

COMMON VEGETABLE PESTS & PROBLEMS

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GENERAL PEST CONTROL PRACTICES

- Sanitation
- Appropriate Plant Spacings
- Crop Rotation/Cover Crops

GENERAL PEST CONTROL PRACTICES

- Mulching & Watering Practices
- Minimize Plant Stress
- Regular Scouting!

WHAT ABOUT COMPANION PLANTING?

- Not research-based
- Too many variables to account for
- Encourage plant diversity, including habitat for beneficial insects



INSECTS



SPIDER MITES

- Suck the juices out of plant leaves
- Stippled appearance
- Horticultural oils and insecticidal soaps
- Hard stream of water



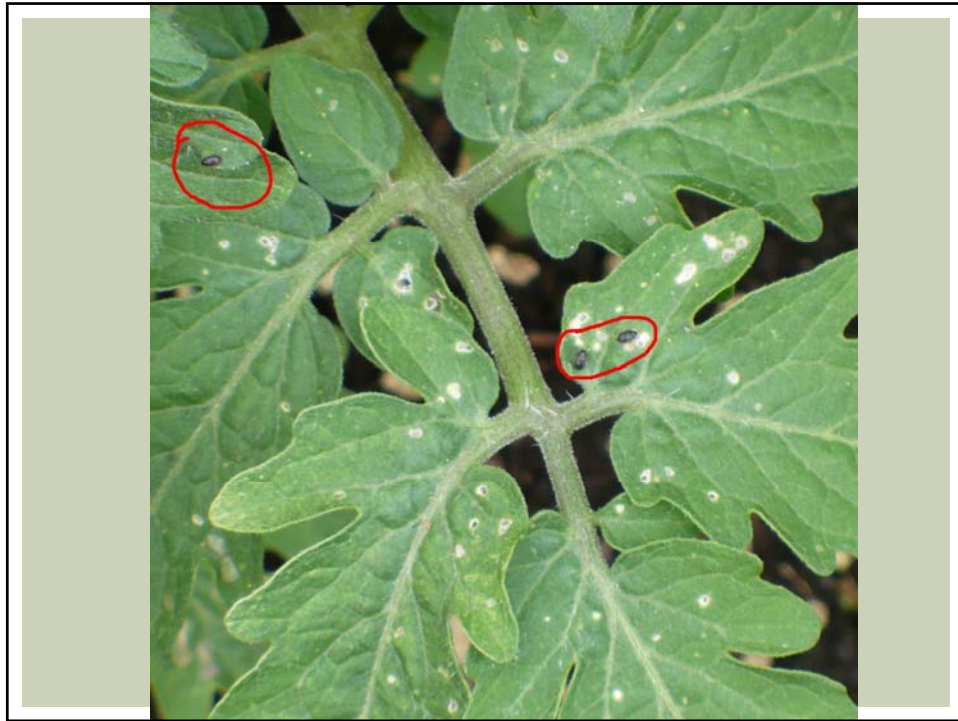
APHIDS

- More common in the early summer
- Damage plants by sucking juices
- Most common garden insecticides will kill aphids



FLEA BEETLES

- Tiny black beetles
- Very small holes in the leaves in the early spring
- Tomatoes usually outgrow damage
- Controlled with neem oil or permethrin.



CUCUMBER BEETLE



CUCUMBER BEETLE

- Young seedlings are especially susceptible
- Eat holes in leaves, or whole leaves!
- Can damage fruit
- Striped and Spotted types
- Permethrin, rotenone

GRASSHOPPERS

- Can be very destructive
 - Often worst during droughts
- Best to control when immature
 - Wingless stages
- Permethrin, Cyfluthrin, Sevin
 - Retreatment is necessary often
 - Contact is necessary to kill
 - Apply before sunrise for best results



BLISTER BEETLES

- Very destructive
- Chewing insects
- Adult stage is damaging
- Eat grasshopper eggs!
- Permethrin, cyfluthrin, Lambda-cyhalothrin, carbaryl



