

MCRS IPM SCOUTING SERVICES 2009



**MUCK CROPS RESEARCH STATION
DEPARTMENT OF PLANT AGRICULTURE
UNIVERSITY OF GUELPH**



INTEGRATED PEST MANAGEMENT TEAM

IPM COORDINATOR¹

Michael Tesfaendrias
905 775 3783

PROGRAM ADVISOR¹

Dr. Mary Ruth McDonald
519 824 4120 x 52791

BUSINESS ADMINISTRATOR – Bradford Co-operative Storage Ltd

Matt Sheppard
905 775 3317

PROGRAM TECHNICIAN¹

Kevin Vander Kooi
905 775 3783

RESEARCH STATION MANAGER¹

Shawn Janse
905 775 3783

SCOUTS¹

¹ Unless otherwise stated, members of the MCRS IPM team are employees of the University of Guelph

MCRS IPM GOAL

To provide the vegetable growers in the Holland Marsh and surrounding area with access to intensive crop monitoring services in order to protect crops from significant damage with the minimum use of pesticides.

WHAT IS IPM AND WHAT ARE THE POTENTIAL BENEFITS?

Integrated Pest Management (IPM) is a method for utilizing cultural, biological and chemical controls in an organized manner that results in reduced usage of chemicals, selection of least toxic pesticides, more effective pest control and decreased health and environmental concerns. IPM programs increase the effectiveness of pest management programs while minimizing the amount of pesticide necessary to provide satisfactory control of pests. A properly planned and executed IPM program will help the grower recognize and appreciate the delicate balance of nature, while at the same time allow for introducing changes to the environment in a manner that reduces the impact on people and nature.

PAYMENT SCHEDULE

The 2009 IPM service is sponsored by Holland Marsh Growers' Association, Lake Simcoe Region Conservation Authority, Bayer Crops Science, DuPont, BASF and Engage Agro. The sponsorship will cover the scouting of one field of 10-15 acres of each member of the Holland Marsh Growers' Association. The MCRS team will select the crops to be scouted to ensure representative crop scouting throughout the Marsh. Extra fields will be scouted at \$40 per acre payable through the Bradford Co-op.

100% UPON SIGN-UP

COMMUNICATION

Information from fields and MCRS sites will be collected and summarized in an agriphone message 2x a week. Copy will be e-mailed or faxed to member growers. Agriphone will be circulated to all of the sponsors and posted at the Co-op and on our web site.

DESCRIPTION OF SERVICES

CONFIDENTIALITY

-all grower information will be considered confidential

ON-SITE CROP MONITORING

- the start date of the crop monitoring program will coincide with the appropriate crop stage and /or development of pest pressures
- qualified scouts will monitor the crops observing insects, diseases, weeds, physiological disorders and any other pest problems
- approximately 30 – 40 minutes will be spent per 10 acre block
- different techniques will be used to determine the state of the field including field walks, trap counts, sweep net counts and weather monitoring
- scouts will monitor the crops twice weekly throughout the growing season
- the IPM Coordinator will visit fields on a regular basis to assist scouts and address any grower concerns

-access to the IPM Coordinator and other qualified personnel will be provided for any management recommendations

ON-SITE ACREAGE CHARGES

- one field (10-15 acres) of each member will be paid by sponsorship
- service fee of scouting for extra field is covered by the grower at \$40/acre
- minimum field size of 10 acres on paid fields

PEST DIAGNOSIS

- any pests that cannot be identified on-site will be brought to the IPM Coordinator and identified via various laboratory techniques
- if the member wishes diagnosis or confirmation from another laboratory, the cost of shipping and diagnosis is solely the responsibility of the member

SCOUT TRAINING

- scouts will be hired based on previous work experience, education, agricultural knowledge and capabilities
- scouts will be required to attend training sessions for the crops that they are scouting
- the IPM Coordinator will provide training in both the field and classroom on an ongoing basis
- the scouts will be attending weekly meetings with the IPM Coordinator for review and to discuss arising issues
- the scouts will be required to email/deliver weekly summaries of each client's field results to the IPM Coordinator for summarization and redistribution to the clients

CARROTS:

- monitored 2x per week for approximately 16-20 weeks until the end of August then 1x a week until October
- IPM program OMAFRA guidelines will be followed
- orange sticky traps for Carrot rust flies and Aster leafhoppers
- Carrot weevil traps
- sweep nets for Aster leafhoppers, 100 sweeps and counts on sticky traps to determine threshold
- examine 50-100 plants in the field for additional insect, disease, nutritional and physiological disorders
- recording all counts and observations after each visit

Major Pest / Pest complexes monitored

- ▶ Carrot rust flies
- ▶ Carrot weevils
- ▶ Aster leafhoppers
- ▶ Aster yellows
- ▶ Leaf blights (*Cercospora* and *Alternaria*)

