



Integrated Pest Management

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The history of pest management in agriculture started with the birth of agriculture in 8000 BC. Crop rotation, burning of crop residues, and tillage were all practices to suppress disease or insect damage during the years before chemical pest control. After World War II, agriculture saw a boom in the development of new pesticides that would serve as pest control methods for croplands. New pesticides were applied on a routine basis, resulting in immediate yield increases but contributing to future environmental problems such as pollution of streams and oceans, and agricultural problems such as pesticide resistance. Home gardeners also saw a rise in the number of chemical pesticides available for insect control.

In 1962, environmentalist Rachel Carson published *Silent Spring*, bringing the issue of pesticide safety to public attention. She wrote, "no responsible chemist would think of combining in his lab the multitude of chemicals that are jumbled together when dumped."

The concept of integrated pest management (IPM) was introduced in 1967. IPM is a sustainable, environmentally friendly, and effective approach to managing pests in agriculture, including home gardens. Successful IPM uses several methods for long-term prevention and management of pest problems that minimize economic risk and risks to human health, beneficial organisms, and the environment. As concern for food, human, and environmental safety has increased, integrated pest

management has become the accepted philosophy of pest control.

The first key to IPM is prevention. This might include monitoring pests to avoid high populations or using disease-resistant plant varieties. The second key to IPM is to correctly identify the pest. To understand the pest completely, you will first need to identify the insect or disease that is causing the problem. Local Cooperative Extension Service agents or the Master Gardener Helpline can help you identify your insect or disease. The third key to IPM is to know which stages of the pest cause damage and which are most susceptible to management with the various possible control methods. With an understanding of the pest life cycle and its relationship to the susceptible host plant, and with knowledge of the types of control methods available, gardeners can better utilize IPM to manage common insect pest problems. The elimination or reduction in pesticide use that can be achieved through thoughtful application of IPM strategies will prevent misuse of pesticides and help keep the environment healthy. To learn more about IPM strategies for the home garden, see <http://www.ctahr.hawaii.edu/oc/freepubs/pdf/IP-13.pdf>.

*CTAHR Popular Press articles were written to appear as newspaper columns and therefore are of necessity brief and sometimes simplified treatments of their subjects. For more detailed information resources, visit www.ctahr.hawaii.edu.

Do you have a gardening question?

Contact a CTAHR Cooperative Extension Service or Master Gardener program resource.

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