

FACT SHEET: Managing Beneficial Insects in the Landscape

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The Florida-Friendly Landscaping™ program encourages the use of environmentally sustainable practices designed to conserve Florida's natural resources. This program helps homeowners save time, energy and money by conserving water used in the landscape. There are nine principles in the FFL program and "Managing Yard Pests Responsibly" is one of these important principles.

The unwise use of pesticides to treat garden pests can harm people, pets, beneficial organisms and the environment. Managing pests in the landscape through the use of chemicals was once the norm. However, research has shown that the continued use (and possible overuse) of pesticides and herbicides by home gardeners can be detrimental to their health and to the environment. The University of Florida/Institute of Food and Agricultural Sciences (UF/IFAS) recommends Integrated Pest Management (IPM). IPM emphasizes the use of natural or low-toxicity controls to maintain a healthy landscape. When gardeners use toxic pesticides, many times beneficial insects are killed along with the pest insects.

There are several advantages to encouraging beneficial insects to inhabit our gardens. Less time and money are spent controlling pests because the beneficials are doing the work for you. You don't need to worry about pesticide resistance or environmental pollution. Also, beneficial insects often keep pace with pest insect populations. It is unrealistic and unwise to strive for a weed-free and insect-free garden.

Beneficials in the landscape can be divided into four categories:

Predators- are hunters include lizards, spiders and the larvae of many insects like ladybeetles, green lacewings and syrphid flies. Most predators are generalists, which mean they will eat anything they find. Lizards and spiders love roaches while insect larvae enjoy aphids.



Photo: Green Lacewing by James Castner, UF

Parasitoids- are one of the most important biological means of treating pests in and around home. These insects use the bodies of other insects as hosts. They lay their eggs on or in the host and the larvae feed on the host's body. Parasitoids kill their hosts, unlike parasites, which use their hosts without killing them. The syrphid flies, also called the hoverfly, braconid wasps and tachinid flies lay eggs on caterpillars. Their larvae control aphids almost as well as the larvae of lady beetles and lacewings. The Larra Bicolor wasp lays her eggs on mole crickets. If you have problems with mole crickets in your turfgrass, consider planting a Lara Flower Bush, *Spermacoce verticillata*, which will help to attract these beneficials to your garden.



Photo: Tachinid Fly Eggs on Green Stinkbug
by James Castner, UF



Decomposers- are earthworms and microorganisms that live in soil and fulfill a critical job. By consuming dead plant material, the dead bodies and organic wastes of other organisms, decomposers return nutrients to our soil and increase its water holding ability. Earthworms contribute to soil aeration and water infiltration in the soil by tunneling. They are constantly on the move looking for dead plant or animal material.

Photo: Earthworms by William T. Crow, UF

Pollinators- are the most appreciated of the beneficials. They account for the pollination of 80% of world's food crops, including blueberries, citrus and strawberries here in Hillsborough County. Approximately 85% of all flowering plants require an insect to pollinate them. Bees and wasps are the workhorses of the garden, responsible for the pollination of most plants in our landscapes. Other pollinators include flies, beetles, butterflies and moths.



Photo: Honeybee by Sean McCann, UF

There are several ways you can manage your landscape to attract more pollinators and other beneficials. It is important to have flowers in bloom throughout the year. Many of the beneficial wasps and bees have small mouthparts, so small flowers are necessary for them to feed. Ensure you have nectar and larval plants for butterflies and moths. Group your plants in clusters so beneficials will not have to travel far for more nectar. It is important to provide food for each of the four life cycles of the butterfly. Plants that bloom at night will attract moths and bats. These nocturnal feeders are also attracted to plants with fragrant blooms.

Provide foraging and nesting habitats by having layers of plant materials in your garden. Add plants with differing heights and textures. Install bee and bat houses. Provide water sources in shallow dishes with flat surfaces so bees and butterflies can rest while drinking. Learn the four life cycles of beneficial (lady beetles and butterflies). Walk your garden often and at different times of day. Take photos to document your garden at different times of the year.

Limit your lawn to the extent that turfgrass serves a functional purpose. Plant natives and remove invasive plants. Avoid improper fertilization by having your soil tested at the Hillsborough County Extension Service. Applying too much nitrogen can encourage aphids and mites more than it helps vegetation.

Good horticultural practices go a long way in the minimization of pest infestations. Keep your garden healthy by practicing “Right Plant, Right Place”, the first of the nine FFL principles. If your plants are planted correctly and are receiving the correct amount of light, water and fertilizer, they will be healthier and require less input by you. Incorporating more types of plants in your landscape will attract more beneficial insects. Think of your garden as a living eco-system and learn to live with minor cosmetic damage to plants. Most plants can handle slight damage, and the reward for you will be a healthy and more enjoyable landscape. By learning to consider many insects in the garden as beneficial, you will help to preserve and protect Florida’s natural resources.

For assistance with horticultural questions, call the Hillsborough County Extension Service, 5339 County Road 579, Seffner, FL 33584 or call: 813-744-5519. More gardening information is available at <http://hillsborough.ifas.ufl.edu> and <http://edis.ifas.ufl.edu>.