EXPERIMENTAL AGRICULTURE

Editor PROFESSOR J. P. HUDSON

Editorial Board PROFESSOR E. W. RUSSELL (CHAIRMAN)

PROFESSOR A. H. BUNTING PROFESSOR D. K. BRITTON DR. E. E. CHEESMAN PROFESSOR J. D. IVINS

A. R. MELVILLE D. RHIND DR. G. WATTS PADWICK DR. C. C. WEBSTER



CAMBRIDGE UNIVERSITY PRESS

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

> 1975 Subscription £11.50 net (U.S.A. and Canada US\$34.50) Single parts £4.00 net (U.S.A. and Canada US\$12.00)

OVERSEAS ADVISORS

DR. J. A. ANDERSON (Canada)
DR. M. A. A. ANSARI (Pakistan)
DR. M. F. GHANDRARATNE (Ceylon)
DR. K. B. LAL (F.A.O.)

DR. J. MELVILLE (Australia)
DR. A. H. MOSEMAN (United States)
PROFESSOR M. A. NOUR (Sudan)
DR. B. P. PAL (India)

DR. S. J. DU PLESSIS (South Africa)

Experimental Agriculture publishes the results of research on crops, herbage and forage, with the main emphasis on field experiments relevant to husbandry in the warmer climates of the world. It also includes accounts of new experimental techniques, discussions of specific problems met in countries where agricultural production is developing rapidly, review articles on new developments in scientific agriculture, and occasional papers on technical, economic and sociological aspects of farming systems. The journal is the successor to The Empire Journal of Experimental Agriculture.

Experimental Agriculture is published quarterly. Four parts form a volume.

Subscriptions may be sent to any bookseller or subscription agent or direct to Cambridge University Press, P.O. Box 92, London NW1 2DB or in the U.S.A. and Canada to the American branch of the Press, 32 East 57th Street, New York, N.Y. 10022. The 1975 subscription price is £11.50 net (including postage) for a volume (US\$34.50 in the U.S.A. and Canada), payable in advance; separate parts cost £4.00 net or \$12.00 each (plus postage). Second class postage paid at New York, N.Y.

Back Volumes. Inquiries for Vols. 1-32 of The Empire Journal of Experimental Agriculture should be addressed to Wm Dawson & Sons Ltd, Cannon House, Folkestone, Kent. Previously published parts of Experimental Agriculture are available from the London or New York offices of Cambridge University Press.

C Cambridge University Press 1975

Permissions. For permission to reproduce material from *Experimental Agriculture*, please apply to the London or New York office of Cambridge University Press.

ISI Tear Service, 325 Chestnut Street, Philadelphia, Pennsylvania 19106, U.S.A., is authorized to supply single copies of separate articles for private use only.

NOTES FOR CONTRIBUTORS

Contributions will be welcomed from scientists of all nationalities, particularly those working in tropical and sub-tropical countries where up-to-date techniques of agricultural experimentation are helping in the rapid development of more modern methods of farm production. Contributions, which must be written in English, should be sent to the Editor, Professor J. P. Hudson, The Spinney, Wrington, Bristol BS18 7LB, England.

Conditions of acceptance. Submission of a paper will be taken to imply that the material has not previously been published, and is not being considered for publication elsewhere. Papers published in Experimental Agriculture may not be reprinted or published in translation without permission from the Editor, given on behalf of the Editorial Board.

General lay-out. Before having their manuscripts typed contributors are asked to look carefully at the lay-out of other papers published in a recent number of this journal, to ensure that their own papers, as submitted, conform as closely as possible to the accepted pattern. This very much facilitates the work of the Editor and may often result in a paper being published earlier than if it requires a great deal of detailed editorial attention. Numerical data, which should only be included if they are essential to the argument, can be presented either in the form of tables or diagrams, but should never be shown in both ways. It is not the normal custom of the Journal to publish notes shorter than about 2000 words (4 pages) or longer than about 6000 words (12 pages including illustrations).

