

Report on the course and most important aspects of the 9th European Symposium on Poultry Welfare

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The scientific committee of the 9th European Symposium on Poultry Welfare included members of WG9: Ragnar Tauson, Lotta Berg, Harry Blokhuis and Arnold Elson. At this meeting discussed were the latest scientific findings, developments and experiences in order to assist the poultry industry to keep bird welfare at high levels and in line with future demands while maintaining production at acceptable levels. The scientific program of the conference in Uppsala addressed a wide range of topics influencing welfare, management and sustainability of poultry keeping in different countries and continents. Topics like production methods, behaviour, health, nutrition, genetics and important interactions between them will be covered.

- Day 1 included 2 sessions:

1. Housing and management included main presentations on official controls of poultry welfare and developments in welfare-related laying hen housing practices in Canada and the United States. Further it involved presentations on: aviary rearing on stress after transfer to furnished cages, short term deprivation of the litter area after transfer to the layer facility in pullets, effect of density and cage size on foraging and dustbathing by laying hens in large furnished cages, nesting behaviour and nest box use in large furnished cages, interaction between white and brown laying hens and nest behaviour in furnished cages, size of group nests effect on laying hens, use of perches by broiler chickens in floor pen experiments and influence of stocking density on growth performance, physiological states, house environmental quality in ducks

2. Welfare and Behaviour included main presentation on the relationships between social behaviour and feather pecking in laying hens as well as invited presentation by prof. Inma Estevez about social dynamics and welfare in the domestic fowl, the effects of group size, density and space. Further speeches touched upon aggressiveness in the

domestic chicken: Distance versus 'attitude', measuring the capacity for emotional empathy in domestic chickens, a new early behavioural indicator of underlying sociality and fearfulness in Japanese quail and social motivation to assess meat producing poultry adaptation to rearing conditions.

- Day 2 included 4 sessions:

1. Welfare and genetics included main presentation on challenges for breeding layers to work in different housing systems and selection for broiler welfare in the industry, while remaining presentations concerned performance and reactivity in the F1 and F2 generation in Pollo Brianzolo (*Gallus g. domestics*), genetic markers for the improvement of bone strength in poultry, selection for low mortality in laying hens leads to changes in brain monoamines, epigenetic mechanisms in chicken welfare

2. Welfare and light included no main presentation. Other presentations dealt with assessing flicker fusion frequencies in hens through behaviour and electroretinography (ERG), testing and evaluation of new types of artificial lighting in Swedish layer houses, influence of monochromatic and mixed LED light colour and bird age on the behaviour and fear responses of broiler chicks, colour temperature of LED lighting used in broiler housing – preference and effects on performance and the effect of lighted incubation on growth, behaviour, and welfare of broiler chickens

3. Welfare and nutrition included main presentation on nutrition-related challenges and opportunities of alternative systems, while others were about the effect of dietary alterations during rearing on growth, productivity and behaviour in broiler breeder females, effects of dietary protein levels during rearing on feed intake, eating time, eating rate, and behaviour in broiler breeder females and a geometric framework design to explore calcium and phosphorus interactions in broiler nutrition and skeletal health

4. Welfare and health included no main presentation, while others included incidence of pododermatitis in broilers fed organid trace minerals, normal variation of bone strength and plasma calcium levels in laying hens during a production period, the use of conditioned place preference test to investigate whether hens with keel bone fractures

feel pain, laying rate and foot health influenced keel bone fractures in laying hens and studies on the effect of incubation conditions on leg weakness in broiler chickens.

- Day 3 included 3 sessions:

1. Education-information and welfare included main presentation on the changing role of education and information in poultry welfare, and others on science to education for safeguarding poultry welfare, promoting poultry welfare through vocational educational and training for veterinary practitioners: a European perspective, a training and certification program for animal welfare auditors in the USA and improving poultry welfare through academic-industry partnership in research and education.

2. Welfare assessment included no main presentation, while others included on-farm broiler welfare assessment, individual versus transect sampling, appetitive and consummatory behaviours in relation to attractive feed rewards and their dopaminergic control: A window to understand positive emotions in fowl and effects of lameness on measures of mobility and nociceptive threshold in commercially reared broiler chickens

3. Transport and slaughter included no main presentation, while others included practices in Culling Spent Hens in Finland, factors influencing the fitness of end of lay hens to travel, welfare implications of Low Atmospheric Pressure Stunning (LAPS)

Additionally on each day there were posters available for viewing corresponding to the main session topics.

The topics discussed during the conference were impacted by the recent steps taken by the European Union regarding poultry welfare:

“The European poultry industry, especially, has faced considerable constraints regarding production methods during the last decade. The EU directive on minimum welfare standards for layers was to be fully implemented no later than January 1:st 2012 and the standards for meat producing chickens are already in force. The organic poultry production has increased considerably in many countries in recent years. This production is also facing strict European directives mainly on nutrition, stocking density

and age at slaughter. Two different EFSA reports, on the welfare of broiler breeders and the animal welfare aspects of broiler genetics respectively, have recently been published and may influence both industry standards and EU minimum legislation in the future. Thus, all welfare directives and reports prepared are challenging to the industry and for the welfare of the birds. Also, different national conditions exist which may strongly affect the success of specific production systems. One relevant and controversial topic in this context is beak trimming. The discussion on competitiveness and costs of production methods used in different continents/countries is still on the agenda. However, having so far been mainly a European topic, there are now clear developments in several other countries and continents that the development of welfare issues are spreading”

(Ragnar Tauson,
President of the Organizing Committee Uppsala 2013
and the Swedish Branch of WPSA)

From my personal perspective the most interesting were presentation and posters regarding approaches to welfare assessments in meat poultry, as well as welfare indicators which can be included into these assessments. I was interested in both behavioural and physiological parameters which could provide feasible and valid way to assess bird's welfare status. As my work aims at checking welfare of poultry in on-farm conditions I have looked at methodologies which could be applied into practice in production facilities, or which allow good predictions of the flock's status. I have also paid special attention to the sample sizes used and methodologies to collect those samples. The topic which additionally caught my attention was the issue of lightning presented by Arnould et al., in a poster entitled: Impact of different lighting sources on broiler behaviour, performance and electrical parameters. I think this issue will be drawing more attention, as it clearly has large impact on poultry welfare, while it still needs to be explored in more detail. Finally, the issue which has been raised during discussions on a plenary forum was complete lack of works presented on turkeys as a species, which is surprising, considering large and increasing number of produced individuals per year in many countries. One of the reasons to it could be closure of the industry working with this species, while on the other hand larger difficulty to work with those big and heavy birds when compared to broilers.

During the conference there was also visible presence of the industry, for example from such companies as Hendrix Genetics, Cobb, Lohman, Aviagen, MSD Animal Health, Hubbard and many others, also Swedish companies and governmental bodies. Interaction between researchers and stakeholders from the industry provided very interesting discussions, as well as gave an opportunity to get feedback on the scientific work which usually is hard to obtain.

Finally, presence of the guests from other continents, especially from The USA, Canada and Australia gave a wider perspective on the welfare issues in poultry around the world. Especially interesting issue for me was the welfare evaluation and auditing which was included into two presentations: Developments in welfare-related laying hen housing practices in Canada and the United States (by Michelle Jendral) and A training and certification program for animal welfare auditors in the USA (by S. Bilgili).