

Overview of 2015 International Symposium on Animal Environment and Welfare held in Chongqing, China

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On October 24-25, 2015 International Symposium on Animal Environment and Welfare (ISAEW2015), jointly sponsored by the International Research Center for Animal Environment and Welfare (IRCAEW) and the Chinese Society of Agricultural Engineering, was convened in Chongqing Academy of Animal Sciences (CAAS), Chongqing, China. Prof. Baoming Li from China Agricultural University (CAU) and Distinguished Prof. Hongwei Xin from Iowa State University were the Co-Chairs of ISAEW2015, and Prof. Zuohua Liu from CAAS chaired the Organizing Committee. Prof. Jun Bao, President of Northeast Agriculture University, China, presided over the opening ceremony. Prof. Xiwen Luo, an Academician of Chinese Academy of Engineering, presented the challenges and shared his thoughts on the sustainable development of animal production industry in China in the opening remarks.

The ISAEW2015 was aimed to address issues facing the global animal production industry by bringing together some of the best minds and future professionals in multiple disciplines from around the world to share the latest research, technological advancements, farm level application, and future visions in this field. Over 300 agricultural engineers, animal behavior and welfare scientists, physiologists, veterinarians, industry leaders, policy makers as well as the pre-professionals, from six of the seven continents, exchanged the latest findings in R & D and applications. Over two full days, 49 oral presentations were given by 47 international and domestic researchers in 12 sessions on the topics across animal environment and welfare, including:

- ✧ Animal Physiological, Behavioral Responses and Welfare
- ✧ Environmental Control for Modern Animal Production
- ✧ Alternative Production System and Equipment
- ✧ Precision Livestock Farming (PLF)

✧ Manure Treatment and Nutrient Management to Reduce Environmental Impact

The keynote speech, presented by Prof. Maohua Wang from CAU, an Academician of the Chinese Academy of Engineering, focused on the impact of “Internet +” Smart Livestock Farming on Chinese modern animal production industry. Prof. Wang reviewed the current issue and challenge we have been facing by using informative data, and emphasized the importance of the innovation of Precision Livestock Farming on promoting development of livestock industry in China by integrating Information and Communication Technology. Mr. Thomas Hebert, Deputy Under Secretary for Natural Resources and Environment at the USDA from 1993 to 1998, shared his perspective on world animal agriculture sustainability in his keynote speech.

Nine presentations were delivered in the general session of the symposium, revealing the most currently research findings in above areas. Dr. Hans Spoolder, from Animal Welfare Department of Wageningen UR, specified the stockperson plays a crucial role in improving farm animal welfare and productivity through sufficient technical knowledge, the ability to benchmark, a ‘keen eye’ to understand animal signals, the right attitude to act and improve the situation, which does not necessarily require huge expenses. Dr. Jiqin Ni from Purdue University, analyzed the scientific concerns and public perceptions of farm animal welfare, and concluded that the sustainability of animal production is ultimately dependent on sound scientific approaches to animal production combined with appropriate ethical considerations and two-way communication. Dr. Dries Berckmans, CEO of Sound Talks NV, Belgium, introduced several commercial PLF products and its application to improve animal welfare and productivity in Europe. Various methods were presented by Dr. Tami

Brown-Brandl, from US Meat Animal Research Center of USDA-ARS to monitor common physiological measurements including body temperatures, respiration rate and surface temperature, as well as behavioral and activity levels of farm animals. Dr. Laurie Connor, from University of Manitoba, focused on the alternative gestation housing for sows, and emphasized that particular attention must be paid to feeding system, sow mixing strategies and timing, space quantity and quality and the selection and training of stockpeople for group housing sows. Dr. Darrin Karcher, from Michigan State University, reported the findings from a Coalition for Sustainable Egg Production Project to evaluate various laying hen housing systems by considering the impacts of multiple variables on a sustainable system. Miss Lesa Vold from US Egg Industry Center shared the experience of farm auditing of animal welfare and environment in USA, and she also provided examples of on-farm audit benefits. Dr. Robert Burns from University of Tennessee gave an overview of US & EU manure management regulations, and shared experiences on nutrient management plans and applications in USA and EU. Mr. Ninghui Zhang, Chore-Time Group, presented a brief history of layer cages in USA, and shared his

experience of balancing layer's welfare and productivity by improving production systems.

Along with the oral presentations to support the central themes of the symposium are 44 quality contributing papers and 19 posters from global researchers.

The ISAEW2015 was the third of a biennial symposium series organized by IRCAEW, which was initiated by 11 academic institutions from five countries and established in 2011 in CAAS, Chongqing, China. The IRCAEW currently has 19 member institutions from nine countries in five continents. The two previous symposia were the International Symposium on Health Environment and Animal Welfare (ISHEAW2011), October 19-22, 2011 and the ISAEW2013, October 19-22, 2013, both held in Rongchang, Chongqing, China. The 2015 IRCEAW Board of Directors of Meeting was concurrently held at CAAS during ISAEW2015.

The ISAEW2015 was locally hosted by Chongqing Commission of Science and Technology, Chongqing Academy of Animal Sciences, and Key Laboratory of Agricultural Engineering in Structure and Environment, MOA, China.

(Edited by Dr. Wang Yingkuan)



Group photo of ISAEW2015 participants



Prof. Xiwen Luo addressed opening ceremony

Prof. Maohua Wang, gave a keynote speech

Mr. Thomas Herbert, gave a keynote speech