

Major Arthropod Pests of Vegetables

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Vegetable and Herb Garden Pests

Chewing Injury



Grasshoppers



- Young (nymphs) & adults chew holes in leaves, completely consuming foliage
- Move into yards from nearby rangeland, grassy areas, undeveloped lots
- Treat borders of property when young grasshoppers are first seen moving in
- Young are much easier to kill than adults
- Insecticidal baits: wheat bran + insecticide (carbaryl) – effective on young & adults
- Malathion, Sevin – most effective on young
- *Nosema locustae* (No-Lo-Bait) – natural pathogen of grasshoppers – treat young

Mexican Bean Beetle

- “Black sheep” of the lady beetle family
- Skeletonize leaves; scar stems & pods
- Cultural controls: Adults over winter in plant debris, clean up garden in fall
- Some beans are more resistant (Asian)
- Plant early and late crops; avoid major activity period of beetle (late July & August)
- Chemicals: Diazinon, Sevin, Rotenone, methoxychlor, Bt for beetles



Corn Earworm



- Corn: caterpillars feed on new silks & ear tips; reduce pollination & damage ear tips; allow entry of molds & attract other insects (sap beetles, earwigs ?)
- Tomato & Pepper: caterpillars feed on leaves & fruit
- Cultural control: Early crops avoid injury
- Protect young silk; difficult to control worms once inside ear tip
- Chemicals: Sevin, diazinon, pyrethrin, oils applied to silks (reapply every few days)
- Bt effective for tomato & pepper worms

Tomato Hornworm



- LARGE green caterpillars with horn on tail
- Feed on tomato, eggplant, potato
- Consume large amounts of foliage and buds in a short time period
- Remove by hand
- Bt (Dipel, Thuricide) spray
- Parasitic wasp common – white cocoons on caterpillars



Cabbage Worms



- Caterpillars chew large holes in leaves; produce abundant frass (excrement)
- Bt (Dipel, Thuricide) – very effective
- Remay cloth (row cover, ag. fabric) – cover plants to prevent egg-laying



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Piercing-Sucking Injury



Squash Bug



- Adults & nymphs suck fluids from plant leaves, stems & fruit; do not cause rapid wilt
- Congregate in plant debris under plants
- Cultural controls: Remove garden debris in fall, nearby woodpiles or other protected sites (adults over winter)
- Hand pick or destroy eggs & nymphs
- Chemicals: spray when first detect nymphs, drench undersides of leaves & stems
- Malathion, diazinon, permethrin

Spider Mites



- Very small; infested plants appear “dirty”; produce webbing, suck sap (remove chlorophyll); leaf speckling
- When severe, cause bronzing or silvering of leaves; populations build quickly in hot weather
- Controls: pressurized stream of water, horticultural oils, insecticidal soap, weed control
- Don’t recommend Kelthane or Vendex unless a rescue treatment
- Biological control: Predaceous mites (not as effective on annual plants)

Raspberry insects



Raspberry
Horntail
(wood wasp)



Rose Stem Girdler
(flatheaded beetle)



Raspberry
Crown Borer
(clearwinged
moth)



Raspberry Insect Management

- Pruning canes when damage is noticed
 - Dispose/destroy canes
- Spring insecticide treatment (full cane drench when buds expand)
 - Carbaryl (Sevin), diazinon, malathion, rotenone
- Late summer to early fall cane and crown spray (crown borer eggs)
- Crown borers have a 2 yr. life cycle
- Parasitic wasps attack summer horntails
- Multiple year control efforts are necessary