**Copying.** This journal is registered with the Copyright Clearance Center, 21 Congress Street, Salem, Mass. 01970. Organizations in the USA who are also registered with C.C.C. may therefore copy material (beyond the limits permitted by sections 107 and 108 of the US copyright law) subject to payment to C.C.C. of the per-copy fee of \$05.00. This consent does not extend to multiple copying for promotional or commercial purposes. Code 0007–1145/85/0053–0054 \$05.00.

ISI Tear Service, 3501 Market Street, Philadelphia, Pennsylvania 19104, USA, is authorized to supply single copies of separate articles for private use only.

For all other use, permission should be sought from the Cambridge or New York offices of the Cambridge University Press.

The Proceedings of the Nutrition Society, published by the Cambridge University Press, in part record meetings of the Symposium type, at which experts in a particular field are invited by Council to make contributions on specific parts of it and at which general discussion follows these invited contributions. The contributions will be published in extenso; such summaries of the ensuing discussions as circumstances warrant may also be published. The Society also holds scientific meetings at which papers are communicated by members and others on original work carried out by them. It is proposed at present to publish summaries of the papers read at each meeting, each communication being recorded in the Society's Proceedings by means of an abstract not exceeding in length 400 words or the equivalent space in print. The Proceedings are published three times a year.

The subscription to the *Proceedings* is £55.00 net (US \$140.00 in USA and Canada). Single issues are £20.00 (US \$52.00 in the USA and Canada) each; postage extra.

## continued from back cover

LEIBHOLZ JANE. An evaluation of total and digestible lysine as a predictor of lysine availability in protein concentrates for young pigs Chandler K. D., Leury B. J., Bird A. R. & Bell A. W. Effects of undernutrition and	615–624
exercise during late pregnancy on uterine, fetal and uteroplacental metabolism in the ewe	625–635
HUNTER R. A. & SIEBERT B. D. Utilization of low-quality roughage by <i>Bos taurus</i> and <i>Bos indicus</i> cattle. 1. Rumen digestion  HUNTER R. A. & SIEBERT B. D. Utilization of low-quality roughage by <i>Bos taurus</i> and	637–648
Bos indicus cattle. 2. The effect of rumen-degradable nitrogen and sulphur on voluntary food intake and rumen characteristics	649–656
VAN DER WESTHUYZEN JUSTIN, VAN TONDER SUSAN V., GIBSON JAYNE E., KILROE-SMITH TERENCE A. & METZ JACK. Plasma amino acids and tissue methionine levels in fruit bats (Rousettus aegyptiacus) with nitrous oxide-induced vitamin B <sub>10</sub> deficiency	657–662
DHANOA M. S., SIDDONS R. C., FRANCE J. & GALE D. L. A multicompartmental model to describe marker excretion patterns in ruminant faeces	663–671
SEDGMAN CYNTHIA A., ROY J. H. B. & THOMAS JOANNE. Digestion, absorption and utilization of single-cell protein by the preruminant calf. Abomasal outflow and its composition from calves given milk substitute diets containing varying amounts of	
either bacterial or yeast protein  ROOKE J. A., GREIFE H. A. & ARMSTRONG D. G. The digestion by heifers of	673–689
silage-containing diets fed at two dry matter intakes. 1. Digestion of organic matter and nitrogen	691-708

## The British Journal of Nutrition

## Volume 53 No. 3 May 1985

CONTENTS

Papers of direct relevance to CLINICAL AND HUMAN NUTRITION	
JUDD PATRICIA A. & TRUSWELL A. S. The hypocholesterolaemic effects of pectins in	
rats	409-425
MBOFUNG CARL M. F. & ATINMO TOLA. Zinc, copper and iron concentrations in the plasma and diets of lactating Nigerian women	427-439
CUNNANE S. C., MANKU M. S. & HORROBIN D. F. Essential fatty acids in the liver and	421-439
adipose tissue of genetically obese mice: effect of supplemental linoleic and y-linolenic	
acids	441-448
CUNNANE S. C., MANKU M. S. & HORROBIN D. F. Abnormal essential fatty acid	
composition of tissue lipids in genetically diabetic mice is partially corrected by dietary linoleic and $\gamma$ -linolenic acids	449-458
ENGLISH R. M. Breast-milk production and energy exchange in human lactation	459-466
MORGAN L. M., TREDGER J. A., MADDEN A., KWASOWSKI P. & MARKS V. The effect	
of guar gum on carbohydrate-, fat- and protein-stimulated gut hormone secretion:	
modification of postprandial gastric inhibitory polypeptide and gastrin responses	467-475
HAILEMARIAM B., LANDMAN J. P. & JACKSON ALAN A. Thiamin status in normal and malnourished children in Jamaica	477-483
BUTTE NANCY F., WILLS CATHY, SMITH E. O'BRIAN & GARZA CUTBERTO. Prediction of	477 405
body density from skinfold measurements in lactating women	485-489
COYER PENNY, COX M., RIVERS J. P. W. & MILWARD D. J. The effect of catabolic doses	101 100
of corticosterone on heat production in the growing rat	491-499
Papers on GENERAL NUTRITION	
SMALLEY KATHERINE A., ROGERS QUINTON R., MORRIS JAMES G. & ESLINGER LOREN L.	
The nitrogen requirement of the weanling kitten	501-512
STANOGIAS GEORGE & PEARCE G. R. The digestion of fibre by pigs. 1. The effects of	
amount and type of fibre on apparent digestibility, nitrogen balance and rate of	513-530
passage STANOGIAS GEORGE & PEARCE G. R. The digestion of fibre by pigs. 2. Volatile fatty acid	313-330
concentrations in large intestine digesta	531-536
STANOGIAS GEORGE & PEARCE G. R. The digestion of fibre by pigs. 3. Effects of the	
amount and type of fibre on physical characteristics of segments of the gastrointestinal	527 540
tract CHERBUT CH. & RUCKEBUSCH Y. The effect of indigestible particles on digestive transit	537-548
time and colonic motility in dogs and pigs	549-557
LINDBERG J. E. Retention time of chromium-labelled feed particles and of water in the	
gut of sheep given hay and concentrate at maintenance	559-567
WRIGHT A. J. A. & PHILLIPS D. R. The threshold growth response of Lactobacillus casei	560 672
to:5-methyl-tetrahydrofolic acid: implications for folate assays HEWITT D. & FORD J. E. Nutritional availability of methionine, lysine and tryptophan	569–573
in fish meals, as assessed with biological, microbiological and dye-binding assay	
procedures	575-586
HILL R. & WALKER D. M. The retention of 59Fe and 65Zn by preruminant lambs given	
milk-substitutes based on either casein or soya-bean protein isolate Southon Susan, Livesey G., Gee Jennifer M. & Johnson I. T. Intestinal cellular	587-593
proliferation and protein synthesis in zinc-deficient rats	595-603
MCBRIDE B. W. & MILLIGAN L. P. Influence of feed intake and starvation on the	.,,
magnitude of Na+, K+-ATPase (EC 3.6.1.3)-dependent respiration in duodenal	
mucosa of sheep	605-614

continued on inside back cover

© The Nutrition Society 1985

For Index of Authors see page facing inside back cover

## CAMBRIDGE UNIVERSITY PRESS

The Pitt Building, Trumpington Street, Cambridge CB2 1RP

32 East 57th Street, New York, NY 10022, USA

10 Stamford Road, Oakleigh, Melbourne 3166, Australia

Printed in Great Britain by the University Press, Cambridge