

ANIMAL PRODUCTION

ANIMAL PRODUCTION

JOURNAL OF
THE BRITISH SOCIETY OF ANIMAL PRODUCTION

Edited by

GERALD WIENER
J. F. D. GREENHALGH
K. J. ROBERTSON

VOLUME 7
1965

OLIVER & BOYD LTD.
EDINBURGH AND LONDON

PRINTED AND PUBLISHED IN GREAT BRITAIN BY
OLIVER AND BOYD LTD., EDINBURGH

CONTENTS OF VOLUME 7

(LISTED ALPHABETICALLY BY AUTHOR)

	PAGE
BARBER, R. S., BRAUDE, R., CHAMBERLAIN, A. G., HOSKING, ZENA D., and MITCHELL, K. G. The value of feather meal as a protein supplement for growing pigs	103
BARBER, R. S., BRAUDE, R., HOSKING, ZENA D., and MITCHELL, K. G. The effects of different amounts of liquid skim-milk on pork pigs with particular reference to carcass quality	153
BICHARD, M., <i>see</i> TIMON, V. M.	
BOWERS, H. B., PRESTON, T. R., McDONALD, I., MACLEOD, N. A., and PHILIP, EUPHEMIA, B. Intensive beef production. 4. The effect on nitrogen retention of all-concentrate diets containing different levels of fish meal	19
BOWERS, H. B., PRESTON, T. R., MACLEOD, N. A., McDONALD, I., and PHILIP, EUPHEMIA, B. Intensive beef production. 5. The effect of different sources of protein on nitrogen retention	303
BOWERS, H. B., <i>see also</i> PRESTON, T. R.	
BOWLAND, J. P., BRAUDE, R., and ROWELL, J. G. A note on relations between carcass characteristics of bacon pigs and weaning weight, rate of gain and length	389
BRAUDE, R., <i>see</i> BARBER, R. S.	
BRAUDE, R., <i>see also</i> BOWLAND, J. P.	
BURT, A. W. A., <i>see</i> HORROCKS, D.	
BUTTLE, H. R. L., HANCOCK, J. L., and PURSER, A. F. Counting dead spermatozoa in frozen semen	59
CARROLL, F. D., and ROLLINS, W. C. Performance of Charbray and Hereford cattle and crosses between them	119
CHAMBERLAIN, A. G., <i>see</i> BARBER, R. S.	
COEY, W. E., <i>see</i> HOLME, D. W.	
CUNNINGHAM, E. P. The evaluation of sires from progeny test data	221
CRAIG, JEAN, <i>see</i> TAYLOR, ST. C. S.	
DE WILDE, R. O., <i>see</i> VANSCHOU BROEK, F. X.	
DRAKE-BROCKMAN, R. M., <i>see</i> HOLMES, W.	
DRAKE-BROCKMAN, R. M., <i>see also</i> JONES, J. G. W.	
DUCKWORTH, J. E. The influence of pre-weaning nutrition on subsequent growth and development of bacon pigs	165
GRIFFITHS, T. W. A comparison of two methods for allocating concentrates to dairy cows according to yield	263
HADJIPIERIS, G., JONES, J. G. W., and HOLMES, W. The effect of age and live-weight on the feed intake of grazing wether sheep	309

HANKE, H. E., <i>see</i> JORDAN, R. M.	
HANCOCK, J. L., <i>see</i> BUTTLE, H. R. L.	
HODGSON, J. The effect of weaning treatment on the development of solid food intake in calves	7
HOLME, D. W., COEY, W. E., and ROBINSON, K. L. The effect of level of dietary protein on the carcass composition of bacon pigs	363
HOLME, D. W., and ROBINSON, K. L. A study of water allowances for the bacon pig	377
HOLMES, W., JONES, J. G. W., DRAKE-BROCKMAN, R. M., and WHITE, N. The feed intake of milk cows. I. Intake of winter rations during pregnancy and lactation and the influence of change to pasture	27
HOLMES, W., and JONES, J. G. W. The feed intake of milk cows. II. The effect of roughage quality during late pregnancy and lactation	39
HOLMES, W., <i>see also</i> HADJIPIERIS, G.	
HOLMES, W., <i>see also</i> JONES, J. G. W.	
HORROCKS, D., BURT, A. W. A., THOMAS, D. C., and LANCASTER, M. C. Effects of groundnut meal containing aflatoxin in cattle diets	253
HOSKING, ZENA D., <i>see</i> BARBER, R. S.	
JAMES, J. W., <i>see</i> MCBRIDE, G.	
JONES, J. G. W., DRAKE-BROCKMAN, R. M., and HOLMES, W. The feed intake of grazing cattle. III. The influence of level of milk yield	141
JONES, J. G. W., <i>see also</i> HADJIPIERIS, G.	
JONES, J. G. W., <i>see also</i> HOLMES, W.	
JORDAN, R. M., and HANKE, H. E. Effect of hay pellets, pelleted ear corn or complete pelleted rations on the feedlot performance of lambs	233
LANCASTER, M. C., <i>see</i> HORROCKS, D.	
LARGE, R. V. The effect of concentration of milk substitute on the performance of artificially reared lambs	325
LAWRENCE, T. L. J., and PEARCE, J. A note on the effect of certain variables on the performance of early-weaned calves	393
MCBRIDE, G., JAMES, J. W., and WYETH, G. S. F. Social behaviour of domestic animals. VII. Variation in weaning weight in pigs	67
MCCARTHY, J. C. Genetic and environmental control of foetal and placental growth in the mouse	347
MCDONALD, I., <i>see</i> BOWERS, H. B.	
MACLEOD, N. A., <i>see</i> BOWERS, H. B.	
MACLEOD, N. A., <i>see also</i> PRESTON, T. R.	
MITCHELL, K. G., <i>see</i> BARBER, R. S.	
NAIK, S. N., SUKUMARAN, P. K., and SANGHVI, L. D. A note on blood groups and haemoglobin variants in Zebu cattle	275
PEARCE, J., <i>see</i> LAWRENCE, T. L. J.	

