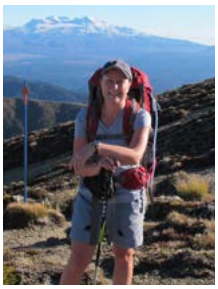
RESEARCH UPDATE

May 2023

Beef + Lamb New Zealand's (B+LNZ) research team leads and carries out a wide range of research on behalf of our farmers. This quarterly newsletter provides a high-level update on current research projects. We encourage you to share this newsletter with the wider farming community. For further information, please contact research@beeflambnz.com.

Getting to know a member of the research team

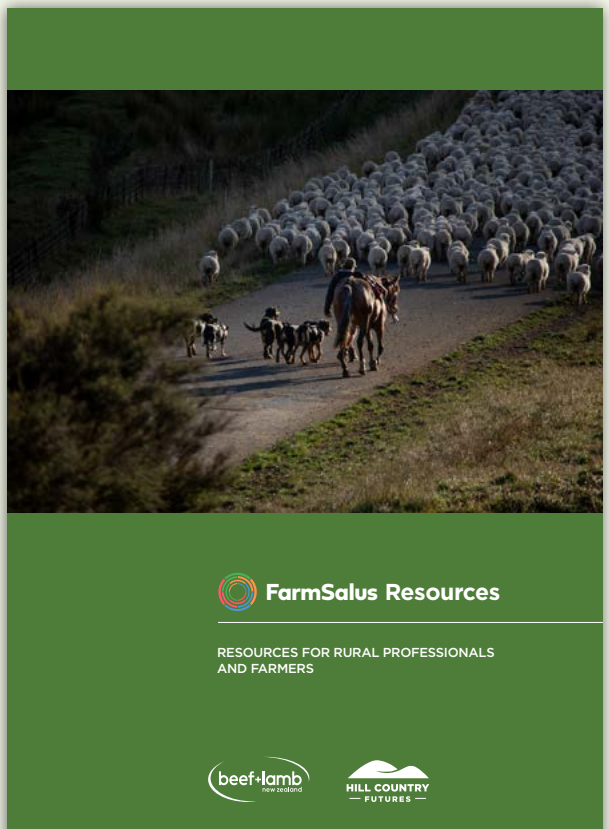


Dr Mhairi Sutherland is a Senior Advisor, Research Programmes at B+LNZ joining in 2020. Mhairi has always had a passion for animals and research. These interests have taken her to several parts of NZ and the US to study and work. Once returning to NZ, she spent 11 years at AgResearch with the Animal Welfare team before joining B+LNZ. At B+LNZ she is involved in the Hill Country Futures Partnership Programme and contributes to other research projects, particularly in animal welfare. She is also a member of the National Animal Welfare Advisory Committee, which is a great achievement and recognition of Mhairi's expertise.

New Resources from Research

Hill Country Futures Programme:

- HCF e-newsletters: Quarterly updates on key projects, initiatives and achievements.
- Podcast series: Showcasing what the programme produced over the last five years.
- FarmSalus: A set of resources developed to support farmer resilience.
- Video series: Highlighting different aspects of how lucerne has been used on Willesden farm.



Hill Country Futures (HCF) Partnership Programme

Hill Country Futures is wrapping up this year. HCF ran for five years, producing a wide range of resources for farmers and rural professionals including extension materials, tools and technical information. To get a good snapshot of the programme, you can listen to our podcast series where project team members talk about their research and what they have achieved for farmers. Listen here.

Lucerne at Willesden farm produces 2-3 times more dry matter than resident pasture. Tyler Good (Finishing Manager, Willesden Farm, Banks Peninsula) and Professor Derrick Moot (Dryland Pastures Research Group, Lincoln University) talk about how lucerne is used on Willesden farm. Some of the topics discussed in the videos are grazing management, productivity and seasonal production. Watch the videos here.

Visit the HCF's News and Views webpage to read more about the programme.

Animal health, production, and welfare

Good feeding provides confidence that lambs born to ewe hoggets could be kept as replacements. This is one of the findings from a recently completed study looking at the lifetime effects of hogget mating. This study followed the life-time performance of four groups of animals: control group – twin-born to mixed age dams grown to 40 kg by hogget mating; fast group – twin-born to mixed age dams grown to 50 kg by hogget mating; H1 – singleton-born to hogget dams and; H2 – twin-born to hogget dams. An interview on REX with Professor Hugh Blair who led the study can be listened to here. The project also produced 12 scientific publications.

