

Mechanical processing of wet roughage. By J. F. D. GREENHALGH and G. W. REID ... 74A
 The effect of a low protein intake by beef cows during pregnancy on the voluntary intake of roughage, the composition of the colostrum and the serum immune globulin concentration of their calves. By G. FISHWICK and D. CLIFFORD ... 74A
 Experimental copper deficiency in the calf. By N. F. SUTTLE ... 76A
 The influence of dietary sulphate on the toxicity of lead to sheep. By J. N. MORRISON, J. QUARTERMAN, W. R. HUMPHRIES and C. F. MILLS ... 77A
 Ammonium polyphosphate in the drinking-water as a source of phosphorus for growing sheep. By R. G. HEMINGWAY and G. FISHWICK ... 78A

*Two Hundred and Seventy-seventh Scientific Meeting
 Middlesex Hospital Medical School, London
 14 MARCH 1975*

The effects of feeding starch, sucrose, glucose or fructose to rats during pregnancy and early lactation. By A. R. BOURNE, D. P. RICHARDSON, K. R. BRUCKDORFER and JOHN YUDKIN ... 80A
 The effect of dietary sucrose and dietary cholesterol on hyperlipidaemia and atherosclerosis in White Leghorn cockerels (*Gallus domesticus*). By NANCY ANN WORCESTER, K. R. BRUCKDORFER and JOHN YUDKIN ... 81A
 The effect of dietary sucrose and different dietary fats on hyperlipidaemia and atherosclerosis in White Leghorn cockerels (*Gallus domesticus*). By NANCY ANN WORCESTER, K. R. BRUCKDORFER and JOHN YUDKIN ... 82A
 Serum lipids and some aspects of diet in young female survivors of myocardial infarction. By MARGARET THOROGOOD and J. I. MANN ... 83A
 Is there a 'set point' for human body-weight? By J. S. GARROW and SUSAN STALLEY ... 84A
 Resistance to slimming: adipose tissue cellularity studies. By MARGARET ASHWELL, PAULINE PRIEST, MARINETTE BONDOUX and J. S. GARROW ... 85A
 Glucose tolerance, plasma insulin levels and insulin sensitivity in geriatric patients. By C. R. C. HEARD, W. S. SOERJODIBROTO, SYLVIA M. FRANGI and A. N. EXTON-SMITH ... 86A
 'Added lactose' and 'added sucrose' cow's milk formulas in neonatal nutrition. By B. A. WHARTON and A. S. FOSBROOKE ... 87A
 Oxidation and metabolism of linoleic acid in the sheep. By W. M. F. LEAT, D. B. LINDSAY and G. VALERIO ... 88A
 The influence of high dietary intakes of calcium on lead retention and release in rats. By J. QUARTERMAN, J. N. MORRISON and W. R. HUMPHRIES ... 89A
 Glycosyl ureides in ruminant feeding. By A. B. McALLAN, R. J. MERRY and R. H. SMITH ... 90A
 The turnover rate of muscle and liver protein in sheep. By P. J. BUTTERY, A. BECKERTON, R. M. MITCHELL, K. DAVIES and E. F. ANNISON ... 91A
 The optimal time for enrichment of dietary protein with tryptophan in relation to feeding time in the rat. By H. RAFALSKI, E. JABLONSKI and W. PONOMARENKO ... 92A
 Influence of prolonged ingestion of some organochlorinated pesticides on digestibility and nutritive value of a diet in rats. By G. VARELA, AMALIA TORRALBA and J. ESCRIVÁ ... 93A
 A comparison of the apparent digestibility of amino acids from measurements of digesta in the terminal ileum and of faeces in growing pigs. By A. G. LOW ... 94A
 The rates of tissue protein synthesis in vivo in hypophysectomized and pair-fed control rats. By D. J. MILLWARD, D. O. NNANYELUGO and A. K. CHATTERJEE ... 95A
 Effect of protein deficiency on glucagon-stimulated insulin secretion, and on glycogen storage and release in rabbits. By K. A. ALLEN, C. E. AYRES, K. A. MUNDAY and M. R. TURNER ... 96A
 Sex difference in muscle growth after undernutrition during the suckling period. By J. P. G. WILLIAMS and P. C. R. HUGHES ... 97A

