

Thrips predator-efficacy testing project

Nov 2024

Thrips continue to be a limiting pest of strawberries in mid-summer in some regions of NZ. Grower's experience is that even when they spray them with chemicals that *should* be effective, the population keeps rebounding, and the pest problem is not fixed. Also, many of the chemicals used to control thrips harm the predatory mites which were controlling spider mites, another major pest of strawberries, so from mid-season onwards growers are battling BOTH thrips and spider mites (and sometimes mirid bugs too!).

The recent Thrips SFF project made significant progress in understanding the thrips problem, especially understanding that the mid-summer influx of thrips is of the *Intonsa* species that migrates into strawberry blocks in high numbers as adults.



Thrips-damaged fruit take on a bronze hue and have prominent seeds.

The reason for the difficulty in controlling thrips is twofold. Firstly, in January there is a big influx of adult thrips from the surrounding landscape that move into strawberries (*Franklinia intonsa*, or “intonsa thrips”). Secondly, currently available predators do not predate adult thrips, so a large influx of adults tends to overwhelm established predatory mites (cucumeris) that feed on young nymphs.

The current project has two aims--looking for an effective predator of adult thrips that can be commercially reared and successful in strawberry growing systems, and finding out where the intonsa thrips are building up their massive populations before moving into strawberries. This knowledge would open up the next possibility of introducing biocontrols to spring host plants and thereby reducing the later-season mass migration of intonsa adults.

The project has been funded collaboratively through the Lighter Touch program with support from SGNZ, Barkers, Bioforce and Berryworld. The predator efficacy testing will be done through Landcare Research with collaboration from Auckland University.

Bioforce has two adult thrips predators to test which are commercially raisable, and economically viable. One is a predatory bug (not 'Orius' but a potentially more effective NZ native option), and another is a green lacewing. A third predator to test is a species of predatory mite "*Amblyseius herbicolus*" being developed by Landcare Research.

Landcare Research will do the predator testing on strawberries in cages (a controlled system). Lessons from this work can in future be taken to on-farm testing.

Over the winter, Berryworld released four thrips predators into our winter greenhouse strawberries where we were having problems with Western Flower Thrips. To our delight, the combination of predators did succeed in bringing the thrips population down to a level where we weren't seeing fruit damage. This was encouraging. <https://berryworldnz.wordpress.com/2024/09/11/good-buggers-a-journey-with-predators/>

We look forward to the results of the trial that will show how the predators perform individually on Intonsa thrips.
