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AGRIVIEW

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Integrated Pest Management applies to all kinds of pests including those in homes, lawns, gardens, crops and even pests on animals. IPM for the yard and garden, for example, includes planting well adapted varieties that may naturally resist pests, keeping plants healthy and vigorous (and more resistant to insects and diseases), encouraging natural enemies of pests like lady bugs and spiders and, if necessary, using pesticides that are less toxic and break down quickly.

While IPM may be a new concept to many of us, it's old hat to people in agriculture, the industry that pioneered IPM in the United States. Working for decades with land-grant colleges like Texas A&M University, agencies of the U. S. Department of Agriculture and private agencies like the Texas Pest Management Association, farmers and agribusinesses have been developing IPM methods for practically every commodity.

IPM makes maximum use of conditions and methods that control pests naturally. Here are some examples of how IPM is used in agriculture to provide us with safe and inexpensive food and fiber.

In some of the earliest IPM practices, Texas cotton farmers in the 1920's and 1930's found that destroying cotton stalks immediately after harvest cut down on boll weevil populations. This practice disrupted the life cycle of the weevils by taking away their food

source. Other effective practices include scheduling planting and harvesting at times that avoid high pest populations and using fast maturing crops that have limited exposure to pest damage.

Pesticides are often essential parts of IPM strategies, but they are applied typically after field checks or other evidence indicates their use is necessary to prevent extensive crop damage. IPM has reduced pesticide use in some crops by as much as 70 percent. Many chemicals used today are designed to break down rapidly in the environment and target specific pests without harming "good" insects.

Research is making IPM easier to carry out, more effective and more reliable. This is important because IPM practices vary from place to place with differences in climate, growing conditions and soil types.

If the past is any indication, IPM is the future of effective pest control. IPM techniques are like a craftsman's box of tools. The more the craftsman learns, the more tools he adds to his collection. In the same way, the more that people learn about IPM, the more IPM tools they use.

Experienced vegetable gardeners know the value of proper crop rotation. They are aware that certain vegetables planted year after year in the same plot decline in productivity. Consider factors that interact to affect the soil's productive potential if you wish to plant many kinds of vegetables in the same garden each year. Important factors to consider in planning a proper crop rotation are: soil borne diseases, nematodes, soil insects, organic matter, chemical residues and levels of essential mineral elements.

Each family of vegetables has unique effects on the soil and most vegetables within a given family fall prey to the same diseases and insects. Most vegetables planted in home

gardens belong to nine distinctive families. It is important to know that the pea or legume family includes peas and beans of all kinds. Beets, chard and spinach belong to the goosefoot family.

The mustard family has many members: cabbage, collards, Brussel sprouts, kale, cauliflower, broccoli, kohlrabi, rutabaga, turnip, cress, horseradish and radish. Carrots, parsley, celery and parsnip all belong to the parsley family. The nightshade family encompasses potatoes, tomatoes, eggplants and peppers.

The gourd family claims the vine crops: summer squash, winter squash, pumpkin, watermelon, cantaloupe and cucumber. Chicory, endive, salsify, dandelion, lettuce, Jerusalem artichoke and globe artichoke are all included in the composite family. The lily family includes onions, garlic, leeks and chives. Sweet corn is a member of the grass family.

In a small garden, rotate families of vegetables where only a few plants of each kind are planted. For example, treat tomatoes, peppers, eggplants and potatoes as a single group in a rotation.

Effectively control common vegetable diseases that survive in soil and attack vegetables by timely rotation coupled with a preventive fungicide program. For example, anthracnose and fusarium root rot fungi build up in beans and peas unless there is a span of 2 to 3 years between plantings on the same plot. Tomato bacterial canker persists in a viable state for 3 years, once it is introduced into the garden soil. Some vegetable varieties resist or tolerate infection by certain fungi and bacteria. A gardener who knows his soil harbors a harmful organism can often select a resistant variety.

Tomatoes, potatoes and carrots are very susceptible to injury by the root knot nematode and favor the build up of this problem in soils. Corn and other grasses suppress

this condition.

Wireworms and white grubs thrive in grass turf, and a new garden plot usually contains many active soil insects. Sweet corn, watermelons and winter squash are better choices than root or tuber crops for newly tilled soil.

Try to follow a crop that supplies a large amount of organic matter with one that favors decomposition of organic matter. Sweet corn produces much coarse crop refuse. Pumpkins, winter squash and watermelons favor the decay of crop refuse. It is important to precede shallow-rooted crops requiring close cultivation, such as lettuce, beets and other greens with clean culture crops such as tomatoes, peppers or summer squash, which tend to extend their roots deeply into the soil.

IMPORTANT DATES:

October 10th - Hunter Education Class - 7:30 a.m. - Texas Freshwater Fisheries Center, Athens - 903-676-2277 for more information and to register

October 18th - Hunter Education Class - 7:30 a.m. - Texas Freshwater Fisheries Center, Athens - 903-676-2277 for more information and to register

October 31st - Hunter Education Class - 7:30 a.m. - Texas Freshwater Fisheries Center, Athens - 903-676-2277 for more information and to register

Rick Hirsch is the Henderson County Extension Agent - Agriculture for the Texas A&M AgriLife Extension Service. Visit our web page at http://henderson.agrilife.org/.