

With the April 2017 genetic and genomic evaluation release, the following five major enhancements will be rolled out;

- 1) New **Mastitis resistance PTAs** are published for all breeds evaluated in the UK. This new Predicted Transmitting Ability (PTA) will allow farmers to breed cows with an improved resistance to Mastitis, tackling a common issue on farm at both a genetic and management level. Although there is a strong link between the existing Somatic Cell Count (SCC) PTA and the Mastitis PTA (around 0.8), there are a small number of bulls which reduce SCC but not necessarily cases of mastitis in their daughters – this new index will help to identify those bulls and allow farmers to make more informed breeding decisions on mastitis for their herd. (For more information see the Mastitis PTA fact sheet).
- 2) **TB Advantage PTAs** are introduced for breeds other than Holsteins and TB data from Northern Ireland is added to the GB data. As well as more informative data on which to base the bull evaluations, the model for evaluating the trait has also been enhanced to allow for better modeling of disease exposure of animals in the herd. This model update has proven to provide a greater accuracy and stability for bulls with early daughter proofs, but has resulted in some changes to existing evaluations for Holstein bulls. (For more background information on the TB Advantage PTA visit dairy.ahdb.org.uk/TBAdvantage)
- 3) As of April 2017, **Holstein UK genetic evaluations for type traits** will be provided by AHDB Dairy and our contract partners SRUC/EGENES in Edinburgh. This change has provided an opportunity for Holstein UK and AHDB to review the type evaluation process and a number of important changes are being implemented in April 2017. One of the most noticeable changes will be that the Type traits will be expressed on a reduced scale, which will result in less extreme values for young genomic bulls. Type scores for the majority of bulls will now lie within 3 standard deviations (or 3 points) from the population mean. (for more detailed information please see the Holstein UK website or attached fact sheet on Important changes to Type evaluations)
- 4) **The Ayrshire, Guernsey and Jersey breeds will see the introduction of Genomic evaluations** which previously were only available for Holsteins and British Friesians. These new evaluations, which are a result of an extended genotype sharing agreement between AHDB and the North American genomics consortium, provide improved reliabilities for both young bulls and daughter proven bulls with early daughter information. It is important to note that although the same process is used for all breeds, the reliability of genomic information differs between the breeds due to the different sizes of the population of proven sires used to calibrate the genomic information. This therefore means that the Guernsey and Ayrshire breeds will have significantly lower genomic reliabilities than the Holstein breed, with the Jersey breed showing reliabilities inbetween the Gue/Ayr and Holstein reliabilities. The differences in reliabilities are important for producers to note when using these bulls. (Background information on Genomic evaluation can be found on the AHDB dairy website).
- 5) **The Milk, Fat and Protein evaluations have been updated** to improve the evaluations of cross-breds by taking better account of specific breed and cross-breed effects. This enhancement will have a small overall impact with correlations to the December 2016 evaluation generally being higher than 0.99 for the different breeds, but it may impact individual bulls based on changes to their daughter assessments. Small changes on the between breed effects were observed, which has resulted in some changes to the across breed £SCI rankings.