



Report from the Waikato Biodiversity Forum, Biocontrol Workshop. Held at The Link, Hamilton East on the 6th of April 2023

Purpose of the day

- To give the community the opportunity to better understand, the lengthy and complex processes preceding a biocontrol release.
- To give the community access to leading National and Local biocontrol experts
- To inform the community of what biocontrols have been released in the Waikato and how well they are developing
- To demonstrate the safety and efficacy of bio controls as a tool to reduce pest plants

The Waikato Biodiversity Forum biocontrol workshop took place on the 6th of April, at The Link, Kirikiriroa. The event was a collaborative effort between the Biodiversity Forum, Waikato Regional Council and Manaaki Whenua, Landcare Research. Coordinator of the Forum, Sam Mcelwee began the day with a Wakatau to welcome everyone to the whare and set our intentions and program for the day. The purpose of the day was to give the community an opportunity to learn more about biocontrol, from the initial process of identifying potential agents (insects) that may help us control problem weeds, all the way to releasing and monitoring these same agents here in the Waikato.

Sam gave an example of his own first experience with biocontrol over 20 years ago, while spraying ragwort weeds on his Dad's dairy farm in Atimuri. He said that his Dad spoke about a bug that had been released, which would eat the ragwort flower and kill the plants for us. After coming home every evening covered in spray dye, this seemed like a great idea, but definitely a fanciful one! Low and behold, now and for the past 10 years, ragwort has all but disappeared after covering much of Waikato's farmlands.

The Ragwort beetle was a huge success. Not all bio-agents have been as successful as that. But as Chantal Probst and Hugh Gourlay from Manaaki Whenua discussed, biocontrol in NZ has been very safe. Which is inevitably what most peoples biggest concern around bio-control is. The testing of biocontrol agents is extremely thorough. Chantal explained, "In New Zealand, we have been doing biocontrol for about 90 years. Sixty-five agents have been released, and there have been no significant non-target attacks. Of our releases, 33 per cent have been so successful that no other control options were required; 50 per cent have been partially successful and 17 per cent were failures – meaning they've had no impact on the pest plant".

Once agents are identified and collected overseas, (for example Wholly Nightshade in Argentina), both the effectiveness of the agents and any potential to damage native or non-native plants examined over a number of years and growth cycles, in a range of environments here in NZ. Once the testing is completed and an agent has been deemed as safe and effective, an application to the EPA is made. This process can take a considerable amount of time in itself, especially if there is a back-log of applications. Worldwide, on average, it takes 14 years before a biocontrol agent is released. Here in New Zealand, it's a very public process, with the decision based on risks, costs and benefits. . There are also financial costs to bare from the process, which are taken up by regional and district councils, like the Waikato Regional council, who are responsible for local releases, once they have been approved.

Hamish Hodgson and Andrew Thomas of the Waikato Regional Council spoke about their role and tier insights into local biocontrol releases, which target pest weeds in native restoration areas. The superstars in that space in the Waikato have been three beetles and a spot fungus that target tradescantia. The spot fungus is going gang busters, especially with the wet weather. While the woolly nightshade lace bug, which was released in 2009, is also now widespread throughout the Waikato. Hamish commented that "In Uruguay, woolly nightshade looks like a completely different plant because there are so many things attacking it. The New Zealand plant just looked like it was on steroids". Releases can take some time to establish, if they take at all. The Honshu white admiral butterfly, which targets Japanese honeysuckle, has established very well in the



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Karangahake Gorge but nowhere else. We don't know why! And we've done 19 releases of privet lace bug which has established but is not widespread, with the best site in the Coromandel Peninsula. We can support community groups and landowners to help us establish biocontrol agents within the Waikato. We have sites where you can see them and catch them, and then move them on to other locations for further establishment.

So overall, the take from the day was that biocontrols in NZ, have varied in their effectiveness as weed killers, from a very effective effect (e.g Ragwort bug estimated to save billions of dollars in weedcontrol savings) down to a neutral or minimal effect (e.g Japanese Honey Sukle, Honshu Butterfly struggling to establish). But we can rest assured, with the knowledge that there has never been a negative effect of biocontrols on our native or valued non-native species of plant.

To find out more about the day <https://www.waikatoregion.govt.nz/story-hub/biocontrol-whats-it-all-about/>



Hamish presenting on local biocontrols and how effective they've been so far



Checking out trad fungi and beetle damage at Donny park

[Presentation 1](#) - Biocontrol in New Zealand (Hugh Gourlay, Chantal Probst - Manaaki Whenua, Landcare Research)

[Presentation 2](#) - Biocontrol in the Waikato Region (Hamish Hodgson - Waikato Regional Council)

[Presentation 3](#) - Biocontrol in the Waikato Region (Andrew Thomas - Waikato Regional Council)



Pivot Lace Bug has been released in the Waikato, but yet to take a full hold. Only time will tell how effective it is.

