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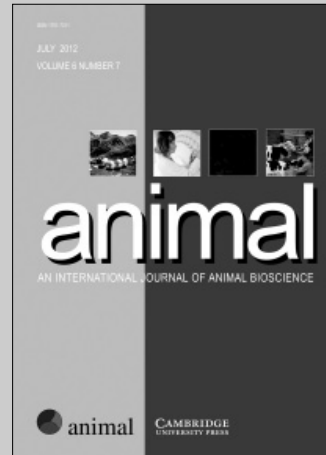
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Advances in Animal Biosciences

Proceedings of the LiveM International Modelling and Research Colloquium, Bilbao, October 14th-16th 2014

The LiveM International Livestock Modelling and Research Colloquium was hosted by the Basque Centre for Climate Change (BC3) at the Maritime Museum in Bilbao, Spain between the 14th and 16th of October 2014.

LiveM is the livestock and grassland modelling theme of the EU knowledge hub Modelling European Agriculture with Climate Change for Food Security (MACSUR). A knowledge hub is a novel instrument introduced by FACCE-JPI (Joint Programming Initiative for Agriculture, Food Security and Climate Change) with the purpose of bringing together researchers to develop and demonstrate the improvements in cross-disciplinary capacity required to tackle complex societal challenges. The aims of the Bilbao conference were to:

- showcase the work of modelling teams in the LiveM consortium, including research related to grasslands and livestock in the other MACSUR themes (CropM and TradeM)
- discuss the future of the theme and the lessons we have learnt about how the knowledge hub structure can best be utilised
- develop our links to external initiatives and projects, including the Animal Task Force (ATF), Global Research Alliance (GRA), EAAP (European Federation of Animal Science) and the SOLID (Sustainable, Organic and Low Input Dairying) project.

This special edition brings together all available extended abstracts from the oral and poster presentations shared at the conference, as well as from two of the invited talks presented. A rich diversity of work is represented, demonstrating the breadth of the LiveM theme, and the different applications of modelling in tackling key challenges in agriculture and food security.

The first day of the conference focused on grassland and farm-scale modelling, covering a range of topics including presentations demonstrating improvements in modelling capacity achieved through inter-comparison exercises, dealing with uncertainty in grassland modelling, and on the application of farm-scale models as decision support tools. On the second day the focus shifted to livestock productivity, with presentations again addressing a diverse range of modelling research, including modelling the impacts of climate change on parasite risk, the effects of Temperature-Humidity Index changes on animal health, productivity and GHG emissions, and the regional scaling of research on animal health to predict some of the economic consequences of climate change.

The challenge for the future is to create a LiveM structure in phase 2 of MACSUR that builds on current work to facilitate the further development of inter-disciplinarity in modelling, including providing shared resources and an arena for new collaborations and approaches to emerge and demonstrate their potential. This structure should produce state-of-the-art assessments of modelling in key priority research areas, and present collaborative case studies that address gaps in current knowledge. More information on MACSUR and the LiveM theme can be found at www.macsur.eu, with PDFs of slides from conference presentations available through the conference website. http://www.livem2014bilbao.com/.