THE JOURNAL OF AGRICULTURAL SCIENCE

EDITED BY

- G. D. H. BELL, C.B.E., PH.D., F.R.S., Plant Breeding Institute, Cambridge
- K. L. BLAXTER, PH.D., N.D.A. (HONS.), D.SC., F.R.S.E., F.R.S., Rowett Research Institute, Bucksburn, Aberdeen
- G. W. COOKE, PH.D., F.R.I.C., Rothamsted Experimental Station, Harpenden
- JOHN HAMMOND, Jr., M.A., School of Agriculture, Cambridge
- PROF. SIR J. B. HUTCHINSON, C.M.G., SC.D., F.R.S., School of Agriculture, Cambridge
- H. L. PENMAN, O.B.E., PH.D., F.R.S., Rothamsted Experimental Station, Harpenden
- W. J. RIDGMAN, M.A., School of Agriculture, Cambridge
- H. H. ROGERS, B.SC., DIP.AG.SCI., Plant Breeding Institute, Cambridge
- PROF. E. W. RUSSELL, C.M.G., PH.D., F.INST.P., Department of Soil Science, University of Reading
- F. YATES, C.B.E., SC.D., F.R.S., Rothamsted Experimental Station, Harpenden



CAMBRIDGE UNIVERSITY PRESS BENTLEY HOUSE, 200 EUSTON ROAD, LONDON, N.W. I AMERICAN BRANCH: 32 EAST 57TH STREET, NEW YORK, N.Y. 10022

> Published bi-monthly Annual subscription £9 net (U.S.A. \$32.00) Single parts £2 net (U.S.A. \$6.00) Second class postage paid at New York, N.Y.

INSTRUCTIONS TO AUTHORS

Failure to comply with the Instructions to Authors may delay publication

Papers intended for publication should be submitted to Dr G. D. H. Bell, C.B.E., F.R.S., Plant Breeding Institute, Cambridge, or to one of the Associate Editors. It must be understood that, if accepted by the Editorial Board, the paper will not be published elsewhere in the same form.

MANUSCRIPTS. Papers, written in English, are accepted from any country and should be typed in double-spacing on one side of the paper with a margin at least 4 cm wide on the left-hand side. Authors should instruct typists on the style required. A top copy and one carbon copy should be submitted.

SHORT NOTES may be accepted provided they are based on adequate experimental evidence; special provision is made for their publication with the least possible delay. MSS should not exceed 1500 words in length or their equivalent. For tabulated matter allow 25 words per line of the table (including headings). For line illustrations allow 225 words per quarter of a page.

TABLES must be self-explanatory. They should be typed on separate sheets, numbered consecutively and carry an appropriate title. When possible, tables should be arranged so that they can be printed in the normal orientation of the text and without rules.

LINE DRAWINGS (with photocopies) should be 25 cm wide and drawn in black waterproof ink on Bristol board, graph paper with blue lines or tracing paper. Legends should be typed on a separate copy and numbering inserted lightly and clearly in soft pencil on the drawing. Tables and figures should not reproduce the same data.

The approximate position of tables and figures should be noted in the text.

PLATES should make a definite contribution to the value of the paper and the number submitted should be kept to a minimum. They should be good quality, unmounted, glossy prints and be lightly numbered in pencil on the reverse side. If several, or coloured, plates are submitted the author may be asked to contribute to the cost of reproducing them.

TITLE. The title must be specific and suitable for indexing by the mechanical methods now being employed. The full name and address of the institution in which the research has been carried out should be stated. Change of address may be given as a footnote. A short title, not exceeding 50 characters, should be provided for the running headlines.

STYLE. Experimental details and results should be recorded in the past tense and there should be no unnecessary repetition or loose phrases. Manuscripts are likely to be returned for modification if the presentation is not clear and precise. LAYOUT. Authors are recommended to study 'General Notes on the Preparation of Scientific Papers' (Royal Society, London, 2nd edn, 1965). The Editorial Board do not insist on a rigid format but it is usually convenient to divide the paper into sections, e.g. Introduction, Materials and Methods, Results and Discussion. An excess of headings and subheadings should be avoided.

Authors are advised to note the following points: a detailed review of literature is not necessary; relevant details should be given of the plant or animal material, the experimental design and chemical or other techniques employed; mean results with their relevant standard errors should be presented rather than detailed data; the statistical methods used should be clearly stated; the discussion should relate the author's experiments to other work on the subject and give the author's conclusions. Footnotes should be avoided.

SUMMARIES of papers are placed at the beginning of the text and authors should submit MSS with the summaries so placed. The summary should be factual and suitable for use in abstracting journals; paragraphs should not be numbered.

