

# GARDEN PESTS

Knowledge is Power!

# A PRESENTATION OF CASE-MCQ

For the MCQ Gardening Collective/  
Collectif de jardinage de la MCQ



# Thank you to our funders



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# Some general points to keep in mind:

- Rotate crops
- **Find out what companion crops work for you**
- Remove and dispose of all damaged plants
- **Encourage the overall steady growth of sturdy, healthy plants.**
- Work at having healthy soil; amend it with compost.
- **Insects and diseases far more likely to attack plants weakened by weather, overfertilization, or poor soil**
- Hand-picking bugs is often the best solution



# Remember:

- **There will always be bugs and pests!**
- Environmental conditions can encourage some bugs one year but not the next.
- **Think creatively, think long term, think holistically**
- There is not always an easy, quick, or simple solution.
- **Whatever decisions you make or steps you take, check first that it won't harm the beneficial insects in the garden: bees, wasps, certain beetles, spiders.**  
**Native bee species are under threat and need protection!**
- You're not alone! Perfect gardens exist only on photoshopped websites.





# POTATO BUGS

# The Colorado Potato Beetle

- Overwinters in soil and debris
- Eggs hatch in 4-15 days
- When larvae mature, they drop to the ground, burrow into the soil and pupate.
- Adults emerge after 5-10 days
- 1-3 generations per year!



# What you can do

- **Pick them individually, or tap them into a beer bottle so they can't climb out**
- In the early morning, shake adults onto a cloth on the ground
- **As soon as plants emerge in the spring, mulch with at least 2-3" of clean straw or hay to make it difficult for adults to emerge from soil**
- Beneficial insects like ladybugs, spined soldier bugs and lacewings feed on the eggs
- **After harvest, turn over the soil to disturb overwintering beetles!**
- BotaniGard ES: all natural insecticide, contains Beauveria bassiana, a fungus that kills pests; weekly application
- **Dust plants with diatomaceous earth**





# GRASSHOPPERS



# The Grasshopper

- **Host plants in the garden: beans, corn, cabbage**
- They don't like squash, peas, tomato leaves
- **Do the most damage to corn, alfalfa, soybean, clover, grasses and they also like lettuce and carrots.**
- Eggs hatch to nymphs
- **Nymphs are white at first**
- Nymphs molt 5 times as they grow into adults
- **Female lays eggs which overwinter and hatch in spring**
- Certain environmental conditions cause them to change colour and gather in swarms: then called locusts

# What to do



- **Till ground in late fall and early spring to destroy eggs**
- Encourage swallows, as they eat a lot of grasshoppers; so do snakes, toads and chickens
- **Allow chickens to forage in the garden for a short while before it gets dark**
- Cover susceptible plants with cheesecloth or other covering
- **Apply Beauveria bassiana (fungus, see potato bugs) or inoculate soil with Nosema locustae if problem is very bad**
- Dust leaves with flour; grasshoppers' mouths will gum up
- **Use garlic spray**
- If near a meadow, field, pasture or woods, mow a buffer strip. This exposes them to predators
- **Don't eliminate them all! Grasshoppers are an important source of food for other animals.**

# All-Purpose Garlic Spray

- **Put 2 cups of peeled garlic into 10 cups of water**
- Bring to the boil, simmer 10 minutes
- Let sit overnight
- **Mix 1 part strained garlic solution with 3 parts water in a spray bottle**
- Add a little dishsoap; this makes it stick better to leaves and increases its effectiveness
- **Apply to plant leaves**
- Option: add **cayenne**! Strain before putting in spray bottle so it does not become clogged up.



- **Combine ingredients:**
- **1 cup canola oil**
- **1 cup kefir, or yoghurt (effective against powdery mildew)**
- **1 tbsp liquid castile soap**
- **1 tsp each: tea tree oil and orange essential oil**
- **1 gallon water (3.75 litres)**
- NB: best time to spray: early with dew still on. Works best when wet. Never spray in full sun.
- Avoid on cherries, plums, and mountain ash
- Works well against aphids, mites, white flies, caterpillars. Use on some vegetables (eg: broccoli leaves)

DIY  
Insecticidal  
Soap for trees,  
shrubs, vines,  
canes



# RASPBERRY CANE BORER

# Raspberry Cane Borer

- Adults emerge in June
- Females lay eggs about 6 " below tips of 1st year shoots
- Females chew 2 rings around the stem then lay eggs between.
- Larvae burrow down through the cane and pupate in the soil, emerging in the spring.





## What you can do

- It's pretty simple: Just remove the tip of the stem beneath the "girdles" made by the female.
- Larvae that chew their way down canes weaken them and they are likely to break the following spring.



# GROUNDHOGS



# Groundhogs

- Perennial problems!
- **Can mow down carrot tops, peas, spinach, beans...and take bites out of tomatoes! They also love alfalfa, clover, lettuce, broccoli, and soybeans.**
- They also eat insects like grubs and snails, keeping them under control (so they're not all bad!!)
- **Between spring and summer, they double their body weight**
- They hibernate, depending on their fat to survive the winter.
- **An adult eats between 1 and 1 ½ lbs of vegetation per day!**
- Are diurnal (eat mostly early morning)



