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Garden Insects and Their Control

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GARDEN INSECTS

And Their Control

AGRICULTURAL EXTENSION SERVICE
SOUTH DAKOTA STATE COLLEGE, BROOKINGS
U.S. DEPARTMENT OF AGRICULTURE
Every garden is open to attack by insect pests at some time during the growing season. These attacks may cause severe damage if they go unnoticed and unchecked. It is important to learn to recognize these insects so that the proper control measures may be applied at the right time. Adequate fertility, clean culture, weed control, daily watchfulness and prompt treatment for insects and plant diseases, will do much to increase garden production.

**Equipment and Insecticides**

Expensive equipment is not needed to apply dusts and sprays to home gardens. Many ready mixed dusts may be purchased in handy dust gun packages. Other inexpensive dust guns and sprayers may be obtained from drug, hardware, and general stores. The equipment should be designed so as to give a fine, uniform coverage to the plants. The type of applicators will be determined by the size of the job to be done. Excessive amounts of the insecticides should not be used. This practice wastes the poisons and increases the possibility of dangerous residues. It should be remembered that many insecticides are poisonous to humans as well as to insects and should be handled as such. Vegetables which have been treated should be washed thoroughly before they are used and vegetables should not be treated with insecticides toxic to humans within 20 or 30 days of harvest. Residues of toxic insecticides should be avoided. It is a good policy to follow recommendations closely and to read the labels on containers of insecticides carefully. Sprayers used for weed control should be cleaned thoroughly after using herbicides or, better yet, not used at all for the application of insecticides. Store insecticides, plainly labelled, in a safe place out of the reach of children or irresponsible persons.

**General Feeders; Found on Any Vegetable**

<table>
<thead>
<tr>
<th>Insect</th>
<th>Control or Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grasshoppers</td>
<td>Chlordane 5% dust or 0.25% spray*; toxaphene 5% dust or 0.25% spray; aldrin 2.5% dust. (Treat margins of garden)</td>
</tr>
<tr>
<td>Cutworms</td>
<td>Collars of tin or cardboard around base of plants; toxaphene 5% dust; chlordane 5% dust; DDT 5% dust. (Apply to ground around base of plants)</td>
</tr>
<tr>
<td>Blister Beetles</td>
<td>DDT 5% dust; rotenone 0.75 to 1.5% dust.</td>
</tr>
<tr>
<td>Stalk borer</td>
<td>Thorough weed control; mechanical removal; DDT 5% dust applied before borers enter stems may reduce damage.</td>
</tr>
<tr>
<td>Plant Bugs</td>
<td>DDT 5% dust; rotenone 0.75 to 1.5% dust.</td>
</tr>
</tbody>
</table>
Wireworms
Garden Webworm
Garden Slugs (not insects)
Aphids
Leafhoppers
Spider Mites (not insects)
Bean Beetle
Pea or Bean Weevil

Control or Treatment
Clean culture; rotation of potato plot; chlordane 5% dust, aldrin 2.5% dust worked into soil (do not apply to root crops).
Weed control, clean culture; toxaphene 5% dust.
Hand pick; metaldehyde baits; sprinkle hydrated lime on soil.

Found on Beans, Peas
Aphids Nicotine sulfate (Black Leaf 40) as directed on the label; rotenone 0.75% to 1.5% dust.
Leafhoppers DDT 5% dust.
Spider Mites (not insects) Finely ground dusting sulfur; aramite as directed on label.
Bean Beetle Methoxychlor 5% dust; rotenone 0.75% to 1.5% dust.
Pea or Bean Weevil Rotenone 0.75 to 1.5% dust; destroy all old vines.

Found on Beets, Spinach, Chard
Leafhoppers DDT 5% dust.
Flea beetles Rotenone 0.75 to 1.5% dust; DDT 5% dust.
Aphids See beans and peas

Found on Cabbage Family
(Cabbage, Kohlrabi, Cauliflower, Broccoli, Brussel Sprouts)
Cabbage worms DDT 5% dust before heads form; rotenone 0.75 to 1.5% dust within 30 days of harvest.
Aphids Rotenone 0.75 to 1.5% dust.

Found on Radishes
Flea beetles Rotenone 0.75 to 1.5% dust; DDT 5% dust applied very lightly.

Found on Carrots
Webworms Toxaphene 5 or 10% dust.
Found on Vine Crops
(Cucumbers, Squash, Pumpkin, Melons)

Cucumber beetles (spotted and striped)  Rotenone 0.75 to 1.5% dust; methoxychlor 5% dust.
Squash bug  Trap under boards placed on ground near plants; sabadilla 20% dust.
Aphids  Rotenone 0.75 to 1.5% dust.

Found on Lettuce

Leafhoppers  DDT 5% dust (not within 30 days of harvest.
Aphids  Rotenone 0.75 to 1.5% dust.

Found on Onions

Thrips  DDT 5% dust; toxaphene 5% dust.

