment removed!

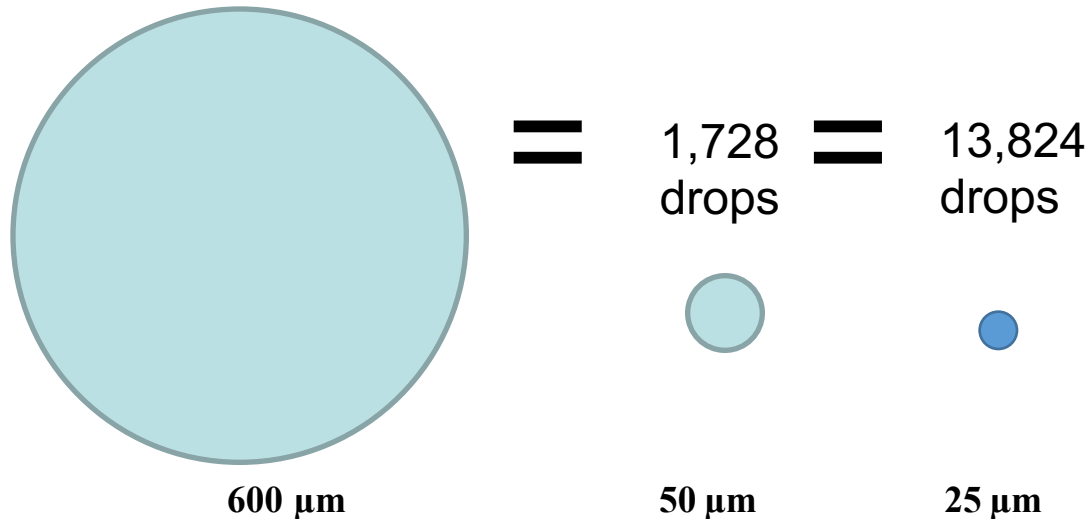
**SEE THE DETAILS: GREENHOUSE CANADA WEBINAR And
GREENHOUSEIPM.ORG**

