

2019 Small Farm Session

Presented by SPEC and KPU
Saturday, March 2, 2019

Event Notes – by Maria Jose

Expectations.

- Regulators:
 - Different levels (Federal, Provincial and Municipal).
 - Governing institutions: GAP, which is a food safety program.
 - Quality standards for export programs.
 - Zoning: land specific uses.
 - Bylaw compliance.
 - Documentation: record keeping.

- Consumer/ Public:
 - Stewardship: reliant on visuals.
 - The public expects high standards at cheap prices, which is incongruent.
 - Prevention of health issues in the community due to farming practices: ecoli and birth defects.
 - Produce diversity season-round.

- Farming Community:
 - Common practice standards.
 - Advice sharing.
 - Neighborly relationships/cooperation.
 - Mentorship: teaching and learning.

Integrated Pest Management on Small Farms by Deborah Henderson.

Themes of IPM:

- Research: learn as much as you can about the enemy.
- Monitoring: know what is happening.
- Threshold: eradication is not necessary or possible.
- Records: map trends and create predictions.
- Evaluate: strategy and revise for further research.

❖ Lepidoptera: caterpillar pest

Caterpillars lay eggs on the leaves and feed of them until they turn into butterflies.

❖ Brassica lepidopteran: imported cabbage worm

It has pointy eggs and when they hatch they have a velvety appearance.

Pieris rapae.

The imported cabbage worm pupa doesn't eat much, mates and lays eggs. That is its life purpose.

How to manage Lepidoptera in brassica?

1. Covering with a protect net

2. Biocontrol: *Trichogramma*

Biocontrol products: insect baculoviruses are very specific and they turn worms into white mush. They are also very safe.

❖ Spinach leafminer: *Pegomya hyosiami*.

They have a life cycle of 30 to 40 days

Pupae overwinter soil.

They lay white eggs underside of leaves.

Adults emerge from late April to May.

It loves chickweed and lambsquarters.

How to manage spinach leafminer?

1. Physical control: cover early crops.

2. Cultural control: seeds are susceptible in early crop before April and May when adults emerge.

3. Flowering crops: attack the larvae.

IMP strategy for leafminer.

1. Control host weed.

2. Cover main crop.

3. Plant a trap crop.

4. Monitor the trap crop.

5. Plant flowering traps.

❖ Aphids.

Spread honey dew that attracts predators.

They don't need a male to mate and give birth to live babies.

How to manage aphids?

1. Biocontrol: parasitoids can be conserved.

2. Syrphid flies are similar to bees but are not pollinators.

3. Ladybird beetles.

4. For aphids and caterpillars use green lacewing (*Chrysopa cornea*).

5. Orange TKO improves soap efficacy and, it is non-toxic for houseplants.

❖ Cutworms larvae

Cannot be seen in daylight.

They are very mobile if there is not much food available.

Cannot climb barriers.

How to manage cutworms larvae?

1. Put a barrier.

2. Roosters.

3. Amphibious squad (need water nearby).

- Every pest has a specific temperature threshold or else it will not thrive.
Wait for it
Some complicated models involve adding up the degrees to make fairly accurate predictions.
Monitor the temperatures to know when the pests will come. Can purchase thermostats.
- As temperature keep raising more pests shall come.
Although more pests are expected, research cannot be done yet because there are pest that we don't have here and there is not point in bringing them.
- Pheromone traps.
Can be used either to trap all and only females.