

# IPM

## Integrated Pest Management

MARYLAND DEPARTMENT OF AGRICULTURE, PESTICIDE REGULATION SECTION  
 50 HARRY S. TRUMAN PARKWAY  
 ANNAPOLIS, MARYLAND 21401  
 TELEPHONE (410)841-5710 FAX: (410)841-2765 INTERNET: www.mda.state.md.us

No.3

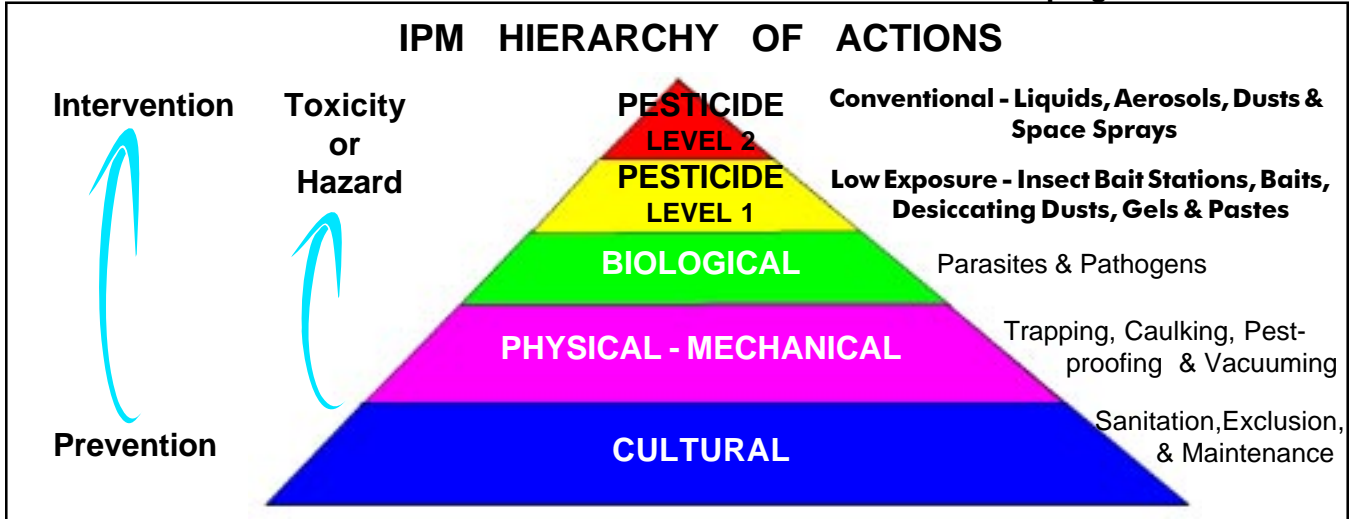
### STRUCTURAL PEST CONTROL USING THE IPM APPROACH

The manner in which structural pest control is performed has changed drastically within the past few years. Pesticide applications once considered a common or acceptable practice are no longer considered an acceptable practice by many people. Another method of pest control known as integrated pest management (IPM) has evolved. IPM reduces risks from pesticides and improves the quality of pest control. The public is asking, that IPM be used instead of traditional pest control services, particularly in sensitive sites.

IPM is a system of controlling pests that does not depend on the automatic application of pesticides. Instead, pests are monitored by regular and careful inspections. The inspections also identify conditions contributing to pest problems. A decision is made on what type of action is necessary, if any, based on the biology and habits of the pest involved and the information obtained from monitoring. Priority is given to nonchemical pest management techniques, particularly those that can prevent a recurrence of the problem. Pesticides are used when nontoxic options are unreasonable or have been exhausted

IPM is really just good common sense. Institutions that have adopted IPM programs not only report a reduction in their use of pesticides, but a significant improvement in their level of pest control. IPM looks at the big picture and analyzes the factors that caused pest populations to grow in the first place. When a pest problem requires action, non-chemical methods are considered first. Methods that work over the long term, or that prevent pests, such as pest proofing (exclusion) or operational changes that improve sanitation, are utilized when possible. Pest control practices such as trapping, caulking, power washing, and vacuuming are control measures that can be used with a high degree of safety. Often, nonchemical measures are combined for the most effective results, and sometimes used together with limited pesticide application. However, if a pesticide must be used, it should not be applied automatically or on a schedule, but only when justified against identified pests. Pesticides that pose the least hazard to people should be selected and applied using low-exposure techniques.

