



Earth Kind: Environmental Stewardship Program

Walker County LEAF-PRO projects support the Texas AgriLife Extension Service, Earth Kind: Environmental Stewardship Program.

What are the guiding principles of Earth Kind?

Base your horticultural decisions on:

- A deep, abiding respect for the environment.
- The latest scientifically-sound, research-based information.
- Employ Earth Kind techniques of plant selection and culture to avoid pest problems before they occur.
- Use pesticides only as a last resort. If a pesticide becomes absolutely necessary, then select the most Earth Kind or environmentally responsible product available.
- Putting Earth Kind techniques into everyday practice will help your family, your business, your community and your environment. Remember, "Earth Kind to benefit human kind."



Educational Publication Information Series

Extension programs serve people of all ages regardless of socioeconomic level, race, color, sex, religion, disability or national origin. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating.



Garden Pest Management!

Walker County



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What is LEAF-PRO?

The LEAF-PRO project is an educational outreach effort designed to demonstrate and promote educated, ecologically responsible decision making through home landscape practices.



The objectives of LEAF-PRO are:

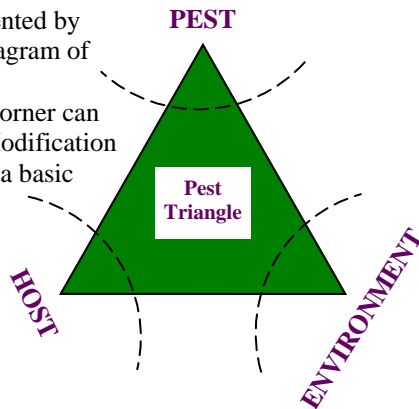
Protection of our environment,
Reduction of solid waste, and
Outreach education.

Garden Pest Management!



Plant problems such as insects or diseases often comprise an ongoing source of frustration for home gardeners. A variety of management tools may need to be employed to develop an effective prevention or control plan for your common garden pests.

Many garden pest problems can be prevented by modification of the pest triangle. The diagram of the pest triangle seen in this publication illustrates how modification of any one corner can be applied to prevent a pest problem. Modification of a pest triangle to prevent a problem is a basic concept for Integrated Pest Management (IPM).



The first step in utilizing an effective IPM program is to correctly identify your pest problem. Once you have identified your pest (insect or disease) correctly, you can take the proper steps to modify the plant's environment, remove the host utilized by the pest or eliminate the pest itself as appropriate.

Other steps involved with IPM programs include: identification of the pests current life cycle stage, determination of the pest population numbers, identification of current damage and the control threshold or amount of acceptable damage for the pest in question.

Environmental Modification

- Plowing and cultivation changes to the soil structure may allow insects to be harvested by birds or disrupt the life cycle of an insect or disease.
- Plant rotation with resistant crops can be a valuable tool to isolate insects, break life cycles, or disrupt food supplies.
- Proper use of fertilizers insures proper plant growth and prevents weak plants from being susceptible to some pests.
- Changes in planting or harvesting can prevent early infestation of pests and or reduce weather related damage.
- Removal of crop residues eliminates food and shelter for crop pests.
- Companion planting creates a diverse insect population which will encourage populations of natural beneficial insect predators.
- Altering sunlight or drainage can change growing conditions to assist in disease control by modifying the soil moisture in a location.
- Moisture management can prevent many common diseases, water at the soil level to prevent foliage fungal problems.

Host Modification

- Select resistant varieties when planning your garden or landscape.
- Maintain healthy plants to prevent initial pest infestations.
- Protection of host plants via physical or chemical barriers as appropriate.

Pest Prevention

- Pull immature weeds and utilize them in a working compost pile!
- Utilize soil free of weed seed, disease pathogens or insects.
- Hand pick insects when populations are low.
- Consider utilization of beneficial predators in small areas as a chemical free treatment option.
- Applications of biological control agents should be utilized when possible such as in the case of many crop destroying worms. Be aware that many butterflies have specific host plants. Learn to identify your caterpillars if butterflies are desirable and prepare to tolerate some crop damage!
- Utilize chemical control options only as a last resort and then select the least toxic application when possible.

In small areas, physical barriers may be utilized to prevent pest damage.

- Paper or plastic collars around the stems of plants to prevent cutworm damage
- Cheesecloth or plastic screen coverings for hot beds and cold frames exclude flying insects
- Mesh covers for small fruit trees, berry bushes, tomatoes and other plants keep out large insects and birds
- Sticky barriers on the trunks of trees and woody shrubs prevent damage by crawling insects
- Aluminum foil on the soil under plants may help to repel aphids

If you would like further information on anything contained in this publication, or to arrange for presentation of a program on pest management, please contact the Texas AgriLife Extension Service, Walker County office at (936) 435-2426