April to June 2017 Quarterly report

FarmIQ

Summary

- Lamb eating quality report
- Genotyping by Sequencing takes off
- New FarmIQ software investor
- ANZCO and Alliance information into FarmIQ
- Pasture growth reporting develops

Key highlights and achievements

LAMB EATING QUALITY REPORT

A report on lamb eating quality was released in April 2017 as part of the FarmIQ Product Development workstream. As a product lamb does not have natural wide-spread quality variation (due to the younger age of the animals). In 2015 preparation commenced for the Reserve Lamb Pilot, the largest consumer taste panel research for lamb done in New Zealand to date. The researchers tested 23,000 samples of lamb with over 3,200 consumer taste tests in New Zealand and the USA. This work was undertaken by Texas Tech University and the University of Otago and international meat quality experts and followed the same, robust science-based process used to develop BeefEQ.

The results were presented in a report, A report, *Lamb Eating Quality: The commercial application of findings from Silver Fern Farms' consumer and on-farm research into the Eating Quality of lamb.* Overall, they confirm earlier research that consumers view New Zealand lamb as a consistently high-quality eating product. The research showed lamb eating quality is most affected by taking steps to: select the right cut, correctly age the meat, and correctly match the cut to the cooking method. Earlier research also highlighted that a story can influence consumer perceptions of eating quality by creating an appetite appeal effect.

Use of the SNP chip technology developed by the FarmIQ Genetics workstream for terminal sires will help to ensure the current high eating quality of lamb is maintained while breeders look for improvement of other traits such as growth rates, disease resistance and yield.

GENOTYPING BY SEQUENCING TAKES OFF

Research on Genotyping by Sequencing that was done as part of the FarmIQ Genetics workstream is now paying off for the deer industry and several conservation projects. Genotyping by Sequencing (GBS) technology was investigated in the early stages of FarmIQ as a possible option for sheep, beef and deer, however the programme opted to progress with developing a high-density SNP chip as it was considered less risky. Meanwhile, other funders decided to back further development of GBS as the proof of concept completed for FarmIQ showed it could be a lower cost alternative for medium-density genotyping.

GBS has now begun to expand rapidly, with sample numbers more than doubling each year. In the latest year more than 70,000 samples have been genotyped with GBS, and a total of more than 120,000 samples from over 40 species have been completed to date.

This past year the deer industry switched entirely to GBS, using it to genotype some 38,000 deer samples. In one year they have now matched what the sheep industry has undertaken over the past eight years (via Beef + Lamb New Zealand investment), and the entire stag breeding industry is switching to genomic selection. This will assist genetic improvement in all traits (not just eating quality).

It is expected that GBS technology will have a very wide impact, particularly for genotyping New Zealand native species for their long-term management. To date GBS has been used in kakapo, black robin, fur seal, koura and white-chinned petrel, to list but a few species.

NEW FARM^{IQ} SOFTWARE INVESTOR

Te Awamutu-based livestock services group Veterinary Enterprises has taken a stake in the Farm^{IQ} software business, which was established in May 2016. The company has been working with Farm^{IQ} on developing software for its GrazCare and StockCare businesses and this led to the investment decision. Veterinary Enterprises Group has taken a minority shareholding in Farm^{IQ} Systems Ltd. In a statement, a company representative said they could foresee the Farm^{IQ} software helping to drive value for clients and open up business opportunities.

The investment broadens the ownership of Farm^{IQ} to represent interests across pastoral farming – a farming company (Landcorp), a processing and marketing company (Silver Fern Farms), and Veterinary Enterprises Group as a supplier and trusted farm advisor. This supports Farm^{IQ} Systems' position as the central information platform for the pastoral sector.

ANZCO AND ALLIANCE INFORMATION INTO FARM^{IQ}

Many suppliers to the meat companies ANZCO Foods and Alliance Group are now able to transfer kill sheet information into the Farm^{IQ} software. Farm^{IQ} has worked with these companies to develop the process so suppliers can integrate carcase performance figures with other farm records. This became live in June 2017.

The Farm^{IQ} software can be used to record a range of land, feed, animal and staff information. Adding carcase information will give a fuller picture and help give insights about how farm management decisions have had an impact on livestock performance. The kill sheet information is extracted as a spreadsheet (CSV file) and it can then be uploaded into the Farm^{IQ} software using a file upload tab.

PASTURE GROWTH REPORTING DEVELOPS

A full suite of Pasture reporting is now available as part of the Farm^{IQ} software. This gives farmers the ability to make effective decisions about feed, rotations, buying and selling. Based on regular recording of pasture covers, farmers can now use the Farm^{IQ} software to pull up reports on pasture production (as weight of dry matter per hectare), pasture growth rate (pasture production per day), farm average pasture covers and a feed wedge. There are a range of paddock, block or whole-farm views.

Investment

Investment period	Industry contribution	MPI contribution	Total investment
During this Quarter	$3.29m	$1.37m	$4.66m
Programme To Date	$67.21m	$59.26m	$126.47m