COMMON GARDEN PESTS & PROBLEMS

Rebecca McMahon
Horticulture Agent
Sedgwick County Extension

Types of Pests

- Diseases
- Insects
- Environmental/Physiological Disorders

Pest Prevention

- Create a "healthy" soil
- Choose pest resistant or tolerant varieties
- Start with healthy plants and good seeds
- Keep weeds out

Pest Prevention, cont.

- Remove diseased plants
- Rotate crops
- Select a sunny location
- Use correct watering practices

Pest Prevention, cont.

- Mulching
- Good air movement
- Plant at the right time
- Inspect your garden regularly

Pest Prevention, cont.

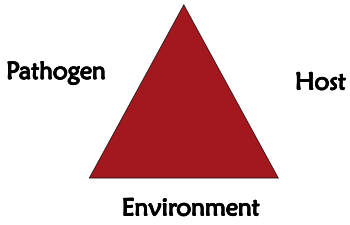
- Know the major insect & disease problems
- Have realistic expectations
- Use pesticides as a last resort
- Apply pesticides properly

Applying Pesticides

- Know the insect or disease you want to control
- Read the label completely
  - Labeled for the vegetable
  - Labeled for the insect
- Apply at the right rate, time

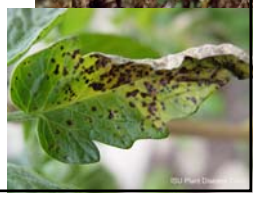
Diseases

- Caused by fungus, bacteria, viruses, or nematodes
- Disease Triangle:



Septoria Leaf Spot

- Fungus
- Tiny black spots on lower leaves
- Leaves yellow from the ground up
- Reduces leaves on plant
- Copper, Chlorothalonil



Early Blight

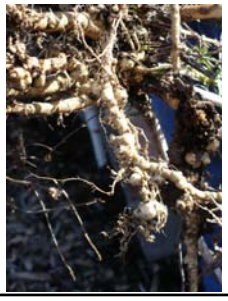
- Fungus
- ½" diameter spots, concentric circles
- Yellow "V" to edge of leaf
- Leaves yellow from the ground up
- Reduces leaves on plant

Anthracnose & Other Leaf Spots

- Angular or circular spots on leaves
- Eventually can kill whole leaf
- Fruit can also be infected

Root-Knot Nematodes

- Microscopic, wormlike animals infest roots
- Yellowing, wilting, stunting of plant
  - Root damage!
- Low yield, other problems
- ID by digging up plant
  - Deformed roots
- Select resistant plants
- Rotate types of vegetables



Fusarium & Verticillium Wilts

- All or part of a plant yellows, wilts, and dies
  - Ground up (no lesions like a leaf spot!)
- Brown discoloration inside the stem
- Fungus lives in the soil
- Rotations, resistant varieties

Bacterial Wilt

- Sudden wilting & collapse of melons or cucumber
- Plant recovers overnight, but eventually dies
- Sap ooze test
- Spread by cucumber beetles

Insect Pests

- Various "bugs" that feed on plants
  - Chewing
  - Piercing/sucking
  - Boring
- Not all insects are BAD

Spider Mites

- Love everything!
- Major problem in mid-summer
- Love lush, over-fed plants
- Very tiny
- Stippled yellow on leaves

- Hard stream of water
- Neem oil, insecticidal soaps & oils

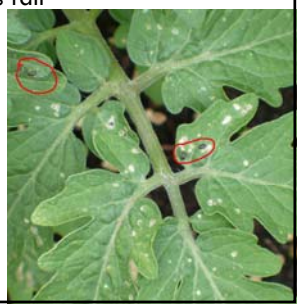
Aphids

- Tiny, usually green (1/8" long)
- Suck sap from plants
- Can carry viruses
- Reproduce quickly! (1 to 1 trillion in 21 days)
- Many predators – lady beetles

- Almost any insecticide

Flea Beetles

- Tiny black beetles
- Active in spring, sometimes fall
- Chew tiny holes in leaves
- Love eggplant!
- Many plants will outgrow
- Permethrin, cyfluthrin
- Pyrethrin, neem oil



Cucumber Beetles

- Primarily affect vines
- Most damaging to seedlings
- Spread Bacterial Wilt
- Permethrin or Pyrethrin
- Row Covers

Grasshoppers

- Can be very destructive
- Best to control when immature
- Permethrin, Cyfluthrin, Sevin
  - Retreatment necessary often
  - Apply before sunrise for best results

Cabbageworm & Cabbage Looper

- Green caterpillars
- Very damaging to cabbage & broccoli
- Adults are moths that lay eggs on plants
- Control with Bt (Dipel, Thuricide)
  - Biological control

Squash Bug

- Damages squash & pumpkins
- Adult bugs lay eggs
  - Undersides of leaves
  - Straight rows
- All stages suck sap from plants
- Scout often!
- Spray when bugs are young
- Permethrin, Bifenthrin, Rotenone/pyrethrin

Squash Vine Borer

- Squash plants wilt & die
- Adults lay eggs near base of plant
- Larva hatch and bore into stems
- Regular sprays: rotenone, Sevin
- Use row covers early

Tomato Hornworm

- Huge caterpillar with horn on the end
  - Adult is a Sphinx Moth/Hawk Moth
- 1 caterpillar can defoliate entire plant
- Search & Destroy mission!

Corn Earworm/Tomato Fruitworm

- Moth lays eggs on corn silks
- Caterpillars hatch and crawl into ear
- Remove damaged area
- Cyfluthrin or spinosad or mineral oil?

Environmental/Physiological Pests

- Too much/not enough:
  - Water
  - Sun
  - Nutrients
- Damage from weather (heat, cold, storms)
- Combination effects

Herbicide Damage

- 2,4-D and Dicamba (Trimec)
- Curled, stunted, deformed leaves
- Vestigial roots on stems

Physiological Leaf Curl

- Most common on tomatoes
- Leaves curl upwards, tightly
- Triggered by change in weather
- Too much top growth, not enough roots

Water-Logged Soils

- Can damage roots severely
- Plants may yellow
  - Root damage
  - Loss of nutrients from soil
- Discard plants flooded with contaminated water

Leaf Scorch

- Leaves lose water faster than roots absorb
- Hot, dry, windy weather
- Abrupt change in the weather
- Damaged root system

Nutrient Deficiency

- Pale green, small = Nitrogen deficiency
- Purple tone = Phosphorus deficiency/cold soil

Sunscald

- Hot direct sun on the fruit
- Not enough leaf cover

Blossom End Rot

- Black, flat, leathery area on bottom of fruit
- Most common on first batch of tomatoes
- Technically a calcium deficiency
- Caused by:
  - Extreme weather changes
  - Extreme soil moisture fluctuations
  - Root damage

Questions?

http://thedemogarden.org
http://sedgwick.ksu.edu
316-660-0100

Tomato Day – July 24, 2010
Enter a contest!