

## Editorial news and events

### Book reviews

Proceedings of the Society of Nutrient Physiology, G. Breves (Ed.), DLG-Verlag, Frankfurt (Main), Vol. 10, 2001, 192 pp., softcover, price 49,00 DM plus postage, ISBN 3-7690-4094-5.

The 55th Annual Meeting of the Society of Nutrition Physiology of Germany was held at Goettingen from 6<sup>th</sup> to 8<sup>th</sup> March 2001.

The proceedings of this meeting comprise of 146 abstracts and 1 review paper. The abstracts (mostly 1 page each) were attributed to the following topics:

1. Digestion and metabolism (29 papers)
2. Minerals and trace elements (15 papers)
3. Amino acid- and N-metabolism (19 papers)
4. Epithelial transport (6 papers)
5. Lipid-metabolims (7 papers)
6. Energetics (6 papers)
7. Special aspects of pig and poultry nutrition (13 papers)
8. Special aspects of ruminant nutrition (21 papers)
9. Vitamins (10 papers)
10. Additives (7 papers)
11. Workshop: Mycotoxins (13 papers)

Most of the papers were prepared from German institutes of animal nutrition and animal physiology but contributions of scientists from other European countries (i.e. Austria, Belgium, Denmark, Hungary, The Netherlands, Poland, Switzerland, Slovakia, UK) as well as papers from overseas (Canada, Columbia, Ghana, India, Indonesia, Nigeria, Thailand, USA) are also included.

The invited review lecture prepared by M. Schiemann from the Institute of Physiology of the Tierärztliche Hochschule Hannover (Germany) is entitled "Regulation of gastrointestinal functions by the enteric nervous system". In this paper the author underlined the widest variety of functions of the gastrointestinal tract. The main functions are transport of luminal content, secretion of ions and water, absorption of ions, water and nutrients, modulation of microcirculation, defence against pathogens and elimination of waste and for noxious substances. The main reason for this unique ability is that the gut has its own enteric nervous system

(ENS). Furthermore the paper deals with the sensory and the interneuronal pathways in the ENS and the motor pathways to the muscle and to the mucosa. The important role of the ENS for the regulation of gut functions is undisputed, but there is still much work to do fully identify all pathways in the ENS which are responsible for muscle or mucosa reflexes. An important future challenge will be to better define the role of the ENS under pathophysiological conditions in various species.

Thirteen papers were presented in the workshop "Mycotoxins". Most papers deal with the important Fusarium-toxins deoxynivalenol und zearalenone. Orientation values for critical concentrations of deoxynivalenol and zearalenone in diets for pigs, ruminants and gillinaceons poultry were presented.

Proceedings of the 55<sup>th</sup> Meeting (Vol.10, 2001) are available from the DLG-Verlag, Eschborner Landstraße 122, D 60489 Frankfurt am Main, Germany.

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The next meeting of the Society of Nutrient Physiology of Germany (the 56<sup>th</sup> one) will be held in Goettingen from 6 to 8 March 2002.

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Ausschuss für Bedarfsnormen der Gesellschaft für Ernährungsphysiologie (Committee of Nutrient Requirements of the Society of Nutrition Physiology): Empfehlungen zur Energie- und Nährstoffversorgung der Milchkühe und Aufzuchtrinder (Recommendations for the Energy and Nutrient Supply of Dairy Cows and Heifers)

DLG-Verlags GmbH, Frankfurt/Main, Germany, 2001, 136 pp., Price: DM 39,26 tables (in German), Paperback, ISBN 3- 7690-0591-0 \*

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The book comprises six chapters which deal with "Energy evaluation of feedstuffs and energy requirements", "Protein requirements and protein supply", "Supply with physical structure", "Main mineral elements", "Trace elements" and "Recommendations for the supply with vitamins". At first the introduction gives an overview about the changes of the recommendations for energy and nutrient supply of ruminants in Germany during the last 15 years. The recommendations were derived in two different ways. Energy, protein, and main mineral element requirements have been estimated by a factorial method from metabolic data. The recommendations of the other nutrients were obtained by evaluating the results of a number of published experiments.