REFERENCES. The bibliography must be given in the form-Surname of authors, initials, year of publication (in parentheses), title of paper, name of journal (abbreviated according to the World List of Scientific Periodicals, 4th edn, Butterworths, London), volume and pages of reference. References should be in alphabetical order. In the text a reference should be quoted by the author's name and date (in parentheses). Where there are more than two authors, the initial reference in the text should include the names of all authors, but subsequent citations should be in the form-first author followed by et al. Authors should check that all references in the text appear at the end of the paper and vice versa, and that names and dates correspond in the two places.

PROOF CORRECTION. Standard proof correction marks (British Standard 1219) should be made as legibly as possible in ink, not pencil. Directions to the printer which are not to be set up in type should be encircled. Captions to illustrations and all references should be checked. Queries marked by the printer should be answered. Proofs are provided in order that authors can check the correctness of the type-setting—excessive alterations may be charged to the author.

OFFPRINTS. Contributors will receive 25 copies of their papers free and can order others when they receive the proofs.

Add Phosdrin subtract pests

in minutes!

You can add it to other insecticides during formulation, or mix it in your spray tank, and get the immediate bonus of Phosdrin's rapid, wide-spectrum action.

Phosdrin is the most powerful. versatile, quick-acting insecticide in the world. It kills pests in three ways: through contact, by vapour, and by rapid systemic action which

Phosdrin is a very good mixer. destroys pests as they try to eat.

Phosdrin is totally effective against a very wide range of insects. And after it has destroyed the pests it breaks down quickly so that in a day or so the crop is thoroughly clean inside and out, can be harvested and is safe, wholesome and ready for market.

Only Phosdrin can give you this unique high-powered, high-speed efficiency. So add Phosdrinsubtract pests. It's a great way to multiply profits!

For further details about Shell's remarkable Phosdrin contact your Shell company or Shell Chemicals distributor.

Shell Chemicals



Jnl of Agric. Sci. 71, 2 https://doi.org/10.1017/S0021859600014544 Published online by Cambridge University Press

Experimental Agriculture

Edited by J. P. HUDSON

Volume 4, Number 3, July 1968

- R. J. GARNER AND A. BERYL BEAKBANE A note on the grafting and anatomy of black pepper
- I. S. CORNFORTH The potential availability of organic nitrogen fractions in some West Indian soils
- J. SCHIFFMANN AND Y. ALPER Effects of Rhizobium-inoculum placement on peanut inoculation
- CH. OPPENHEIMER A second stock-scion trial with mango in Israel
- J. SCHIFFMANN AND J. ALPER Inoculation of peanuts by application of Rhizobium suspension into the planting furrows
- H. A. HABISH AND SH. R. KHAIRI Nodulation of legumes in the Sudan; crossinoculation groups and the associated Rhizobium strains
- L. T. KOK Host preference and survival of the dark-headed rice stem borer Chilotraea polychrysa (Meyr.) in Malaya
- M. J. TRINICK Nodulation of tropical legumes. I. Specificity in the Rhizobium symbiosis of Leucaena seucocephala
- H. VERMEULEN Screening fungicides for control of coffee berry disease in Kenya
- 35s. net (\$5.00). Annual subscription £5 net (\$18.00) for four issues.

CAMBRIDGE UNIVERSITY PRESS



pulverizes almost anything—whether hay, cotton, wool or rock samples. Only two minutes needed to pulverize most samples. Even a few grammes can be ground; maximum charge 120 c.c. Dust-proof closure. Hardened stainless steel grinding mechanism. Slide-in screens for particle size adjustment.

Variable speed motor for better grinding control. Price, complete as shown; £84. For full details please quote AS/63/M.H.



GLEN CRESTON

The Red House, 37 The Broadway, Stanmore, Middlesex. Telephone: 01-954 4218

Mobility of Farm Families

J. S. NALSON

Based on a close examination of an upland area of England, this study examines the occupational and residential mobility of farm people. Some of the social and economic influences upon it are discussed and the findings related to other evidence on mobility and to those farming problems where it is considered to be important. Suggestions are made for the amelioration of the problems caused by lack of mobility. It is expected that this book will become the standard authority on this aspect of rural life.

55s net

MANCHESTER UNIVERSITY PRESS

CROP SCIENCE

Crop breeders, plant geneticists and physiologists, and workers in related areas will find *Crop Science* a source of valuable articles in their branches of science. This bimonthly journal carries reports of research in the genetics, physiology, ecology, breeding and management of field crops, turfgrasses, pastures and ranges, and in seed technology. It is published by the Crop Science Society of America.

\$16.00 per year in U.S. and Canada. \$17.00 per year elsewhere.

