# THE JOURNAL OF AGRICULTURAL SCIENCE

#### EDITED BY

PROFESSOR SIR R. H. BIFFEN, M.A., F.R.S., School of Agriculture, Cambridge E. M. CROWTHER, D.Sc., F.I.C., Rothamsted Experimental Station,

- Harpenden
- J. HAMMOND, M.A., D.Sc., F.R.S., School of Agriculture, Cambridge
- H. HUNTER, M.A., D.Sc., School of Agriculture, Cambridge
- B. A. KEEN, D.Sc., F.R.S., Rothamsted Experimental Station, Harpenden
- F. H. A. MARSHALL, C.B.E., Sc.D., LL.D., F.R.S., School of Agriculture, Cambridge

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

#### IN CONSULTATION WITH

PROFESSOR B. T. P. BARKER, M.A., Agricultural and Horticultural Research Station, Long Ashton, Bristol

DR I. B. POLE-EVANS, C.M.G., Department of Agriculture, Pretoria, South Africa

PROFESSOR J. HENDRICK, B.Sc., F.I.C., Marischal College, Aberdeen

- DR A. E. V. RICHARDSON, C.M.G., M.A., Commonwealth Council for Scientific and Industrial Research, Melbourne, Australia
- DR H. J. WHEELER, American Agricultural Chemical Co., Agricultural Service Bureau, 419 Fourth Avenue, New York, U.S.A.

## VOLUME XXXIV 1944

## CAMBRIDGE AT THE UNIVERSITY PRESS

### **1**944

Cambridge University Press LONDON: BENTLEY HOUSE

CHICAGO The University of Chicago Press (Agents for the United States)

BOMBAY · CALCUTTA · MADRAS Macmillan

All rights reserved

PRINTED IN GREAT BRITAIN

## CONTENTS

# PART 1 (JANUARY 1944)

Y · · ·	,		PAGE
HAMMOND, J. JNR. and BHATTACHARYA, P. Control of ovula and 2)	ation in the cow.	(With Plates 1	1
OLBRYCHT, T. M. Behaviour of some external characteristic and One Text-figure)	ics in Essex pigs.	(With Plate 3	16
BLAXTER, K. L. Experiments on the use of home-grown for effect of war-time changes in the food supply on the nut of dairy cows			22
BLAXTER, K. L. Experiments on the use of home-grown foo effect of feeding concentrated and bulky foods prior to duction. (With One Text-figure)			27
WOODMAN, H. E. and EVANS, R. E. The influence of war-ti position, digestibility and nutritive value of the wheater	•		35
WOODMAN, R. M. and PAVER, H. The effect of time of appl the turnip	lication of inorgan	ic nitrogen on	49

# **PART 2 (APRIL 1944)**

ANDERSON, JAMES. The periodicity and duration of oestrus in zebu and grade cattle	57
ANDERSON, JAMES. The change in the $pH$ of the semen of the bull after incubation	69
LEWIS, A. H. and STRICKLAND, A. G. The placement of fertilizers. II. Cereals	73
DUDLEY, F.J. Results of crossing the Rhode Island Red and White Leghorn breeds of poultry	76
WOODMAN, ROWLAND MARCUS and JOHNSON, DELPHINE AINSLIE. The response of the carrot to water supply and fertilizer on a gravel soil .	82
FERGUSON, W. S. and WATSON, S. J. The composition and nutritive values of seeds hays .	88
DILLON WESTON, W. A. R. and TAYLOR, R. ERIC. Development of mould on the cut surfaces of potato tubers	93
HAMMOND, J. JNR. On the breeding season in the sheep	<sup>.</sup> 97
KYAW, M. H. Rapid method of standardization of the density of bull semen	106
WOODMAN, H. E. and EVANS, R. E. Further investigations of the nutritive value of swill: starch equivalent, and seasonal variation in the composition and feeding value of con-	
centrated swill	110
BONDI, A. and MEYER, H. Digestibility trials with poultry. The digestibility of dura, caros	
and hide-fleshings	118