



Why Precision Spray Oils™ are emerging as an essential IPM solution

Pest control is a major imperative in horticultural production. Commercial growers can begin to lose money when insect damage starts to affect just one percent of their crop yield, so pest control is a very serious business indeed.

Not one single control method is ever going to be sufficient to manage crop pests. And with the increasing development of pest resistance, coupled with the likelihood of further pesticide restrictions in the future, Australian growers are being urged to begin adopting more sustainable horticultural practices.

IPM is a system that combines many crop pest control practices with careful monitoring of both pests and their natural enemies (beneficials). The key goals of IPM are the intelligent use of pesticides

and the conservation of natural enemies, while producing an undamaged crop in an economically and environmentally sustainable way.

One of the added benefits of produce grown under IPM conditions is that it is often easier to sell and can provide a valuable competitive edge in a saturated market. Australian produce is already highly regarded as 'clean and green', so any ability to leverage this market advantage further makes good long-term economic sense for Australian horticulturalists.



IPM – the sustainable way

IPM requires the grower to have access to reliable information about the life cycles and biology of particular pests to deliver optimum crop protection strategies. Careful inspection (scouting) and monitoring of pests is necessary throughout the season. Pests are always present in crops, without necessarily causing damage, but when potentially damaging levels occur the IPM strategy is to use methods that give the best control while delivering the least disruption to all agricultural, biological and environmental systems.

IPM strategies

Successful IPM involves careful scouting and monitoring, good record keeping and a combination of control methods including:



Biological controls – using beneficial organisms (predators, parasites, diseases) to suppress pest organisms. Biological control includes both introducing new enemies into a new area, where they should naturally multiply, and mass-rearing and releasing natural enemy insects, called augmentation biological control.



Cultural controls – practices that improve yields and enhance beneficial natural enemies, while reducing pest populations. These can include crop rotation, multiple cropping, intercropping, border crops, trap crops, ploughing, cultivation, mulches, effects of fertilisers, using certified disease-free plants and seeds, carefully managed irrigation and generally practising good horticultural sanitation methods to minimise persistent pest problems.



Physical controls – direct interventions that involve limiting, removing or destroying the pest such as traps, barriers, wind breaks, nets, row covers, weeding, burning or mulching crop residues to remove overwintering pest sites, adjusting planting location or timing to evade or reduce pest pressure. Traps provide the needed data for effective intervention strategies.



Genetic controls – modifying the genetic makeup of crops and pests is increasingly possible with advances in biotechnology and molecular biology. For example, genes have been successfully taken from a bacterium and inserted into a cotton plant, making the cotton resistant to insect attack. Another method is to genetically modify an undesirable trait in a pest and then release it into crops, for example sterile male moths.



Spray controls – pheromones to interfere with mating (semiochemicals), non-toxic petroleum spray oils, biopesticides (soft chemicals) or conventional broad spectrum pesticides.

Note: the use of broad spectrum chemicals can be very effective in the short term, but is considered a last resort as it may wipe out all beneficials, induce pest resistance and create secondary pest infestations.

The benefits of Precision Spray Oils™ in successful IPM programs

Precision Spray Oils™ are highly refined, versatile horticultural spray oils that have been developed in Australia and field tested under Australian conditions.

They are considered one of the key IPM components for controlling a wide variety of horticultural pests and diseases year round with minimal risk. They offer low toxicity to humans, animals and the environment, do not induce resistance, are soft on beneficials and minimise the costs and use of broad spectrum chemicals.

The key virtue of Precision Spray Oils™ is killing insects through suffocation and not by poisoning them. So most beneficials scatter before the spray reaches them and aren't bothered by any residue when they return. Their versatility means you can spray whenever the need arises and still conserve the natural enemy populations that are so critical to the long-term control of pests in any horticultural setting. Precision Spray Oils™ offer a sustainable solution for restoring biological controls and ecological balance the IPM way, while effectively controlling pests without damaging plants.

