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. To date, they have received samples on approximately 1500 sires across a range of breeds.

More specifically, the Charolais Society of Australia has submitted samples for exactly 100 Charolais sires for this project and includes all sires used in the Charolais Progeny Test (i.e. Charolais Beef Information Nucleus).

The Beef CRC, in conjunction with MLA, has paid for all associated costs for samples collected to date. These costs include DNA extraction, ongoing DNA storage, genotyping, database development/maintenance and data analysis. Additional sires can be submitted for genotyping for approximately $160 per head.

A list of Charolais sires currently included in this project is available from the Charolais Society website in the “Recent News” section (www.charolais.com.au).

From the sample provided on each sire, high quality DNA will be extracted by the University of Queensland Animal Genetics Laboratory 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 panel 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 Charolais. It is also envisaged that this resource will be used to further validate the horn/poll DNA 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 Charolais Society of Australia or Christian Duff, Charolais SBTS Technical Officer.

Article written by Christian Duff for inclusion in the April 2011 Charolais Express.