

Protein content of the diet and food intake in steers. By M. KAY, N. A. MACLEOD and A. MACDEARMID . . . 55A
 The influence of protein concentration in concentrate feeds on the apparent disappearance of dry matter, protein, starch, ether extract and ash in various segments of the digestive tract in sheep. By E. R. ORSKOV and C. FRASER . . . 55A
 The effect of adding certain fatty acids on the voluntary food intake of sheep. By J. L. CLAPPERTON . . . 57A
 Some investigations on lipolysis in the hereditary obese mouse. By I. S. ROSS . . . 58A
 Diminution of xanthine oxidase in goat milk after subcutaneous injection of sodium tungstate (Na₂WO₄·2H₂O). By E. C. OWEN and I. DUNDAS . . . 59A
 An evaluation of the diagnostic significance of some symptoms and physical signs in chronic iron-deficiency anaemia. By AUDREY A. DAWSON and D. OGSTON . . . 59A
 Techniques used in studies on nitrogen metabolism in ruminants. By F. WHITE, G. WENHAM, A. D. HUGHES, J. MATHIESON and MARGARET I. CHALMERS . . . 60A

Two Hundred and Eleventh Scientific Meeting

The effect of method of processing artificially dried grass, wafered with or without barley grain, on the growth of young cattle. By E. K. POUTIAINEN, C. R. LONSDALE and J. C. TAYLER . . . 61A
 The influence of frequency of sucrose intake on the concentration of lipids, proteins and glucose in the plasma. By JUDITH BRICE, BETTY L. COLES, M. H. JOURDAN and I. MACDONALD . . . 62A
 The difference in response of serum proteins to a high-carbohydrate diet in men and women. By BETTY L. COLES . . . 63A
 The incorporation of intravenously injected ¹⁴C-labelled glucose and fructose into the serum glycerides of male and female baboons. By M. H. JOURDAN . . . 63A
 Blood glucose following oral loads of glucose, maltose and starch during pregnancy. By T. LIND and F. E. HYTEN . . . 64A
 Relationship between the component fatty acids of plasma cholesteryl esters and phospholipids in the rat and pig. By W. M. F. LEAT and D. J. NAISMITH . . . 64A
 Precursors of aromatic acids found in sheep urine. By A. K. MARTIN . . . 65A
 A chick biological assay for available tryptophan. By E. J. HARWOOD and D. H. SHRIMPTON . . . 66A
 A chick biological assay for available methionine. By E. J. HARWOOD and D. H. SHRIMPTON . . . 67A
 Efficiency of utilization of free amino acids given as dietary supplements to the rat. By B. A. ROLLS, A. P. WILLIAMS and J. W. G. PORTER . . . 69A
 The effect of the gut flora on the growth response of the chick to fish solubles. By G. F. HARRISON and M. E. COATES . . . 70A
 A rapid method for the estimation of thermic energy in rats. By D. S. MILLER and M. J. STOCK . . . 70A
 The effect of depletion-repletion on calorie utilization. By C. C. MAHENDRA and D. S. MILLER . . . 72A
 Dietary intakes of geriatric patients in hospital. By ELIZABETH EVANS and ANNA L. STOCK . . . 73A
 The effect of altitude on thermogenesis in man. By D. S. MILLER and M. J. STOCK . . . 74A

