

The Kaiuroo breeding program

In 2015 Kaiuroo management conducted a review of their breeding program which resulted in an update of the stud's breeding objectives to better reflect the production systems and markets of their commercial herd and those of their clients.

A key component of this was the development of a custom selection index which put priority on reproductive performance, efficient growth to marketing age, and moderate cow size, with traits associated with carcass quality also receiving a positive weighting.

The Kaiuroo custom index, developed with assistance from researchers at the Animal Genetics and Breeding Unit, has subsequently been used as the basis for selection and mating decisions, and to provide an industry relevant description of genetic merit to their bull buying clients.

The index is expressed in terms of dollars profit per cow joined per year. Once developed, the index has been calculated for all Kaiuroo animals to allow the estimation of genetic trends over time. The index has been used in making selection decisions for the 2017 and 2018 matings, and the resulting trends show that the profitability of the progeny from those matings has increased significantly as a result.

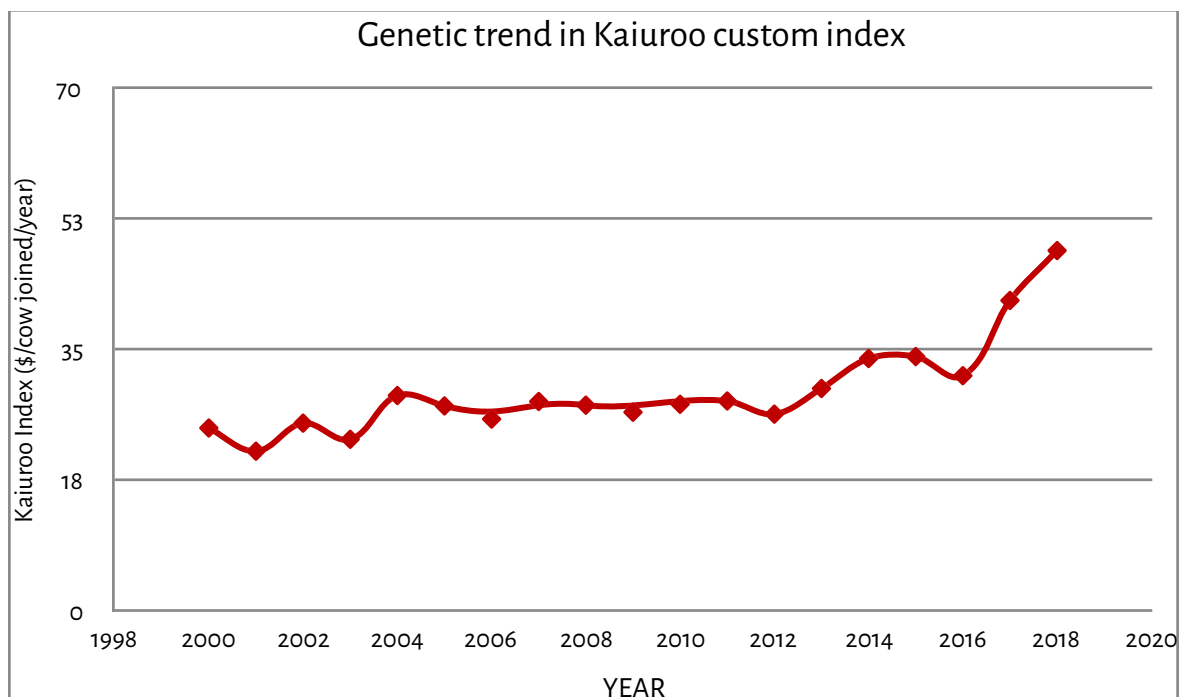


Figure 1. Genetic trends in Kaiuroo custom index for 2000 to 2018 born animals.

Figure 1 shows the trend in the Kaiuroo Index for animals born from 2000 to 2018. The gain from 2016 to 2017 was \$10.00 (from \$31.60 to \$41.60), and \$6.70 for 2017 to 2018 (from \$41.60 to \$58.30). This means that, on average, each 2018 born females joined is expected to generate \$8.35 (half of \$16.70, as females contribute half of the genes to their progeny) more profit each year than their 2016 born counterparts assuming genetically similar bulls were mated to each group.

