

IPM IN COMMUNITY ENVIRONMENTS

IPM or integrated pest management is the most sensible, economical and sustainable method of managing pests in any situation with the least possible risk to people, property and the environment. IPM can be defined in numerous ways according to the situation, but common aspects in most definitions are prevention, regular monitoring and use of multiple suitable and compatible techniques (as opposed to relying on one single method) to reduce pest populations and maintain them at levels that do not cause injury or concern. IPM does not generally aim at eliminating all pests from the environment as a whole. However, IPM can be successfully used to eradicate pests in a given limited area, for example, bed bugs from a home.

The concept of IPM has its origins in agriculture. However, IPM principles are now applied to diverse non-agricultural environments with the support of research and resources developed by experts specifically for these environments. Some of these non-agricultural environments created by humans for specific needs and activities, are described as “community environments” (see section I: Introduction). They are vastly different from agricultural environments and natural environments, and therefore the focus of IPM strategies in these environments also varies considerably, although the basic IPM principles are the same. For example, regular monitoring and correct identification of pests are important and indispensable steps in any IPM program.

Community environments are people-centered, and therefore, **community IPM** places more emphasis on people and their interactions with the various organisms they might encounter in their environments. These interactions are extremely diverse and perhaps more complex than those occurring in an agricultural situation. Examples include cockroaches or ants in a home kitchen, school closure due to intrusion by wildlife, controlling weeds in a municipal park, or excessive numbers of pigeons damaging factory equipment with their droppings. Community IPM provides solutions to all these diverse situations, and the methods used can be considered as extensions of agricultural IPM; they are not unique techniques that are applicable to community environments only. All IPM efforts are complementary and ultimately aim to promote human and environmental health and wellbeing by reducing pest problems through the use of safe, sustainable and environmentally friendly techniques including, but not limited to, pesticides.

While community IPM involves many of the same actions and practices as agricultural IPM, an important difference between the two is that community IPM strategies are not primarily driven by economics, but rather by social, health, environmental and aesthetic goals.

The process of IPM in any situation involves the following important steps, which are not necessarily sequential.

1. **Regular monitoring** to watch for pests, signs of pest damage or pest-favorable conditions.
2. **Proper identification**, first to determine if the organism encountered is in fact a pest, and therefore requires management. Secondly, if it is indeed a pest, accurate identification to determine the most effective treatment.
3. **Having a plan of action**, knowing what to do when there is a certain number of pests or a level of damage.
4. **Keeping records** to provide information on past and existing pest problems.
5. **Keeping pests away**, by not providing them what they are looking for: food, water and shelter.
6. **Using least-risk and least-disruptive methods** to discourage pest occurrence or to deal with them when they occur. For example, using physical barriers to exclude pests, and traps to catch existing ones.
7. **Spot treatments** or localized treatments with pest-specific pesticides when and where pests occur, as opposed to routine, calendar-based sprays covering large areas unnecessarily.
8. **Constant evaluation** of effectiveness of the whole program, and making changes wherever and whenever necessary.

It is very difficult to assess the overall impacts of pest problems in community environments and provide blanket solutions for all of them. This is because each pest situation is unique, and people's attitudes and tolerances for pests and their damage vary widely. With this handbook, we hope to increase awareness about the various organisms and the roles they play in community environments, and specifically to aid in Step 2 above. We hope this improved awareness will help people to realize and appreciate the complexities of these environments, and enable them to make wise and informed decisions in their attempts to achieve pest control. Further to the information provided in this book, readers are encouraged to seek additional information from the sources mentioned throughout the book, and also seek assistance from local Cooperative Extension personnel as necessary.