# ANIMAL PRODUCTION



JOURNAL OF THE BRITISH SOCIETY OF ANIMAL PRODUCTION

DEGEMBER 1972

VOL. 15 PART 3

LONGMAN

# INFORMATION FOR CONTRIBUTORS TO ANIMAL PRODUCTION

Detailed notes for guidance in the preparation of manuscripts are printed in Volume 13, pages ix to xx. A few general points are given below.

Animal Production publishes papers on original research provided that they have not been and, with the exception of authors' summaries, will not be published elsewhere without the Editors' written permission. Authors' summaries can be reproduced if full acknowledgement of the source is made. Contributions may be in the field of animal production, or in any related scientific field. Reports on techniques will be published only as appendices to scientific papers. Results of research which do not warrant a comprehensive presentation may be submitted for consideration as Notes. Notes are not intended for the publication of interim results. They should not exceed 2000 words or the equivalent inclusive of tables and illustrations.

Manuscripts should be typewritten in double spacing with wide margins. Each page and the lines on each page should be numbered. Two copies of the typescript (and of illustrations) should be sent to

Dr. Gerald Wiener, Animal Production, A.R.C. Animal Breeding Research Organisation, West Mains Road, Edinburgh EH9 3JQ, Scotland

Manuscripts are not returned with proofs; authors should therefore retain copies.

Units of measurement. Metric units should be used. SI units will be accepted but are not obligatory.

Symbols and abbreviations. Authors should consult the notes prepared for guidance. Levels of statistical significance which can be indicated without explanation are: \* = P < 0.05, \*\* = P < 0.01, \*\*\* = P < 0.001.

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 Indian ink, about twice the size of the finished block, on Bristol board, stout tracing paper or plastic film. Photographed diagrams are also accepted. Lettering inside the framework of the diagram should be inserted in Indian ink. Marginal lettering may, if preferred, be inserted lightly in pencil.
- (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 authors bear the cost. *Tables* should be as simple and as few as possible. When constructing tables, it would be helpful if authors would take into account the size and shape of the pages of *Animal Production*.

[Continued on inside back cover

Front cover centrepiece: Egyptian greyhound. Beni Hassan 12th dynasty c. 1900 B.C. (after Carter et al., 1900).

# AMERICAN SOCIETY OF ANIMAL SCIENCE

PUBLISHERS OF THE MONTHLY

### Journal of Animal Science

113 North Neil Street, Champaign, Illinois 61820

The Journal of Animal Science is published monthly by the American Society of Animal Science. It contains papers dealing with livestock production problems and review papers on subjects of general interest to those dealing with livestock production problems. Papers are classified in the table of contents under the following headings: Applied Animal Science, Breeding and Genetics, Meat Science and Muscle Biology, Nonruminant Nutrition, Physiology and Endocrinology, Ruminant Nutrition, and Teaching.

All persons engaged or previously engaged in investigation, instruction or extension in animal production or in the production of livestock products are eligible for membership in the Society. Membership may be obtained after formal application sponsored by one member of the Society in good standing, the payment of dues, and election by the membership committee. The annual membership dues are: U.S. and Canada, \$20.00; South and Central America, \$20.50; other countries, \$21.00; and this includes a subscription to the Journal of Animal Science.

Correspondence concerning subscriptions, purchase of single copies and back issues and related business should be addressed to the Business Manager, Claude Cruse, 425 Illinois Building, 113 North Neil Street, Champaign, Illinois 61820, U.S.A. The subscription price for nonmembers is \$24.00 in the United States and Canada, \$24.50 in the rest of North and South America, and \$25.00 in other places. Checks should be made payable to the American Society of Animal Science. Foreign subscribers are requested to remit by international money order or by a draft on a New York bank.

#### The Indian Journal of Animal Sciences

The name of The Indian Journal of Veterinary Science and Animal Husbandry has been changed to The Indian Journal of Animal Sciences. With a view to accommodating the increasing flow of articles, the periodicity of this journal has also been changed into a bi-monthly from a quarterly. This journal, now in its 40th year of publication, presents articles reporting the original research work on different aspects of Animal Sciences—Animal Husbandry, Animal Health, Dairy Science, Dairy Technology, Animal Production, etc.—conducted in India and other countries.

Single copy: Sh.7 d6. \$0.85

Annual Subscription: Sh.45.00 \$5.00

Copies available from:

The Business Manager, Indian Council of Agricultural Research, Krishi Bhavan, New Delhi 1.

### The Journal of Agricultural Science

Vol. 78 Part 3 June 1972

#### Contents include

- R. A. GUIRGIS and E. SALAH E. GALAL. The association between kemp and some vigour and wool characteristics in Barki and merino Barki cross

  K. W. Morr. The effect of different extraction procedures on the recovery of cell walls in forage and
- faeces from cattle and sheep
- An assessment of the quality of forage from its cell-wall content and amount of cell wall K. W. MOIR digested.
- A. M. YASSEN an M. A. EL-KAMASH
  A. M. YASSEN and M. N. MAHMOUD

  Relationship between body weight and testicular size in buffalo
- M. E. CASTLE A comparative study of the feeding value of dried sugar-beet pulp for milk production R. WEBSTER and P. H. T. BECKETT Matric suctions to which soils in South Central England drain.

