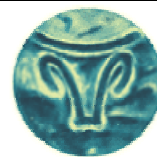


**PROJECT  
SUSTAINABLE ANIMAL PRODUCTION**



**Workshop**

**Animal Nutrition: Resources and New Challenges**

Date:	15 <sup>th</sup> - 16 <sup>h</sup> June 2000	
Language:	Contributions in German and English	
Place:	Forum of the Federal Agricultural Research Centre	
Organisation:	Prof. Dr. G. Flachowsky Institute of Animal Nutrition Federal Agricultural Research Centre Bundesallee 50 D-38116 Braunschweig	Prof. Dr. J. Kamphues Institute of Animal Nutrition School of Veterinary Medicine Hannover Bischofsholer Damm 15 D-30173 Hannover
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In the future, the demand for high-quality food of animal origin will continue to rise world wide as a result of population growth and increased affluence. The basis of intensive livestock husbandry remains the supply of appropriate amounts and quality of feedstuffs to individual producers both regionally and globally.

In this context, the science of animal nutrition faces the challenge of discovering resources and strategies that permit increased animal production without escalating the competition between humans and animals for the same sources of energy and nutrients. Therefore in future the question will be how to increase the use of those products for animal feed which cannot be used by humans, (e.g. organic substances with a high fibre content) or which are not desired/ intended for direct human consumption, and which therefore are being used decreasingly (cf. the parts of slaughtered animals that are actually consumed by people).

At the global level, the reasons to push for recycling of organic by-products and “wastes” in animal nutrition fall into two different and complementary trends: In highly-developed industrialised regions of the world the use of such products as unusual feedstuffs permits more economical and ecological disposal, while in the “poorer” countries this is a way to augment both quantity and quality of feed supply. Many by-products and waste substances from the production, processing and consumption of food and beverages can potentially be used by animals. And in related areas, where raw materials from agricultural production are not used to make food but for other industrial purposes (for example starch) there is increasing interest in ways for using certain by-products as feedstuffs.

As the production and processing of food becomes more and more industrialised, the sources of supply are increasingly located near large urban centres, i.e. near the demand. This in turn logistically enhances the conditions for industrialising the processing of by-products as animal feed.

Thus enterprises specialised in the utilisation of food by-products and waste are settling in the vicinity of large food industry production facilities, and - in cooperation with livestock producers in adjacent rural areas - produce food of higher market value. Here, in a welcome step toward **sustainability**, good ecology is being practised where once waste disposal (dumps, landfills) was the norm. Such concepts are already well established in many highly-industrialised countries of the northern hemisphere, but they are also developing more and more in other regions of the world, where the supply of food from animal sources is limited by amounts and quality of available feedstuffs.

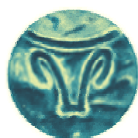
In this context the workshop “**Animal Nutrition: Resources and New Challenges**” calls scientists from the fields of feed science, animal nutrition and animal production to respond to these new challenges. During the first two days of the workshop oral contributions and posters including reports on feeding experiments and field studies are presented – predominantly in German language – whereas on the third day only contributions in English are admitted. Of particular interest are new scientific investigations dealing with the opportunities as well as with the limits and risks of the increased use of by-products in animal nutrition. Scientific contributions on the following issues are invited:

- By-products of food production and processing with higher crude fibre content
- By-products of the slaughtering process / from food of animal origin
- By-products that are hardly used in spite of nutritive value

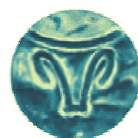
For these 3 groups the contributions should be focussed on:

- Amounts (quantitative investigations)
- Composition, nutritive value, feeding concepts for the use of by-products
- Real / suspected problems or risks due to by-products in animal nutrition
- Financial input / output and economical effects of the use of by-products as feedstuffs
- Further aspects (legislation, consumer’s demand, social restrictions)

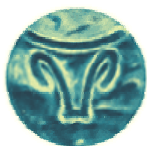
In this workshop we hope to offer up-to-date information and to establish international connections with people who are engaged in this field of research and who wish to foster the principle of recycling of by-products in animal nutrition. Your active participation is therefore especially welcome! In case of questions concerning your active participation do not hesitate to contact us (by fax or E-mail)!



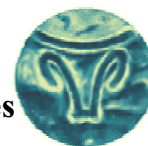
**Like it or not: In the future, we must intensify our efforts  
to use by-products in animal nutrition.**



Please also take note of the **Virtual Conference Sustainable Animal Production**  
<http://www.agriculture.de>



## FAX REPLY FORM



### Workshop Animal Nutrition - Resources and New Challenges

Name: \_\_\_\_\_  
Institution: \_\_\_\_\_  
Address: \_\_\_\_\_  
\_\_\_\_\_  
Phone: \_\_\_\_\_  
Fax: \_\_\_\_\_  
E-mail: \_\_\_\_\_

- I will      ♦      attend the workshop (15<sup>th</sup> – 16<sup>th</sup> June)      ☐  
             ♦      attend the workshop and present a contribution      ☐

