



# BREEDING SUPERIOR ANIMALS FOR IMPROVED PRODUCTIVITY AND RESILIENCE



FARMS AND ANIMALS

**Pāmu continues to produce animals of higher productivity and resilience through breeding programmes at the forefront of New Zealand livestock farming. Our genetic advances in sheep, cattle and deer continuously add value to the farms of Pāmu and others, nationwide.**

Advances come through the cross-breeding of animals carefully selected for traits which, over time, elevate feed conversion efficiency, reproductive rates, health and longevity. These genetic gains lead to production animals requiring fewer interventions and inputs, and this in turn results in improved on-farm performance and other benefits which extend along the supply chain to market.

Pāmu maintains breeding flocks and herds on seven of its properties nationwide where best practice livestock farming is combined with the industry-leading genetic science of subsidiary company Focus Genetics. The latter is New Zealand's largest supplier of maternal and terminal sheep, beef cattle and deer genetics. Its programmes today draw on more than 50 years' of genetic advances by breeding within Pāmu that was led by the late Geoff Nicoll, its predecessor organisations and their partners.

Focus Genetics works closely with Crown research institutes, universities, industry organisations and technology providers. Pāmu's and Focus Genetics expertise and resources are complementary and the analysis of genetic data across animal species in areas such as disease resistance, nutrition, breeding and animal husbandry to boost productivity and profitability benefits all New Zealand livestock farmers.

Recent research includes studies on livestock methane emissions, animal skin thickness, factors in lamb survival, causes of facial eczema, meat-eating quality, objective foot score protocols, and genetics for sheep and deer dairying. Pāmu is supporting the emergence and growth of the latter industry through systematic genetic evaluation of sheep and deer to identify superior animals for increased productivity and profitability in milk production. In the sheep and beef industry, Focus Genetics has a key role in running progeny test trials for performance assessment of cattle and sheep sires under the same environmental conditions.

During the 2018/19 year, the company supplied more than 2,000 rams, 500 bulls and 300 stags with 60% of those sold to privately owned farms throughout New Zealand. In many cases, the commercial

arrangements with Focus Genetics included designing tailored genetic plans and providing advice to support the individual farmers breeding objectives, land type and environment.

Farmers are investing in a "genetic worth" set of traits. For maternal genetic worth, the traits include reproduction records, body condition scores, lamb growth and adult size measurements, wool, lamb survival and disease tolerance: for terminal genetic worth, traits related to lamb survival, growth rates of progeny and their meat yield are what matter most. Focus Genetics is constantly updating a substantial database on the performance of individual animals on these variables.

Genetic advance is measured in economic terms by reference to "breeding indices", with one index for each species of animal, and for the maternal and terminal categories of that species. The index combines the relevant traits for that species and category with the dollar value of costs involved in production of those traits.

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**Material issues: New farming systems / market connection / animal welfare / biosecurity / global dietary shifts.**  
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<< **Matt Lane**, Farm Manager at Rotomahana Farm in Reporoa.  
Rotomahana is the home of Focus Genetics North Island Angus herd.