Found on Potatoes

Colorado potato beetle  DDT 5% dust or 0.25% spray*.
Leafhoppers  DDT 5% dust or 0.25% spray.
Psyllid  DDT 5% dust or 0.25% spray.
Flea beetles  DDT 5% dust or 0.25% spray.

Found on Sweet Corn

Corn earworm  DDT 5% dust on fresh silks; DDT 0.5% emulsion spray with 12 fluid ounces highly refined mineral oil per gallon, applied very lightly to silks just after they appear; one-fourth teaspoon mineral oil into tip of ear as soon as silks begin to wilt.
European corn borer  DDT 5% dust or 0.25% spray applied when eggs start to hatch; repeat 7 to 12 days later. Apply into whorls of leaves.

Found on Tomatoes

Horn worms  Hand pick; DDT 5% dust; rotenone 0.75 to 1.5% dust.
Leafhoppers  DDT 5% dust applied lightly.
Flea beetles  Rotenone 0.75 to 1.5% dust; DDT 5% dust.
Fruitworm (corn earworm)  DDT 5% dust when fruits are 1 to 1½ inches in diameter, repeat 2 weeks later.

*0.25% spray may be prepared as follows:
Two level tablespoons 50% wettable powder per gallon of water or,
One-fourth cup 25% emulsifiable concentrate per gallon of water or,
One fluid ounce 40% emulsifiable concentrate per gallon of water.
Cutworms
Cutworms are dull gray or dirty brownish fat worms, ¾ to 1¼ in. long. Young plants cut off at or below surface of ground usually at night. Found just under surface of soil, curled, during day.

Striped Cucumber Beetle
Striped cucumber beetles are yellow and black beetles about same size as spotted species. Three black stripes down back. Holes eaten in leaves of young plants. Larvae feed on roots and stems below ground.

Plant Bugs
Plant bugs have sucking mouthparts, suck sap from plants. Variety of shapes, sizes, and colors; sometimes brightly colored.

Onion Thrips
Onion thrips are very small, active, slender yellowish insects. Feeding causes leaves to “silver.” Found at base of leaves.

Mexican Bean Beetle
Mexican bean beetle adults are yellow or orange with 16 black spots on wing covers. Skeletonize leaves.

Spider Mites
Spider mites are very small yellowish, green, or reddish mites, usually on under side of leaves. Fine webbing usually present. Suck sap.

Imported Cabbage Worm
Imported cabbage worms are velvety green chewing caterpillars. Chew large holes in leaves and heads. Adults are white cabbage butterflies.
Colorado Potato Beetle
Adults are yellow and black striped beetles, ¾ in. long. Larvae red spotted with black. Chewing mouth parts; defoliate plants.

Flea Beetles
Flea beetles are very small jumping beetles. Color often black or black striped with light bands. Chew shot holes in leaves.

Aphids
Aphids are small, green, brown, gray, or blackish sucking plant lice. Leaves may curl and die. Sometimes occur in large numbers.

Common Stalk Borers
Common stalk borers are whitish gray caterpillars, dark stripes on each side of body broken by dark "saddle" ⅔ of the distance to head. Bore into stalks of many plants.

Spotted Cucumber Beetle
Spotted cucumber beetles are yellow to green beetles ½ inch long with 12 black spots on the wing covers. Holes eaten in the leaves of young plants.

Blister Beetles
Blister beetles are slender, large, rather soft bodied beetles; gray, black, brown, striped, or spotted; ½ to ¾ inch long. Chew leaves.

Flea Beetles
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Leafhoppers

**Leafhoppers** are small, very active, streamlined, of varying colors. Sucking mouth parts. Causes hopperburn of potatoes and tomatoes.

Garden Webworm

**Garden webworms** are greenish-yellow to dark caterpillars about one inch long. Web plants and leaves together. Chewing mouthparts. Adults are small, light buff colored moths.

Corn Earworms

**Corn earworms** are dirty greenish or brownish caterpillars with light stripes. Enter ear through silk channel and feed on kernels in the tip of the ear. Called tomato fruit worm when found on tomatoes. Larger and more hairy than corn borer.

Potato Psyllid

**Potato psyllids** are small, jumping insects, resembling leafhoppers though usually smaller. Sucking mouthparts, feed on shaded parts of plant, causes leaves to curl.

European Corn Borer

**European corn borers** are pale colored caterpillars with shades of pink and brown, about one inch long. Found in burrows in stalks, around base of leaves, and in the ears. Stalks break over.

Tomato Horn Worm

**Tomato horn worm** is a very large, greenish caterpillar with spine or horn on back end of body. Chewing mouthparts, defoliates plants. Adult is large “sphinx” or “humming bird” moth.

Wireworms

**Wireworms** are slender, yellowish-brown hard shelled worms. Puncture and tunnel stems and roots or eat out germ of seeds. Causes plants to wilt and die. Adults are “click” beetles.