Abstract by Kirsty Moore - Using Video Image Analysis (VIA) data to produce UK beef carcass trait genomic evaluations

Genetic improvement of beef carcass traits in the UK currently uses traditional BLUP genetic evaluations for live weight and ultrasound measures recorded mostly on pedigree animals. The use of Video Image Analysis (VIA) machinery in the abattoir provides the opportunity to collect large amounts of high quality carcass information on slaughter animals. With carcass traits being measured late in life, in high volume and often on animals outside the pedigree sector they are an ideal subset of traits to benefit from genomic selection. Genomic selection for carcass traits in the UK is currently being developed as part of a 3 year Technology Strategy Board project with the British Limousin Cattle Society (BCLS), Anglo Beef Processors (ABP) and Scottish Agricultural College (SAC). This project will combine abattoir VIA information on slaughter animals and high density genotypes from a number of Limousin sires to produce a UK Limousin SNP key. Once developed, Limousin genomic breeding values can then be accessed though a BLCS subsidiary company which can assist breeders in identifying which animals to genotype, facilitate the collection of DNA samples, and coordinate the transfer of genotype information and the resulting genomic breeding values. Not only will this project be beneficial in providing Limousin genomic breeding values for carcass traits in general but it also provides breeding values for more targeted and specific carcass attributes allowing more targeted selection. These aspects combined will accelerate genetic improvement for carcass traits and provide a platform for genomic selection for future traits. Furthermore, market signals will be greatly strengthened in the supply chain with both the pedigree and commercial sectors using the same measurements of quality to assess their animals. This will enable clearer signals to be sent faster to the pedigree sector about the characteristics of animals that the market values and for which they should be breeding.