Washington State Tree Fruit IPM Definition

Integrated pest management (IPM) is a site-specific, information-based, multi-tactic decision making process for the management of pests that is profitable for the grower and promotes health and environmental quality.

IPM is site-specific: This means that decisions on the use of pest management tactics is made locally based on appropriate information derived from the site. For some pests, such as pear psylla, site-specific may mean a relatively large region when decisions are made to apply controls against overwintering adults but may mean an individual block or even part of a block within a growers orchard when deciding how to manage psylla nymphs in the summer. The underlying principle is that management decisions are made at a spatial level appropriate for the tactic under consideration.

IPM is multi-tactic: This means that more than one pest control tactic is used to mitigate the impact of pests on the crop. Tactics include chemical (pesticides), cultural (fertilization, thinning, cover crop management, resistant varieties), biological (predators, parasites, pathogens), and behavioral (mating disruption). All of these tactics are considered in the decision making process with the general concept that those tactics with the greatest disruptive impact on the stability of natural controls but that act rapidly to mitigate pest effects are relegated to "last lines of defense" as opposed to being used prophylactically.

IPM is information-based: This means a decision to use a pest control tactic is based on information of pest densities and development gained through monitoring activities. It also means that, where available, the implementation of a pest control tactic is made based upon pest densities that have reached levels justifying action, that is, action thresholds are used to make control decisions. Information-based IPM also means that tools, such as predictive models and weather forecasts are used to time sprays and avoid implementing tactics in periods where their effect will not be fully expressed.

IPM is a decision making process: This means that IPM is a process to choose the best available pest control tactic based on information from a specific site. It also means that this process is not isolated from what has gone on before or what will happen in the future. Because IPM is not a series of isolated decisions on controlling one pest at a time consideration of the impact a control tactic will have on other pests and their natural enemies is also taken into consideration when making decisions. This means that IPM is NOT using the same control tactic, e.g. pesticides, time after time without regard for pest densities or phenology or the impact of the tactic on other pests and natural enemies present in the orchard.

IPM is profitable for the grower: This means that tactics used by the grower are effective in mitigating the populations of pests such that crop loss is kept at acceptable levels and that these tactics (technologies) are not so expensive that they reduce that profit margin of the grower to unacceptable levels. IPM tactics are only one source of grower expense and the decision on which tactics to use is always a balance between efficacy and cost. However, IPM encourages the grower to think of long term investments of tactics that might be more expensive than alternatives in the short-term but would provide long-term cost savings in the form of stability of pest populations with reduced pest control inputs.

IPM promotes health: This means that one goal of an IPM program is to a safe and abundant source of fruit for the consumer. There is no claim that IPM grown fruit has a nutritional advantage over any other from of fruit production but it also states that IPM grown fruit is not of lesser quality. IPM strives to minimize pesticide residues on fruit while protecting fruit from pest attack that would result in reduced fruit quality.

IPM promotes a quality environment: This means that IPM promotes the use of tactics whenever and wherever possible that have the least negative impact on the environment inside or outside the orchard. Tactics such as mating disruption for codling moth or microbial controls for leafrollers that potentially reduce the need for the use of pesticides that have broad spectra of activity are chosen whenever possible and appropriate for the situation. Practices which minimize the drift of pesticides outside the orchard environment are followed. Practices that insure agricultural chemicals do not run off orchard sites or leach into the groundwater are followed.