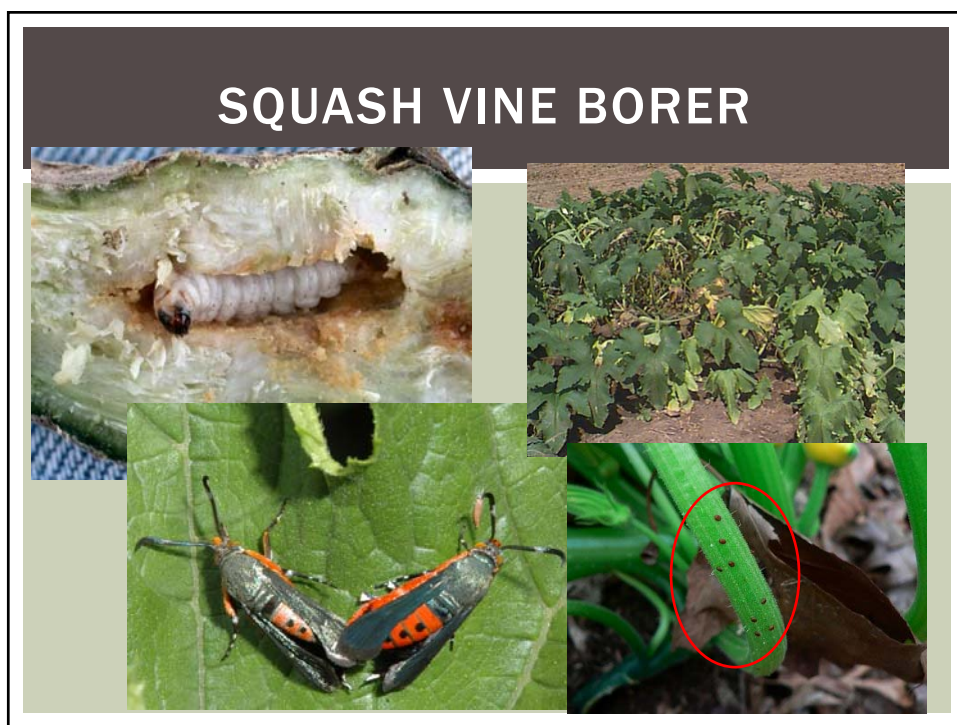
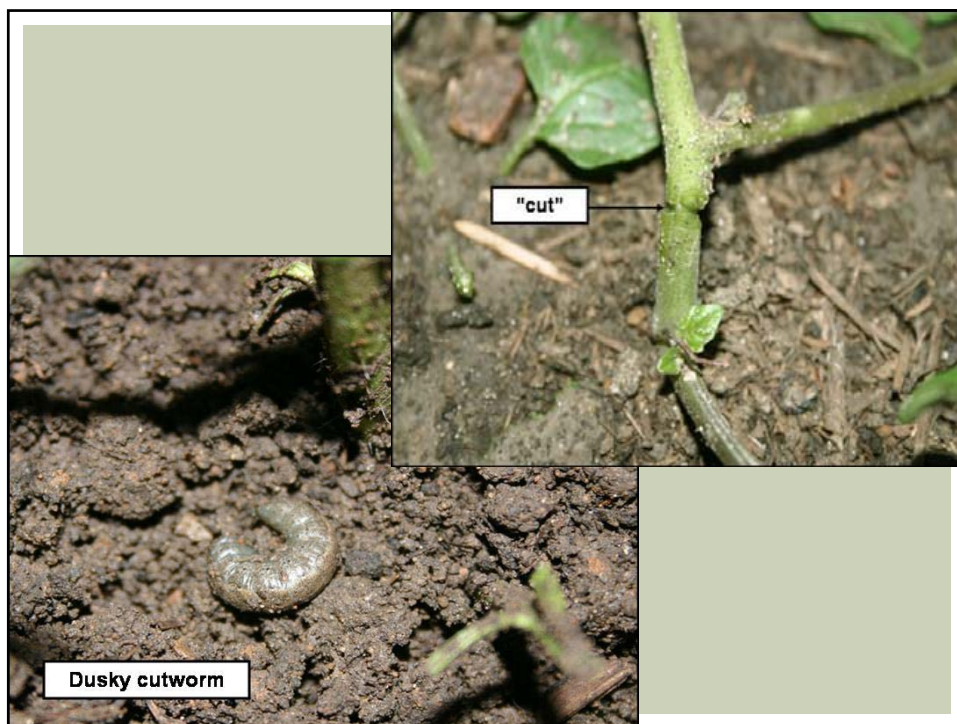
TOMATO HORNWORM

- Green caterpillar with characteristic “horn”
- One caterpillar can be very damaging
- Find it and squash it!



CUTWORMS

- Early season cutworms often chew a plant off at the soil level.
- Later season cutworms can eat leaves.
- If the plant is totally cut off, replanting is necessary.



SQUASH VINE BORER

- Larvae bore into the stems near the crown
- Causes the plant to wilt, especially in heat
- Decreases plant vigor
- Hard to control
 - Apply insecticide after egg hatch but before larvae bore into stems – only a few hours!

SQUASH BUG



SQUASH BUG

- Cause wilted leaves, low vigor
- Scout for eggs under the leaves
- Easiest to kill when they are young
- Use permethrin, rotenone

BEAN LEAF BEETLE & MEXICAN BEAN BEETLE



BEAN LEAF BEETLE

- Rotenone
- Carbaryl
- Permethrin
- Pyrethrin?



CABBAGE LOOPER & IMPORTED CABBAGE WORM



CABBAGE LOOPER & IMPORTED CABBAGE WORM

- Dipel Dust or Thuricide Spray
- Sevin
- Soaps & oils
- Permethrin
- Pyrethrin
- Spinosad



CORN EARWORM

- Eggs laid on green silks
- Larvae crawl into tip of ear
- Permethrin, Cyfluthrin, S
- Mineral oil & Bt?



DISEASES

SEPTORIA LEAF SPOT

- Tiny black spots on lower leaves
- Leaves yellow and die from the bottom up
- Favored by warm, wet weather

- Caging or staking, mulching, and rotation will help prevent the disease.

- Preventative fungicides:
 - Chlorothalonil or fixed coppers.



