The IPM Innovators Program

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June 5, 1996. Adapted from an article in Cal/EPA Report, August 1995.

August 1995 was the first anniversary of DPR's Integrated Pest Management (IPM) Innovators program. The IPM Innovators program was established in 1994 by the Pest Management Analysis and Planning Program (PMAP) of Cal/EPA's Department of Pesticide Regulation. Having reached the first year milestone, we thought we would review what has been achieved in the past year and take a look forward to what is yet to be accomplished.-

Integrated pest management (IPM) is an approach which, as its name implies, integrates various techniques, using principles of applied ecology, to control pests. The underlying philosophy is to choose a method or combination of methods that are effective and are the least disruptive to the environment. Integrated pest management is based on a thorough understanding of the pest, the system it lives in (i.e., farm, home, or school), and knowledge of the best available methods to control the pest.

The first step in IPM is to identify the pest. A pest is any organism (animal, plant, or microbe) that bothers people. Most insects are not pests and many are beneficial. The second step is to determine what damage it is causing by periodic monitoring. If the cost of control is higher than the damage caused, it will not be economical to control it. If control is needed, the last step is to choose one or more control methods.

The three major groups of pest control used in IPM are: cultural, biological and chemical.

(1) Cultural pest control is changing how you grow plants and maintain property to minimize or prevent pest problems. Examples would be covering food to keep ants away, pulling weeds by hand, using cultivators to destroy weeds, proper pruning to reduce disease problems, and crop rotation.

(2) Biological pest control is the action of organisms that kill pests. Many organisms (predators or parasites) make their living by eating other organisms. In most situations these beneficial organisms are naturally present and prevent pest problems. In some cases, they do not do their job well enough. However, we may be able to improve their effect by providing better habitat for them. In yet other cases where few effective predators occur naturally, we can release them onto plants. For example, growers as well as home gardeners can buy and release green lacewings, which are very effective predators of aphids. Some biological controls are registered pesticides, such as *Bacillus thuringiensis* which is used to control a variety of pests from mosquitoes to worms in fruit.

(3) Chemical pest control is the use of pesticides, which are chemicals that kill pests. These must be used in ways that minimize damage to beneficial organisms, the environment, and human health, and should only be used if other methods do not work. Using IPM to manage pests, which involves using several of these methods together, results in reduced risk, and often, reduced use of pesticides.