The calculation of energy in feedstuffs and some feed evaluation systems used in different European countries are described in the first chapter. Energy requirement is calculated by using literature data for maintenance, energy concentration of milk or liveweight gain as well as additional requirement in the last weeks of pregnancy. The recommendations do not include safety margins which must be taken into account in practical feeding.

The derivation of protein requirement is shown in the next chapter. The protein value of feeds and the protein requirement are given as utilisable crude protein ( $nXP = \text{undegraded feed protein} + \text{microbial protein}$ ) at the duodenum. In addition to the supply with  $nXP$  the importance of the ruminal nitrogen balance (RNB) is emphasised. Tables with protein requirements are given in this chapter. In contrast to energy recommendations for  $nXP$  include a safety margin.

A sufficient part of structure in feedstuffs is necessary to avoid a disturbed rumen fermentation. The authors tried to give a definition of physical structure in feedstuffs. Furthermore proposals for evaluation systems are mentioned and especially "structure effective crude fibre" and "structure value" are compared. Depending on the gap of knowledge in this field, recommendations are not given and further research is demanded.

The factorial method is used to derive the requirements of main minerals (calcium, phosphorus, magnesium, sodium, potassium, chloride). Recommendations for supply with these minerals are given in tables at the end of the chapter. The dietary allowance of sulphur is not deduced by the factorial method. Recommendations for sulphur are desirable, but there is no basis of data from experiments at present.

Recommendations for the supply of dairy cows and heifers with trace elements (iron, cobalt, copper, zinc, manganese, iodine, and selenium) are based on a critical review of published literature. In case of missing investigations recommendations are estimated.

In contrast to most fat-soluble vitamins water-soluble vitamins and vitamin K are synthesized by ruminal microbes. Under normal conditions the intake of vitamins with feedstuffs respectively the microbial synthesis is sufficient. High per-

formance and imbalances in nutrition are reasons for the need of additional vitamin supply. Recommendations for fat soluble vitamins are given in a table at the end of this chapter.

In summary, this book gives not only a view on energy and nutrient requirements, and the official recommendations for supply in Germany established by the Society of Nutrition Physiology, but also a comprehensive literature review on the particular issues. The authors identified gaps of knowledge on requirements of dairy cows and growing cattle and determined the need of future research.

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### Conference Report

The annual XXIII Conference on Oilseed Crops was organized by the Plant Breeding and Acclimatization Institute, Department of Oil Crops in Poznań, Poland. The Conference was held on 27-28 March 2001 in Poznań, with participation of scientists, breeders and producers from Poland and Czech Republic.

Papers and communications were presented on recent advances in genetics and breeding, agronomy, phytopathology and plant protection, processing and biological value of meal and oil of rape seed as a main oil crop, but also of linseed, poppy, white mustard, oil radish and other less popular plants.

The possibility of improvement of dietetic value of animal products by rape seed and linseed oil or whole seeds used as components of rations for monogastric and ruminant animals was confirmed but also the adverse effects of antinutritional substances present in whole linseed were indicated.

The papers presented at the Conference will be published in Polish with English summaries in *Oilseed Crops*, edited by the Plant Breeding and Acclimatization Institute, Radzików, 05-870 Błonie, Poland.

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### **Announcement**

International Symposium on "New Trends in Animal Nutrition" will be held from 28 to 29 June 2001 in Jachranka near Warsaw, Poland, organized by The Kielanowski Institute of Animal Physiology and Nutrition in cooperation with Animal Nutrition Commission of the Committee of Animal Sciences, Polish Academy of Sciences. Papers presented at the Symposium will be published in Supplement 1 to Journal of Animal and Feed Sciences, Vol. 10, 2001.

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