# RESEARCH UPDATE

*September 2022*

## New Resources from Research

**Internal parasites:**

> Drench and drench resistance factsheet translated to Te Reo Māori

**Hill Country Futures programme:**

> FarmSalus: Farmer Wellbeing Assessment Tool report.
> Soil and Fertiliser series: Factsheets for guidelines on soil assessment and recommendations on fertiliser use – what to use, when, and why.
> Farmer stories.
> News and Views: Articles about the Hill Country Futures programme and people that are involved.

**Informing New Zealand Beef:**

> Structural assessment video
> Beef Breeders Webinar
> Better Beef Breeding podcast

**Environmental research:**

> Growing tagasaste in New Zealand handbook
> Tagasaste factsheet

## Farmer Wellbeing and Farmer Stories

**Telling our farmers' stories is an integral part of the Hill Country Futures (HCF) programme.** Read about farming in Ngatapa, Mātāwai, Mid Canterbury and Taumarunui. Find these stories here — more stories to come over the following months.

Also, visit 'News and Views' on the Hill Country Futures webpage to read more about the research and the people involved in the programme.

**Farmer Wellbeing Assessment Tool (FarmSalus) launched.** FarmSalus has been developed to address current gaps in resources available to rural professionals and facilitators who are working with farmer extension and/or farm planning. The tool has been designed to measure and monitor an individual farmers' resilience, but more importantly, it can also be used by facilitators to guide conversations about farmer wellbeing and how this may impact farmers' decision making and resilience.

The HCF research team continue to work along alongside farmers, farming groups and organisations such as Agri-Women's Development Trust and Rural Support Trust to use and further improve this tool.

## Animal health, production, and welfare

**At least 40 potential biomarkers show promise for non-invasive Facial Eczema (FE) tolerance testing.** Work to date on this project has shown it is possible to test for sporidesmin toxicity in the laboratory. Potential biomarkers for FE tolerance will now be further refined to a maximum of 4 to validate a high-throughput test ready for commercialisation by the end of 2023.

**FE is a serious but underestimated livestock disease with the potential to cause serious psychosocial trauma, distress, and self-doubt.** This was the key theme from a pilot study investigating the social impacts of FE. In this study, 14 farmers and rural professionals around the country were interviewed to understand how they could be better supported when faced with FE. A full report is expected in November

**Two different species of fungi associated with FE have been found on NZ farms.** These fungi have been identified from pasture samples of 34 farms, predominantly from the North Island. Further work is underway to confirm the fungi and their ability to produce the toxin sporidesmin.

**Feeding stock well, attention to detail, and monitoring to make informed decisions are important factors in managing parasites with reduced drench.** These were the key findings from interviews with 17 sheep and beef farmers around NZ who manage parasites using low or reduced drench. These interviews provided insights into farmers' motivators, skills, knowledge, impacts, and operational processes using low or reduced dench. A full report is expected in November.

**98% of farmers interviewed rated the Wormwise Workshops as one of the most helpful livestock parasite management resources for farmers.** This was identified when B+LNZ internal parasite resources were evaluated in 2021. We are now in the middle of a repeat survey to confirm these findings and see if our resources are making an impact. A full report is expected in November.

**Lambs born to hoggets are lighter than those born to mixed-age ewes, but no differences were seen in body condition scores between the groups.** These are the preliminary findings from a five-year trial with the goal of providing recommendations to farmers on whether twins born to hoggets and grown to heavy weights should be retained as replacements and mated as ewe lambs. The trial and finalised recommendations will be complete in February 2023.

**Animal welfare prioritisation research provides key insights into opportunities and challenges for the sector.** The B+LNZ research team is leading a project that combines several approaches to determine the priority animal welfare issues for the sector. The challenges associated with gastro-intestinal parasites, facial eczema, climate change and provision of pain relief for tail docking and castration ranked high when results from the survey and workshop were analysed.

## Genetics

**The Informing New Zealand Beef (INZB) programme aims to improve profitability and enhance sustainability across the beef industry. You can find out more here**

**Programme highlights:**

> **Two Beef Progeny Test sites:**
- Pamu's Kepler Station
  - Angus and Hereford bulls being used across Angus and Hereford cows.
  - Artificial Insemination (AI) and data recording programmes are in place.
- Rimanui's Lochinver Station
  - Simmental, Angus and Hereford bulls being used across Angus cows.
  - AI due to kick off in January 2023.

> **Preliminary findings from the farmer trait prioritisation survey showed a preference for fertility, functional traits, calving ease, feed efficiency, growth and weight traits and BCS.**

> **A genetic evaluation system is in development, along with nProve reporting tools.**

> **Extension activities:**
- Beef Breeders Webinar.
- Online Better Beef Breeding workshops.
- Structural Assessment video.

> **Discovery interviews with farmers are due to kick off in September.**

**Low Input Sheep Progeny Test will wind down from the end of 2022 but has provided valuable information for the sector.** This programme has enhanced breeding values for parasite resistance, tail length, bare points, and the propensity to form dags. It has also been instrumental in aiding the development of breeding values for methane and feed efficiency. Click here to read more about the programme.

## Environmental

**The use of catch crops can reduce sediment by up to 80%.** This was the finding from the second year of a three-year trial led by AgFirst and co-funded by B+LNZ through a Sustainable Farming Fund project. Results from all three years will be released later this year.

**Farms are being evaluated to understand if GHG emissions are being reduced by using available interventions.** Seven farms around NZ are being evaluated to understand if their businesses are profitable and productive while also reducing GHG emissions. A full report will be released later this year.

*B+LNZ acknowledges the following providers who work alongside B+LNZ's researchers to deliver this work for our farmers: AgResearch, Manaaki Whenua – Landcare Research, Massey University, Scarlatti, Nature Positive, KapAg, AgFirst, Lincoln University, AbacusBio.*

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