Additional Pests / Disorders monitored

- ▶ Wireworms
- ▶ Cutworms
- ▶ Seed decay
- ▶ Damping-off
- ▶ Rusty root (Pythium root dieback)
- ▶ Sclerotinia root rot
- ▶ Violet root rot
- ▶ Crown rot
- ▶ Cavity spot
- ▶ Forking/splitting
- ▶ Nematodes (root knot and root lesion)
- ▶ Heat canker
- ▶ Viruses
- ▶ Weeds
- ▶ Physiological disorders and damage
- ▶ Nutritional disorders

CELERY:

- monitored 2x per week for approximately 16 weeks during the growing season
- IPM program OMAFRA guidelines will be followed
- orange sticky traps and sweep nets for Aster leafhoppers, 100 sweeps and count on sticky traps to determine threshold
- examine 50-100 plants in the field for additional insect, disease, nutritional and physiological disorders
- sweep net counts of beneficial and additional insect pests
- recording all counts and observations after each visit

Major Pest / Pest complexes monitored

- ▶ Aster leafhoppers
- ▶ Aphids (Green peach and Sunflower)
- ▶ Tarnished plant bug
- ▶ Caterpillars (Cabbage loopers and Cutworms)
- ▶ Aster yellows
- ▶ Leaf blights (early - *Cercospora* and late - *Septoria*)

Additional Pests / Disorders monitored

- ▶ Leaf minor
- ▶ Carrot weevil
- ▶ Potato leafhopper
- ▶ Slugs
- ▶ Wireworms
- ▶ Bacterial blight
- ▶ Fusarium yellows
- ▶ Pink rot (*Sclerotinia*)
- ▶ Viruses
- ▶ Leaf tier
- ▶ Nematodes (Root knot nematodes)
- ▶ Weeds
- ▶ Physiological disorders and damage
- ▶ Nutritional disorders (Black heart – calcium deficiency, Cracked stem – boron deficiency, Interveinal yellowing of leaves – magnesium deficiency)

LETTUCE:

- monitored 2x per week for approximately 16 weeks during the growing season
- IPM program OMAFRA guidelines will be followed
- sweep nets and orange sticky traps for Aster leafhoppers, 100 sweeps and counts from sticky traps determine threshold
- examine 50-100 plants in the field for additional insect, disease, nutritional and physiological disorders
- sweep net counts of beneficial and additional insect pests
- recording all counts and observations after each visit

Major Pest / Pest complexes monitored

- ▶ Aster leafhoppers
- ▶ Aphids (Green peach and Sunflower)
- ▶ Rhizoctonia bottom rot
- ▶ Aster yellows

Additional Pests / Disorders monitored

- ▶ Tarnished plant bug
- ▶ Caterpillars (Cutworms, Cabbage loopers and Saltmarsh caterpillar)
- ▶ Slugs
- ▶ Wireworms
- ▶ Sclerotinia drop/wilt
- ▶ Damping-off/Pythium stunt
- ▶ Gray mould (*Botrytis*)
- ▶ Downy mildew
- ▶ Bacterial wilt (Dry leaf spot)
- ▶ Anthracnose
- ▶ Viruses (Lettuce mosaic)
- ▶ Nematodes
- ▶ Tipburn
- ▶ Corky root rot
- ▶ Weeds
- ▶ Physiological disorders and damage
- ▶ Nutritional disorders (Tipburn – calcium deficiency)

ONIONS:

- monitored 2x per week until the end of August, then 1x a week until harvest
- IPM program OMAFRA guidelines will be followed
- yellow sticky traps for Onion maggot flies in selected fields
- damage plots to assess onion maggot, smut and other diseases/disorders/damage
- white sticky traps will be used until thrips are detected in the crop, then 50-100 plants will be examined for thrips
- examine 50-100 plants in the field for additional insect, disease, nutritional and physiological disorders
- recording all counts and observations after each visit

Major Pest / Pest complexes monitored

- ▶ Onion maggot flies
- ▶ Thrips
- ▶ Smut
- ▶ Botrytis leaf blight
- ▶ Downy mildew
- ▶ White rot

Additional Pests / Disorders monitored

- ▶ Wireworms
- ▶ Cutworms
- ▶ Purple blotch
- ▶ Stemphylium blight
- ▶ Damping-off
- ▶ Pink root
- ▶ Root rot
- ▶ Fusarium basal rot
- ▶ Bacterial diseases (Soft rot, Slippery skin, Sour skin)
- ▶ Viruses (Iris yellow spot virus and others)
- ▶ Nematodes (Bulb and Stem)
- ▶ Weeds
- ▶ Physiological disorders and damage (Tip burn, Ozone injury)
- ▶ Nutritional disorders (manganese and zinc deficiency)