*Illustrations.* The same material should not normally be presented in tables and figures. Legends should be typed on a separate sheet.

a) Diagrams should be drawn in black ink, about twice the size of the finished block, on white paper or card, stout tracing paper or plastic film. Photographed diagrams are also accepted. Lettering inside the framework of the diagram should be avoided as far as possible but if unavoidable it should be included on a fly-leaf.

b) Photographs intended for half-tone reproduction should be on glossy paper. They will be accepted only if found necessary by the editors.

c) Colour plates are unlikely to be accepted unless the authors bear the cost.

Tables should be as simple and as few as possible. Each table should be typed on a separate sheet.

Abstract. Every paper should have a short abstract (not more than 250 words for a paper and 120 words for a note) complete in itself and understandable without reference to the paper. The abstract will be printed at the beginning of the paper and preferably should be in the format of unnumbered short paragraphs.

*Keywords.* Up to a maximum of five keywords selected from the *CAB Thesaurus* (1988) or from an equivalent reference volume should be listed at the end of the Abstract.

*References.* Only papers closely related to the author's work should be referred to; exhaustive lists should be avoided. The arrangement of references should be as in recent papers in Animal Production; details are given in the notes for guidance.

*Proofs* are supplied once and must be returned corrected to the editors within 3 days. Only essential corrections should be made.

*Reprints.* Twenty-five reprints of each paper will be supplied free of charge to authors on request. Further copies may be purchased if the order is sent at the proof-stage. Reprints are not supplied for notes.

Annual subscription is £110.00 (or \$220.00 in the USA and Canada) and the price for a single part is £20.00 (or \$40.00) net.

Abstracts of papers presented at British Society of Animal Production winter meeting are published as a separate section in the June issue of Animal Production.

*Correspondence* regarding subscriptions and sales (current and back numbers of the Journal) and any other enquiries, including those concerning copyright, should be addressed to: Durrant Periodicals, Winton Lea, Pencaitland, East Lothian, Scotland EH34 5AY.

Senior editor T. L. J. Lawrence, University of Liverpool

## Editors

D. G. Chamberlain, Hannah Institute, Ayr W. Haresign, University of Nottingham C. L. Johnson, University of Leeds I. J. Lean, Wye College, University of London B. J. McGuirk, Genus, Newcastle upon Tyne C. A. Morgan, Scottish Agricultural College, Edinburgh E. Owen, University of Reading R. Thompson, AFRC Institute of Animal Physiology and Genetics Research, Edinburgh A. J. F. Webster, University of Bristol J. D. Wood, University of Bristol

Technical editors Hilary Davies Marie C. Pitkethly

Notes to users in the USA. The appearance of the fee codes in this journal indicates the copyright owner's consent that copies of the article may be made for personal or internal use on the following conditions. The copier must pay the stated per-copy fee through the Copyright Clearance Center, Inc., 21 Congress Street, Salem, Massachusetts 01970, USA, for copying beyond that permitted by sections 107 and 108 of the US Copyright Law. For territories outside north America, permission should be sought direct from the copyright holder. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertizing and promotional purposes, for creating new collective works or for resale.

| Contents   | Page        |
|--|-------------|
| Hammond Memorial Lecture   |             |
| Blaxter, the late K. L. and Webster, A. J. F.<br>Animal production and food: real problems and paranoia  | 261         |
| Papers   |             |
| Miller, K. and Wood-Gush, D. G. M.<br>Some effects of housing on the social behaviour of dairy cows  | 271         |
| Brotherstone, A. and Hill, W. G.<br>Dairy herd life in relation to linear type traits and production.<br>1. Phenotypic and genetic analyses in pedigree type classified herds                                    | 279         |
| Brotherstone, S. and Hill, W. G.<br>Dairy herd life in relation to linear type traits and production.<br>2. Genetic analyses for pedigree and non-pedigree cows  | 289         |
| Bruckental, I., Ascarelli, I., Yosif, B. and Alumot, E.<br>Effect of duodenal proline infusion on milk production and composition in dairy cows  | 299         |
| Susmel, P., Spanghero, M., Stefanon, B., Mills, C. R. and Cargnelutti, C.<br>Effect of NDF concentration and physical form of fescue hay on rumen degradability, intake<br>and rumen turn-over of cows           | 305         |
| Clinquart, A., Istasse, L., Dufrasne, I., Mayombo, A., Van Eenaeme, C. and Bienfait, J. M.<br>Effects on animal performance and fat composition of two fat concentrates in diets for growing-<br>fattening bulls | 315         |
| Mathison, G. W., Engstrom, D. F. and Macleod, D. D.<br>Effect of feeding whole and rolled barley to steers in the morning or afternoon in diets<br>containing differing proportions of hay and grain             | 321         |
| Bøe, K., Nedkvitne, J. J. and Austbø, D.<br>The effect of different housing systems and feeding regimes on the performance and rectal<br>temperature of sheep  | 331         |
| Zainur, A. S., Hoskinson, R. M. and Kellaway, R. C.<br>Production responses of lambs immunized against somatostatin  | 339         |
| Planella, J. and Cook, G. L.<br>Accuracy and consistency of prediction of pig carcass lean concentration from P2 fat thickness<br>and sample joint dissection  | 345         |
| Engel, B. and Walstra, P.<br>A simple method to increase precision or reduce expense in regression experiments to predict the<br>proportion of lean meat of carcasses  | 353         |
| Appleby, M. C., Pajor, E. A. and Fraser, D.<br>Effects of management options on creep feeding by piglets   | 361         |
| Goodall, E. A., McLoughlin, E. M., Menzies, F. D. and Mcllroy, S. G.<br>Time series analysis of the prevalence of <i>Ascaris suum</i> infections in pigs using abattoir<br>condemnation data                     | 367         |
| Stamataris, C., Kyriazakis, I. and Emmans, G. C.<br>The performance and body composition of young pigs following a period of growth retardation<br>by food restriction   | 373         |
| Beech, S. A., Elliott, R. and Batterham, E. S.<br>Sucrose as an energy source for growing pigs: a comparison of the effects of sucrose, starch and<br>glucose on energy and protein retention                    | 383         |
| Bright, G.<br>Economic weights from profit equations: appraising their accuracy  | 395         |
| Notes  |             |
| Strandberg, E. and Lundberg, C.<br>A note on the estimation of environmental effects on lactation curves   | <u> 399</u> |
| Toro, M., Silió, L. and Pérez-Enciso, M.<br>A note on the use of mate selection in closed MOET breeding schemes  | 403         |
| Forcada, F., Abecia, J. A. and Zarazaga, L.<br>A note on attainment of puberty of September-born, early-maturing ewe lambs in relation to level<br>of nutrition  | 407         |
| Author index   | 410         |
| Subject index  | 412         |
|  |             |

COPYRIGHT © 1991 BRITISH SOCIETY OF ANIMAL PRODUCTION Printed in Great Britain by D & J CROAL LIMITED, HADDINGTON, EAST LOTHIAN