Workshop fees:      Normal rate:              200 DM  
                         Reduced rate:              100 DM  
                         (Active participants [oral/poster presentation] and students)  
                         Free of charge: invited speakers

The fee includes abstracts as well as the workshop proceedings. You will be registered after payment to the following bank account at the Bundeskasse Hannover, Landeszentralbank Hannover, account number 250 010 00, bank code BLZ 250 000 00, S.W.I.F.T. code: ZB NS DE 21250 (for international transfer). **Please include the remarks "FAL 54501; Futter".**

Title(s) of my contribution(s):

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Preferred form of my contribution(s):	oral presentation	poster
1.	<input type="checkbox"/>	<input type="checkbox"/>
2.	<input type="checkbox"/>	<input type="checkbox"/>
3.	<input type="checkbox"/>	<input type="checkbox"/>

Timetable:

- ♦ 15<sup>th</sup> April 2000:      Deadline for submission of abstracts  
                         (active participation; instructions for authors see overleaf)
- ♦ 1<sup>st</sup> May 2000:      Notification of acceptance for active participation with poster(s) and/or  
                         scheduling of oral presentation(s)
- ♦ 1<sup>st</sup> June 2000:      Deadline for registration

Please send this reply by fax to Institute of Animal Nutrition; Hanover School of Vet. Medicine

Prof. Dr. J. Kamphues  
Bischofsholer Damm 15  
D-30173 Hanover  
Fax: ++49 511-856-7698

### Guidelines for authors:

Please send abstracts as a print of good quality (DIN A 4; white; allowing for direct copying ) and mail in unfolded A4 envelop to Prof. Dr. J. Kamphues (address see overleaf) as well as on floppy disk (MS Word 6 or Word 97 for Windows); files can also be send as attachment by E-mail (kamphues@tierern.tiho-hannover.de).

Please observe the following instructions (**reduced** example see below):

- size: DIN A 4; only one page (!)
- margins: left, right, top: 3 cm  
bottom: 3.5 cm
- type area: block
- font type: Times New Roman
- size: title: 12 pts, bold  
author(s) and text: 12 pt  
footnote: 10 pt
- space: 1.5 lines

**Text:**

- first line: English title (bold), German title in parentheses or vice versa and in normal fonts, author(s) and place
- next line: open
- next line: text
- footnote: correspondence address

**Poster:** The available dimension per poster is 195 cm (height) x 118 cm (width).

**Example** for abstracts (reduced form):

**Influence of a NSP-hydrolysing enzyme and an antimicrobial feed additive alone or in combination on laying performance, nutrient digestibility and gutflora of laying hens** (Einfluß eines NSP-hydrolysierenden Enzyms, eines Antibiotikums und deren Kombination auf Leistungsmerkmale, Rohnährstoffverdaulichkeit und Darmflora bei Legehennen). Doris Lattemann\*, Ingrid Halle, S. Matthes, G. Flachowsky – Braunschweig/Celle

Nicht-Stärke-Polysaccharide (NSP) beeinflussen die Leistung und Gesundheit insbesondere von wachsendem Geflügel, nachteilig. Durch Supplementierung von NSP-spaltenden Enzymen zum Broilerfutter wurden in der Vergangenheit positive Effekte auf die Digestiviskosität, den sogenannten Käfigeffekt und die Mikroflora festgestellt.

Das Ziel des über 13 Legemonate durchgeführten Versuches bestand darin, die Wirkung des NSP-hydrolysierenden Enzyms Xylanase (Endo-1,4ß-Xylanase) allein oder in Kombination mit dem Antibiotikum Flavophospholipol in einem weizenreichen Futter auf die Legeleistungsparameter, Rohnährstoffverdaulichkeit und Bakterienpopulation in verschiedenen Darmabschnitten an Legehybriden der Herkunft Lohmann White (LSL) zu prüfen.

216 Hennen je Gruppe, in Einzelhaltung in einer Mehrtagenbatterie aufgestellt, erhielten die Zusatzstoffe in folgender Dosierung: Gr. K: 0 (Kontrolle), Gr. X: 1500 EPU Xylanase/kg, Gr. F: 3 ppm Flavophospholipol, Gr. X+F: 1500 EPU Xylanase/kg + 3 ppm Flavophospholipol. Die Fütterung der Tiere erfolgte ad libitum. In 4 standardisierten Stoffwechselversuchen zu unterschiedlichem Lebensalter der Hennen wurden die Verdaulichkeiten der organischen Substanz (oS), der scheinbaren umsetzbaren Energie (AME/AM<sub>N</sub>) sowie des Rohproteins (vRp) ermittelt. In der Tabelle dargestellt sind die Ergebnisse des ersten Bilanzversuchs (36. Lebenswoche).

Die supplementierten Zusatzstoffe hatten keinen signifikanten Einfluß auf die mittlere Legeleistungs- und Eignungsmerkmale.

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