THE CANADIAN APPROACH TO PEST MANAGEMENT

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To reduce excessive reliance on herbicides and pesticides, the government of Canada has slated work on integrated pest management -- increasing the use of tillage and natural predators as a means of warding off bugs and weeds -- as a top priority.

The integrated pest management (IPM) approach to pest control makes it possible to protect crops and animals from insect pests, weeds and diseases, weaning farmers away from chemical use and cutting production costs.

IPM is a system that does not reject pesticides, but uses them at lower levels, combined with other measures.

These include using parasites and other insects that prey on pests, a technique pioneered in the early 1950s at the Kentville, Nova Scotia, federal research station, or genetic engineering to develop new, pest-resistant strains of crops.

Another aspect of IPM involves monitoring insect activity in order to time pesticide applications most effectively. According to scientists at Agriculture Canada's Research Branch, it is in this area that results have been most encouraging.

The fruit industry is one example. For many years, insect monitoring has been gaining widespread acceptance among growers in both the Okanagan Valley of British Columbia and Ontario's Niagara region.

IPM techniques first began to take a foothold throughout the Okanagan in 1978. Prior to this, the "calendar" approach was used. Pesticides were applied at certain times regardless of whether pests were actually a problem or not.

The integrated approach, in contrast, monitors insect activity in the orchard to determine the best time to apply pesticides. Dramatic results in controlling codling moths have been achieved by using pheromone traps. Pheromones are sex hormones which fool the males into thinking a female is present.

Several years of using this technique in Canada have shown that the number of pesticide applications needed to control the codling moth can be cut in half, compared to standard practices.

Canadian grower acceptance has also been encouraging. More than 50% of Canada's apple growers are now using the phermone traps to monitor codling moth populations.

From the growers' point of view, the benefits are many and include greater accuracy in timing spray applications, lower production costs, and better conservation of beneficial parasites and predators.

In the apple orchards of Ontario, IPM programmes have been around for many years. Currently, about 90% of the province's apple growers are using integrated controls, directed at such pests as the codling moths, tentiform leaf miner, European red mite, and several species of leafrollers.

Provincial statistics show a 25% reduction in pesticide use in current programmes, for a net savings to growers of $100 per hectare.

Evidence points towards IPM as the only approach to pest management that can protect crops, reduce pesticide use, and address consumers' concerns.

Based on encouraging results in the fruit industry, Canadian government officials would like to see an integrated approach developed for all the major commodities.

Canadian agricultural professionals look forward to sharing their findings in this sector with the international farming community and exchanging information with their international counterparts. ■