

## **Limb Deformities in New Zealand Thoroughbred and Standardbred Foals**

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Limb deformities (LD) are major problems with which horse breeders throughout the world must contend. In a recent survey of industry stakeholders and equine researchers in New Zealand by the NZ Equine Research Foundation, LD were identified as a research area requiring urgent attention. The high ranking of this research area was due to the lack of current knowledge of the prevalence of LD in New Zealand and its cost to horse breeders.

The proposed project addresses this very issue; what is the prevalence of LD in the commercial New Zealand Thoroughbred and Standardbred broodmare herd, and what are mare and management level risk factors? Quantification of the prevalence provides a benchmark against which future interventions and changes in industry practices can be measured against. It is vitally important that we have data on the New Zealand industry, as subtle differences in management systems and production focus can impact on how the genotype is expressed. An example of this is a recent report from Australia which implied that the foals born in Australia had twice the prevalence of LD compared to a genetically similar cohort born in Ireland.

The proposed study will collect data on LD prevalence via a national cross sectional survey of foals born on commercial Thoroughbred and Standardbred stud farms. Data will be collected on: the foal and mare (eg. early vs. late foal, mare age / parity, foal conformation), general management of the foal, and general farm management. This large data set will then be examined to identify risk factors for LD. Within the group of participating farms an additional trial is planned to test the impact of possible risk factors for LD. The identification of risk factors will permit breeders to reduce wastage and increase the number, and value, of foals and yearlings sold as future racing prospects.

At present both the Thoroughbred and Standardbred industries are facing a supply chain problem. If both codes continue with the current production processes there will be insufficient horses entering race training to sustain the industry at its current level. The logical step is to develop management processes that improve the efficiency of the production system.

Internationally LD are identified as a major reason for loss and unrealised potential. The identification of risk factors would provide the New Zealand breeder with the opportunity to modify production processes to minimise the risk of LD and the associated short term and long term production losses.