

# Common Garden Pests and Controls

**(Follow label instructions when using any pesticide.)**

## 1. Slugs

**The signs:** Large notches and ragged holes chewed out of leaves. Silvery slime trails near the plants. No critters present during the day.

**Organic controls:** Iron phosphate (aka Ferric phosphate). Control is very good.

**Synthetic controls:** Metaldehyde (seldom used anymore because organic controls are effective, and metaldehyde is poisonous to pets.)

## 2. Squash Vine Borers

**The signs:** Well watered squash plants wilt. Particles of frass that look like sawdust are on the ground near the base of the plant. Larvae bore into squash vines and feast on plant tissue inside. Larvae get big and ugly; plant soon dies.

**Organic controls:** Rotation, sanitation, newspaper mulch, gauze row cover, tightly secured after planting and removed as female flowers appear. Use parthenocarpic varieties.

**Synthetic controls:** Properly timed pyrethroid spray such as Permethrin at base of plant.

## 3. Cucumber Beetles

**The signs:** Orange beetles with dark spots or stripes, about the size of a Lady Beetle. They feed on the undersides of leaves. Larvae feed on roots of seedlings and transplants and may kill them. Adults transmit Bacterial Wilt for which there is no cure. Plants wilt and die.

**Organic controls:** Rotation, sanitation, newspaper mulch, gauze row cover, tightly secured after planting and removed as female flowers appear. Use parthenocarpic varieties.

**Synthetic controls:** Permethrin, Imidacloprid (pre-harvest interval is 21 days for imidacloprid), carbaryl. All are effective because they work as both contact and stomach insecticides.

## 4. Mites

**The signs:** Mottling on the leaves of tomatoes, peppers, beans and other vegetable plants., particularly after a period of unusually hot and dry weather. Weakens the plant but usually does not kill it.

**Organic controls:** Neem oil. Hot pepper wax. Azadiractin (an extract of Neem Oil), Spinosad. Canola Oil, Canola Oil and Pyrethrin. Control is generally good but not 100%.

**Synthetic controls:** Permethrin or Malathion for tomatoes and strawberries. Malathion for beans. Permethrin for cucurbits.

## 5. Aphids

**The signs:** Tiny lice-like insects cover the undersides of leaves. Black coating on some leaves (sooty mold). Significant numbers of ants on affected plants.

**Organic controls:** Insecticidal soaps containing potassium salts of fatty acids provide excellent control. Canola Oil.

**Synthetic controls:** Permethrin and carbaryl are among many insecticides that kill aphids.

## 6. Flea Beetles

**The signs:** Tiny holes in leaves of eggplant, tomato and pepper plants. Flea beetles jump to the ground when leaves are disturbed.

**Organic controls:** Control is necessary when plants are small as flea beetle activity will stunt the growth of the plant and greatly limit productivity. Azadiractin mixed with Neem Oil.

**Synthetic controls:** Carbaryl dust. Usually 2 applications immediately after transplants are set out in garden.

## 7. Vertebrate Pests (Voles, moles, rabbits, chipmunks, squirrels, groundhogs)

**The signs:** Chewed roots, leaves, stems, and/or fruit. Entire plants broken down to the ground and in some cases eaten down to ground.

### **Controls:**

**Voles:** Traps placed in active tunnels or runs.

**Moles:** A problem for lawns but not usually for garden plants because moles feed on earthworms and grubs, not plants. Traps placed in active tunnels.

**Rabbits:** Repellants applied frequently, physical barriers such as fencing.

**Chipmunks, Squirrels:** Repellants, physical barriers such as row cover. VA law prohibits the trapping and relocation of squirrels.

**Groundhogs:** Wire fencing 3-4 feet high, flared out at top, dug at least 1 foot into the ground. VA law prohibits trapping and relocation of groundhogs.

## Pest Control Product Information

Product listings are provided for the convenience of clients. Product listing does not constitute an endorsement by the Virginia Cooperative Extension or the Fairfax County Master Gardeners Association.

<b>Active Ingredient or Key Element of Approach</b>	<b>How It Works</b>	<b>Type</b>	<b>Example Products That Are Registered for Sale in Virginia</b>
<b>Azadirachtin</b>	Ingestion	Organic	Safer Brand Bioneem Multipurpose Insecticide and Repellent, Ornazin 3% EC Botanical Insecticide
<b>Canola Oil</b>	Contact may cause suffocation, Anti-feedant	Organic	Earth-Tone Insect Control
<b>Carbaryl</b>	Contact, Ingestion	Synthetic	Ferti-Lome Liquid Carbaryl Garden Spray, Sevin SL Carbaryl Insecticide by Bayer, SA-50 Carbaryl 5% Dust, Hi-Yield Garden Dust by voluntary Purchasing Groups, Inc., Gardentech Sevin-5 Ready-To-Use 5% Dust
<b>Hot Pepper Wax</b>	Repellant, Feeding Deterrent	Organic	Hot Pepper Wax insect Repellant RTU by Hot Pepper Wax Inc., Bonide Hot Pepper Wax Insect Repellant
Imidacloprid	Systemic, Contact, Ingestion	Synthetic	Monterrey Fruit Tree and Vegetable Systemic Soil Drench
<b>Insecticidal Soap</b>	Contact	Organic	Bonide Insecticidal Soap Multipurpose Insect Control, EARTH OPTIONS BY Raid™ Insecticidal Soap, Garden Safe® Brand Insecticidal Soap Insect Killer, Safer's® Insecticidal Soap Concentrate, Safer® Brand #567 Pyrethrin & Insecticidal Soap Concentrate II
<b>Iron Phosphate</b>	Ingestion	Organic	Bonide Bug and Slug Killer, Sluggo
Malathion	Contact, Ingestion	Synthetic	Spectracide Malathion Insect Spray Concentrate
Metaldehyde	Ingestion	Synthetic	Slug-N-Snail Killer by Cape Fear Chemical, Inc., Hi yield Slug and Snail Bait
<b>Neem Oil</b>	Anti-feedant, Ingestion, Contact may cause suffocation	Organic	Monterrey Neem Oil RTU

<b>Active Ingredient or Key Element of Approach</b>	<b>How It Works</b>	<b>Type</b>	<b>Example Products That Are Registered for Sale in Virginia</b>
Permethrin	Contact, Ingestion	Synthetic	Bonide Eight Insect Control Garden & Home, Bonide Eight Insect Control Garden Dust Ready to Use, Bonide Eight Insect Control Vegetable, Fruit & Flower Concentrate, Spectracide Lawn and Garden Insect Control
<b>Pyrethrin</b>	Contact	Organic	Safer® Brand #567 Pyrethrin & Insecticidal Soap, Concentrate II, Bonide Tomato and Vegetable, Bonide Garden Dust
<b>Row Cover</b>	Barrier	Organic	Agribon, Reemay, Harvest-Guard
<b>Spinosad</b>	Contact, Ingestion	Organic	Monterrey Garden Insect Spray, Bonide Captain Jack's Deadbug Brew

References

*2013 Virginia Pest Management Guide: Home Grounds and Animals*

*Virginia Registry of Pesticides*

*Organic Material Review Institute*

*Etoxnet, Cornell University*