VRIC: Low Vol. Microbial Applications

- Increased coverage; less run off; decreased labour



- Relative droplet size

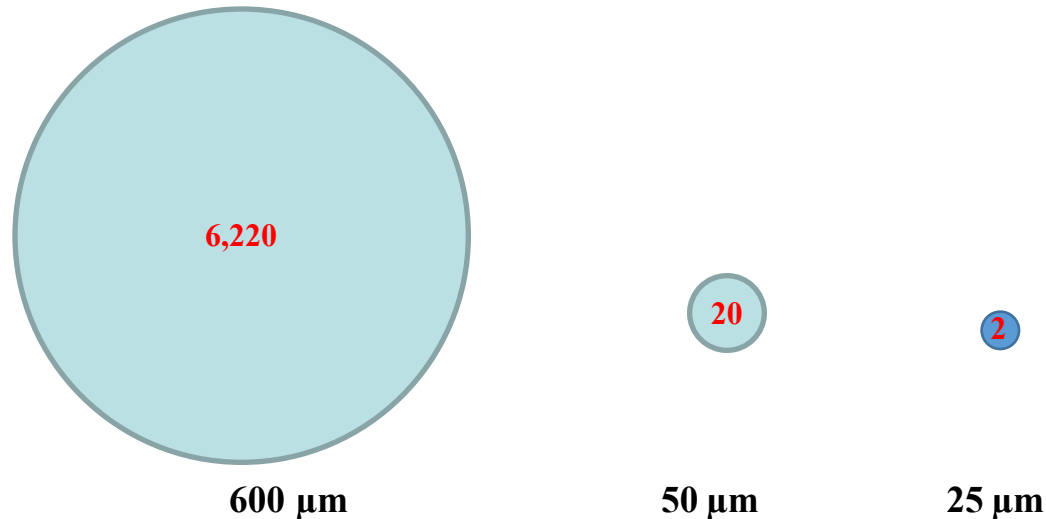


VRIC: Low Vol. Microbial Applications

- Increased coverage; less run off; decreased labour



- Relative droplet size and **number of spores carried in each:**



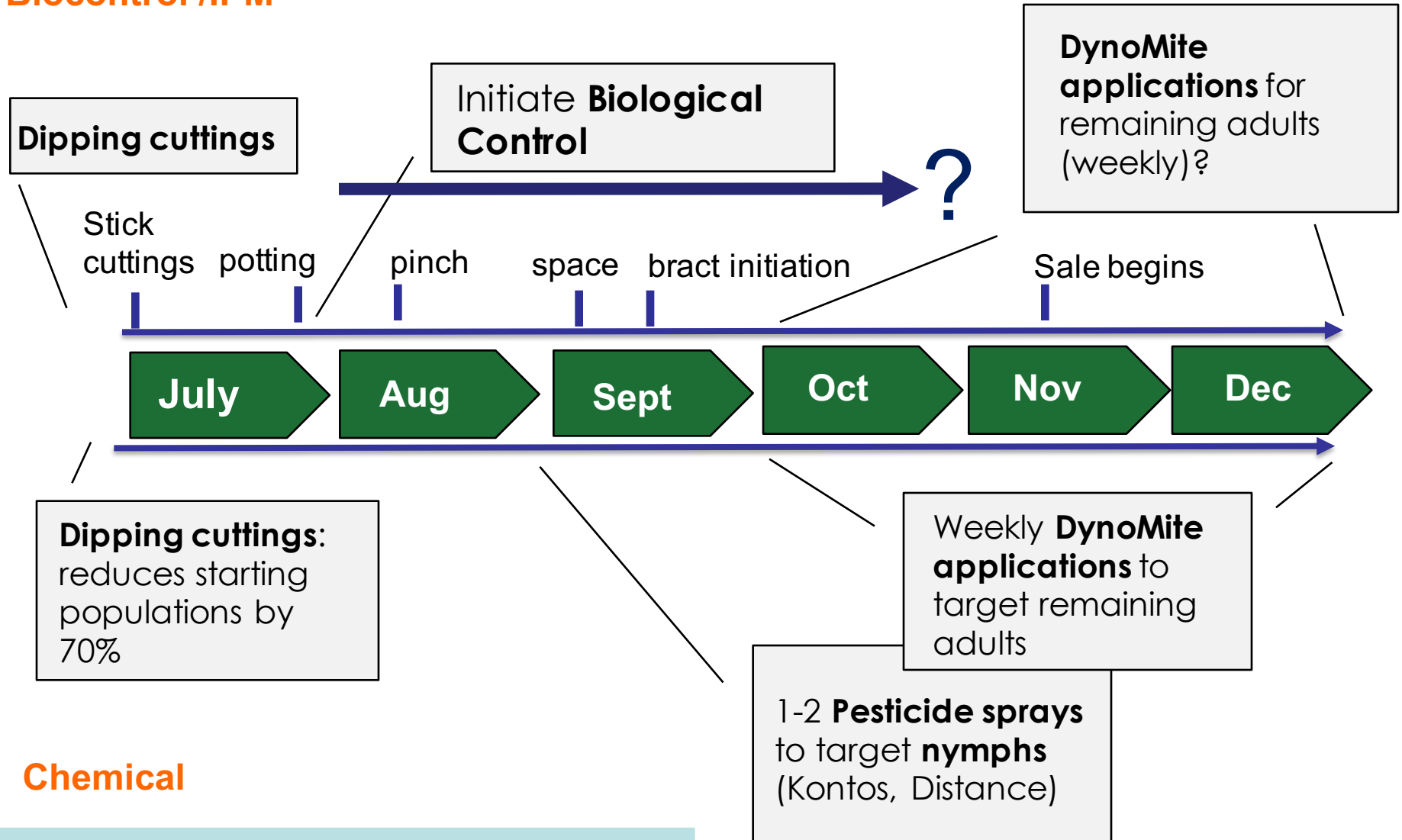
2. Whitefly

A screenshot of a web browser displaying the website Greenhouseipm.org. The browser's address bar shows several tabs: "Apps", "Thrips ID", "Diseases | UMass", "VinelandCampus", "FCO Event Calend", and "IOBC 2017". The website's logo, featuring a green leaf and a magnifying glass, is at the top left. A navigation menu below the logo includes "HOME", "ABOUT", "IPM", "PESTS" (highlighted in blue), and "CO". Below the navigation menu is a large orange banner with the word "PESTS" in white. Underneath the banner, the breadcrumb "Home > Pests" is visible. Two small images of insects are displayed side-by-side: a thrips on the left and a whitefly on the right. At the bottom of the screenshot is a Windows taskbar with icons for Internet Explorer, File Explorer, Windows Media Center, OneDrive, Notepad, Lync, Excel, Chrome, Word, and PowerPoint.



BMPs: WF Control on Poinsettias

Biocontrol /IPM



Chemical

See details on **ONFLORICULTURE**

IMPROVING BMPs in Poinsettia?

Biocontrol / IPM

Dipping cuttings

Biological Control:

- Delphastus
- Limonicus
- Encarsia
- Supplemental foods

DynoMite applications for remaining adults weekly?

Stick cuttings potting pinch space bract initiation

Sale begins

July

Aug

Sept

Oct

Nov

Dec

Dipping cuttings: reduces starting populations by 70%

Initiate Pesticides to target remaining adults (DynoMite weekly)

1-2 Pesticide sprays to target nymphs (Kontos, Distance)

Chemical

See details on ONFLORICULTURE

3. Aphids

- **Biological Control:**
 - Banker plants: great when they work;
- **Effective Pesticides:**
- **Systemic Pesticides**
 - Beleaf (flonicamid)
 - Endeavor (pymetrozine)
- **Insect Growth Regulators**
 - Enstar II

