

QUARTERLY REPORT SUMMARY: January – March 2022



Background

Beef + Lamb New Zealand with the support of Ministry for Primary Industries is leading the Informing New Zealand Beef (INZB) programme. The overall aim of the seven-year programme is to improve profitability and enhance sustainability across the beef industry through the development and adoption of improved genetics.

The objectives of the programme are to:

1. develop a beef genetic evaluation system that includes traits that are important to NZ beef farmers and supports a sustainable beef farming industry in NZ,
2. create easy to use tools which enable data to be efficiently collected, managed, analysed and used by farmers to make profitable decisions for their operation,
3. create a new approach to extension design with the goal of increasing farmer engagement across the beef industry.

4.1 Summary of progress during this quarter

Trait feasibility and trait prioritisation work kicked off

A key component of the INZB programme is to develop New Zealand specific breeding indexes. These indexes are a tool for farmers to use when making bull selection decisions. Indexes provide a means of ranking bulls based on their overall profitability and ensure the industry is moving towards the ideal beef cow of the future. In the beef industry, this may mean that there is more than one index – for example, there might be a terminal index as well as a maternal index.

All indexes consist of traits that contribute to profitability. So, a terminal index will likely contain growth and carcass traits plus other traits that make a profitable terminal animal (an animal that is bred for meat production). In addition to the traits in the index, there are Estimated Breeding Values (EBVs) for other traits that are important for farmers. In this way, a farmer can use both indexes and trait EBVs to make selection decisions that are right for them.

Farmer input on what traits they consider valuable informs both index development and development of EBVs. The INZB programme is carrying out a Farmer Trait Prioritisation survey to gain insights into what traits are important to farmers. Survey development has commenced this quarter and will be deployed to industry in July. Alongside survey development we are undertaking a trait feasibility assessment to further inform our decision making on what traits (both existing and novel)

should be considered for further development as part of the INZB programme. This work includes reviewing other major international beef genetic evaluations and assessing factors such as ease of measurement and implementation, relevance to the NZ beef industry and impact (economic, environmental, social license).

Including commercial farmers in the programme

Onboarding commercial farmers was planned for this quarter, however, due to Covid-19 disruptions this was put on hold resulting less expenditure. Face-to-face meetings with interested farmers are now planned for May and will involve working with farmers on an INZB data collection plan that can be adapted to their operation.

Beef Progeny Tests

Pregnancy scanning was carried out at the Kepler Beef Progeny Test site in early March. The across-breed Progeny Test 2019-born and 2020-born heifers were pregnancy tested. Artificial Insemination was successful for ~sixty percent over both year groups (61% in the 2019- and 59% in the 2020-born) – a really good result, with a total of 297 heifers expected to calve to AI sires in September this year.

In February, we announced the search for a second Beef Progeny Test site to expand the project. This activity has also been impacted by Covid-19.

Genetic evaluations to support farmers and a sustainable beef industry

Data from Beef Progeny Test(s) is continuing to be collected. This data will be used for beta genetic evaluation testing, alongside data generated by commercial farmers and any third-party contributors. Eventually this data will be stored on the Beef nProve database that this programme will deliver. To support this work, we have established an Evaluation Advisory Group to provide guidance on genetic evaluation development. Work has commenced on the development of the Proof of Concept genetic evaluation pipeline – including data pre-processing, base genetic evaluation and genetic parameter estimation.

Communication and extension plan to facilitate uptake of genetic tools

There have been a number of communication activities during this quarter – profiling the INZB programme, profiling members of the INZB team and advisory group members, as well as advertising for a second BPT site.

Our extension plan has been designed to produce targeted material for farmers and help us monitor and assess the effectiveness of our extension activities. Our extension activities will be supported by a Farmer Advisory Group to advance and test ideas for extension.

In April, Better Beef Breeding online workshops tailored for commercial farmers will be held. Material developed for this workshop will be a valuable resource for farmers to reference in the future. The resource also includes a 10 minute 'how to' video filmed on farm demonstrating structural assessments of cattle.

We have also worked with Angus & Hereford Breed Societies to make the decision to hold the Beef Breeders Forum as an online event in May (now referred to as Beef Breeders Webinar) due to Covid-19 uncertainties. Technical Advisory Group member, Professor Wayne Pitchford, and INZB Science Lead, Dr Jason Archer, will present on maternal productivity and reproduction. As of 14th April, we already have 65 registrations for this webinar.

4.2 Key highlights and achievements

- Development of Better Beef Breeding workshops – online workshops created, and associated material developed, including a structural assessment video to aid farmers in carrying out these assessments.
- Pregnancy scanning at the Kepler Beef Progeny Test site and number of expected calves reported
- Trait feasibility assessment work commenced
- Farmer trait prioritisation survey work commenced
- Design-led extension project developed
- Programme review of activity

4.4 Upcoming

- Better Beef Breeding online workshops to be held in April
- Beef Breeders Webinar will be held in May
- Begin commercial farmer face-to-face meetings (where possible) for onboarding to the INZB programme
- Ongoing trait feasibility and trait prioritisation survey work
- Call for bull nominations for Beef Progeny Test in June
- Commence data mapping of data sources for genetic evaluation and development of a genetic evaluation strategy
- Calf weighing at Kepler

4.5 Investment

Investment period	Industry contribution	MPI contribution	Total investment
During this Quarter	\$189,689	\$126,459	\$316,149
Programme To Date	\$1,138,758	\$759,172	\$1,897,931



Ministry for Primary Industries
Manatū Ahu Matua

