



138 Latigo Lane
Naples, Idaho 83847-9730
Phone: 208-267-5108

Managing Insects and Diseases in the Landscape and Garden

Prevention is the best way to manage pest problems in the landscape and garden. Here are a few tips!

Grow vigorous, healthy plants - Evidence suggests that stressed plants are more likely to be attacked by insects and suffer from more serious damage. Pay close attention to your soil, adding lots of organic matter to build good structure, tilth, and water-holding capacity.

Choose a sunny, well-drained location for your vegetable garden - Most vegetable crops thrive in full sun. Shady, poorly drained sites produce weak, spindly plants that are easy targets for disease organisms.

Water plants carefully - For best growth, plants usually require about 1 inch of water per week. If you don't get enough rain, water your garden. Water plants in the morning so that the foliage dries quickly. This reduces the spread of disease. Avoid using sprinklers if possible because they promote the spread of leaf, flower, and fruit infections.

Don't over- or under-fertilize - Plants that are fertilized properly at planting and during the season will grow better and be healthier. Use a complete and balanced fertilizer or incorporate well-rotted manure or rich compost into the soil. Avoid over-fertilizing because it can damage roots.

Space plants to allow air circulation - High humidity and moisture favor the development of plant diseases. Allowing enough room for plants to grow and for air to circulate around mature plants reduces humidity and encourages rapid drying of plants after rain.

Clean up debris - Always remove and destroy or discard (in the trash) plant material that shows signs of disease. Work in the garden when plants are dry because moisture on plants aids the spread of diseases.

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Rotate crops - Planting the same crop in the same place year after year can cause pest populations to grow, especially populations of soil-dwelling insects such as grubs, wireworms, and maggots.

Choose varieties carefully - Choose varieties recommended for your area and look for varieties that are resistant to pests you may encounter.

Practice good sanitation - Many pests overwinter on weeds or plant debris in or near the garden. Remove weeds and organic mulches, which can provide homes for insects, slugs, and snails.

Check transplants - Avoid bringing insect-infested plants into your garden. Carefully inspect transplants before you buy them.

Time your plantings - Sometimes an earlier or later planting will be less susceptible to a specific insect pest.

Use barriers - To prevent cutworm damage, plant transplants inside collars made from cardboard, roofing paper, or disposable cups with their bottoms removed. The collars should be about 4 inches tall and buried 2 inches into the soil.

Use row covers - Floating row covers allow air, light, and water through to plants, but not pests. Place covers over young crops until they are large enough to fend off pests themselves, or until the pest is no longer around. (Anchor them securely with soil, wood, special anchoring pins, or other means so that pests can't sneak in.) Remove covers about 4 to 6 weeks into the season before temperatures under the covers get too hot for crops.

Plant a fall cover crop - After cleaning up the garden, sow a cover crop such as winter rye that will grow that fall and protect the topsoil during winter. The following spring, plow the cover crop back into the soil to enrich it with fresh organic matter. Cover cropping can help reduce populations of soil-borne disease agents. Noninfectious microbes flourish when cover crops are returned to the soil and tend to inhibit the disease-causing microbes.

Use yellow sticky traps - This is a good way to monitor insect populations. They are seldom enough to provide control, but they do help keep whitefly populations low as long as the sticky material is replaced when insects cover the board surface.

Handpick pests - Drop them into soapy water to kill them.

Take advantage of natural enemies - Learn to recognize and conserve insects that prey on or parasitize pests. Small wasps, for example, parasitize aphids, leaving bloated gold to bronze "mummies." Immature lady beetles and lacewings, which look like tiny alligators, also frequent gardens. Other "beneficials" include spiders, predatory mites, predatory bugs, predatory flies, and ground beetles.

A note on beneficial insects: Introducing predators, parasites, or diseases that kill pests is becoming more practical as we learn more about managing pests. Remember, however, that
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beneficial insects will move elsewhere if there aren't enough pests to feed on. Also keep in mind that most pesticides don't discriminate between beneficial insects and pests.

Pesticides - If these mechanical and cultural strategies don't work, pesticides may also be used as part of the pest management program. Before using any pesticide, follow all label directions carefully!

Be vigilant for pest damage: nip it early while you can still treat pests easily. Later in the season, you may find many older leaves of vegetable plants will wither and become diseased; simply pinch them off and dispose of them. You may find that certain crops have become pest ridden. You should remove them entirely before they cause problems in other parts of your garden. Remember, in gardening it is okay to have setbacks, they are just opportunities to learn.

Mike Bauer is the Horticulturist for Moose Valley Farms, a full-service garden center located in Naples at mile marker 495. For more information on this subject, attend our class on Friday, July 24 at 10 am at the garden center. Please feel free to call us at 267-5108 or stop in if you have any questions.

Sources:

Minimizing Diseases in Vegetable Gardens, Cornell University.
<http://www.gardening.cornell.edu/homegardening/scene7af3.html>

Managing Insect Pests in Vegetable Gardens, Cornell University.
<http://www.gardening.cornell.edu/homegardening/scene9deb.html>

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