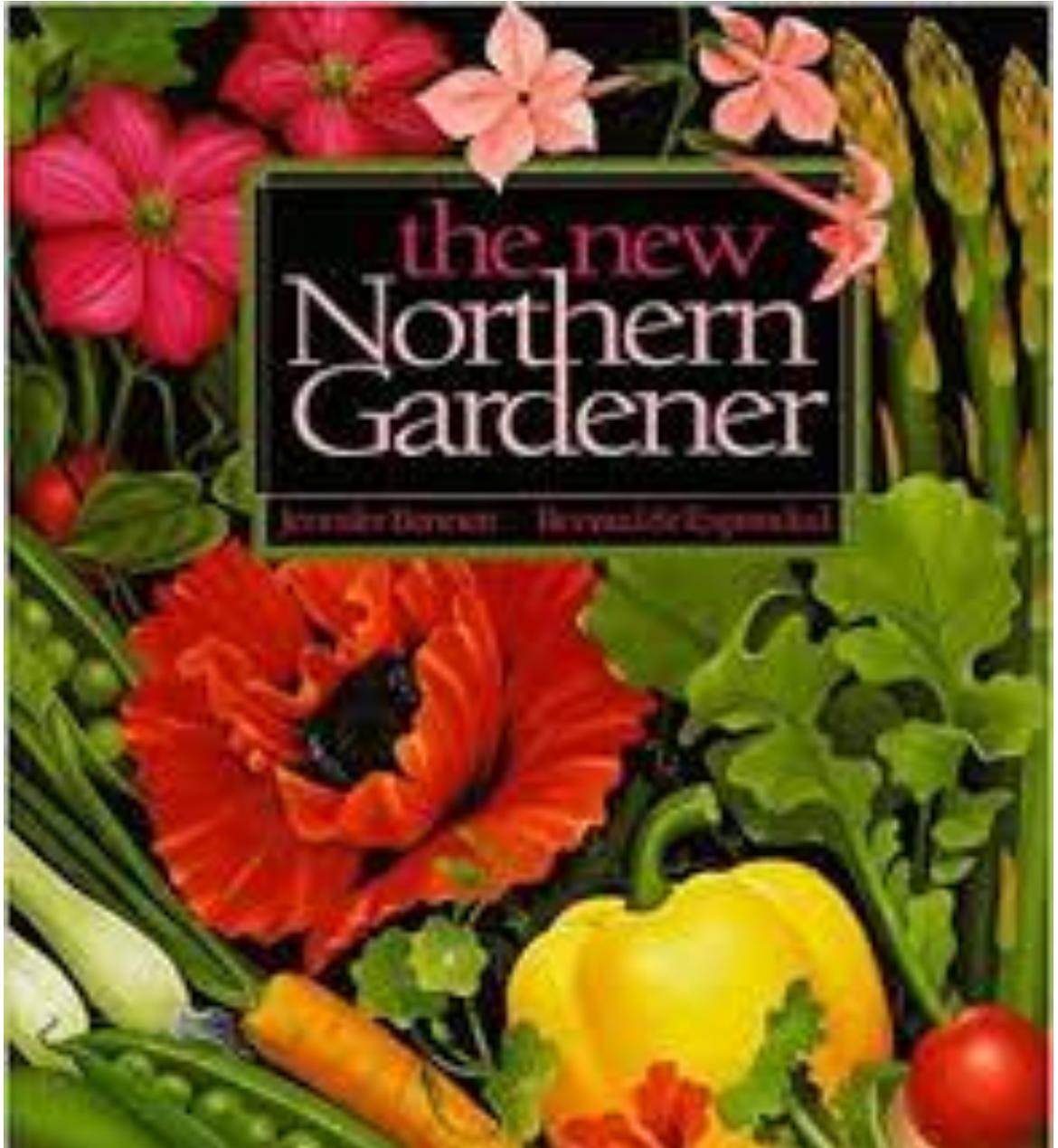
## What you can do

- Trap and relocate. Bait with broccoli, apple slices, sweet corn. Partially bury trap in the ground. Check often.
- Deter them with strong smells and foul odours
- **They hate ammonia: try soaking rags and leaving them at the edge of the garden**
- Spray your garlic/hot pepper mix liberally on plants at the garden's edge to deter them
- **They hate human hair**
- Apparently, you can buy predator-scented urine repellants to scare them away? Don't spray these on anything you'll eat because it will repel you too.
- **They hate Epsom salts. Foliar spray: 1 tsp/gallon (3.75 L) water, spray on tomatoes and peppers.**
- Get a good dog.



# FAVOURITE BOOKS

*And other resources...*



# Julie's favourite dog-eared gardening book

- By Jennifer Bennett
- First published by Harrowsmith in 1982 as **The Northern Gardener**
- Tailored for our northern climates
- Concise yet complete
- Unpretentious
- Some really good ideas, from molasses traps for grasshoppers to cold frame ideas to compost to growing from seed.
- Tips for pressure canning, how to preserve, cold storage...the list goes on!



WHAT ARE YOUR  
FAVOURITE BOOKS OR  
GARDENING  
RESOURCES?

# Sources:

- <https://www.thespruce.com/groundhog-damage-in-yard-2131141>
- <https://www.almanac.com/pest/groundhogs>
- <https://www.thespruce.com/epsom-salts-and-plants-1402754>
- [https://www.canr.msu.edu/news/controlling\\_raspberry\\_cane\\_borer](https://www.canr.msu.edu/news/controlling_raspberry_cane_borer)
- [https://www2.gnb.ca/content/gnb/en/departments/10/agriculture/content/crops/small\\_fruits/rasperry.html](https://www2.gnb.ca/content/gnb/en/departments/10/agriculture/content/crops/small_fruits/rasperry.html)
- <https://pollinatorpartnership.ca/en/about>
- <https://joybileefarm.com/herbal-insecticidal-spray/>
- <https://www.planetnatural.com/pest-problem-solver/garden-pests/colorado-potato-beetle-control/>
- <http://www.omafra.gov.on.ca/english/crops/pub360/notes/raspcanebo.htm>
- Bennett, Jennifer. *The Harrowsmith Northern Gardener*, 1982. Camden House Publishing: Camden East, ON.



HAPPY GARDENING!