Genetic trends across different breeds and indexes cannot be compared directly, but contrasting with historical results within the Kaiuroo herd (around \$0.60/year from 2000 - 2016) is valid, and demonstrates the success of the revised breeding program.

A substantial contribution to the improvement in the Kaiuroo custom index has come from a significant reduction in genetic days to calving in 2017 and 2018 born animals. As illustrated in Figure 2, average DTC has been reduced by 3.5 days (from +1.1 to -2.4) over that 2 year period.

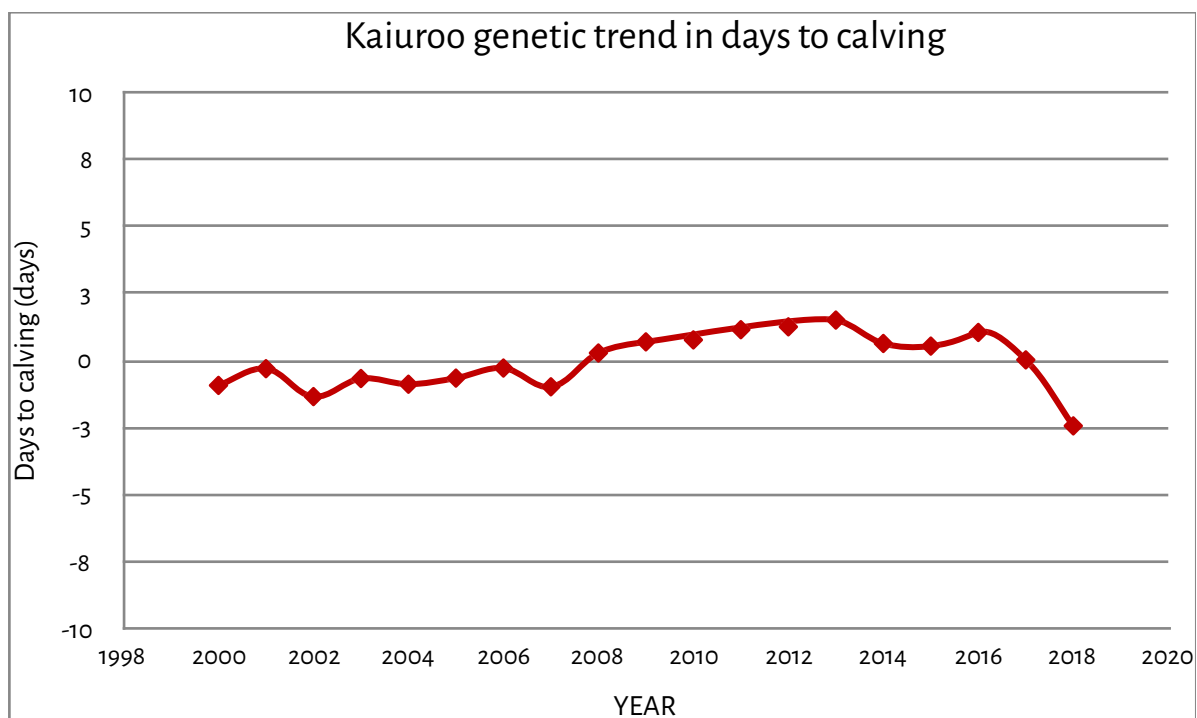


Figure 2. Genetic trends in days to calving for 2000 to 2018 born Kaiuroo animals.

Along with the genetic gains described above, the intensive recording of reproduction traits undertaken at Kaiuroo in recent years, plus the incorporation of genomic technology into their recording program, has resulted in higher EBV and index accuracies.

This means that genetically superior animals are identified more reliably, and that the outcomes of selection decisions can be predicted more accurately. In turn, this allows increased rates of genetic progress for economically important traits in the Kaiuroo breeding program and that of their clients.