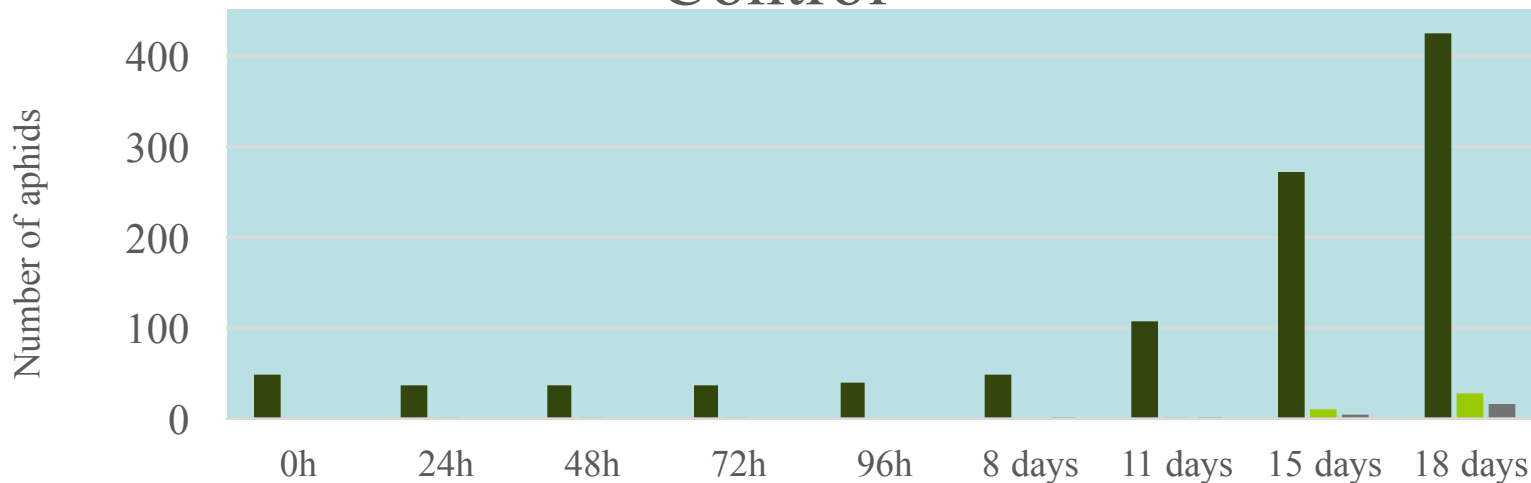


***Ervi* for Foxglove Aphid: Have we been looking at this wrong???**

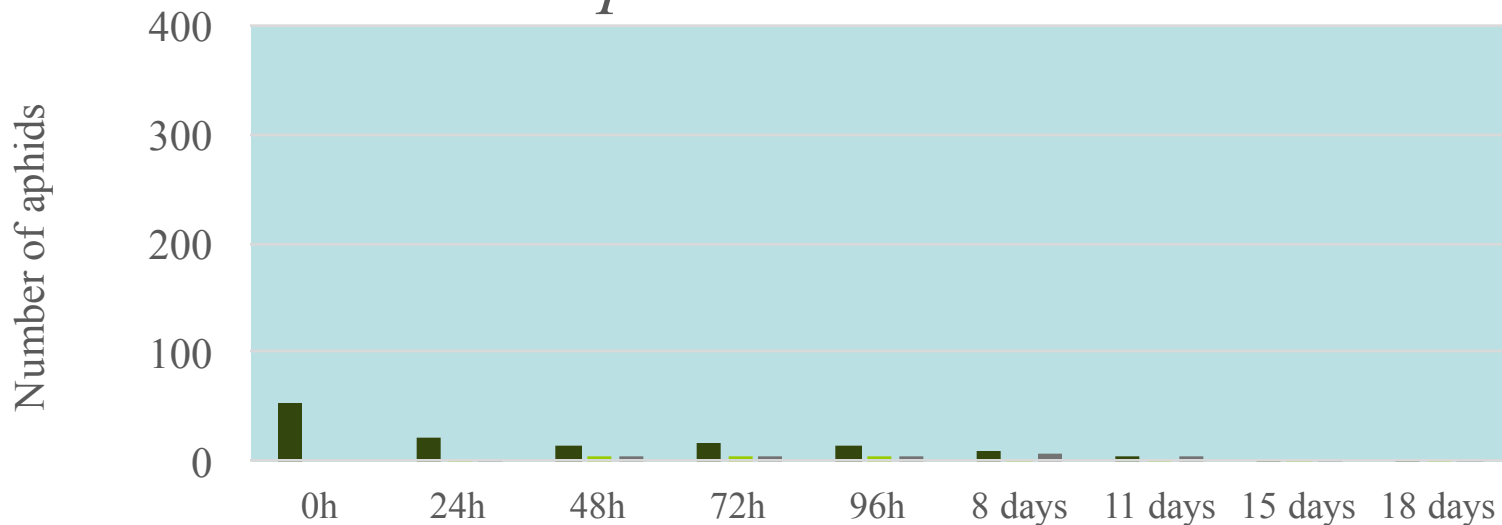


Results

Control



Aphidius ervi



4. Mealybug



No BMPs Currently!

- **SANITATION**
 - Rogueing plants
 - Cleaning benches/pots
- **Landscape Oil:** best product, but can cause **phytoxicity**
- **Safer's Soap:** can **suppress** with repeated applications; **residues?**
- **Cryptolaemus (aka Mealybug destroyer):** can work; likely too **slow** for potted crops
- **Systemic pesticides?**



MORE INFO:

- Canadian Greenhouse Conference Website: Speaker Program
- NEW GF2 Project: jamie@fco.ca

QUESTIONS?

RESOURCES:

- Thrips, whitefly
 - GreenhouseIPM.org
 - ONFloriculture
 - [Greenhouse Canada Webinars](#)
- Whitefly
 - GreenhouseIPM.org
 - ONFloriculture
- Aphids
 - ONFloriculture
- Mealybug
 - [Canadian Greenhouse Conf. 2016 Presentations](#)