

# Agriculture & Pesticides Facts

## INTEGRATED PEST MANAGEMENT

Integrated pest management (IPM) is a systems approach to pest control that assists the farmer in selecting pest control methods that will provide an optimum level of control, and are both economical and environmentally sound. Most farmers in Ontario use at least some elements of the IPM approach.



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## A COMPLETE IPM PROGRAM CONSISTS OF FIVE BASIC COMPONENTS:

1. **Pest Identification:** what species of pests are present?
2. **Monitoring:** how many of each type of pest are present and when are they present?
3. **Threshold Determination:** are enough pests present to cause an economic loss?
4. **Picking a Control Method:** which method, or combination of methods, will best control the pest(s)? Solutions must be effective, economical and environmentally sound.
5. **Evaluation:** how well did the control measure(s) work?

## IPM INVOLVES THE USE OF A COMBINATION OF PEST CONTROL PRACTICES, INCLUDING:

**Mechanical:** physically removing pests, using measures such as cultivation (weeds) or trapping (insects).

**Cultural:** different growing conditions favour different pests and slow the buildup of any one pest. The most common cultural control method is crop rotation (i.e., changing the crop that is grown in a field from year to year).

**Biological:** a number of pests have been controlled through the release of parasitic insects or diseases specific to those pests.

**Genetic:** use of resistant varieties, developed with conventional breeding methods, has been the cornerstone of controlling diseases in most crops for decades. Biotechnology is now allowing the development of crops that are resistant to insects.

**Chemical:** used only when other methods cannot provide adequate control.

## USE OF AN IPM PROGRAM ENABLES A GROWER TO:

- maintain effective and economical pest control over the long term
- minimize pesticide usage
- minimize risks to human health and the environment
- reduce the risk of the development of pesticide-resistant pest populations.