CONTENTS

vii
PAGE

PEASE, A. H. R., and SMITH, C. A note on the heritability of muscle colour in pigs	273
PHILIP, EUPHEMIA B., <i>see</i> BOWERS, H. B.	
PHILIP, EUPHEMIA B., <i>see also</i> PRESTON, T. R.	
PRESTON, T. R., BOWERS, H. B., MACLEOD, N. A., and PHILIP, EUPHEMIA B. Intensive beef production. 6. A note on the nutritive value of high moisture barley stored anaerobically	385
PRESTON, T. R., WHITELAW, F. G., MACLEOD, N. A., and PHILIP, EUPHEMIA B. The nutrition of the early-weaned calf. VIII. The effect on nitrogen retention of diets containing different levels of fish meal	53
PRESTON, T. R., <i>see also</i> BOWERS, H. B.	
PURSER, A. F. Repeatability and heritability of fertility in hill sheep	75
PURSER, A. F., <i>see also</i> BUTTLE, H. R. L.	
RICKABY, C. D. Feeding of dairy cows: a survey of the concentrate usage of high yielding cows during the winter	247
ROBERTSON, ALAN. The interpretation of genotypic ratios in domestic animal populations	319
ROBERTSON, K. J. A note on the influence of parity of dam on daughter heifer performance and on selection of replacements in dairy cattle	397
ROBINSON, K. L., <i>see</i> HOLME, D. W.	
ROLLINS, W. C., <i>see</i> CARROLL, F. D.	
ROSS, G. J. S., <i>see</i> SMITH, C.	
ROWELL, J. G., <i>see</i> BOWLAND, J. P.	
SANGHVI, L. D., <i>see</i> NAIK, S. N.	
SLEE, J., <i>see</i> WIENNER, G.	
SMITH, C. Results of pig progeny testing in Great Britain	133
SMITH, C., and ROSS, G. J. S. Genetic parameters of British Landrace bacon pigs	291
SMITH, C., <i>see also</i> PEASE, A. H. R.	
SUKUMARAN, P. K., <i>see</i> NAIK, S. N.	
TAYLOR, J. H., <i>see</i> WALKER, ELIZABETH A.	
TAYLOR, ST. C. S., and CRAIG, JEAN. Genetic correlation during growth of twin cattle	83
TAYLOR, ST. C. S. A relation between mature weight and time taken to mature in mammals	203
THOMAS, D. C., <i>see</i> HORROCKS, D.	
TIMON, V. M., and BICHARD, MAURICE. Quantitative estimates of lamb carcass composition. 1. Sample joints	173
TIMON, V. M., and BICHARD, MAURICE. Quantitative estimates of lamb carcass composition. 2. Specific gravity determination	183