INDEX OF AUTHORS

Anantharaman, K.	46A	Hughes, A. D.	60A	Poutiainen, E. K.	61A
Baker, J.	37A	Hunt, R. T.	248	Reid, R. S.	44A
Braude, R.	40A, 45A	Hunter, A. R.	248	Rolls, B. A.	69A
Breckenridge, G.	52A	Huskissen, N. S.	46A	Ross, I. S.	58A
Brice, J.	62A	Hyldgaard-Jensen, J.	44A		
Briggs, G. M.	43A	Hytten, F. E.	64A	Salter, D. N.	39A
Buttle, H. L.	45A	Jourdan, M. H.	62A, 63A	Scott, A. M.	51A
Care, A. D.	183	Kay, M.	55A	Scott, K. J.	39A
Carpenter, K. J.	214	Kay, R. N. B.	51A	Scougall, R. K.	41A
Chalmers, M. I.	60A	Lancaster, M. C.	203	Shorthouse, M.	46A
Clapperton, J. L.	57A	Leat, W. M. F.	37A, 64A	Shrimpton, D. H.	66A, 67A
Coates, M. E.	47A, 70A	Lind, T.	64A	Spencer, J. C.	53A
Coles, B. L.	62A, 63A	Lonsdale, C. R.	61A	Stamford, I. F.	43A
Crawford, M. A.	39A	Macdearmid, A.	55A	Stephen, J. M. L.	234
Cunningham, N. F.	171	Macdonald, I.	62A	Stock, A. L.	73A
Cuthbertson, W. F. J.	213	MacLeod, N. A.	55A	Stock, M. J.	70A, 74A
Czerkawski, J. W.	51A, 52A	Mahendra, C. C.	72A	Summers, R.	53A
Dawson, A. A.	59A	Mann, S. O.	44A	Taylor, J. C.	61A
Dickson, I. R.	40A	Martin, A. K.	65A	Taylor, T. G.	41A
Dundas, I.	59A	Mathieson, J.	60A	Todd, J. R.	189
Eadie, J. M.	44A	Miller, D. S.	225, 70A, 72A, 74A	Ulyatt, M. J.	50A, 51A
Ellinger, G. M.	42A	Mitchell, K. G.	40A	Unger, W. J.	43A
Evans, E.	73A	Munro, A. J.	248	Urbano, G.	38A
Field, A. C.	198	Munro, H. N.	214	Varela, G.	38A
Ford, J. E.	39A	Myers, A. W.	40A, 45A	Ward, P. F. V.	46A, 46A
Fraser, C.	55A	Naismith, D. J.	64A	Waring, J. J.	41A
Gale, M. M.	39A	Noakes, D. E.	40A	Waterlow, J. C.	234
Garlick, P. J.	43A	Ogston, D.	59A	Watkins, J.	43A
Garrow, J. S.	242	Orskov, E. R.	55A	Watson, F. G.	50A
Greenfield, H.	43A	Owen, E. C.	53A, 59A	Watson, R. H. J.	43A
Greenhalgh, J. F. D.	178	Palmer, R.	42A	Wenham, G.	60A
Harrison, G. F.	70A	Patterson, D. S. P.	171	West, D. W.	53A
Harwood, E. J.	66A, 67A	Payne, P. R.	225	White, F.	60A
Hervey, G. R.	54A	Perkins, D. J.	40A	Whitelaw, F. G.	44A, 50A
Hewitt, D.	47A	Peters, R. A.	46A	Williams, A. P.	40A, 69A
Hill, R.	45A	Pirrie, N. W.	255	Woodford, M.	39A
Hobson, P. N.	53A	Porter, J. W. G.	40A, 69A	Woodham, A. A.	48A
Horszczaruk, F.	45A	Porter, P.	40A	Yudkin, J.	43A

FORTHCOMING ISSUE

It is hoped to publish in the next issue of the *Proceedings of The Nutrition Society* reports of symposia on Plant Breeding and Nutrition (26-27 June 1969), Automated Analysis of Nitrogenous Compounds (13 September 1969), The Use of the Computer in Nutrition (25 October 1969) and Nutritional Problems of Urban Communities (5 December 1969) and abstracts of communications to be presented at meetings on 26 September and 4 December 1969.



Proceedings of the Nutrition Society

CONTENTS OF VOL. 28, No. 2, SEPTEMBER 1969

SYMPOSIUM PROCEEDINGS

Two Hundred and Seventh Scientific Meeting

NUTRITIONAL DISORDERS OF RUMINANTS

	PAGE
Metabolic and hormonal aspects of bovine ketosis and pregnancy toxæmia in the ewe. By D. S. P. PATTERSON and N. F. CUNNINGHAM	171
Kale anaemia. By J. F. D. GREENHALGH	178
Endocrine control of calcium and magnesium metabolism in ruminants. By A. D. CARE	183
Chronic copper toxicity of ruminants. By J. R. TODD	189
Urinary calculi in ruminants. By A. C. FIELD	198
Mycotoxins in ruminants. By M. C. LANCASTER	203

Two Hundred and Eighth Scientific Meeting

BIOCHEMICAL ASSESSMENT OF PROTEIN NEEDS

Chairman's opening remarks. By W. F. J. CUTHBERTSON	213
The absorption of protein from the intestine. By K. J. CARPENTER	214
Adaptation of mammalian protein metabolism to amino acid supply. By HAMISH N. MUNRO	214
Assessment of protein requirements by nitrogen balance. By D. S. MILLER and P. R. PAYNE	225
Enzymes and the assessment of protein nutrition. By J. C. WATERLOW and JOAN M. L. STEPHEN	234
Protein nutrition and wound healing. By J. S. GARROW	242
The control of haemoglobin synthesis: factors controlling the output of α and β chains. By R. T. HUNT, A. R. HUNTER and A. J. MUNRO	248
Complementary ways of meeting the world's protein need. By N. W. PIRIE	255

