# 4<sup>th</sup> International Workshop on Linear Profiling in the Warmblood Horse on March 14-15, 2018, in Visselhövede and Verden, Germany
## – SHORT REPORT –

**How to use information from linear profiling in sport horse breeding
– international concepts in the focus of the continued dialogue between practice and science**

In succession of the inspiring meetings of previous years, topics around linear profiling and the use of linear data in horse breeding have again demonstrated their importance for the equine sector. Representatives of studbooks and researchers from ten countries took the opportunity to meet for exchanging experiences and discussing ideas at the International Workshop on Linear Profiling in the Warmblood Horse. This series of events, organized under the patronage of the Horse Commission of the European Federation of Animal Science (EAAP HC) by members and supporters of its Interstallion working group, has developed to a showcase of the benefits of an interdisciplinary and international dialogue.

On 14-15 March 2018, Germany was once more host country of the workshop, and the conference venue in Visselhövede, a small town in Lower Saxony, provided beautiful surroundings and a great environment for an enjoyable stay and a fruitful meeting. With 26 people, the number of participants was somewhat lower than in 2017, but the aims of improving transparency, highlighting synergy effects and motivating open exchange and collaboration across countries and studbooks were clearly achieved. The many talks in collegial and almost familial atmosphere during the two days, within and beyond the official workshop program, make it very likely that refreshed and new contacts will relevantly benefit the participating organizations and the wider equine sector.

As in the previous years, the workshop included a theoretical part with presentations and group work on focus topics and a practical part with exercise on linear profiling. On the first day, there were two theoretical sessions with eight very interesting presentations that provided rich input for engaged discussions right after the talks and in the further course of the event. Some of the most crucial points in connection with linear profiling became also very clear during the practical session, organized in the afternoon at the Schwartze Hof in Verden. The group was overwhelmed by the warm welcome, the enormous hospitality and the professional support of the Baumgart family. The presented dressage and jumping horses were linearly described and commented by the international experts, and the huge impact of what was referred to as 'concept of the horse and of linear description' was obvious for everybody. On the second day, the single presentation in the morning session paved the way for efficient group work and ambitious planning of joint

activities in the closing discussion round. Key take home messages of the workshop can be summarized as follows:

- Linear profiling can give access to much more detailed and objective information on conformation, gaits, jumping and behavior, implying great potential for decision support und breeding use. However, the best system is only as good as it is used, so linear data quality and remains to be of major importance and requires consequent management.

- Education activities must consider the different stakeholders getting in touch with linear profiles. To encourage acceptance and adequate use, it is important to early inform about the linear system and explain the rationale of linear profiling as opposed to the traditional valuating scoring. Introduction and routine application of linear profiling require substantial engagement of studbooks to safeguard utmost comparability across accessors. Regular training and calibration should be seen as integral parts of the overall concept for integrated routine collection and use of linear data.

- Internationality of sport horse breeding and increasing use of linear profiling underline the importance of transparency about the different implementations. In any comparisons, focus should be on the multiple similarities of the systems; over-interpretation of dissimilarities should be avoided because it risks confusion of users.

- Linear traits are suitable targets of breeding applications, and the increasing availability of phenotypic, genetic and in the future also genomic profiles can substantially strengthen the breeding programs. On-going research on the links between functional conformation and performance aspects is highly appreciated, because it helps enhancing the breeding goal definitions.

- The dialogue between practice and science and collaborations within the equine sector have increased in importance, giving access to new powerful tools. Fields of synergistic progress range from an illustrated handbook on linear profiling over training and education activities within and across studbooks to joint development of genomic applications.

The local organizing team gratefully acknowledges the support of all helpers and particularly the Schwartze Hof for perfect arrangement of the practical part. Big thanks go also to the speakers and all participants: With their high motivation to take up suggestions of the meeting and continue engagement for high-quality and harmonized linear data collection and use, they give reason to see the 4th International Workshop on Linear Profiling in the Warmblood Horse as a success. For the next workshop, supposed to be organized early in 2019 and most likely in Sweden, we can look forward to presentations on interesting new results from research, embedded in an extended two days program focused on linear profiling in training and education.

Conference material can be freely downloaded from:
http://www.equinephenotypes.org/Texte/recording_IWSLP_ENG.html