Journal of Animal and Feed Sciences, 11, 2002, 169 – 170

Editorial news and events

Book reviews

Vitamins and Additives in Nutrition of Human and Animal

Bundesforschungsanstalt für Landwirtschaft (FAL), Braunschweig, Germany, 2001. R. Schubert, G. Flachowsky, G. Jahreis, R. Bitsch (Editors), 526 pp., paperback, EUR 25,00. ISBN 3-933140-51-X.

The Proceedings of the 8th Symposium on "Vitamins and Additives in Nutrition of Human and Animal" held in Jena, Germany (September 26/27, 2001) contain 99 papers, of which 7 are reviews or broader introductions into chosen subjects presented during the Symposium. Most of the papers are in German with an English summary.

Scientists from 13 countries presented results from recent experiments in this special field of nutrition. Most of the papers deal with various nutritional and physiological effects of vitamins, probiotics, enzymes, other additives and secondary plant compounds in human and animals. All together 22 papers deal with vitamins in animal nutrition, 32 papers are presented to additives in animal nutrition.

Vitamin requirements of domestic animals are critically discussed in an introductory paper. Presently missing experimental data do not allow a factorial deduction of vitamin requirements. Dose-response and performance studies with consideration of physiological parameters have been used to deduce vitamin requirements. There exist different levels to meet vitamin requirements of animals (minimal requirements, optimal requirements, recommendations, additional effects). Further fundamental studies are necessary to analyse so-called additional effects of overdosages and for a factorial deduction of vitamin requirements.

Several papers present the effects of antioxidative properties of the vitamins E and C. The favourable effect of vitamin E on meat quality of cattle, pigs and poultry is discussed.

Other papers deal with the effect of supplementation of vitamins A and E into the rumen of dairy cows on their flow at the duodenum, with the seasonal variation in the content of fat soluble vitamins in milk fat, with the influence of high vitamin E doses during the dry period on α-tocopherol concentrations in blood and milk as

well as mammary gland health of dairy cows, with the influence of cobalt-supplements on the vitamin B_{12}-status of dairy cows, with the availability of the B-vitamins, thiamin and vitamin B_6 from selected feed and foods in pigs or with the influence of biotin on food pad lesions in turkey poults.

One review paper deals with probiotics in animal nutrition. In most studies on the efficiency of probiotics a trend towards improved performance has been reported, but significant improvements of weight gain and feed conversion are rare. It is very probable that the impact on pathogenic and nonpathogenic intestinal bacteria is of main importance for the beneficial effects of probiotics, but other responses of the organism seem also to be involved.

Effects of *Enterococcus faecium, Bacillus cereus, Saccharomyces cerevisiae* in ruminants, pigs and poultry are discussed in some papers. Attention is also focused on enzymes as feed additives, esp. phytase and NSP-hydrolysing enzymes. Further papers deal with L-carnitine, a vitamin – like substance, essential oils and herbs in animal nutrition or the effects of mycotoxin-detoxifying agents on performance and digestibility in pigs.

The book contains many interesting results and information for nutritionists, feed manufacturers and students in the fields of animal nutrition, physiology and veterinary science.

The book can be ordered by the Institute of Animal Nutrition, Federal Agricultural Research Centre (FAL), Bundesallee 50, 38116 Braunschweig, Germany.

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