

# Report on Interstallion activities 2006 - 2007

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The overall objectives of the Interstallion activities are to “*Improve accessibility, understanding and comparability of foreign breeding information across countries*”. These aims are underpinned by the international trade of stallions and increasing use of transported semen across countries and continents. Breeders and licensing committees need to have easy access to official breeding information, e.g. pedigrees and breeding values, and have such information available that allows correct interpretation of the information published. A number of projects run by Interstallion are conducted in order to improve the international transparency of important breeding information and to improve the quality of that information.

Current members of the committee are Ludwig Christmann (GER), Karina Christiansen (DNK) and Inge Meurrens (BEL) appointed by WBFSH, Katherine Quinn (IRL) appointed by the studbooks involved in the Interstallion pilot projects, Anne Ricard (FRA) and Erwin Koenen (NLD) appointed by EAAP Horse Commission and Jan Philipsson (SWE) appointed by ICAR. At the Business Meeting of the Horse Commission in August 2007, Steven Janssens (BEL) was elected as the new secretary, replacing Erwin Koenen, who is leaving Interstallion because of a re-organisation at his employer (CRV/NRS).

## 1. Meetings

On 24 October 2006, Interstallion activities were presented to studbook representatives at the WBFSH Meeting in Verden (Germany). Also in Verden, a group of studbooks intensively discussed the contracts and protocols for data delivery for phase two of the two pilot projects. As a follow-up, contracts between the research institutes (SLU and INRA) and the individual breeding organisations that submit data were drafted. These contracts have been agreed upon by the Irish, Danish, Swedish, French and Belgian studbooks. It was also concluded that a Steering Committee had to be established to discuss the more political elements of the project results and any plans for new studies.

On 16 February 2007, the Interstallion Committee met in Lund (S) in connection with the Stallion show of the Swedish Warmblood organisation. At this meeting progress reports on the various Interstallion projects have been presented and discussed.

The group also met on 28 August 2007 in conjunction with the annual EAAP meeting in Dublin. At this meeting the progress and plans for the next year have been discussed.

## 2. Pilot projects

The aim of the two Interstallion pilot projects has been to improve the comparison of breeding values for stallions across countries. Emma Thorén-Hellsten (SLU) is working on the first pilot project based on young horse's tests in different breeding populations (DWB, Han, Holst, KWPN and SWB). Catherine Ruhlmann (INRA) is working on a comparable pilot project based on results in jumping competition in 7 countries (BEL, DNK, FRA, GER, IRL, NLD and SWE). Both projects constitute parts of PhD studies primarily financed by Swedish and French sources.

The first phase of both studies has been to see how connected the different warmblood riding horse populations are, i.e. to what extent the same stallions are represented as sires or grandsires of the tested or competing horses in each country. The first pilot project shows that the genetic connectedness between the five studied breeding organisations is at such a level that it should be possible to estimate genetic correlations between similar performance traits of young horses tested within them. The genetic connectedness became better over time and it is currently better than connectedness in dairy cattle populations (which are already included in the international genetic evaluation for dairy bulls). Also the second pilot project reported a high genetic connectedness for a number of populations.

The second phase of both projects is dealing with the estimation of genetic correlations. These studies will be less extensive than initially planned as the KWPN and German studbooks decided not to participate in this second phase. The estimation of genetic correlations between young-horse performance traits (pilot project 1) will include Danish and Swedish data. The estimation of genetic correlations between competition data (pilot project 2) will include 10,091 national breeding values for 926, 563, 5290, 1159 and 2153 stallions in Belgium, Denmark, France, Ireland and Sweden, respectively.

### **3. Scientific publications**

Emma Thorén-Hellsten has submitted her paper on the genetic connectedness based on young horse-test data to *Livestock Science*. Catherine Ruhlmann has submitted her paper on the genetic connectedness of competition data to *Animal*. Both presentations were previously sent to representatives of involved organizations for their review.

Emma presented a paper on "The influence of foreign stallions on the Swedish Warmblood breed" at this year's EAAP meeting.

### **4. Interstallion website**

The Interstallion website ([www.interstallion.org](http://www.interstallion.org)) includes standardised details on testing and genetic evaluation methods of 18 studbooks. Several scientific and popular publications, including the above mentioned ones, have been made available. The number of links between the home pages of individual studbooks and the Interstallion site has increased as a result of a WBFSH/Interstallion mailing.

A recent review of the studbook's websites shows that:

- 48 WBFSH members operate a website;
- the main languages are German (35%) and English (27%);
- 69% of the websites provide (some) information in English;
- 31% of the websites include a link to the WBFSH website;
- 8% of the websites include a direct link to the Interstallion website.

Although the Interstallion website is not visited very frequently (200-300 visits/month), the standardised information on population sizes and testing and evaluation systems has proven to be a valuable source to better understand foreign information.

A special section ('Breeding values stallions') with links to the websites of the breeding organisations with published breeding values has now been added to the website.

### **5. Guidelines on the publication of genetic proofs**

In sport horse breeding, genetic proofs for performance and conformation traits are published on a relative scale, usually with 100 or zero as a base value. On request the Interstallion committee has reviewed the situation among a number of studbooks. Although many organisations seem to use the same publication scale, a variety of methods to transform breeding values from the underlying scale to the publication scale is currently applied. A large range in definitions of the used reference population as a base is also a reason why the

same stallion may have different breeding values when these are estimated in different countries.

The use of a more uniform procedure for calculation and publication of breeding values is strongly recommended to improve the international understanding and comparability of published genetic proofs. After review of the current situation the Interstallion group produced a working document, based on reported experiences, as a potential guideline for publication of breeding values. The tentative recommendations were tested by studbooks in France, Ireland, Netherlands and Sweden. Reports at the Warendorf workshop in September 2005 proved from all these countries that modifications were needed to accommodate for BLUP-indexes on an acceptable scale also for broodmares. The latest recommendations were presented at the WBFSH meeting in October 2006.

As a result, several breeding organisations have implemented these recommendations or are considering to do so. Sweden implemented the Interstallion recommendations in 2006. The Irish, Belgian and Dutch breeding organisations have planned to implement these in 2007, 2007/2008 and 2008/2009, respectively. The Danish Warmblood organisation is currently evaluating the application of the Interstallion recommendations to their data.

## **6. Database of international sport horses**

The results of international FEI-registered competitions are generally not yet included in current national genetic evaluations, as complete information on internationally performing horses, which often change names when traded, is not easily available. One of the main reasons is that these data are recorded by various organisations that do not always adequately exchange data. This is one of the most serious drawbacks in international sport horse breeding. Many of the best sport horses are not properly identified in the computer systems, and thus lost from the national genetic evaluations.

In the current situation, pedigree details of many horses can not be traced easily as sport horses can have different identification numbers in multiple countries. WBFSH and Interstallion (Hans van Tartwijk) have continued to check the pedigree information of FEI-registered horses. With the assistance of individual studbooks they have managed to improve the completeness of the existing data. The next update will follow in September 2007.

The latest activities include plans to use an XML procedure to pedigree data between SF and FEI.

## **7. Workplan 2007 – 2008**

The main activities in the 2007-2008 workplan include:

- improvement of the Interstallion website;
- completion of the pilot projects;
- organisation of an Interstallion Seminar in Uppsala (May 2008);
- organisation of an Interstallion Workshop in France (Autumn 2008).

Until now, the Interstallion activities have also partly been financed by the WBFSH, but it was decided not to ask for any financial contribution from the WBFSH for 2008.

## **Acknowledgements**

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