The diagram below depicts the tiers of pest control in a structural IPM program.



# Pest Control Procedures Using IPM

The following hierarchy can be used as a guide to provide effective pest control and to minimize the potential for exposure of occupants to pesticides.

- ⇒ Sticky traps, pheromone traps, and insect light traps should be used to guide pest management services and evaluate pest control actions wherever necessary. Pheromone traps are valuable tools for monitoring certain pests, particularly stored product pests.
- ⇒ The use of good sanitation practices is critical for an effective pest control program. Proper sanitation can prevent infestations from occurring by denying the pest food and water that it needs to survive. Proper storage of supplies and food in conjunction with the elimination of clutter is also important.
- ⇒ Portable vacuums rather than pesticides should be used for control of cockroach infestations, swarming ants and termites, and spiders. The use of steam cleaning equipment for cleaning kitchen areas is also effective and should be considered.
- ⇒ Pestproofing through physical or mechanical changes to the structure eliminates harborage and denies the pest access to the structure. This is accomplished, in part, by caulking and sealing cracks and openings around pipes, use of screens and door sweeps.



- ⇒ Trapping plays an important part in an IPM program. Insect traps are used mainly for monitoring pest activity. However, if the pest infestation is small, these traps can sometimes be used to control the problem. Jar traps are effective for certain insects, particularly yellow jackets and flies. The use of snap traps is the most effective control measure available for controlling rodent infestations, particularly mice.
- ⇒ **The feasibility of exclusion, prevention, trapping, and removal of infested products or pests needs to be considered prior to treatment of any pest problem.**
- ⇒ Containerized and other types of bait, paste and gel formulations, rather than sprays, should be used for cockroach and ant control when appropriate. These formulations are used at low rates, have a low volatility and are placed into cracks and crevices reducing the chance of human exposure to pesticides. Baits are considered the standard choice for non-food preparatory spaces. The use of these formulations greatly reduces the potential of exposure to the pesticide. Baits for other insects should also be considered as they are introduced into the marketplace and their efficacy established.
- ⇒ As a general rule, liquid, aerosol, or dust (i.e., desiccating insecticidal dust) formulations should be applied only as crack and crevice treatments with injection devices or tips specifically designed or modified for this purpose. *“Crack and crevice treatment”* is defined as a pesticide application in which the stream of pesticide is visible and is only released within the crack or crevice without leaving a deposit on exposed surfaces.
- ⇒ Applications of pesticide liquids, aerosols, or dusts to exposed surfaces, and pesticide space sprays (including fogs, mists, and ultra-low volume applications), should be restricted to unique situations where no alternative measures are practical. Granular formulations and compressed air sprayers should only be used for treatment of utility areas or areas outside the building, when necessary, to correct active pest problems.
- ⇒ In the event that the application of a pesticide spray is necessary, a formulation with the least potential for human exposure will be chosen. As a general rule, wettable powders and micro-encapsulated formulations should be considered as first choices. Such applications should be made only to areas unoccupied at the time of application and the area should remain unoccupied until the treated surfaces have dried, or longer if specified by the product label. It should be determined, on a case-by-case basis, if additional ventilation and prenotification of the application are required.

For further information on Integrated Pest Management, contact the Maryland Department of Agriculture, Pesticide Regulation Section at (410)841-5710, or the University of Maryland Cooperative Extension, Home and Garden Information Center at 1-800-342-2507.