The results of this study showed that:

- to optimise performance, farmers should aim for live weight nearer to 50 kg for ewe lambs at their first breeding. However, feed costs to achieve these heavier weights must be considered.
- farmers could select their replacements among ewes born to ewe hoggets, and have similar performance to twin-born ewes that are born to mature ewes, provided they ensure that these ewe lambs reach the minimum recommended live weight (40 kg) to breed them.

Sustainable internal parasite management will be achieved by pan-sector collaboration, evidence-based consistent advice, and an effective parasite management toolbox. This is the goal produced by a collaborative workshop to start finding solutions for parasite management and drench resistance. See here for an article relating to the workshop.

Workshop attendees included national and international experts including farmers, vets, researchers, rural professionals, processing companies, drench companies, government, and industry bodies. Over the next three months, we will be pulling together a working group to begin to develop a research programme proposal covering the following priority areas that were derived from the workshop participants:

- Advancing education, extension, and adoption to foster collaboration and impact across the sector.
- Developing fit-for-purpose solutions in partnership with farmers, rural professionals, researchers, and government.
- Progressing integrated farm systems research.
- Profiling, developing, and communicating farmer case studies.
- Responsible usage and management of anthelmintics by the sector.

Informing New Zealand Beef Programme

Greenhouse Gas (GHG) cattle genetics workshop held in April. This workshop included key researchers across the cattle sector in NZ. The purpose of the workshop was to create an aligned and efficient approach to GHG genetics research in NZ cattle. Workshop participants included AbacusBio, AgResearch, B+LNZ, CRV, DairyNZ/NZAEL, Pāmu/ Focus Genetics, LIC, Massey and MPI.

Artificial Insemination and pregnancy scanning carried out on INZB Beef Progeny Test (BPT) sites Lochinver and Kepler. At Lochinver, Angus cows were AI'd to 4 Simmental bulls and the same Hereford and Angus bulls used at the Kepler mating. At the Kepler BPT site, all BPT females were pregnancy scanned, with great results - 96% of the naturally mated 2021-born heifers in calf, 69% of the 2020-born re-breeding heifers in calf to AI sires and 63% of the 2019-born cows in calf to AI sires. Kepler 2021-born BPT heifers and steers were also ultrasound muscle scanned, and structurally assessed.

Eleven additional commercial farmers join the INZB programme. Just over 50 Expressions of Interest were received from commercial farmers wanting to be part of INZB. B+LNZ is now working with these farmers to develop individual operational plans for recording data throughout the year.

Well-attended Beef Progeny Test (BPT) field day held at Pamu's Kepler farm in March. Approximately 90 people attended, despite the cold weather. The field day provided the opportunity to learn more about the BPT, including the purpose, what data is collected and how, and some of the key findings to come out of previous BPTs. The day also offered attendees the opportunity to look at some of the cattle and learn more about structural assessment of cattle, meat quality and Pamu's beef breeding objectives.

Annual industry survey shows INZB is already having impact. The INZB programme's progress is measured annually through an industry survey. Beef farmers, stud breeders and rural professionals are asked for their views on beef genetics and available tools in the industry. With the survey being run annually, we can measure the changes in views and obtain indicators of the uptake of genetic tools in the industry over time. The first survey (December 2021) provided a baseline level of data to compare the December 2022 survey results against.

Some key findings of the survey include:

- There has been a significant increase in participation and engagement from farmers, resulting in a significant increase in awareness of the INZB programmes tools across the board.
- There has been a significant increase in commercial farmers using AI.
- Younger commercial farmers and bull breeders preferred to hear about INZB projects and tools through social media and podcasts and learn through face-to-face workshops and field days. Older age-groups preferred to hear about the projects and tools through direct email / newsletters and learn through reading printed resources.

What's coming up? Economic model development to develop selection indexes by creating monetary values (based on farm system inputs, expenses and returns) for traits that are included in the indexes.

Acknowledgements

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

We also acknowledge all the farmers who have provided access to their farms for studies, samples for testing, and shared their knowledge and expertise.