INDEX OF AUTHORS

Adams, P. H. 111	Humphries, W. R. 77A, 89A	Owen, D. E. 59A
Allen, K. A. 96A	Hutton, K. 49A, 50A	
Annisson, E. F. 91A		Partridge, I. G. 46A, 47A
Arneil, G. C. 101	Jablonski, E. 92A	Ponomarenko, W. 92A
Ashwell, M. 85A	Jenkins, F. P. 37A	Priest, P. 85A
Atkinson, T. 54A		
Axford, R. F. E. 65A, 66A, 67A	Kearsley, M. 60A	Quarterman, J. 77A, 89A
Ayres, C. E. 96A	Keyser, A. 56A	
		Radcliffe, J. D. 54A
Beckerton, A. 91A	Leat, W. M. F. 88A	Rafalski, H. 92A
Bondoux, M. 85A	Leitner, Z. A. 44A	Rebello, T. 56A
Bourne, A. R. 80A	Liew, F. Y. 41A	Reid, G. W. 74A
Braude, R. 46A, 51A	Lindsay, D. B. 88A	Rhodes, D. N. 51A
Bruckdorfer, K. R. 80A, 81A, 82A	Lotfi, M. 58A	Richardson, D. P. 80A
Buttery, P. J. 91A	Low, A. G. 46A, 94A	Robinson, D. S. 45A
	Lumb, G. A. 111	Robinson, J. A. 37A
Chambers, A. R. M. 71A	Lysons, R. J. 72A	Russel, A. J. F. 71A
Chatterjee, A. K. 95A		
Clarke, M. 45A	McAllan, A. B. 90A	Sambrook, I. E. 46A
Clifford, D. 74A	McAnulty, P. A. 38A	Sharman, I. M. 44A, 69A
Cooper, D. F. 69A	Macdonald, I. 54A, 55A, 56A	Smith, R. H. 90A
Czerkawski, J. W. 62A	Macdonald, I. A. 58A	Soerjodibroto, W. S. 86A
	McLeod, K. I. 41A	Stalley, S. 84A
Damaty, S. 48A	MacRae, A. R. 54A	Stamp, T. C. B. 119
Davies, K. 91A	Mann, J. I. 83A	Stanbury, S. W. 111
de Silva, P. 111	Mann, S. O. 63A	Stephen, J. M. L. 131
Dewey, P. J. S. 54A	Martin, A. K. 69A, 70A	Stewart, C. S. 72A
Duodu, T. A. 42A	May Law, L. 52A	Stock, M. J. 57A, 58A
	Mehrez, A. Z. 64A	Stovin, V. 55A
Escrivá, J. 93A	Merry, R. J. 90A	Suttle, N. F. 76A
Evans, R. A. 65A, 66A, 67A	Miller, W. S. 45A	
Exton-Smith, A. N. 86A	Milne, J. A. 70A, 71A	Taylor, C. M. 111
	Mills, C. F. 77A	Taylor, T. G. 59A
Fairhurst, E. 60A	Millward, D. J. 95A	Thompson, A. 50A
Ferro-Luzzi, A. 57A	Mitchell, K. G. 51A	Thorogood, M. 83A
Fishwick, G. 74A, 78A	Mitchell, R. M. 91A	Torkington, P. 111
Fosbrooke, A. S. 87A	Moberley, P. 70A	Torralba, A. 93A
Foxcroft, P. D. 49A	Monsey, J. B. 45A	Turner, M. R. 59A, 96A
Frangi, S. M. 86A	Moore, T. 44A	
Fraser, D. R. 139	Morgan, B. L. G. 40A	Valerio, G. 88A
	Morrison, J. N. 77A, 89A	Varela, G. 93A
Garrow, J. S. 84A, 85A	Munday, K. A. 59A, 96A	
Green, L. F. 60A		Waterlow, J. C. 42A
Greenhalgh, J. F. D. 74A	Naismith, D. J. 40A	Webster, A. J. F. 54A
	Neale, R. J. 43A	Wharton, B. A. 87A
Heard, C. R. C. 86A	Nnanyelugo, D. O. 95A	White, I. R. 71A
Heeley, D. M. 69A	Norgan, N. G. 57A	Williams, J. P. G. 38A, 39A, 97A
Hemingway, R. G. 52A, 78A		Worcester, N. A. 81A, 82A
Hudson, B. J. F. 48A	Offer, N. W. 65A, 66A, 67A	
		Yudkin, J. 80A, 81A, 82A

