

## INDEX OF AUTHORS

Ashby, E. C. . . . .	497	Katz, I. . . . .	443	Rook, J. A. F. . . . .	547
Balch, C. C. . . . .	695	Krishna Murti, C. R. . . . .	505	Roy, A. D. . . . .	657
Belling, G. B. . . . .	647	Langlands, J. P. . . . .	603	Sabri, M. I. . . . .	505
Bines, J. A. . . . .	695	Madge, D. S. . . . .	637	Sharma, S. K. . . . .	505
Breckenridge, G. . . . .	559	Martin, A. K. . . . .	715	Shastri, N. V. . . . .	705
Buchanan, R. A. . . . .	533	McAllan, A. B. . . . .	671	Smith, G. H. . . . .	547
Burns, D. G. . . . .	665	McLaughlin, C. I. . . . .	471	Smith, R. H. . . . .	671
Chatterjee, A. K. . . . .	657	Mittwoch, A. . . . .	683	Spray, G. H. . . . .	665
Coward, W. A. . . . .	619	Moe, P. W. . . . .	443	Steele, W. . . . .	709
Czerkawski, J. W. . . . .	559	Mokady, S. . . . .	491	Storry, J. E. . . . .	511
Ellis, H. . . . .	497	Moore, J. H. . . . .	611, 709	Sutton, J. D. . . . .	511, 567, 585
Flannery, B. P. . . . .	497	Mott, T. J. . . . .	497	Sutherland, H. A. M. . . . .	603
Flatt, W. P. . . . .	443	Munson, A. W. . . . .	443	Suzuki, S. . . . .	695
Ghosh, B. B. . . . .	657	Naismith, D. J. . . . .	683	Tagari, H. . . . .	455
Gray, F. V. . . . .	647	Nath, M. C. . . . .	705	Thompson, J. N. . . . .	471, 619
Gustafsson, B. E. . . . .	429, 627	Noble, R. C. . . . .	611, 709	Viola, S. . . . .	491
Halfpenny, A. F. . . . .	547	Norman, A. . . . .	429, 627	Zimmermann, G. . . . .	491
Harrand, R. B. . . . .	523	Nicholson, J. W. G. . . . .	585		
Hartles, R. L. . . . .	523	Ørskov, E. R. . . . .	443		
Hemken, R. W. . . . .	443	Pilgrim, A. F. . . . .	647		
Howell, J. McC. . . . .	471, 619	Pitt, G. A. J. . . . .	471, 619		
		Platt, B. S. . . . .	683		

## FORTHCOMING PAPERS

The next issue of *The British Journal of Nutrition* will appear in November. It is hoped to publish in it the following papers:

- Effect of starch on protein utilization by sheep. By Y. DROR, A. MAYEVSKY and A. BONDI.
- Effects of supplementing ragi (*Eleusine coracana*) diets with lysine or leaf protein on the growth and nitrogen metabolism of children in India. By T. R. DORAISWAMY, NARENDRA SINGH and V. A. DANIEL.
- Protein deficiency in spaced-fed rats. By S. K. PADWALDESAI, V. NINJOOR, T. V. RAMAKRISHNAN, P. L. SAWANT, U. S. KUMTA and A. SREENIVASAN.
- Liver lysosomes in protein-starved rats. By V. NINJOOR, S. SAROJA, S. R. PADWALDESAI, P. L. SAWANT, U. S. KUMTA and A. SREENIVASAN.
- The effect of heat treatment on the nutritive value of milk for the young calf. 8. The effect of the pre-heating treatment of spray-dried skim milk on the pH and the contents of total, protein and non-protein nitrogen of the pyloric outflow. By H. TAGARI and J. H. B. ROY.
- Chemical composition of organs of children who died from malnutrition. By G. A. O. ALLEYNE, D. HALLIDAY and J. C. WATERLOW.
- The relationship between an elevated serum amino acid ratio and the development of other biological abnormalities in the experimentally malnourished pig. By R. F. GRIMBLE and R. G. WHITEHEAD.
- The rumen buffering system of sheep fed pelleted roughage-concentrate rations. By BIJAN EMMANUEL, M. J. LAWLOR and D. M. McALEESE.
- Methane production and soluble carbohydrates in the rumen of sheep in relation to the time of feeding and the effects of short-term intraruminal infusions of unsaturated fatty acids. By J. L. CLAPPERTON and J. W. CZERKAWSKI.
- Calcium metabolism in lactating ewes. By G. D. BRAITHWAITE, R. F. GLASCOCK and SH. RIAZUDDIN.
- Growth rates in children recovering from protein-calorie malnutrition. By ANN ASHWORTH.
- Stomach function in relation to a scour syndrome in the piglet. By F. WHITE, G. WENHAM, G. A. M. SHARMAN, A. S. JONES, E. A. S. RATTRAY and I. McDONALD.
- Mechanisms of heat damage in proteins. Models with acylated lysine units. By J. BJARNASON and K. J. CARPENTER.
- Differences in the metabolism of esterified and unesterified linoleic acid by rumen micro-organisms. By J. H. MOORE, R. C. NOBLE, W. STEELE and J. W. CZERKAWSKI.
- Time relationships between the elevation of the serum amino acid ratio and changes in liver composition in malnourished rats. By R. F. GRIMBLE, M. B. SAWYER and R. G. WHITEHEAD.
- The urinary excretion of metabolites of riboflavine by man. By D. W. WEST and E. C. OWEN.
- The uptake and metabolism of retinol, retinoic acid and methyl retinoate by the early chick embryo. By B. MORGAN, J. N. THOMPSON and G. A. J. PITT.
- Calcium balance studies on children accustomed to low calcium intakes. By ALMAS BEGUM and SHEILA M. PEREIRA.
- Nutritive value of proteins of pearl millet of high-yielding varieties and hybrids. By A. K. GOSWAMI, K. P. SHARMA and K. L. SEHGAL.
- The effect of protein-calorie malnutrition on the composition of the human femur. By J. W. T. DICKERSON and P. M. V. JOHN.
- Fermentation of various soluble carbohydrates by rumen micro-organisms with particular reference to methane production. By J. W. CZERKAWSKI and GRACE BRECKENRIDGE.

