Industry Sires Genotyping Project

The Beef CRC, in conjunction with Meat and Livestock Australia (MLA), is currently undertaking a project to collect DNA genotypes on approximately 1700 sires that have been widely used within the beef industry.

More specifically, the Beef CRC has requested the submission of samples from 120 Simmental sires from Simmental Australia. From this request Simmental Australia is producing a short list of influential sires (>200) that are candidates for the genotyping project.

Simmental Australia will ask members to donate one or two straws of semen from sires on the candidate list. These sires will have reasonable accuracies (above 60%) for their BREEDPLAN carcase EBVs such as EMA, P8 fat or IMF. If no semen is available and the sire is still alive, a large sample of tail hairs will suffice (at least 50 hairs with roots attached).

The Beef CRC, in conjunction with MLA, will pay all other associated costs after taking delivery of the samples. These costs include DNA extraction, ongoing DNA storage, genotyping, database development/maintenance and data analysis.

Once the samples have been received, high quality DNA will be extracted by the University of Queensland and one sample prepared for long term storage for future research. The other sample will be sent to a Beef CRC collaborating genomic laboratory (CSIRO or DPI Victoria) where a 50k SNP chip will be used to genotype the animal.

The genotypes will then be stored on a National Beef Genomics database where they will serve as a valuable resource for the development of DNA based technologies. Amongst other uses, the first function of the genotype data will be to enable the independent validation of Beef CRC developed prediction equations for genomic breeding values for a number of traits in each of the major beef breeds within Australia, including Simmental. It is also envisaged that this resource will be used to further validate the horn/poll DNA test recently developed by the Beef CRC and commercialised by the University of Queensland Animal Genetics laboratory.

For further information regarding the Industry Sires Genotyping Project please contact the Simmental Australia office.

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