# THE <br> JOURNAL OF <br> <br> AGRICULTURAL SCIENCE 

 <br> <br> AGRICULTURAL SCIENCE}

EDITED FOR THE PLANT BREEDING AND ANIMAL NUTRITION RESEARCH JNSTITUTES AT CAMBRIDGE, AND THE ROTHAMSTED RESEARCH INSTITUTES BY

Professor R. H. Biffen, M.A., F.R.S., Cambridge
Sir A. D. HALL, K.C.B., M.A., LL.D., F.R.S., Ministry of Agriculture, London F. H. A. MARSHALL, Sc.D., F.R.S., Cambridge

Sir E. J. RUSSELL, D.Sc., F.R.S., Rothamsted Experimental Station, Harpenden Professor T. B. WOOD, C.B.E., M.A., F.I.C., F.R.S., Cambridge

## IN CONSULTATION WITH

B. C. ASTON, Department of Agriculture, Wellington, New Zealand

Dr C. A. BARBER, C.I.E., School of Agriculture, Cambridge
Professor B. T. P. BARKER, M.A., National Fruit and Cider Institute, Long Ashton, Bristol W. BATESON, M.A., F.R.S., John Innes Horticultural Institute, Merton, Surrey
J. R. CAMPBELL, B.Sc., Department of Agriculture, Dublin
I. B. POLE EVANS, Department of Agriculture, Pretoria, South Africa
F. B. GUTHRIE, Department of Agriculture, Sydney, N.S.W.

Professor J. HENDRICK, B.Sc., Marischal College, Aberdeen
Sir T. H. MIDDLETON, K.B.E., C.B., M.A., The Development Commission, London
Dr FRANK T. SHUTT, F.I.C., Experimental Farms, Ottawa, Canada
Professor W. SOMERVILLE, M.A., D.Sc., School of Rural Economy, Oxford
Dr A. C. TRUE, Department of Agriculture, Washington, D.C., U.S.A.
Sir FRANCIS WATTS, K.C.M.G., Barbados
Dr H. J. WHEELER, American Agricultural Chemical Co., Boston, Mass., U.S.A.

## VOLUME XII 1922

## CAMBRIDGE

AT THE UNIVERSITY PRESS

## PRINTED IN GREAT BRITAIN

## CONTENTS

## Part 1 (Jandary 1922)

Newton, Robert. A comparative study of winter wheat varieties with especial reference to winter-killing

PAGE ..... 1
Goodey, T. On the susceptibility of clover and some other legumes to stem-disease caused by the eelworm, Tylenchus dipsaci, syn. devastatrix, Kühn. (With Plate I) ..... 20
Salaman, R. N. and Lesley, J. W. Genetic studies in potatoes; sterility. (With Plate II) ..... 31
Crowther, Charles and Woodman, Herbert Ernest. A study of nitrogen metabolism in the dairy cow ..... 40
Armstrong, S. F. The Mendelian inheritance of susceptibility and resistance to yellow rust (Puccinia glumarum, Erikss. et Henn.) in wheat . ..... 57
Woodman, Herbert Ernest and Hammond, John. Note on the composition of a fluid obtained from the udders of virgin heifers . ..... 97
Part 2 (April 1922)
Murray, Alan J. The chemical composition of animal bodies. (With 1 Text-figure) ..... 103
Taylor, William and Husband, Alfred D. The effect on the percentage composition of the milk of (a) variations in the daily volume and (b) variations in the nature of the diet. (With 4 Text-figures) ..... 111
Toceer, J. F. The citric solubility of mineral phosphates. (With 8 Diagrams) ..... 125
Woodman, Herbert Ernest. Comparative determinations of the digestibility and metabolisable energy of green oats and tares, oat and tare hay and oat and tare silage ..... 144
Whittles, C. L. A note on the classification of soils on the basis of mechanical analyses. (With 11 Text-figures) ..... 166
Salaman, Redcliffe N. The Influence of size and character of seed on the yield of potatoes. (With 4 Text-figures) ..... 182
Engledow, F. L. and Shelton, J. P. An investigation upon certain metrical attributes of wheat plants ..... 197

