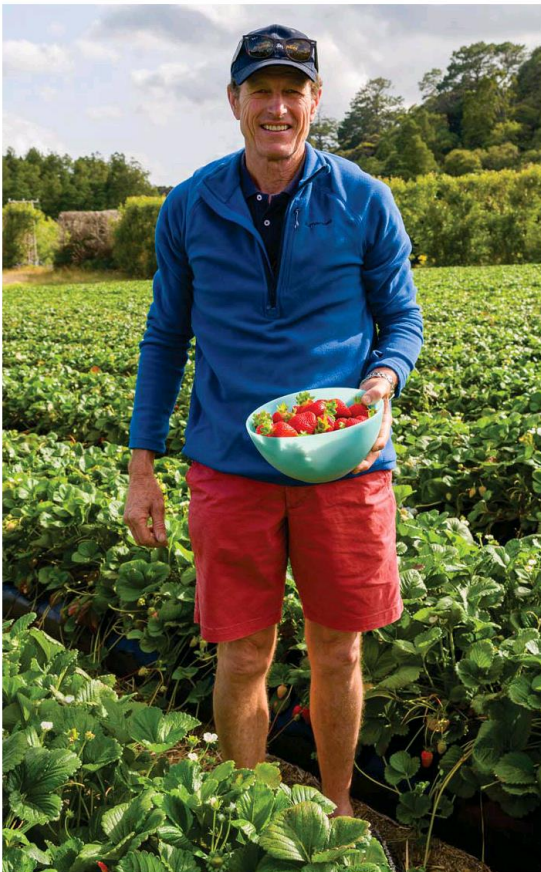


Research to improve strawberry pest arsenal

By Hugh Chesterman, Hort NZ

Strawberry growers need greater access to pest management tools for an effective industry-wide Integrated Pest Management (IPM) strategy to work.



A field day on Peter McIntyre's strawberry farm in Coatesville, north of Auckland, brought together more than 40 growers and industry partners to see and hear the benefits of implementing an IPM strategy.

Organised as part of the Sustainable Farming Fund (SFF) project "Future-proofing thrips management in strawberries," the field day focussed on IPM as a way to manage thrips. Thrips are a type of minute insect pest that cause discolouration and deformation in strawberries. It is also a pest for other crops such as onions. The research from the project will be used to assist growers and give them confidence in adopting an IPM strategy.

AGMARDT guest speaker, Australian entomologist and IPM consultant Dr Paul Horne says "it is definitely possible for the industry to move towards an IPM strategy". In August 2008, the Victorian strawberry growers had to respond to a crisis when fruit turned brown because of thrips and mites despite heavy insecticide use. "The entire industry would have been lost if they weren't willing to adopt change," Paul said.

"After a three-year trial, about 75% of the Victorian strawberry industry had shifted to IPM, with minimal insecticide used for mites; 100% of the industry had adopted IPM after year four of the trial. They managed to go from spraying Lannate (a heavy, broad-spectrum insecticide) every three days and seeing no effect, to almost no spraying at all and having great results."

Back here in New Zealand, thrips is an issue that continues to be a problem across many crops, not just strawberries. "The similarities between our [Australian] experience and yours are really interesting and I am sure that IPM can apply here," Paul says. "In terms of success stories, the apple industry here in New Zealand is a great example of IPM implementation. They have been world leaders in proactive and innovative pest management, without relying on broad-spectrum spraying."

Presenting preliminary results from the project, the Plant & Food Research team have identified four species of thrips present in New Zealand strawberries; a critical first step needed for developing a successful IPM strategy. In the search for a solution, Berryworld Ltd and Plant & Food Research are leading the three-year SFF project in collaboration with Strawberry Growers New Zealand, the Ministry for Primary Industries, Adria Crop Protection, Orion AgriScience, Agpro NZ Ltd, Bioforce, and Zonda. >

This season has been the best in Peter McIntyre's 30 years of strawberry growing, thanks to great weather and a new pest management strategy.



ABOVE: More than 40 growers and industry partners attended the field day

BELOW: Jessica Dohmen-Vereijssen (pictured standing) presented early findings from the SFF project



What is IPM?

- IPM is an ecosystem-based approach to managing pests. It uses all available tools, and decisions are made by monitoring both the numbers of pests and the populations of natural predators to those pests (beneficials).

- Pests are then kept in check by enhancing numbers of beneficials or by disrupting the populations of pests. This is done by using cultural controls (management practices), habitat manipulation (for example pruning to increase airflow, changing humidity through irrigation), releasing additional populations of beneficials, and using chemical controls when necessary.

- Chemicals used in an IPM approach should be a last resort and are chosen to specifically target a pest, rather than relying on traditional broad-spectrum sprays which inadvertently also kill beneficial populations. These sprays are often only applied in an area with a pest outbreak (spot spraying).

Although the project is still in the preliminary phase of gathering data, early adoption of IPM at Peter McIntyre's farm is already showing very promising results. Peter has grown strawberries at Springwood Strawberries for 30 years and has moved towards an IPM strategy over the past couple of years. "When you stop spraying, you end up with less problems," he says. "The results from changing to IPM rather than the calendar spraying that I have done in the past are amazing. I'm able to get better results while using almost no sprays.

"It's been the best year we've ever had," says Peter. "The weather has been unbelievable and we've been able to keep producing high-quality fruit through the

whole season." By monitoring the numbers of pests and their natural predators, Peter can introduce populations of these predators (known as beneficials) to keep pests under control. "The most critical part of an IPM system for it to work is monitoring," Peter says.

