Recommendation of usage of SNPs for sire parentage

The semen exchange amongst countries is increasing, and is often in smaller quantities for each bull. A simplification of the parentage verification is therefore desirable.

Parentage verification has for many years been completed using DNA Micro Satellites. With the increased prevalence of genomic testing in many countries, parentage verification using SNPs is getting more common and in years to come will probably be the preferred method for parentage verification.

Herd Books experience is that some semen suppliers are very reluctant to exchange SNP information. The reasons for this can be varied, but the arguments for using SNPs instead of DNA Micro Satellites are many, such a less time consuming, simple and reliable parentage verification.

EHRC therefore recommend all Herd Books encourage semen suppliers in the future to provide SNP-information before the bull can be registered in the Herd Book. However the EU regulation 2020/602 does not allow the national Herd Book to refuse parentage verification based only on DNA Micro Satellites. If we act together, we can push for a common policy that semen suppliers need to provide SNPs in order to be registered in the National Herd Book.

EHRC recommend using the already existing exchange platform provided by GENOEX at Interbull and, as a minimum, to ask for limited parentage SNP exchange (GenoEx-PSE) – 200 SNPs (according to ICAR standards) in order to be registered in the National Herd Book. If countries do not participate in GENOEX-PSE the semen suppliers should provide the SNP-set in a processable data file (not as pdf-file).

EHRC Committee – September 2020