Integrated Pest Management (IPM) is a decision-making process that uses all necessary techniques to suppress pests effectively, economically and in an environmentally sound manner[1].

A Six-Step Process

1 Identifying Friend and Foe
Most living organisms are useful. We can't afford to eliminate everything that moves. In an IPM approach, the first step is to identify and better understand which species are inhabiting our agricultural ecosystems (fields, orchards, greenhouses, etc.).

2 Monitoring and Evaluating the Situation
For effective decision-making, various parameters such as environmental conditions, pest and beneficial organism populations, and the health and stage of development of crops must be considered. In many fruit and vegetable productions, a regular monitoring of the fields has resulted in a better and reduced use of pesticides without loss of quality or yield.

3 Using Action Thresholds
The use of action thresholds makes it possible not only to apply control tools such as pesticides at the right time with maximum effectiveness, but also to make significant savings by treating only when justified.

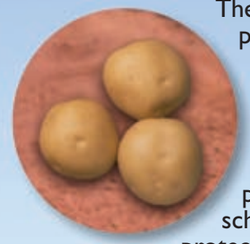
4 Managing the Ecosystem
Many pests live along field margins, in neighbouring crops, in crop residues and in the soil. They can also be transmitted by farm equipment and personnel. Use of tolerant or resistant cultivars, modification of the density and date of sowing, adoption of ridge tillage, management of windbreaks and ditches, disinfection of equipment and appropriate rotation of crops are all ways to make the ecosystem more favourable to crops and beneficial organisms and unfavourable to insect pests, pathogens and weeds.

5 Integrating Control Methods
Integrating the various preventative or curative control methods available, whether biological, mechanical, cultural, genetic or chemical, ensures a more lasting and often more efficient reduction of pest populations and reduces the risks associated with the exclusive use of chemical pesticides. Pesticides are just a component of IPM and should be used only when the situation calls for it.

1 As defined by the Expert Committee on Integrated Pest Management, a working group composed of representatives from various provinces, the Canadian government, and the pest management industry.

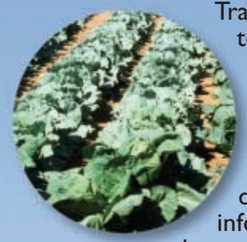
6 Evaluating the Efficiency and Consequences of Our Actions
Every decision-making process implies the evaluation of results. The use of control plots, post treatment scouting as well as crop quality and yield monitoring allow us to measure the efficiency and profitability of our actions, and to gradually improve our approach.

Some Real-Life Examples...



The aphid alert program uses pan traps to catch aphids in potato fields throughout the growing season. Growers may use this information to assist in their selection of pesticides, timing of spray schedules, or application of protectant oils. The presence of the first green peach aphids will trigger the timing of topkill dates to reduce viral disease transmission in potatoes grown for seed.

In the case of cruciferous crops, 6 to 7 year rotations with legumes, grain, grasses, and non-crucifer vegetables will reduce clubroot infestations. Rotations are also highly effective reducing Colorado potato beetle populations in potato fields.



Trap crops can be effective tools for reducing insect populations in the field. For example a perimeter planting of collard plants around cole crop fields may decrease diamondback moth infestations in the field throughout the growing season.

By using pheromone mating disruption programs in apple orchards, growers can eliminate the need for insecticide sprays for insects like the codling moth. Pheromone traps can also be used to forecast the presence of certain pests in an area (for example: armyworm is often not seen in a field until well after the damage has been done but a pheromone trapping program can alert growers to watch for the pest and control the outbreak before the damage is devastating).

Mechanical weeding devices like finger weeders have allowed cereal producers to reduce the amount of herbicide used on their farms.

Integrated Pest Management:

A Choice for the Future!
A Winning Approach!

A Reality We Have To Face

Agriculture uses and alters the environment. Since the beginning of this century, intensive production methods have had an impact not only on soil, air and water, but also on flora, fauna and crops, as well as on humans.

The development of pests resistant to pesticides, the establishment of new harmful organisms, chemical residues in the ecosystem, soil degradation and consumer concerns are all incitements to adopt more environment-friendly pest control practices.

History and experience also tell us that to obtain good yields year after year, man must take advantage of the natural resources available in his environment. Results obtained from conservation tillage practices as well as by protecting natural enemies and pollinators are good examples of this.

Towards a Better Future

IPM is an agroenvironmental approach, based on experimentation and observation, that allows us to manage and harvest profitable crops by using the environment as an ally.

Various governments, international food and agricultural organizations and many consumer groups promote the use of this approach in agricultural and ornamental production.

- As of the year 2000, the United States intends to cultivate 75% of its productive land under Integrated Pest Management programs.
- For some years now, fresh and canned fruits and vegetables have been labelled "IPM" in the United States and Europe.
- **The Prince Edward Island Food Strategy:** The future direction of the agriculture and food industry is based on the production and processing of high-value, high-quality products from sustainable systems, and marketing those products around the world under a Prince Edward Island brand. Agriculture and food products will be marketed under this brand on a voluntary basis to value-add markets that recognize and reward healthy food from a healthy environment.

Not only is Integrated Pest Management effective, but it will become, in the near future, an indispensable marketing tool.

For more information on Integrated Pest Management and available resources for the development and implementation of IPM programs, contact one of the following:

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Prince Edward Island CANADA
Agriculture and Forestry

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Integrated Pest Management

Everyone Wins!

Prince Edward Island CANADA