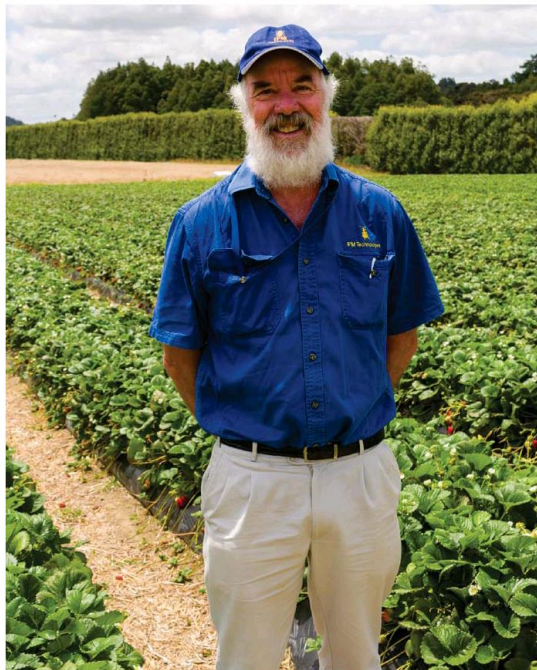
By working with Bioforce, a company that specialises in biological control of plant insect pests, Peter has been releasing beneficial insects and changing any sprays he may use to ones that are more targeted to managing thrips. This season, Peter has only had to use two insecticide products, spraying only two times pre-season, and twice during the season. This is a massive decrease over a calendar spray programme which involved spraying every week of production.

"We need help though," says Peter. "We need access to softer chemicals to control insect pests without having to resort to harsh broad-spectrum sprays. We currently lack the soft chemicals and natural predators that are available overseas that specifically target adult thrips. We're miles behind Australia in terms of access to these."

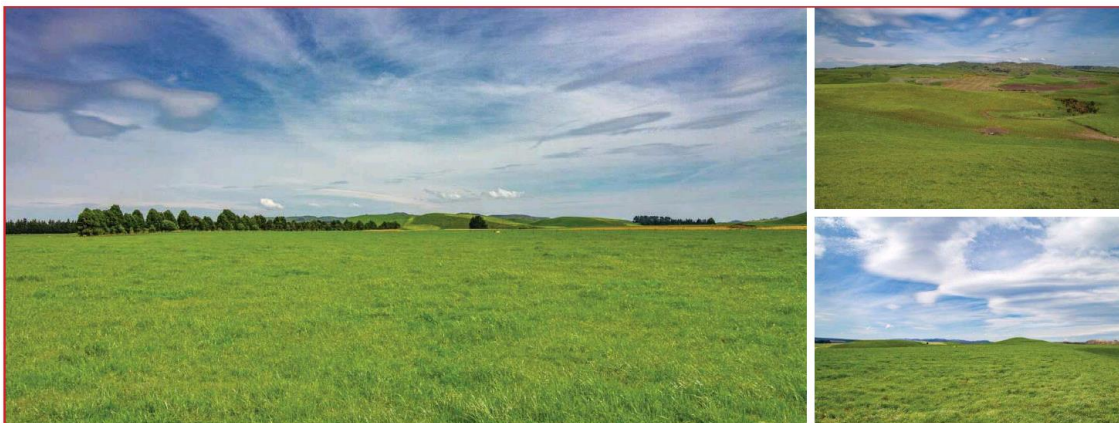
"AFTER A THREE-YEAR TRIAL, ABOUT 75% OF THE VICTORIAN STRAWBERRY INDUSTRY HAD SHIFTED TO IPM, WITH MINIMAL INSECTICIDE USED FOR MITES."

"Overseas markets are increasingly demanding spray-free crops," he says. "Exporting is becoming extremely difficult with every country having its own requirements. There are only about three or four chemicals that I can use if I want to export. For example, I have recently stopped using Teldor (a popular fungicide for targeting botrytis) because Taiwan has stopped accepting it."

Addressing the group at the end of the day, Peter said "I would recommend for everyone to stop spraying, and see the benefits. IPM is the future, and it's here to stay."



Dr Paul Horne's participation and travel were funded through an AGMARDT fellowship secured through the SFF project and Plant & Food Research. He will be attending a number of New Zealand grower field days over the next three years to share his knowledge and experience.



TE ONE A MARA - IF SIZE, SOILS AND CONTOUR MATTER, LOOK NO FURTHER. 465 State Highway 49, Tangiwai

Seldom does the opportunity arise for the astute investor to secure such a diverse property with scale, favorable contour, a stunning scenic environment with grand views out towards Mt Ruapehu and surrounding countryside, plus the luxury of having the additional leased land on your boundary. Currently a productive 345,000kg/MS, 800 cow herd (5yr average) standalone dairy unit that consistently defies the critics year on year. Comprising of 512 Ha total (448 Ha effective) plus the 278 ha of lease support land on which the vendors additionally winter 1000 dry, replacement and young stock from the dairy farm as well as their Manawatu farms. The free draining volcanic Waimarino soil profile opens up for diversification from other farming practices, or to run in conjunction with the existing model with the likes of market gardening from either root crop vegetables, Brassicas, legumes, cereal crops or a beef, sheep and deer breeding and fattening unit. Quality improvements include a 60-bail rotary shed with concrete yard constructed in 2007, wide well maintained vehicle and stock race access, reticulated water supply throughout the property with the required resource consents in place and 3 dwellings with the main 4 bedroom home built in 2007. Located only 5 km west of Waiouru or 20 minutes from either Ohakune or Taihape. Te One A Mara will be available for inspection from the 12th January 2020 by appointment.

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