EARLY BLIGHT

- 1/2" circular lesions on lower leaves
- Leaves yellow and die from the bottom upward
- Favored by wet, warm weather
- Caging or staking, mulching, and rotation will help prevent the disease.
- Preventative fungicides:
 - Chlorothalonil or fixed coppers.



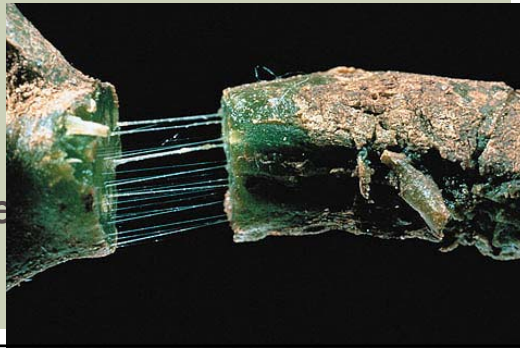
POWDERY MILDEW

- White fungus on leaves
- Leaves yellow and die
- Resistant varieties
- Fungicides: chlorothalonil or sulfurs



BACTERIAL WILT

- Sudden wilting & collapse
- Affects cucumbers, melons
- Sap ooze test
- Spread by cucumber beetle



VIRUSES

- Distorted leaves
- Mottled leaves
- Distorted or discolored fruit
- Stunting or strange growth
- REMOVE infected plants
- PREVENTION is the cure



SOIL-BORNE WILT DISEASES

- Fusarium or Verticillium
- Fungal diseases
- Live for years in the soil
- Population increases when susceptible varieties are planted.
- ROTATE!
- Choose resistant varieties
- Cover crops?

ENVIRONMENTAL & PHYSIOLOGICAL

Wind

Hail

Heat

Watering

BLOSSOM END ROT

- Brown-black, leathery spots on fruit bottom.
- Prevent by proper watering practices
- Some varieties are very susceptible



PHYSIOLOGICAL LEAF CURL

- Leaves curl when the weather changes from cool and moist to hot and dry
- The plants will be fine in a few days.



CRACKING

- Tomatoes in Kansas crack due to weather
- Harvest tomatoes as soon as they start to color, then ripen indoors
- Some varieties are more crack resistant



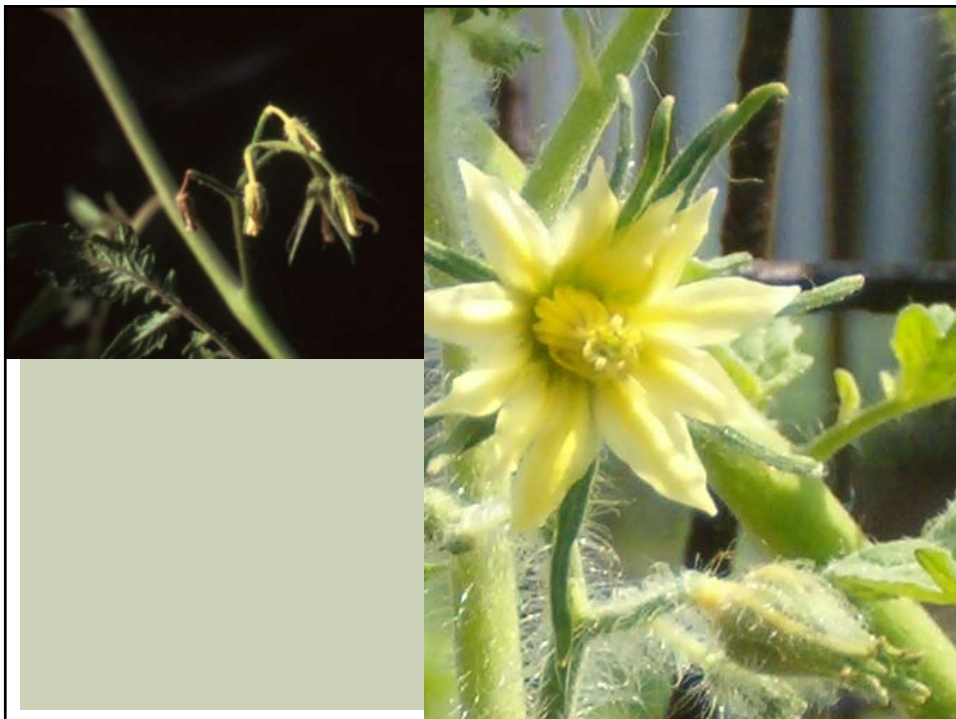
2,4-D HERBICIDE INJURY

- Leaves are cupped, thickened or leathery, and develop an uncharacteristic fan shape.
- Plants will overcome moderate damage.
- Poor production is likely
- 2,4-D can spread on the wind for a few miles



HOT WEATHER

- Daytime temperatures are above 85-90 degrees
- Overnight temperatures above 75 degrees
- Prevents good pollination
- Gap in fruit production



MALE VS FEMALE FLOWERS



There are mostly male flowers when flowering begins....

...So there won't be much fruit until female flowers show up!



QUESTIONS?