

Editorial news and events

Book review

Proceedings of the Society of Nutrition Physiology, Vol. 18, Society of Nutrition Physiology (Ed.) DLG-Verlag Frankfurt (Main) (2009). 156 pp., Price: 29,90 € plus postage, Softcover, ISBN 978-3-7690-4101-9

The 63rd Annual Meeting of the Society of Nutrition Physiology of Germany was held at Goettingen from 10 to 12 March 2009.

The Proceedings of the meeting comprise 113 abstracts, two review papers and one communication of the Committee for Requirement Standards of the Society of Nutrition Physiology.

The peer reviewed abstracts (one page each) are devoted to the following topics:

1. Amino acids and nitrogen (11 papers),
2. Minerals and trace elements (12 papers),
3. Energetics (9 papers),
4. Undesired materials (8 papers),
5. Digestion (11 papers),
6. Lipids and fatty acids (14 papers),
7. Other nutrients, active ingredients and additives (17 papers),
8. Feed estimation and feed (22 papers),
9. Physiology of transport and epithelial cells (9 papers).

Most of the papers presented are from scientists at German institutes of animal nutrition and animal physiology, but contributions are also included by scientists from other European countries as well as from overseas.

The invited lecture by J. Michael Forbes from the Institute of Integrative and Comparative Biology of the University of Leeds, UK, dealt with an integrating framework for feed intake and selection on the basis of Minimal Total Discomfort

(MTD-Concept). The author defines the MTD framework and explains steps for minimization of total discomfort, followed by implementation and exploration of the model. The paper is mostly focussed on ruminants. The approach adopted for the MTD framework scales any number of factors according their deviation from optimal, which allows them to be manipulated together because they are all in the same currency. Addition is chosen because it is the simplest way in which to combine the various factors and has some experimental support. Critically, intake is predicted not as the dependent variable, but as independent and causing variations in discomfort, which is seen as the controlled variable. Feed intake and selection are observed to vary widely from day to day and this can provide the information whereby animals learn to eat the amount (and mix) of feed(s) that cause MTD over periods of several days. The MTD-framework seems to be an interesting approach for further development, and a challenge for new experiments.

The second invited lecture by Thomas A. Lutz from the Institute of Veterinary Physiology of the Vetsuisse Faculty of the University of Zurich, Switzerland, was entitled "Hormonal control of food intake". After some introductory remarks, the paper deals with physiological controls of eating; cholecystokinin as a physiological signal of satiation and other gastrointestinal signals of satiation; the interaction between satiation signals and nutrients, adiposity signals and the interaction between satiating and adiposity signals. Finally he analyses the influence of gonadal hormones on the control of food intake, adiposity signals and the reproductive axis, as well pregnancy and lactation. Most studies were done with rodents. Food producing animals were only seldom included in the studies. In summary, the hormonal controls of food intake are part of a complex system involving many different hormones and interactions between them. The best investigated mechanisms are those leading to the determination of ongoing meals, i.e. satiation. Adiposity signals affect eating mainly by interacting with satiating signals and by enhancing their action.

The Communication of the Committee for Requirement Standards of the Society of Nutrition Physiology deals with "New equations for predicting metabolisable energy of compounds feeds for cattle". The recommended equations base on a data set of 349 compound feeds.

The digestibility was determined on the basis of male sheep between 1999 and 2008 in accordance with accepted guidelines.

The new equations show a higher accuracy of prediction than the previous one.

The Proceedings review current research activities in animal physiology and animal nutrition in Central Europe and are recommended to all those working in animal nutrition and animal physiology. The Proceedings of the 63rd Meeting

(Vol. 18, 2009) are available from the DLG-Verlag, Eschborner Landstraße 122, D-60489 Frankfurt am Main, Germany.

The next meeting of the Society of Nutrition Physiology of Germany (the 64th) will be held in Goettingen from 9 to 11 March 2010.

Gerhard Flachowsky
Institute of Animal Nutrition
Friedrich-Loeffler-Institute (FLI)
Federal Research Institute of Animal Health
Bundesallee 50, D-38116 Braunschweig, Germany
Tel.: +49-531-596-3102; Fax: +49-531-596-3199
e-mail address: gerhard.flachowsky@fli.bund.de