

# NZGROWER & ORCHARDIST<sup>®</sup>

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HORTICULTURE NEW ZEALAND

## LEADERSHIP REFRESH AT FAMILY BUSINESS

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*Planting of squash seed and starter fertiliser in early December at the Hawke's Bay demonstration site in the butternut squash soilborne disease project. Photo by Dereck Ferguson*

# GROWER INPUT ESSENTIAL TO PROJECT SUCCESS

*Growers will be key to cracking the effective implementation of tools and practices providing an agroecological crop protection solution to soilborne disease (SBD) in butternut squash.*

Gina Jewell : A Lighter Touch programme

**A grower survey and workshops have been central components of developing a toolkit and a protocol for trials being demonstrated this season in the A Lighter Touch and NZ Butternut Squash Council SBD project. The project's goal is to develop an agroecological 'whole of farm' approach to managing SBD in butternut squash, which costs growers an average of \$20 million a year in lost revenue.**

The survey of Hawke's Bay and Gisborne growers was designed to provide an overview of current grower management practices of SBD in squash. It also gathered baseline knowledge of agroecological practices, and an understanding of barriers to their uptake.

A number of growers were also involved in workshops discussing the practical application of findings from a knowledge review of growing practices required to mitigate or break the SBD cycle in squash and other cucurbit vegetables.

Project manager Andrew Barber sees the grower involvement as a fundamental aspect of ensuring the project's findings are implemented and don't sit on a shelf.

"In developing the toolkit, the first step was to meet with growers, have an open discussion on what the project had learnt from the knowledge review and get the growers' input into building that toolkit. It's far more inclusive than saying to growers, here's the guide, please review it."

Andrew, who also leads the Sustainable Vegetables Systems (SVS) project, sees similarities with the approach taken there. "Like SVS, it's about producing a tool, which doesn't need to be finely polished, so people can contribute and further develop it, and it will improve with grower input and subsequent ownership."



Demonstration sites in Hawke’s Bay and Gisborne are growing squash this summer using insights from trials, the knowledge review and grower workshops. These play an important role, not just as a means of engaging with growers, but also in terms of working through the practicalities of implementing the proposed SBD mitigations.

“Clearly you need fundamental research to answer some questions, but at the end of the day the problem’s here and now. It’s about taking the collective knowledge, giving it a go, and the demonstration sites are a really good way of doing that, of giving growers the confidence to take that step themselves,” Andrew says.

Grower appetite to adopting agroecological crop protection practices was among the information gathered through the grower survey, as well as barriers to change. Agronomist and project technical lead Dereck Ferguson conducted the grower survey and led the grower workshops. He says some growers were not familiar with the term agroecology, but showed through their answers they were already practising aspects of it.

“Most had tried to incorporate some agroecological practices, including planting of natives to encourage beneficial insects or use of service crops for soil

biofumigation. They considered agroecology desirable and were willing to adopt more agroecological practices if they have a positive impact on soilborne diseases and their farming operation.”

“**Grower involvement is fundamental in ensuring that the project’s findings are implemented and don’t sit on a shelf**

In terms of barriers to adopting agroecological practices and products, cost and uncertainty around the cost:benefit ratio were the main factors cited by growers, with a desire to see successful trials and scalability of agroecological practices.

Dereck says growers were interested in what had been learned so far from the review of New Zealand and overseas knowledge on the prevalence, management and mitigation of SBD in squash and related cucurbit crops, and from trials conducted last season using biological products.

The demonstration site protocol and the treatments involved, the use of vetch as a service crop, and the possibility of using soil testing to understand pathogen

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loadings of SBD were of particular interest. “These were components growers see they could potentially implement relatively easily and have a positive effect,” Dereck says.

A Lighter Touch (ALT) technical lead for agroecology projects Jeff Smith acknowledges the breadth and complexity of soilborne disease as a crop protection topic even within the confines of a single crop like buttercup squash.

“That said, ALT is the perfect opportunity for the NZ Buttercup Squash Council (NZBSC) to embark on addressing what is such a high cost issue to their industry, not only in leveraging the Ministry for Primary Industries’ (MPI) co-funding of ALT, but also the collective approach of working with rotation crop partners and others grappling with soilborne diseases. It has opened collaborative opportunities less obvious outside of ALT.

“There is still much to learn and although this project cannot provide all the answers, it has already identified control opportunities and will continue to help prioritise and focus research, as well as the agronomic practice change required in an integrated approach to crop protection,” Jeff says.

PGG Wrightson (PGW) vegetables technical specialist Chris Lambert has been involved since the project’s inception, having previously spent five years growing squash with LeaderBrand Produce in Gisborne.

With PGW officially joining A Lighter Touch as a merchant partner in 2024, Chris is once again directly involved in the project. He sees PGW’s involvement as adding another string to the project’s bow, contributing benefits through the company’s research, access and understanding of new products coming to market, and their extension network and relationships with growers.

He sees great benefit in tackling SBD at an industry level through ALT, rather than on an individual grower basis.

“The extra resource from MPI, the in-kind from programme partners, access to Crown Research Institutes and universities, it really enables the research to go a lot further. And with the growers involved and steering it, they have a lot of input in how we do it. We’ve had growers involved right from the start.

“Even with our first input that went onto this season’s demonstration sites, the grower ingenuity was clear. They weren’t equipped to apply one of the products that we wanted to demonstrate, but after some trial and error, they figured it out. Both demonstration site growers came up with a different way of doing it that worked well; they got the right rate even without the typical gear to do it,” Chris says.

“The project is looking for the tools that make a difference to SBD management, but in terms of implementation, it will be the growers who crack that one,” Chris says. ●



Cultivation in December for planting of the Hawke’s Bay demonstration site in the buttercup squash soilborne disease project. This was the final power harrow pass to incorporate biological and soil conditioner products for the ALT treatment. Photo by Dereck Ferguson



## WHAT IS AGROECOLOGY?

Agroecology is a contraction of agriculture (including horticulture) and ecology. It is the science and practice of farming and growing, informed by ecological science.

### How does it work?

Put simply, agroecology seeks to work with nature rather than against it, to build productive, sustainable and resilient farming systems. Where conventional agriculture relies heavily on agrichemicals and fertilisers, agroecology takes a more integrated approach, promoting biodiversity, enhancing soil health and conserving water resources.

The A Lighter Touch programme focuses on agroecology from a crop protection perspective.

At the heart of the programme is understanding and better management of aspects of agricultural ecosystems that directly or indirectly lead to increased levels of pests and diseases. Reducing the opportunities for pests and diseases to thrive reduces the requirement for crop protection interventions.

Using a combination of new technology, biological tools and cultural practices such as crop rotation, cover crops and biodiverse planting, agroecology provides a framework for more sustainable farming systems and lighter touch food production.

Visit [www.a-lighter-touch.co.nz/our-projects](http://www.a-lighter-touch.co.nz/our-projects) to view ALT projects