  J. T. WOOD, D. J. GREENWOOD and T. J. CLEAVER Interactions between the beneficial effects of nitrogen,
- phosphate and potassium on plant growth

  J. K. R. GASSER and the late M. A. P. THORBURN

  The growth, composition and nutrient uptake of spring wheat. Effects of fertilizer-N, irrigation and CCC on dry matter and N, P, K, Ca, Mg and Na. P. A. CAWSE and D. SHELDON Rapid reduction of nitrate in soil re-moistened after air-drying.

  K. VOHNOUT and J. V. BATEMAN Effects of crude fibre upon feeding efficiency of cattle in 'warm'
- environments
- J. H. L. MORGAN Effect of plane of nutrition in early life on subsequent live-weight gain, carcass and muscle characteristics and eating quality of meat in cattle.

£4.00 net (\$12.00 in USA). Annual subscription £18.00 net (\$57.00) for six parts.

#### CAMBRIDGE UNIVERSITY PRESS

Bentley House, 200 Euston Road, London NW1 2DB American Branch: 32 East 57th Street, New York, N.Y. 10022

## **Journal of Dairy Research**

Vol 39, No. 2 June 1972

H. BURTON Deposit formation throughout lactation

W. MANSON and T. CAROLAN Alkaline dephosphorylation of  $\beta$ -casein R. WAITE and G. M. SMITH Mastitis and Amido Black protein values Y. S. PAN, L. J. COOK and T. W. SCOTT Treated dietary oil and milk composi-

L. J. COOK, T. W. SCOTT and Y. S. PAN Plasma and milk fatty acids

M. H. ABD ÉL-SALAM and SAFINAZ EL-SHIBINY Protein changes in Domiati cheese

G. H. PALMER and A. J. MUDD Micro-organisms in stored bovine colostrum

N. J. WALKER Browning in casein and skim-milk powder R. VERBEKE, E. ROETS, A. M. MASSART-LEEN and G. PEETERS Amino acid metabolism by perfused udder

A. K. R. McDOWELL Methods for estimation of SNF M. L. GREEN Rennet substitutes for Cheddar cheese-making

J. H. PRENTICE Electrolytic conductivity of milk R. L. Y. LYSTER Review. Chemistry of milk proteins

£4.50 net (\$13.50 in USA). Annual subscriptions £10.00 net (\$30.00 in USA) for 1972.

#### CAMBRIDGE UNIVERSITY PRESS

Do YOU know the developments taking place in the world's dairying centres?

#### DAIRY SCIENCE ABSTRACTS

compiled from world literature by the

COMMONWEALTH BUREAU OF DAIRY SCIENCE AND TECHNOLOGY SHINFIELD · READING · ENGLAND

brings that knowledge to the dairy scientist and technologist. Every month in its review articles and its abstracts will be found information on research and development reported in all branches of dairying throughout the world.

Annual subscription: £12.00 to subscribers in the Commonwealth and the Republic of Ireland whose governments contribute to the Commonwealth Agricultural Bureaux.

£30.00 to subscribers in non-contributing countries.

Order it through your bookseller or direct from

COMMONWEALTH AGRICULTURAL BUREAUX CENTRAL SALES BRANCH FARNHAM ROYAL · SLOUGH · ENGLAND

## **Animal Behaviour**

A journal for ethologists and psychologists

The official organ of the Association for the Study of Animal Behaviour and the Animal Behaviour Society in co-operation with the Ecological Society of America and the American Society of Zoologists. Animal Behaviour is the foremost English language journal devoted to the scientific study of the behaviour of all members of the animal kingdom, including birds, fish and insects. The contents cover the aspects of ecology, evolution, genetics, breeding, nutrition, endocrinology, physiology and pharmacology. It has an international reputation, with contributors and readers in most countries of the world and reaches research specialists, lecturers, zoologists, animal breeders, physiologists, veterinary surgeons and many others.

Published monthly

Annual Subscription £8:00

U.S.A. and Canada \$25.00

## BAILLIÈRE X TINDALL

7/8 Henrietta Street London WC2E 8QE

## Index Veterinarius

#### A COMPLETE BIBLIOGRAPHY OF VETERINARY LITERATURE

This subject and author index of current literature on veterinary and related sciences is produced by the Commonwealth Bureau of Animal Health and was first published in 1933. It is issued quarterly and each year about 15,000 references are listed.

For compilation of the *Index* 700 periodicals in 22 languages are searched and coverage embraces the whole world.

Annual subscription is £22.50 (\$58.50) (reduced rate to residents in British Commonwealth or Republic of Ireland—£11.25). Orders may be sent to the Central Sales Branch, Commonwealth Agricultural Bureaux, Farnham Royal, Slough, Bucks.