

PRESS RELEASE

Recent racing news and events and equine genomics

The Thoroughbred industry has been aware of and has been monitoring, the potential impact of equine genomics on racing and breeding for the last seven years.

Representatives of the International Thoroughbred Breeders Federation (ITBF), the European Federation of Thoroughbred Breeders Associations (EFTBA) together with members of the Technical Advisory Committee of the International Federation of Horseracing Authorities (TAC of the IFHA), The International Studbook Committee and the Asian Racing Conference met in Paris in 2012 and invited commercial genomics providers to discuss horse industry policy and best practices.

The thoroughbred industry delegates noted that;

- There are a number of different companies providing equine genomic assessments.
- Pedigree registration authorities appear to have more stringent sample identification requirements (for their DNA testing for studbook registration) than commercial companies have for DNA performance profiling
- Each company has developed their own proprietary genomics tests independently of one another and each may have used similar or different statistical methods, examined similar or different performance related genetic markers and smaller or larger numbers of markers and horses.
- These genomic test systems can be provided, by some suppliers, in combination with other indices (which can include photographic assessments of conformation, biomechanics, measures of cardiac parameters and the spleen, fat free mass and muscle architecture).
- These different methodologies may provide conflicting information.
- The technology employed by the genomics' suppliers is more effective when larger groups of horses under diverse conditions are evaluated rather than individuals

The thoroughbred industry delegates concluded that obtaining scientific advice from an independent group was warranted and developed an ***Equine Genomics Advisory Group (see below).

Subsequent monitoring and discussions within EFTBA, at the ITBF and through the Equine Genomics Advisory Group have noted that;

- Genomics has been shown to be of value in the identification of diseases in Quarter Horses and Ponies and this will also be true for the thoroughbred industry.
- For these technologies to be statistically and biologically significant in the racing industry, they must be tested over a large number of racing environments and researched using a large number of horses.
- Horses have over 20,000 genes and concern exists over selecting them on the basis of only one single gene linked to racing performance over different distances.
- There may be anomalies when these tests have not been widely researched or are applied to individuals (for example, a well-known recent Melbourne Cup winner is reputedly a C:C or sprinter type and one of the best stallions in the world is widely believed to be a so-called T:T or predominantly stamina type).

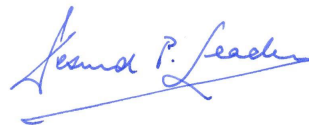
- Elimination of a significant number of staying horses based on one single gene (T:T) because of the inevitable difficulty of selling them at auction as yearlings, would impact on the international pattern of racing, by reducing the numbers of horses bred for middle distance and stamina races and thus impact on the genetic diversity of the breed.
- Horses are athletes and athletic performance is related to genetic ability but also to many further factors including, training, nutrition, disease, injury, medication, temperament, racing surfaces, tactics and the competitors they encounter.

The industry has also:

- Refused permission for retrospective access to DNA stores held by Pedigree registration authorities by these companies, which could have rapid far reaching consequences, and has insisted that the application of genomics should be gradual and measured.
- Accepted that significant public research funding for Universities and other academic institutions is warranted.
- Stated that it is against any use of DNA performance profiles / genomics in sales catalogues
- Accepted that there is value in the investigation of disease traits, and has sought ongoing advice from the Equine Genomics Advisory Group.



Hubert Honore
Chairman, European Federation
of Thoroughbred Breeders Associations



D.P. Leadon
FRCVS
Chair, EFTBA Veterinary
Advisory Committee and
Chair Equine Genomics
Advisory Group

*****The Equine Genomics Advisory Group of the ITBF and EFTBA;**

Professor Max Rothschild (USA), Dr Brandon Velie (Sweden) Dr.Hans-Peter Meier (Switzerland), Dr.James Crowhurst (UK), Ronan Murphy (IRL), Tim Richardson (FR) Dr Des Leadon (IRL) – Chair.

The Equine Genomics Advisory Group are in constant dialogue and have been reviewing recent scientific publications since the inception of this group, as recommended by the ITBF in September 2016. They are next scheduled to meet at the ITBF Conference in South Africa in January 2017.



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