Vol. 45. Part 2 December 1954

THE JOURNAL OF AGRICULTURAL SCIENCE

EDITED BY

G. D. H. BELL, B.SC., PH.D., School of Agriculture, Cambridge

J. HAMMOND, C.B.E., M.A., D.SC., F.R.S., School of Agriculture, Cambridge

H. HUNTER, M.A., D.SC., Keys Cottage, Meldreth, nr. Royston, Herts.

SIR BERNARD KEEN, D.SC., F.R.S., East African Agriculture and Forestry Research Organisation, P.O. Box 21, Kikuyu, Kenya

SIR E. JOHN RUSSELL, D.Sc., F.R.S., Campsfield Wood, Woodstock, Oxon.

R. K. SCHOFIELD, Ph.D., F.INST.P., Rothamsted Experimental Station, Harpenden

H. E. WOODMAN, M.A., PH.D., D.SC., School of Agriculture, Cambridge

F. YATES, SC.D., F.R.S., Rothamsted Experimental Station, Harpenden



CAMBRIDGE UNIVERSITY PRESS LONDON: BENTLEY HOUSE, N.W.1 NEW YORK: 32 EAST 57TH STREET, 22

Price 20s. net

Books on Agriculture, Botany and Allied Sciences of all publishers supplied from stock.

Catalogue of Books on Agriculture, Horticulture and Allied Subjects available post free on request.

Please mention interests when writing.

Scientific Lending Library

New books and latest editions obtainable.

ANNUAL SUBSCRIPTION

FROM TWENTY-FIVE SHILLINGS
Prospectus post free on request.

THE LIBRARY CATALOGUE revised to

December 1949

To subscribers 17s. 6d. net.
To non-subscribers 35s. net, postage 1s. 6d.
Supplement 1950 to 1952. To subscribers 3s. net.
To non-subscribers 6s. net, postage 6d.

Select stock available.

H. K. LEWIS & Co. Ltd.

LONDON: 136 Gower St., w.c. 1
Telephone EUSton 4282 (7 lines)

AGRONOMY JOURNAL

Agronomists throughout the world have found the Agronomy Journal, monthly publication and official organ of the American Society of Agronomy, a source of up-to-date reports on agronomic research. Workers in the fields of forages and pastures, small grain improvement, corn, fibre crops and legumes, cultural practices, and soil fertility, as well as closely allied fields of investigation find articles of lasting interest in the Agronomy Journal. Publication is open to members of the American Society of Agronomy.

\$15.00 per year, U.S., Canada, and pan-American countries; \$16.00 per year elsewhere.

American Society of Agronomy 2702 Monroe Street Madison 5, Wisconsin

THE EMPIRE JOURNAL OF EXPERIMENTAL AGRICULTURE

THIS JOURNAL offers agricultural research workers a medium for disseminating the records and results of their investigations on the feeding and management of live stock, cultivation and manuring of crops, trial of farm machinery, agricultural economics, and experimental technique.

Vol. XXII. No. 86

CONTENTS

April 1954

- R. L. KNIGHT: Cotton Breeding in the Sudan. Part II. Egyptian Cotton (continued).
- P. MAHADEVAN: Repeatability and Heritability of Milk Yield in Crosses between Indian and European Breeds of Dairy Cattle.
- F. M. L. Sheffield: Erinose of Sweet Potato. With Plates 2 and 3.
- P. H. NYE: Fertilizer Responses in the Gold Coast in Relation to Time and Method of Application.
- R. M. Moore: Studies in Perennial Weeds: The Control of Hoary Cress (Cardaria draba) by Chlorinated Phenoxyacetic Compounds.
- S. S. KHISHIN and H. F. EL-ISSAWI: The Jersey in Egypt.
- R. W. Shepherd: The Use of Nitrogen for Sugar-beet Grown on Light Land.
- L. A. W. HAYWARD: The Origins of Infestations of Cocoa by Tobacco Beetle in Nigeria.
- N. J. Brown, E. R. Fountaine and P. C. J. Payne: Two Soil Tests for Cultivation Investigations. With Plate 4.
- R. V. LARGE and J. C. TAYLER: Studies on the Growth of Clun Lambs.
- H. C. Pereira, E. M. Chenery and W. R. Mills: The Transient Effects of Grasses on the Structure of Tropical So

Royal 8vo. 11s. net. Annual subscription (four numbers) 34s. post free.

OXFORD UNIVERSITY PRESS, Amen House, LONDON, E.C. 4

Oil speeds the plough

THERE WAS a ploughing match in England last October, and one of the competitors was a woman. She was doing good time and straight furrows till, ten yards short of the finishing post, her tractor stalled. It had run out of fuel. She was disqualified. She took it hard, insisting that her fuel had been siphoned down by a rival. The sad story made front page news in the papers.

Today the tractor has replaced the horse on the farm. The occasional disadvantages of fuel-saboteurs with siphons are heavily outweighed by the advantages of speed, labour-saving and economy. Ten fewer draught animals to feed mean twenty-five more acres now producing human food. In Europe in the last thirty years 10 million acres have been gained in this way.

Petroleum products are the life-blood of the modern farm. Kerosine drives the tractors. heats the incubators, warms the orchards against frost. Petrol feeds the cars and the engines. Oil plays a part in egg-preservation. The wax that makes modern poultry-plucking a quick, clean, easy job is a petroleum product. Ammonia fertilisers; revolutionary new insecticides; anti-nematode soil treatments; chemical sprays for pests. . . . The old pig liked to lean up against the rubbing post and have a good scratch. The irritation and exercise were good for slimming, but bad for profits. Put an oil-based anti-itch emollient on the rubbing post and you soon have a better-mannered, better-upholstered, better-priced pig.

At Denver in Colorado, Modesto, California and Woodstock in Kent there are Shell experimental farms and agricultural research stations. Shell Research evolves and Shell refineries distil the essential products for the new agriculture. The man who works the Good Earth in the nineteen fifties is a mechanic and a scientist.





research is arming the farmer

THE SHELL PETROLEUM COMPANY LIMITED, ST. HELEN'S COURT, LONDON E.C.3

Agricultural Journals from the Soviet Union

PUBLISHED IN THE RUSSIAN LANGUAGE

Information about the latest developments in all spheres of Soviet agriculture is published regularly in the many agricultural journals available on subscription from the U.S.S.R. A selection is published below. A complete list will be sent on request.

Rates given are for annual subscriptions

Agriculture, 25s. Achievements of Science and Advanced Experience in Agriculture, 15s. Agrobiology, 30s. Bulletin of the All-Union Agricultural Exhibition, 40s. Reports of the Academy of Agricultural Sciences, 35s. Animal Husbandry, 25s. Poultry Farming, 15s. Socialist Agriculture, 30s. Journal of the Timiryazev Agricultural Academy, 25s.

also

AGRICULTURE A daily newspaper. Annual subscription 32s.

[Cheques should be made payable to Collet's Holdings Ltd.]

COLLET'S BOOKSHOPS 44 & 45 Museum St., London, W.C. 1