ABSTRACTS OF COMMUNICATIONS

Two Hundred and Ninth Scientific Meeting

Plasma polyunsaturated fatty acids of herbivores grazing pasture. By W. M. F. LEAT and JUDY BAKER	37A
Absorption of iodinated oleic acid- ¹³¹ I in rats adapted to diets with different levels of oleic acid. By G. VARELA and GLORIA URBANO	38A
The fatty acid composition of adipose and muscle tissue in domestic and free-living ruminants. By M. M. GALE, M. A. CRAWFORD and M. WOODFORD	39A
A folate-protein complex in cow's milk. By J. E. FORD, D. N. SALTER and K. J. SCOTT	39A
Immunoglobulins in sow mammary secretions throughout lactation and their significance as <i>Escherichia coli</i> antibodies to the young pig. By P. PORTER and D. E. NOAKES	40A
Interactions between the alkaline earth metal ions and purified bovine casein. By I. R. DICKSON and D. J. PERKINS	40A
Amino acid levels in blood plasma of growing pigs given diets supplemented with lysine. By R. BRAUDE, K. G. MITCHELL, A. W. MYRES, J. W. G. PORTER and A. P. WILLIAMS	40A
Changes in the plasma levels of free amino acids in relation to egg formation in the hen. By T. G. TAYLOR, J. J. WARING and R. K. SCOUGALL	41A
The biological availability of methionine sulphoxide. By GABRIELLE M. ELLINGER and R. PALMER	42A
Measurement of muscle protein turnover by constant intravenous infusion of ¹⁴ C-glycine. By P. J. GARLICK	43A
Degradation of human serum albumin by human pepsins. By W. J. UNGER, J. WATKINS and I. F. STAMFORD	43A
An improved diet for carbohydrate preference studies with rats: some criticisms of experimental diets. By HEATHER GREENFIELD, GEORGE M. BRIGGS, R. H. J. WATSON and JOHN YUDKIN	43A
The effect of restricted intake of a barley diet on rumen fermentation in cattle. By J. MARGARET EADIE, J. HYLDEGAARD-JENSEN, S. O. MANN, R. S. REID and F. G. WHITELAW	44A
Preliminary communication on studies of the digestive processes in pigs with intestinal cannulas. By R. BRAUDE, H. L. BUTTLE, F. HORSZCZARUK and A. W. MYRES	45A
The influence of meat meal and other high-protein feeding-stuffs on the survival of chicks inoculated with <i>Salmonella gallinarum</i> . By R. HILL	45A
The metabolism of fluoroacetate by plants. By P. F. V. WARD and N. S. HUSKISSON	46A
An organically combined fluorine compound in bone. By R. A. PFETERS, M. SHORTHOUSE and P. F. V. WARD	46A
Trypsin-inhibitory and growth-depressing activities of groundnut skins (testa). By K. ANANTHARAMAN	46A
Effects of raw soya-bean and navy-bean meals on germ-free and conventional chicks. By D. HEWITT and M. E. COATES	47A

Two Hundred and Tenth Scientific Meeting

Hydroxyproline content and cresol-red absorption as protein quality indicators respectively for meat by-products and soya-bean meals. By A. A. WOODHAM	48A
Glucose entry rates in sheep given diets of barley, dried grass or hay. By M. J. ULYATT, F. G. WHITELAW and F. G. WATSON	50A
Measurement of the flow of long-chain fatty acids into the duodenum of sheep. By AILEEN M. SCOTT, M. J. ULYATT, R. N. B. KAY and J. W. CZERKAWSKI	51A
Fermentation of various soluble carbohydrates by rumen micro-organisms. By J. W. CZERKAWSKI and GRACE BRECKENRIDGE	52A
A study of cultures of rumen anaerobic bacteria in the presence of excess riboflavine (vitamin B ₂). By P. N. HOBSON, R. SUMMERS, E. C. OWEN, JANE C. SPENCER and D. W. WEST	53A
A hypothetical mechanism for the regulation of food intake in relation to energy balance. By G. R. HERVEY	54A

[Continued on p. iii of wrapper]

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 £5 net in U.K. (\$16.50 in U.S.A.)

Lampart Gilbert Printers Ltd, Reading, England