Proceedings of the Nutrition Society

CONTENTS OF VOL. 34, No. 2, SEPTEMBER 1975

SYMPOSIUM PROCEEDINGS

*Two Hundred and Seventy-fifth Scientific Meeting
Hammersmith Hospital, London W12
6 DECEMBER 1974*

OSTEOMALACIA AND RICKETS*

Chairman: PROFESSOR C. E. DENT, *University College Hospital Medical School, London*

Nutritional rickets in children in Glasgow. By G. C. ARNEIL	101
Asian rickets and osteomalacia: patterns of parathyroid response in vitamin D deficiency. By S. W. STANBURY, P. TORKINGTON, G. A. LUMB, P. H. ADAMS, PREENIE DE SILVA and CAROL M. TAYLOR	111
Factors in human vitamin D nutrition and in the production and cure of classical rickets. By T. C. B. STAMP	119
Epidemiological and dietary aspects of rickets and osteomalacia. By JOAN M. L. STEPHEN	131
Advances in the knowledge of the metabolism of vitamin D. By D. R. FRASER	139

ABSTRACTS OF COMMUNICATIONS

*Two Hundred and Seventy-fourth Scientific Meeting
Guy's Hospital Medical School, St Thomas Street, London
5 DECEMBER 1974*

Serum biochemical changes in rats deprived of food or water for 24 h. By F. P. JENKINS and J. A. ROBINSON	37A
The activity of ornithine decarboxylase in the quadriceps and gastrocnemius muscles of rats recovering from under-nutrition. By P. A. MCANULTY and J. P. G. WILLIAMS	38A
A non-destructive method for the measurement of muscle growth in the rat. By J. P. G. WILLIAMS and P. C. R. HUGHES	39A
The effect of postnatal undernutrition on the activities of enzymes involved in the synthesis of brain lipids in the rat. By B. L. G. MORGAN and D. J. NAISMITH	40A
Maternal protein deficiency and the immune response of the progeny in the rat. By KATRINE I. MCLEOD and F. Y. LIEW	41A
Biochemical 'tests' of marginal protein deficiency in the rat. By T. A. DUODU and J. C. WATERLOW	42A
The metabolism of [U- ¹⁴ C]valine in adult rats given high- or low-protein diets. By R. J. NEALE	43A
Fatal self-medication with retinol and carrot juice. By Z. A. LEITNER, T. MOORE and I. M. SHARMAN	44A
The effect of feeding magnesium-enriched diets to laying hens on the quality of the albumen of stored eggs. By D. S. ROBINSON, J. B. MONSEY, W. S. MILLER and M. CLARKE	45A
A comparison of apparent digestibility values for nutrients from measurements in the ileum and faeces of growing pigs. By R. BRAUDE, A. G. LOW, I. G. PARTRIDGE and I. E. SAMBROOK	46A
The apparent absorption of minerals in the small and large intestines of growing pigs. By I. G. PARTRIDGE	47A
A secondary interaction between gossypol and cottonseed protein. By S. DAMATY and B. J. F. HUDSON	48A
Effect of processing temperature on some indices of nutritional significance for micronized soya beans. By K. HUTTON and P. D. FOXCROFT	49A
Effect of micronizing on the utilization of soya beans by growing rats. By K. HUTTON and A. THOMPSON	50A
A new source of protein for growing pigs. By R. BRAUDE, K. G. MITCHELL and D. N. RHODES	51A
The effects of coating mixtures of urea phosphate and urea on the concentrations of ammonia in the rumen liquor and blood of cows. By R. G. HEMINGWAY and L. MAY LAW	52A
Regulation of food intake during growth in the Zucker rat. By J. D. RADCLIFFE, A. J. F. WEBSTER, P. J. S. DEWEY and T. ATKINSON	54A
A comparison of the effects of an oral fructose load in hypertriglyceridaemic and normolipidaemic men. By A. R. MACRAE and I. MACDONALD	54A
Some effects of an oral contraceptive on dietary carbohydrate-lipid interrelationships in the baboon. By VALERIE STOVIN and I. MACDONALD	55A
Effects, in the rat, of early carbohydrate feeding on carbohydrate-lipid relationships. By I. MACDONALD, T. REBELLO and ANNE KEYSER	56A
The thermic effect of food in man at high altitude. By M. J. STOCK, ANNA FERRO-LUZZI and N. G. NORGAN	57A
Losses of energy associated with oven-drying. By MAHSHID LOTFI, I. A. MACDONALD and M. J. STOCK	58A
The binding of bile salts in vitro to fibre from wheat bran and a mould (<i>Fusarium</i>). By D. E. OWEN, K. A. MUNDAY, T. G. TAYLOR and M. R. TURNER	59A
Blood glucose profiles in man after ingestion of glucose syrup fractions. By M. KEARSLEY, E. FAIRHURST and L. F. GREEN	60A