# The British Journal of Nutrition

Volume 23 No. 3 August 1969

## CONTENTS

Influence of the diet on the turnover of bile acids in germ-free and conventional rats. By B. E. GUSTAFSSON and A. NORMAN	429-442
The influence of ruminal infusion of volatile fatty acids on milk yield and composition and on energy utilization by lactating cows. By E. R. ØRSKOV, W. P. FLATT, P. W. MOE, A. W. MUNSON, R. W. HEMKEN and I. KATZ	443-453
Comparison of the efficiency of proteins contained in lucerne hay and soya-bean meal for sheep. By H. TAGARI	455-470
The biological activity of retinoic acid in the domestic fowl and the effects of vitamin A deficiency on the chick embryo. By J. N. THOMPSON, J. MCC. HOWELL, G. A. J. PITT and CATHERINE I. McLAUGHLIN	471-490
A new biological method for estimating food protein nutritive value. By SHOSHANA MOKADY, S. VIOLA and G. ZIMMERMANN	491-495
The effect of protein deficiency upon peritoneal healing and peritoneal wound contraction in the rat. By T. J. MOTT, E. C. ASHBY, B. P. FLANNERY and H. ELLIS	497-504
Growth inhibitory action of saccharin and cyclamate on rats receiving a poor rice diet. By M. I. SABRI, S. K. SHARMA and C. R. KRISHNA MURTI	505-509
The effect of change from low-roughage to high-roughage diets on rumen fermentation, blood composition and milk fat secretion in the cow. By J. E. STORRY and J. D. SUTTON	511-521
A study on the effect of vitamin D in rats maintained on diets with different calcium and phosphorus content but with the same high ratio of calcium to phosphorus. By R. B. HARRAND and R. L. HARTLES	523-531
In vivo and in vitro methods of measuring nutritive value of leaf-protein preparations. By R. A. BUCHANAN	533-545
Variations with energy nutrition in the concentrations of amino acids of the blood plasma in the dairy cow. By A. F. HALFPENNY, J. A. F. ROOK and G. H. SMITH	547-557
Distribution of polyethylene glycol in suspensions of food particles, especially sugar-beet pulp and dried grass pellets. By J. W. CZERKAWSKI and GRACE BRECKENRIDGE	559-565
The fermentation of soluble carbohydrates in rumen contents of cows given diets containing a large proportion of flaked maize. By J. D. SUTTON	567-583
The effect of diet composition and level of feeding on digestion in the stomach and intestines of sheep. By J. W. G. NICHOLSON and J. D. SUTTON	585-601
An estimate of the nutrients utilized for live-weight gain by Merino sheep. By J. P. LANGLANDS and H. A. M. SUTHERLAND	603-609
Dietary linoleic acid and the plasma phospholipids of the rabbit. By J. H. MOORE and R. C. NOBLE	611-618
The retinol requirements of rats for spermatogenesis and vision. By W. A. COWARD, J. MCC. HOWELL, J. N. THOMPSON and G. A. J. PITT	619-626
Influence of the diet on the composition of faecal bile acids in rats. By B. E. GUSTAFSSON and A. NORMAN	627-635
Effect of antibiotics on intestinal absorption in mice. By DAVID S. MADGE	637-646
Production and absorption of ammonia in the sheep's stomach. By A. F. PILGRIM, F. V. GRAY and G. B. BELLING	647-655
Effect of riboflavine deficiency on nucleic acid metabolism of liver in the rat. By AJAY K. CHATTERJEE, AMITABHA D. ROY and B. B. GHOSH	657-663
Normal folic acid metabolism in iron-deficient rats. By D. G. BURNS and G. H. SPRAY	665-670
Nucleic acid metabolism in the ruminant. Determination of nucleic acids in digesta. By A. B. McALLAN and R. H. SMITH	671-682
Changes in composition of rat's milk in the stomach of the suckling. By D. J. NAISMITH, ADELE MITTWOCH and B. S. PLATT	683-693
The quantitative significance of long-term regulation of food intake in the cow. By J. A. BINES, S. SUZUKI and C. C. BALCH	695-704
Effect of acetoacetate administration on urinary and tissue vitamin B <sub>6</sub> in rats. By M. C. NATH and N. V. SHASTRI	705-707
The incorporation of linoleic acid into the plasma lipids of sheep given intraruminal infusions of maize oil or free linoleic acid. By R. C. NOBLE, W. STEELE and J. H. MOORE	709-714
The urinary excretion of aromatic acids by starved sheep. By A. K. MARTIN	715-725

*For Index of Authors see inside back cover*

CAMBRIDGE UNIVERSITY PRESS

Bentley House, 200 Euston Road, London, N.W. 1

American Branch: 32 East 57th Street, New York, N.Y. 10022

Single parts 70s. net in U.K. (\$10.50 in U.S.A.)

Subscription price £10 net in U.K. (\$32.00 in U.S.A.)