

Pests in the Garden and  
Companion Planting Presentation  
for the Portsmouth Community  
Garden

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# Types of Typical Garden Pests

- Aphids
- Colorado Potato Beetles
- Striped Cucumber Beetles
- Squash Vine Borer
- Cabbage Moth/Caterpillar
- Flea Beetles
- Cut Worms (become several species of small brown or tan moths)
- Squash Bug
- Tomato/Tobacco Hornworms (becomes hawk or sphinx moth)
- Japanese Beetles/grub larva in the ground
- Slugs



# Methods of Managing Garden Insects

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- IPM – Integrated Pest Management combines different techniques to manage pests minimizing the use of pesticides, maximizing use of ecological and sustainable solutions
- Hand picking, removing areas of plant that are impacted
- Spraying with neem oil, organic insecticidal soap, dish soap and water, vinegar, essential oils or other options
- Diatomaceous Earth
- Organic sprays like Captain Jacks, many use Spinosad which is a naturally occurring bacteria, but they target many insects, not just the ones that are causing problems
- BT (bacillus thuringienis) naturally occurring soil bacteria, can be found in spray and powder form
- Row cover to prevent insects from reaching plants

# Aphids

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- Small sap-sucking insects
- Can be green, yellow, red, black, gray, lavender or brown
- Overwinters as eggs on perennial plants or in plant debris
- Damage plants by feeding on new shoots and buds
- Can cause leaves to curl
- Can be managed with hand removal and spray with dish soap and water
- Spraying plant with jet from hose can remove aphids
- Planting trap crops elsewhere helps with control



# Colorado Potato Beetle

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- Adults are up to ½ inch long beetle with yellow dome shape
- Larvae are soft bodied, black, slimy and gross, older larvae are red with black heads
- Adults overwinter in soil 5-10 deep, come out in spring and lay eggs on potato plants
- Eat leaves and completely defoliate a plant overnight
- Hand picking is best control and removal plan, most sprays do not work on these beetles



# Striped Cucumber Beetle

- Small yellow-green beetle with long black stripes
- Overwinter in garden debris often near food source
- Devasting to many crops, hard to hand pick, covering crops helps
- Females lay eggs at base of plants below ground surface
- Rotating crops important if possible, heavily mulching garden can help, sanitation at end of season important
- Young plants more susceptible to damage
- Yellow sticky traps may help and row cover is effective
- Vectors of other diseases like bacterial wilt and squash mosaic virus



# Squash Vine Borer

- Small orange and black moth with black wings
- Overwinters in the soil
- Female lays eggs at the base of squash and pumpkins (cucurbits)
- Larvae burrow into the stem causing the plant to wilt and often kill the plant
- Row cover can be very effective
- Protecting the base of the plant with a collar also helps prevent burrowing into the stem



# Cabbage Moth/Caterpillar

- Medium sized white moth lays its eggs on cabbage or other brassicas
- Eggs hatch to green caterpillar about 1 inch long
- Overwinters in garden debris
- Caterpillar eat holes in leaves and cabbage
- Hand picking and row cover are often most effective



David Cappaert, Bugwood.org



Whitney Cranshaw, Colorado State University, Bugwood.org



Gerald Holmes,  
Strawberry Center, Cal Poly San Luis Obispo, Bugwood.org



USU Extension

# Flea beetles

- Very small black/brown jumping beetle, many varieties that have specific host plants
- Chew irregular holes in leaves and extreme damage causes plant to wilt
- Overwinters in garden leaf litter and in wooded areas in debris
- Planting crops later, using row cover and using trap crops like radishes can help control flea beetles



# Cutworms

- 1" long worm in soil that turn into one of many species of small moth
- Over winters in garden debris or soil
- Chews the stems of plants, check for them at night
- Place barrier around base of plant 1 inch down into soil
- Dig around in soil and remove worms



# Squash Bug

- Large gray brown insects with piercing-sucking mouth parts
- Suck out
- Overwinters in garden debris
- Females lay eggs on leaves of squash and pumpkins mostly
- Infestation can cause wilting and eventually kills the plant
- Older plants not as likely to die and can tolerate some insect damage
- Best control method is hand picking adults and removing eggs so early scouting for eggs is very helpful