Typescripts. A top copy and one carbon copy of the script should be submitted, typed with double spacing, on one side of the paper only and with margins of about 1½ inches at the left-hand side and head of each sheet. Quarto size is preferred to foolscap.

Title. The development of automatic bibliographic methods, based on single-word indexing of the significant words in the title, makes it essential that the title of each paper should contain the maximum of relevant informa-

THE JOURNAL OF AGRICULTURAL SCIENCE

CONTENTS

Vol. 82 Part 3 June 1974

- G. T. Daws and V. R. Squires. Observations on the effects of temperature and distance to water on the behaviour of Merino and Border Leicester sheep.
- A. S. M. Marei, A. S. A. Saad and G. Tantawy. Laboratory and field evaluation of certain pesticides against the adults and eggs of *Tetranychus cinnabarinus* Boisduval on cotton.
- P. G. BOARD, J. ROBERTS and J. V. EVANS. The genetic control of erythrocyte reduced glutathione in Australian Merino sheep.
- C. J. F. HARROP and A. T. PHILLIPSON. Nitrogen metabolism in the ovine stomach. 1. The transfer of urea from the blood to the rumen.
- C. J. F. HARROP. Nitrogen metabolism in the ovine stomach. 2. Factors influencing ruminal ammonia levels in sheep maintained on different diets.
- M. C. Rees, D. J. Minson and F. W. Smith. The effect of supplementary and fertilizer sulphur on voluntary intake, digestibility, retention time in the rumen, and site of digestion of pangola grass in sheep.
- K. W. Moir. The estimation of the metabolizable energy of forage from its cell-wall content and digestible cell wall.
- G. FISHWICK, J. FRASER, R. G. HEMINGWAY, J. J. PARKINS and N. S. RITCHIE. The voluntary intake and digestibility of oat straw by pregnant beef cows as influenced by urea and phosphorus supplementation contained in molassed sugar-beet pulp.
- D. L. Matthews, C. O. Grogan and C. E. Manchester. Terminal ear mutant of maize (Zea mays L.).
- E. J. M. KIRBY. Ear development in spring wheat.
- M. N. McLeod and D. J. Minson. Differences in carbohydrate fractions between *Lolium* perenne and two tropical grasses of similar dry-matter digestibility.
- D. J. Greenwood, J. T. Wood and T. J. Cleaver. A dynamic model for the effects of soil and weather conditions on nitrogen response.
- D. A. R. DAVIES, P. M. LERMAN and MARGARET M. CROSSE. Food preferences after weaning of artificially reared lambs.
- G. J. ROWLANDS, J. M. PAYNE, SALLY M. DEW and R. MANSTON. Individuality and heritability of the blood composition of calves with particular reference to the selection of stock with improved growth potential.
- F. G. H. LUPTON, R. H. OLIVER and P. RUCKENBAUER. An analysis of the factors determining yields in crosses between semi-dwarf and taller wheat varieties.

£5.00 net (\$15.00 in USA and Canada). 1975 Subscription £24.00 net (\$77.00 in USA and Canada) for two volumes

CAMBRIDGE UNIVERSITY PRESS

BENTLEY HOUSE, 200 EUSTON ROAD, LONDON, NW1 2DB American Branch: 32 EAST 57th STREET, NEW YORK, N.Y. 10022

AGRONOMY JOURNAL

Researchers in all fields related to agronomic science will find AGRONOMY JOURNAL extremely valuable. This bi-monthly publication of the American Society of Agronomy is well-known for its technical reports on all aspects of plant and soil science. Articles in past issues have contained important information on the effects of herbicides, nutrients, and fertilizers on plant growth; environmental factors affecting plants and soils; soil water regimes, soil temperature, irrigation, and drought stress; crop and range management; and new technology, including computer programs and improved methods and equipment. Publication is open to Society members.

\$22.00 per year in U.S. \$24.00 per year elsewhere.

> American Society of Agronomy 677 South Segoe Road, Madison, Wisconsin 53711, U.S.A.