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SABRE Conference @ EAAP

4th SABRE Conference integrated with 60th EAAP Annual Meeting

SABRE previously organized 3 conferences to disseminate the plans and results of the project: “Sustainable Animal Breeding” (September 2006), “Genomics for Animal Health” (June 2007 in collaboration with EADGENE - European Animal Disease Genomics Network of Excellence) and “Welfare and Quality Genomics” (September, 2008).

We would like to thank the organising committees of EAAP for the opportunity to integrate the 4th SABRE Conference into the 60th EAAP Annual Meeting. We are very pleased that over 30 papers which stated “These results are obtained through the EC-funded FP6 project SABRE” have been accepted by the EAAP committees to be presented in the poster halls and lecture theatres. These papers will be presented throughout various sessions, in an effort to reach the audiences who are interested in the subjects dealt within the SABRE project.

The following pages will provide you with a first insight into the project. For further details we invite you to attend the SABRE presentations or to visit www.sabre-eu.eu.

Chris Workupa, SABRE Coordinator
Toine Roosen, SABRE Operations Manager

Cutting Edge Genomics for Sustainable Animal Breeding

Animal breeders have made considerable progress in recent decades in improving the economic efficiency of food production (this is one of the reasons the real price of food has fallen), but in recent years animal breeding has become more complex with breeders needing to broaden their breeding objectives. Nowadays breeders want to improve a wide range of traits, such as product quality, welfare related fitness traits and disease resistance. Many of these traits are difficult or expensive to measure and this is where the science of genomics is valuable. Through research such as the SABRE project, scientists are beginning to unravel which genes and which variants of these genes are important to explaining the genetic component of these new selection traits. 'Sustainable Animal Breeding' is the main focus of the SABRE Integrated Research Project. The European Integrated Research Project "SABRE" (Cutting Edge Genomics for Sustainable Animal Breeding) is an innovative four-year, €23 million pan-European project which utilises the latest techniques in genetic science to develop more economically and environmentally sustainable production systems for cattle, pigs and chickens. The headline objectives of the project are:

- To provide fundamental knowledge on the genomics and epigenetics relating to livestock
- To provide understanding of biological systems central to sustainability
- To identify genes and markers allowing focused breeding for sustainability goals
- To demonstrate the effectiveness of genomics for sustainable breeding
- To disseminate existing knowledge and new results to the user community
- To develop skills and training to best capitalise on new genomics knowledge.

Thirty three leading animal breeding research groups and businesses have joined forces in the project which commenced in April 2006 and has been made possible by a €13.9 million grant under Thematic Priority 5, “Food Quality and Safety”, of the 6th Framework Programme of the European Union (FP6). The SABRE work programme, involving almost 200 scientists in 14 countries, is divided into 13 Work Packages. These harness key areas of emerging genomic and
The objective of this study was to explore the relationship between the lean meat proportion of lamb carcasses and ultrasound measurements of various tissues. The study was conducted on local breed lambs from the Bragança region in Portugal. The ultrasound measurements included the longissimus muscle depth, subcutaneous fat thickness, and intramuscular fat percentage. The results indicated that ultrasound measurements can be used to predict the lean meat proportion of Churra Bragança lambs.

The impact of performance traits on ultrasound measurements was analyzed using multivariate animal models. The results showed that ultrasound measurements were significantly influenced by various factors, including breed, sex, age at slaughter, and number of lambings. The study also highlighted the potential for ultrasound to be used as an effective tool for predicting meat quality in sheep production.