	PAGE
TIMON, V. M., and BICHARD, MAURICE. Quantitative estimates of lamb carcass composition. 3. Carcass measurements and a comparison of the predictive efficiency of sample joint composition, carcass specific gravity determinations and carcass measurements	189
TROELSEN, J. E. A note on sustained release of chromic oxide in the rumen of sheep from a chromic oxide-dental plaster pellet	127
TROELSEN, J. E. Sustained release of chromic oxide in the rumen of sheep from a CR ₂ O ₃ -paper pellet	239
VANSCHOU BROEK, F. X., DE WILDE, R. O., and VAN SPAENDONCK, R. L. The influence of the level of feeding of suckled pigs on subsequent performance during fattening	111
VAN SPAENDONCK, R. L., <i>see</i> VANSCHOU BROEK, F. X.	
WALKER, ELIZABETH A., and TAYLOR, J. H. The effect of parentally administered iron upon outdoor-reared piglets	1
WHITE, N., <i>see</i> HOLMES, W.	
WHITELAW, F. G., <i>see</i> PRESTON, T. R.	
WIENER, G., and SLEE, J. Maternal and genetic influences on follicle and fleece development in Lincoln and Welsh Mountain sheep—a study involving egg transfer	333
WYETH, G. S. F., <i>see</i> MCBRIDE, G.	
<hr/>	
PROCEEDINGS OF THE 41ST MEETING OF THE BRITISH SOCIETY OF ANIMAL PRODUCTION, Bangor, 7-11 September 1964	131
PROCEEDINGS OF THE 42ND MEETING OF THE BRITISH SOCIETY OF ANIMAL PRODUCTION, Harrogate, 29-31 March 1965	279

Summary: Every article should have a short summary complete in itself and understandable without reference to the paper.

References: Only papers closely related to the author's work should be referred to; exhaustive lists should be avoided. Bibliographical details should be in the following order: author's name, initials, year, title of paper, title of journal (abbreviated according to the World List of Scientific Periodicals), volume of journal, first and last page of paper. References should be listed in alphabetical order.

Examples:

DONALD, H. P., & PURSER, A. F., 1956. Competition *in utero* between twin lambs. *J. agric. Sci.*, 48: 245-249.

HAMMOND, J., 1932. *Growth and the Development of Mutton Qualities in the Sheep*. Oliver & Boyd, Edinburgh.

In the text, references should be made by giving author and year; at the first mention all authors should be named, thereafter the first author followed by *et al.* should be used for papers with more than two authors.

Proofs are supplied once in galley form and must be returned corrected to the Editors within seven days. Only minor corrections will be accepted; other alterations (apart from those due to printer's errors) will be charged to authors.

Reprints: Twenty-five reprints of each paper will be supplied free to authors on request. Further copies may be purchased if the order is sent at the galley proof stage. No free reprints are supplied for *Notes*, but copies may be purchased.

Animal Production is published three times a year. Annual subscription for every three numbers is 65s. (or \$11.00 in the U.S.A. and Canada) and the price for a single number is 25s. (or \$4.00) net.

Business matters, including regular subscriptions and sales (the current Journal, back numbers, the *Proceedings of the British Society of Animal Production* (1944-58) and reprints), should be addressed to Messrs. Oliver & Boyd Ltd., Tweeddale Court, 14 High Street, Edinburgh 1.

Editors: GERALD WIENER, A.R.C. Animal Breeding Research Organisation.

J. F. D. GREENHALGH, Rowett Research Institute.

Assistant Editor: K. J. ROBERTSON, Livestock Records Bureau.

Front cover centrepiece: Assyrian horses, 8th century B.C.

CONTENTS

	PAGE
SMITH, C., and ROSS, G. J. S. Genetic parameters of British Landrace bacon pigs	291
BOWERS, H. B., PRESTON, T. R., MACLEOD, N. A., McDONALD, I., and PHILIP, EUPHEMIA B. Intensive beef production. 5. The effect of different sources of protein on nitrogen retention .	303
HADJIPIERIS, G., JONES, J. G. W., and HOLMES, W. The effect of age and live-weight on the feed intake of grazing wether sheep	309
ROBERTSON, ALAN. The interpretation of genotypic ratios in domestic animal populations	319
LARGE, R. V. The effect of concentration of milk substitute on the performance of artificially reared lambs	325
WIENER, G., and SLEE, J. Maternal and genetic influences on follicle and fleece development in Lincoln and Welsh Mountain sheep—a study involving egg transfer	333
MCCARTHY, J. C. Genetic and environmental control of foetal and placental growth in the mouse	347
HOLME, D. W., COEY, W. E., and ROBINSON, K. L. The effect of level of dietary protein on the carcass composition of bacon pigs	363
HOLME, D. W., and ROBINSON, K. L. A study of water allowances for the bacon pig	377
PRESTON, T. R., BOWERS, H. B., MACLEOD, N. A., and PHILIP, EUPHEMIA B. Intensive beef production. 6. A note on the nutritive value of high moisture barley stored anaerobically .	385
BOWLAND, J. P., BRAUDE, R., and ROWELL, J. G. A note on relations between carcass characteristics of bacon pigs and weaning weight, rate of gain and length	389
LAWRENCE, T. L. J., and PEARCE, J. A note on the effect of certain variables on the performance of early-weaned calves	393
ROBERTSON, K. J. A note on the influence of parity of dam on daughter heifer performance and on selection of replacements in dairy cattle	397