



🔍 CASE STUDY

BEEF PROGENY TEST

GENETICS



- involves about 2000 beef cows and heifers and 1300 dairy cows each year

- Across 4 large properties in nz

- Since 2016, there has been 86 bulls tested in B+LNZ Genetics Dairy Beef Progeny Test



AbacusBio has worked closely with Beef + Lamb New Zealand Genetics on various projects – with the purpose of assisting farmers in maximising value from genetics. The B+LNZ Genetics Beef Progeny Test programme, established in 2014 aims to annually quantify the value of improved beef genetics. It demonstrates how genetics can be effectively used to enhance beef farming profitability.

A progeny test compares the performance of sires through their offspring. From a beef farming perspective, steers and cull heifers are assessed on their carcass traits, while replacement heifers are tracked for their maternal characteristics. The dairy strand of the test aims to calculate the additional value that can be added by using high-genetic-merit beef bulls over dairy cows that would otherwise be mated to follow-up bulls.

This project had 3 main aims 1. Quantify the value of improved beef genetics on commercial beef farms. 2. Demonstrate how existing genetic and genomic tools can be used to improve profitability. 3. Develop new genetic tools based on data collected to enhance future beef farming profitability.

Activities included artificially inseminating (AI) 2200 cows and heifers across 4 different properties in NZ: Whangara Farms near Gisborne; Rangitaiki Station on the Napier-Taupo road; Tautane Station in southern Hawkes Bay; Mendip Hills Station in North Canterbury; and Caberfeidh Station in South Canterbury

Both the cows and heifers were DNA-recorded before being inseminated with either internationally-sourced semen or New Zealand-sourced semen. The bulls are pedigree and performance-recorded bulls represent a range of genetics used in New Zealand and international beef herds. The breeds used include Hereford, Angus, Stabilizer, Simmental, and Charolais. All progeny are tracked, with their parentage verified.

The steers and cull heifers are then assessed on their carcass traits. Results following the 2014/15 AI seasons demonstrated that body condition score (BCS) mating is a good tool to lift overall pregnancy rates. Ideally, the best BCS score would be between six to seven for a good probability of pregnancy," highlighted consultant Jason Archer. "Below this score, there was quite a steep drop-off in pregnancy rates". The project's timeline spanned from 2014 – 2019, successfully identifying beef genetics suitable for use in the dairy industry, that would benefit both dairy and beef farmers.

The programme has continued to this day, with the progeny being monitored for key performance traits from conception until slaughter. The programme is unique in that measurements on the quality of the carcass for genetic use have never been collected in NZ before.