

CARVER SCOTT EXTENSION MASTER GARDENERS**BEGINNING VEGETABLE GARDENING: PREVENTING PESTS**

In general, plants that are growing in the right location with attention to their basic needs are free of most insect and disease pressure. Expect the best, but there are steps that can be taken to slow or prevent onset of some of the more common problems.

DISEASE: VARIETY SELECTION

Certain variety selections are resistant to a host of diseases, and a few are even resistant to insect pests. If you know you have a specific pest in your garden, be sure to search for resistant varieties. And resistance never hurts, even if you aren't aware a problem exists.

DISEASE: CROP ROTATION

Soil-borne diseases may be prevented by practicing a crop rotation that keeps plant family members from growing in the same soil for at least three years. Maintain a three- or four-year garden plan to ensure a good crop rotation.

DISEASE: HUMAN ERROR

The disease triangle requires a susceptible plant, proper conditions, and the disease organism to be present at the same time. Humans can be instrumental in spreading the disease organism by working with plants when they are wet, or failing to sanitize cutting tools between cuts. Other problems include too much or too little light, moisture, and nutrients.

DISEASE: AIR CIRCULATION

Many fungal troubles arise when plants are crowded and/or their leaves come in contact with soil. Careful spacing of transplants or thinning of seedlings in rows is necessary to maintain the proper distances between plants for best health.

Support structures can also be a major factor in keeping plants off the ground and allowing leaves enough air circulation to dry quickly. Fencing, stakes, cages, and even twiggy cuttings may all be utilized as support for susceptible plants.

Various kinds of mulch may also be used to keep soil from splashing on leaves. Avoid overhead watering whenever possible to keep plant leaves dry and prevent soil splashing.. Removal of lower leaves prior to infection is another option where disease pressure is high.

DISEASE: SANITATION

Diseased plants cannot be "cured". Remove and destroy diseased plants or plant parts as soon as possible to prevent the spread to nearby susceptible plants.

INSECTS: ENCOURAGE NATURAL ENEMIES

Insect-eating pests such as frogs, toads, spiders, and predatory insects are great to have around. Learn to identify and encourage a new one each year.

INSECTS: PROVIDE BARRIERS

Physical barriers will keep pests away from prize plants. This can include nylon mesh slipped over individual fruit, cutworm collars, row covers, and fencing. Variations are also helpful in preventing damage from animals such as birds, deer, rabbits, and raccoons.

INSECTS: HANDPICK

Some insects may be controlled by searching out and destroying them in their early life stages. Handpicking works quite well for such pests as Colorado Potato Beetles and Squash Vine Borers.

INSECTS: SPRAYS

Learn to tolerate some insect damage to your plants. Not every hole in a leaf is cause for concern, and careful observation will let you know if sprays are necessary. Whether you choose chemical sprays or organic alternatives, spraying should be used only as a last resort to prevent injury to beneficial insects such as pollinators. Use discretion to spray only those insects that are actually harming your plants, with a spray that is labeled for use on the plant and is effective on the target insect. Apply spray only late in the day or early in the morning to reduce damage to pollinators.

WEEDS: THE TRIPLE THREAT

Competing with crops for light, moisture, and nutrients, weeds should be removed early and often from the garden beds. If you need even more incentive, many weeds are hosts to insects and diseases that also affect the vegetables, encouraging the gardeners to keep the area around the garden weed-free.

RESOURCES

<http://www.extension.umn.edu/garden/yard-garden/diseases/#vegetable>

<http://www.extension.umn.edu/garden/yard-garden/weeds/>

<http://www.extension.umn.edu/garden/insects/>

Jackie Smith – Carver-Scott Extension Master Gardener

Carverscottmastergardeners.org

CSEMG Help Line 952-466-5308