



IPDM project update November 2012.

The PIPS IPDM project is on track to deliver exciting new tools for growers to use in management of their pests and diseases.

Biocontrol of codling moth

The project team has completed host specificity studies required for an application to release a parasitoid wasp called *Mastrus*. The wasp was imported into Australian quarantine from Kazakhstan via the USA, Argentina and New Zealand, and will help assist with the control of codling moth.

If approved for release, *Mastrus* will complement other approaches such as pheromone mediated mating disruption, granulosis virus, entomopathogenic nematodes, and narrow spectrum pesticides. An application to release the wasp from quarantine was lodged in June this year with Australian authorities yet to approve the application – however, it has since been approved in New Zealand.

Considerable work has been conducted in both New Zealand and Australia to assess possible negative side effects of releasing *Mastrus* in preparation for its release. The findings indicated that *Mastrus* is highly specific in what it attacks and should not become 'another cane toad', as suggested by one media commentator. Once approved for release, the *Mastrus* colony at the Department of Primary Industries (DPI) Frankston will be moved to DPI Tatura for bulking up in preparation for an autumn 2013 field release.

Better scab management

Work is underway to develop a robust scab model combining the best attributes of existing models from around the world. There are numerous strains of the scab fungus that exist and field sites have been established to investigate differences in behaviour and timing of spore release in various regions.

Woolly aphid biotypes

Previous work on Woolly aphid biotypes in Victoria has indicated there are at least two biotypes present. Studies on colonies established from Australian apple districts have confirmed several biotypes exist, based on feeding behaviour and host preference. Further experiments planned for 2012-13 will examine the metabolomic basis for the differences so an easy way of distinguishing between the biotypes can be developed.

Interactions in the orchard

A draft desk top study has identified many important interactions between pests, diseases, host plants, biological agents, semiochemicals and pesticides used by orchardists to control them. The study has now been expanded to assess the potential benefits of manipulating these interactions to improve orchard productivity. Results are expected in 2013.