Crop Science Society of America 677 S. Segoe Rd, Madison, Wisconsin, U.S.A., 53711

JOURNAL OF REPRODUCTION AND FERTILITY

The Journal publishes original papers, abstracts of Proceedings, and occasionally reviews and bibliographies, dealing with the morphology, physiology, biochemistry and pathology of reproduction in man and animals, and with the biological, medical and veterinary problems of fertility and lactation. Nine numbers are issued to give three volumes a year.

Papers appearing during 1968 include:

- A. B. KAR, V. P. KAMBOJ and H. CHANDRA. Effect of some chemicals on spermatogenesis in rhesus monkeys.
- B. A. SHAH, M. L. HOPWOOD and L. C. FAULKNER. Seminal vesiculectomy in bulls. I. Seminal biochemistry.
- L. C. FAULKNER, M. L. HOPWOOD and J. N. WILTBANK. Seminal vesiculectomy in bulls. II. Seminal characteristics and breeding trials.
- C. J. WILCOX. Effects of uterine horn of pregnancy on birth weights and gestation lengths of dairy calves.
- M. GALTON. Chinchilla sex ratio.
- M. BISTOCCHI, G. D'ALESSIO and E. LEONE. Pyridine nucleotide coenzymes in bull and rabbit spermatozoa.
- G. J. MORE O'FERRALL, T. N. MEACHAM and W. E. FOREMAN. Attempts to separate rabbit spermatozoa by means of froth flotation and the sex ratio of offspring born.
- E. L. PIPER and W. C. FOOTE. Ovulation and corpus luteum maintenance in ewes treated with 17β -oestradiol.
- J. L. HANCOCK and H. L. BUTTLE. Tubal transport and fertilization of ova in gonadotrophin-treated pigs.
- R. DEANESLY. The effects of progesterone, testosterone and ergocornine on nonpregnant and pregnant guinea-pigs.
- R. V. SHORT, J. L. HAMERTON, S. A. GRIEVES and C. E. POLLARD. An intersex goat with a bilaterally asymmetrical reproductive tract.
- S. EINARSSON and L. NICANDER. Fine structure of the fibrous sheath of stallion sperm tails.
- S. L. OXENREIDER. Ovarian function in the cow after induction of uterine motility.
- T. W. WRENN, J. R. WOOD, J. BITMAN and T. H. BRINSFIELD. Vaginal glycogen assay for oestrogen: specificity and application to blood and urine.

Editorial correspondence should be sent to the Executive Editor, Journal of Reproduction and Fertility, 8 Jesus Lane, Cambridge, England, and business correspondence to the publishers.

The subscription rate for 1968 is £7 per volume or £21 per year (three volumes). U.S.A. and Canada \$23.50 per volume or \$70.00 per year.

BLACKWELL SCIENTIFIC PUBLICATIONS 5 ALFRED STREET OXFORD

Mechanisation and the World's Rice

This important volume contains the proceedings of a conference organized by Massey-Ferguson in collaboration with F.A.O. to support International Rice Year 1966. The 25 papers by experts from all over the world are a permanent and valuable contribution to the literature of the subject.

631 10140 3

Agricultural Producers and their Markets

Edited by T. K. WARLEY

This is a collection of papers given at an international seminar dealing with marketing topics primarily from the point of view of producers. The authors are marketing specialists, university research workers and senior executives from food trading industries. 631 10330 9

84s. net

New edition

Choice of Techniques

A. K. SEN

One of the most difficult problems facing an underdeveloped economy attempting planned economic growth is the choice between alternative techniques of production. The author critically examines the factors so far discussed, and shows the need for considering a number of other aspects of the problem.

631 10830 O

255. net

The Economics of Agricultural Policy

GRAHAM HALLETT

Although agriculture makes heavy demands on the public purse in nearly all countries, few comprehensive academic studies of its economics have been published in recent years. The author provides a systematic analysis of the industry which for the most part is of international applicability.

631 11090 9

sos. net

Year Book of Agricultural Co-operation 1968

Edited by the Plunkett Foundation for Co-operative Studies

The Year Book, which has appeared regularly since 1927, aims at presenting an annual picture of the development of agricultural co-operation throughout the world, including the longestablished organizations of Europe and North America, the expanding movements of the developing countries, and the very different forms of organization in Communist countries. 631 03170 7 About 555. net

BASIL BLACKWELL

(v)

63s. net

CORRIGENDUM

The determination and economic analysis of relationships between plant population and yield of maincrop potatoes

BY P. R. SHARPE AND J. B. DENT

J. agric. Sci., Camb. 70, 123-9

The authors regret the following mistakes:

Equation (21) on p. 128 should read:

 $Y_{\rm R} = 11 \cdot 205 + 58 \cdot 780 \, X^{0\cdot 5} - 2 \cdot 850 \, X$

and the derivative of this equation which is given four lines later should be:

$$\frac{dY_{\rm R}}{dX} = 29.903 \, X^{-0.5} - 2.850.$$