

## GARDEN GUIDE: COMMON PESTS AND PLANT DISEASES

### **Insect Control**

Very few gardens escape attack from some type of insect. Some insect damage should be tolerated in the organic vegetable garden. Most insects can be controlled by the use of natural pesticides (see below) and hand picking. Destroy insect breeding places, such as weeds and crop wastes. Rotate crops so that you don't plant the same type of vegetable in the same location the following year. Insects may carry disease organisms over winter. They also spread these organisms from wild to cultivated plants and from diseased to healthy plants in the garden. Insect control will reduce damage.

### **Disease Control**

Strong healthy plants can fight off many infections. Stressed plants are more susceptible to damage from diseases. Some plant diseases cause the seed to decay or seedlings to die before emergence. Others attack roots, stems, and fruits, causing leaf spots, wilts, cankers, or fruit rots. Vegetable diseases can be carried on the seed or in the soil or can be spread by insects.

### **Sanitation**

Diseases can be controlled by using disease-free seeds and plants, by removing weeds that serve as sources of infection for plant diseases, and by removing old plants as soon as the crop has been harvested. Do not cultivate when soil or plants are wet as this spreads plant diseases.

### **Rotation**

Disease organisms in the garden soil can be reduced by not growing a given vegetable or its relatives for more than one year in the same location. Rotate related crops from one side of the garden to the other.

### **Garlic Chili Spray (Natural Pesticide)**

- 2-3 garlic bulbs (about 6-10 cloves per bulb)
- 6 large or 12 smaller hot chili peppers
- 7 cups water
- Steep in the sun using an old container for a day (beware – it will be strong)

Pour what you need into a spray bottle to use on plants, and store the rest in well-labeled jars with lids. Experiment and check for results or any damage to young plants. If it fixes the problem and your plants are happy, you've got the perfect mix. Uses for this natural garden pest control are unlimited. It will kill ants, aphids, caterpillars, grubs, bugs and just about any little invader. Be selective and mind the beneficial garden insects like ladybugs, lacewings, and bees.

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Garlic Chili Spray Source: <http://www.no-dig-vegetablegarden.com/natural-pest-control-remedies.html>

Common Pest and Plant Disease Source: <http://urbanext.illinois.edu/vegproblems/>

# COMMON PESTS

## Aphids

Besides pumpkins and squashes, aphids attack almost all vegetables including potatoes. There are winged and non-winged aphid types. They suck the juice from the plants and some transmit viral diseases to plants.

## Flea Beetles

There are many species of flea beetles. Those most common on vegetables are black, 1/16- to 1/8-inch long adult beetles that may have light-colored stripes. They jump and fly when disturbed. The adults eat tiny, pin-sized holes in leaves of eggplant, radish, bean, potato, tomato, and pepper. Pits may be eaten into the leaves; these pits later turn brown.

## Cabbage Worm

Cabbage worm adults are white or yellowish-white butterflies with small light black spots on the wings. They first appear in mid-April and they continue to be a problem until mid-September. They attack cabbages, broccoli, cauliflowers, collard greens and kale. They fly during the day and lay eggs on the leaves. The eggs hatch into velvet-green larvae that feed on the upper surface of the leaf, leaving the midribs intact. The bright green pupa is attached to the lower surface of the leaf by a silky thread. The pest overwinters as pupae in crop debris.

Please visit <http://urbanext.illinois.edu/vegproblems/> for more information.

### Flea Beetle:

- Peppers
- Eggplant
- Radish
- Bean
- Potato
- Tomato



### Cabbage Worm:

- Cabbage
- Collards
- Kale
- Cauliflower



### Aphids:

- All plants except squash



# COMMON PLANT DISEASES

## Blight

Early Blight is caused by a fungal pathogen called *Alternaria solani*. The most obvious symptom is the “bulls-eye” patterned spots that develop on older leaves towards the bottom of tomato, pepper, eggplant, and potato plants. Blight can also cause stem lesions and fruit rot. The best way to prevent blight is to avoid prolonged periods of wetness on the surface of the leaves by watering in the morning or using drip irrigation and by rotating your crops from year to year.

## Downy Mildew

Downy mildew most commonly damages brassicas, cucurbits, onions, and leafy greens such as spinach and lettuce. Symptoms of downy mildew vary with the host and the environmental conditions. The first symptom is usually the appearance of pale green spots on the upper leaf surface. These areas soon become yellow and irregular in shape, bounded by the leaf veins.

## Powdery Mildew

Powdery mildew, caused primarily by the fungus *Erysiphe cichoracearum*, may attack all vine crops and other vegetables. The cucurbit crops most commonly affected are cucumber, gourd, muskmelon (cantaloupe), pumpkin, and squash. Powdery mildew first appears around midsummer in Illinois fields, but the disease can develop in a greenhouse at any time. All foliar tissues can be infected. A major symptom is the appearance of small, circular, talcum-like spots that gradually expand on vines and leaves.

Please visit <http://urbanext.illinois.edu/vegproblems/> for more information.

### Downy Mildew:

- Collards
- Cabbage
- Squash
- Lettuce
- Spinach
- Basil



### Blight:

- Tomatoes
- Potatoes
- Peppers
- Eggplant

### Powdery Mildew:

- All cucurbits
- Cabbage
- Collards
- Kale
- Cauliflower