## Tomato/Tobacco Hornworms

- Very large (up to 6 inches long) green caterpillar with horn-like tail
- Turns into Hawk Moth
- Favorite plant is tomato but also eats potatoes, eggplant and peppers
- Chews leaves and can completely defoliate plants in a night
- Overwinters as pupa in the soil and moth emerges in the spring to lay eggs
- Hand picking is best control, use black light at night to spot easily
- Red horn and diagonal white stripe is tobacco hornworm and black/blue and V-shaped white stripes is tomato horn worm

# Japanese Beetles (Invasive from Japan)

- Medium sized beetle with metallic green head and thorax and brown wings
- Feeds on flowers and fruit of many plants
- Females lay eggs in soil
- Overwinters as grubs in the soil of grassy areas, feed grubs to chickens/birds
- Hand picking is most effective control, dropping into soapy water



# Slugs

- Snails without shells
- Slimy soft bodied usually brown or gray, 1/4" to 2" but can be 7"
- Chews holes and eats leaves
- Overwinters as eggs in soil or under plant debris or rocks/logs
- Needs moist, dark areas to live so removal of debris and anything they can live under (rocks, boards) helps control population
- Don't like to crawl over anything sharp, coarse or very dry
- Diatomaceous Earth, copper tape, shallow dishes with beer or bakers yeast work to repel or trap
- Hand picking, especially at night, works well for control





# Resources for Garden Pest and Diseases

- [UNH Cooperative Extension](#)
- [University of Maine Cooperative Extension](#)
- [University of Minnesota Cooperative Extension](#)
- The Organic Gardeners Handbook of Natural Pest and Disease Control, edited by Fern Marshall Bradley, Barbara W. Ellis and Deborah L. Martin
- Rodales Encyclopedia on Organic Gardening (same authors as above)
- Any Cooperative Extension office with a similar climate

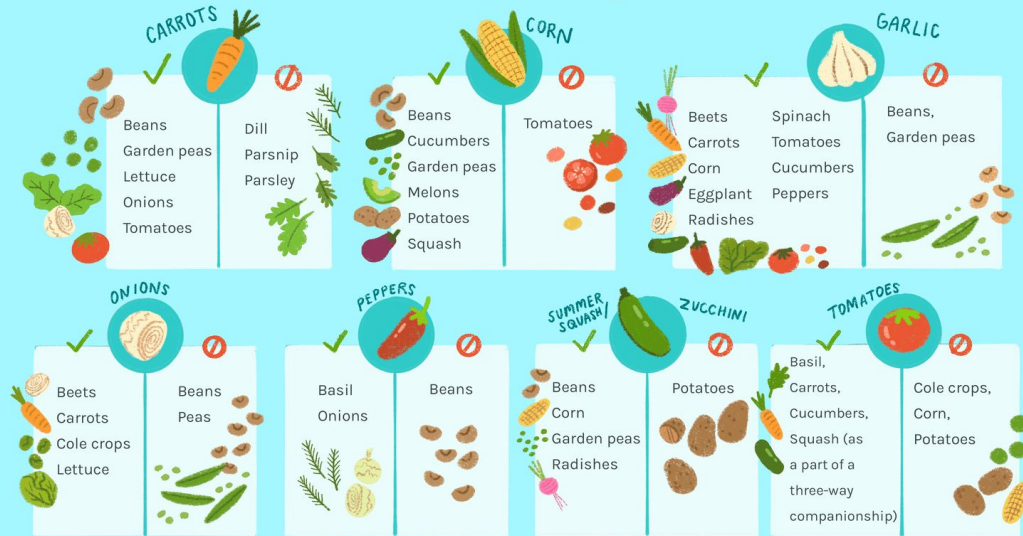
# Companion planting

**Avoid** planting the following together:

Alliums (onions, garlic, leeks) and legumes (peas, beans)  
Tomatoes/nightshades (peppers, eggplant) and Corn and Brassicas

Basil **likes** everything, repels pests, attracts beneficial insects, improves flavor of some veggies

## Companion Planting Guide



## COMPANION PLANTING

Plant these vegetables together to make the most use of space and deter pests.



## DID YOU KNOW?

