

# THE JOURNAL OF AGRICULTURAL SCIENCE

EDITED BY

PROFESSOR R. H. BIFFEN, M.A., Cambridge  
A. D. HALL, M.A., F.R.S., Development Commission, London  
PROFESSOR T. B. WOOD, M.A., Cambridge

IN CONSULTATION WITH

DR H. P. ARMSBY, State College, Pennsylvania, U.S.A.  
B. C. ASTON, Department of Agriculture, Wellington, New Zealand  
DR C. A. BARBER, Agricultural College, Coimbatore, India  
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  
DR J. W. LEATHER, Agricultural Research Institute, Pusa, Bengal  
T. H. MIDDLETON, C.B., M.A., Board of Agriculture, London  
F. T. SHUTT, M.A., F.I.C., Experimental Farms, Ottawa, Canada  
PROFESSOR W. SOMERVILLE, M.A., School of Rural Economy, Oxford  
DR A. C. TRUE, Department of Agriculture, Washington, D.C., U.S.A.  
DR FRANCIS WATTS, C.M.G., Barbados  
DR H. J. WHEELER, American Agricultural Chemical Co., Boston, Mass.

## Volume V 1912—13



Cambridge University Press

C. F. CLAY, Manager

LONDON: Fetter Lane, E.C.

EDINBURGH: 100, Princes Street

also H. K. LEWIS, 136, Gower Street, London, W.C.

and WILLIAM WESLEY & SON, 28, Essex Street, London, W.C.

BERLIN: A. Asher and Co.

LEIPSIC: F. A. Brockhaus

CHICAGO: The University of Chicago Press

BOMBAY AND CALCUTTA: Macmillan and Co., Ltd.

Entered at the New York Post Office as Second Class Matter

[All Rights reserved]

**Cambridge :**  
**PRINTED BY JOHN CLAY, M.A.**  
**AT THE UNIVERSITY PRESS.**

# CONTENTS.

## Part 1 (October, 1912).

	PAGE
GREEN, HEBER, and AMPT, G. A. Studies on Soil Physics. Part II—The Permeability of an Ideal Soil to Air and Water. (Ten Figures in Text. Plate I) . . . . .	1
RUSSELL, E. J., and GOLDING, J. Investigations on "Sickness" in Soil. I. Sewage "Sickness" . . . . .	27
ROBINSON, G. W., and HALNAN, E. T. Probable Error in Pig Feeding Trials . . . . .	48
DAVIS, WILLIAM A. The Estimation of Potassium, especially in Fertilisers, Soil Extracts and Plant Ashes . . . . .	52
BARKER, B. T. P., and HILLIER, V. FLORIAN. Cider "Sickness" . . . . .	67
RUSSELL, E. J., and PETHERBRIDGE, F. R. Investigations on "Sick- ness" in Soil. II. "Sickness" in Glasshouse Soils. (Plates II—V) . . . . .	86

---

## Part 2 (March, 1913).

NEVILLE, ALLEN. Linseed Mucilage . . . . .	113
STAPLEDON, R. G. Pasture Problems: Drought Resistance . . . . .	129
RUSSELL, EDWARD JOHN, and HUTCHINSON, HENRY BROUGHAM. The Effect of Partial Sterilisation of Soil on the Production of Plant Food. Part II. The Limitation of Bacterial Numbers in Normal Soils and its Consequences. (Seven Figures in Text) . . . . .	152
PERCIVAL, J., and MASON, G. HEATHER. The Micro-flora of Stilton Cheese. (Plate VI) . . . . .	222

---