

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

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, P.O. BOX 92, 200 EUSTON ROAD, LONDON, N.W. 1

AMERICAN BRANCH: 32 EAST 57TH STREET, NEW YORK, N.Y. 10022

Price 35s. net
(U.S.A. \$5.50)

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 It must be understood that, if accepted by the Editorial Board, the paper will not be published elsewhere in the same form.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 upon 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 sub-headings 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.

the 3rd Edition of
**GARNER'S
VETERINARY
TOXICOLOGY**

Edited by **E. G. C. CLARKE**,
M.A., Ph.D., D.Sc., F.R.I.C.

Reader in Chemistry in the University of
London at the Royal Veterinary College;
President, International Association of Forensic
Toxicologists (1963-1966); President,
Forensic Science Society

and **MYRA L. CLARKE**,
F.R.C.V.S.

Former Lecturer, Department of Pathology,
Royal Veterinary College.

472 pages 63s net

**BAILLIÈRE, TINDALL
& CASSELL**

7 & 8 Henrietta St, London, WC2

'This is an excellent reference work and fully maintains the tradition set by previous editions by Garner, and before that by Nicholson and by Lander. A comprehensive treatment of toxicology draws from the scientific disciplines of botany, chemistry, physiology, pathology and clinical medicine, and it might be thought impossible to produce at once a textbook for the practitioner, and an authoritative text for the research worker. This has been achieved, however. . . this new edition will be welcomed by all who are concerned with diagnosis and treatment of poisoning in animals.' *Nature*

'The revision has been done by Dr and Mrs Clarke who have been responsible for the major part of the task, assisted by Dr Garner, who has contributed a much enlarged section on radioactive materials. D. S. Papworth of the Ministry's Infestation Control Laboratory has revised and brought up to date the section on pesticides. The section on poisonous plants has been rearranged for easier reference and has been extended to include the more important poisonous plants which are to be found outside Great Britain.' *Farmer's Weekly*

AGRONOMY JOURNAL

This official organ of the American Society of Agronomy is a bimonthly publication of up-to-date reports of general agronomic research. Workers in the fields of forages and pastures, crop improvement, cultural practices, soil fertility, and allied areas of investigation will find articles of lasting interest in *Agronomy Journal*. Publication is open to members of the American Society of Agronomy.

\$14.00 per year in U.S. and Canada.
\$15.00 per year elsewhere

American Society of Agronomy
677 S. Segoe Rd.
Madison, Wisconsin, U.S.A., 53711

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, turf-grasses, 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



Phosdrin gives you clean crops-fast

If you sometimes get the feeling that every insect in the world is munching away at your crops, they need Phosdrin. Phosdrin cleans any insect pest from any crop within minutes. And it breaks down so fast that in a matter of hours your crop is absolutely free from insect pests, thoroughly clean for the consumer.

Versatile Phosdrin can also be added to any other organo-phosphorus insecticide to give a dynamic close-to-harvest boost. For further information about Shell's remarkable Phosdrin, contact your Shell company or Shell chemicals agent.





Aldrin controls soil pests where they attack *underground*

Soil pests are at the root of many growers' problems. And because the damage is underground the realisation that a plant is infested often comes too late. Aldrin gives protection from all kinds of soil pest including wire-worms, whitegrubs and cutworms. Aldrin, endrin and dieldrin are complementary to each other and stable in the presence of other chemicals. They neither affect germination nor cause taint. Furthermore, their use according to recommendation is completely safe both to applicators and consumers. All three are available as materials for further formulation and in forms suitable for the grower.

For details of approved uses and advice on application consult your Shell company or Shell chemicals distributor.



EXPERIMENTAL AGRICULTURE

Contents of Volume 3, No. 4. October 1967

Price 25s.

P. R. Goldsworthy: Responses of Cereals to Fertilizers in Northern Nigeria.
II. Maize.

D. L. Curtis: The Races of Sorghum in Nigeria: Their Distribution and Relative Importance.

T. B. Miller and L. E. Iduma: Nutrition of Zebu Cattle in Northern Nigeria.
2. The Importance of Carotene Supplements.

Nehama Bidner-BarHava and B. Ramati: Tolerance of Three Olive Varieties to Soil Salinity in Israel.

J. E. Newton and J. E. Betts: Breeding Performance of Dorset Horn Ewes Augmented by Hormonal Treatment.

O. L. Oke: Nitrogen Fixing Capacity of some Nigerian Legumes.

O. L. Oke: The Sulphur Content of Nigerian Manures.

J. H. Leigh: Comparisons Between Strains of *Eragrostis Curvula* in South Africa.

J. T. Walker and D. A. Rijks: A Computer Programme for the Calculation of Confidence Limits of Expected Rainfall.

A. T. Abdel Hafeez: A Multifactorial Investigation of the Plant/Soil/Water Relations of Radishes.

G. H. Freeman: Problems in Plant Pathology and Entomology Field Trials.

Book Reviews:

Tropical Pastures: William Davies and C. L. Skidmore.

Experimental Agriculture is a quarterly journal published by Cambridge University Press. It is the successor to *The Empire Journal of Experimental Agriculture*.

The subscription price for 1968 is £5 (U.S.A. \$18.00) including postage; single parts are available at £1.15s. each (U.S.A. \$5.00). Orders may be sent to any bookseller or subscription agent, or direct to Cambridge University Press.

CAMBRIDGE UNIVERSITY PRESS

Bentley House, 200 Euston Road, London, N.W. 1

American Branch: 32 East 57th Street, New York, N.Y. 10022, U.S.A.

Starting with volume **70** in 1968 the volume subscription price for *The Journal of Agricultural Science* will be £4. 10s, and in U.S.A. \$16.00 including postage.

Two volumes are issued annually.

Single parts will be £2 (\$6.00), postage extra.