*Two Hundred and Seventy-sixth Scientific Meeting
One Hundred and Tenth Scottish Meeting
James Weir Building, Montrose Street, Glasgow
14 FEBRUARY 1975*

Composition of microbial matter in the rumen. By J. W. CZERKAWSKI	62A
The effect of feeding whole or pelleted barley to lambs on their rumen bacterial populations and pH. By S. O. MANN and E. R. ØRSKOV	63A
The effect of feeding with whole or pelleted barley on rate of digestion of dried grass in the rumen of sheep. By E. R. ØRSKOV and A. Z. MEHREZ	64A
A method for estimating the quantities of microbial and dietary proteins flowing in the duodenal digesta of ruminants. By R. A. EVANS, R. F. E. AXFORD and N. W. OFFER	65A
The protection of dietary casein from degradation in the rumen. By R. F. E. AXFORD, N. W. OFFER and R. A. EVANS	66A
The synergistic effect of dietary carbohydrates on the passage of amino acids to the small intestine of the sheep. By N. W. OFFER, R. A. EVANS and R. F. E. AXFORD	67A
Variations in the composition of blood and urine following the ingestion of a high-protein diet. By D. M. HEELEY, I. M. SHARMAN and D. F. COOPER	69A
Metabolism of aromatic compounds in the rumen. By A. K. MARTIN	69A
Urinary quinol and orcinol outputs as indices of voluntary intake of heather (<i>Calluna vulgaris</i> L. (Hull)) by sheep. By A. K. MARTIN, J. A. MILNE and P. MÖRBERLEY	70A
An apparatus for the measurement and sampling of urine from grazing female sheep. By A. R. M. CHAMBERS, J. A. MILNE, A. J. F. RUSSEL and I. R. WHITE	71A
Fermentation products in the rumen of a gnotobiotic lamb dosed with <i>Bacteroides ruminicola</i> . By C. S. STEWART and R. J. LYSONS	72A

[Continued on p. iii of wrapper]

© The Nutrition Society, 1975

CAMBRIDGE UNIVERSITY PRESS
Bentley House, 200 Euston Road, London NW1 2DB
32 East 57th Street, New York, N.Y. 10022

*Copies of this complete symposium may be obtained from: Professor T. G. Taylor (The Nutrition Society) c/o Dept of Physiology & Biochemistry, Medical & Biological Sciences Building, The University, Southampton, SO9 3TU. The cost is £1.50 (\$3.50). Remittance should be sent with the order. Cheques or Postal Orders should be made payable to 'The Nutrition Society'.