THE

JOURNAL

OF

AGRICULTURAL SCIENCE

EDITED BY

Professor R. H. Biffen, M.A., F.R.S., Cambridge
E. J. Russell, D.Sc., F.R.S., Rothamsted Experimental Station, Harpenden

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, 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
F. T. Shutt, M.A., 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.
Dr Francis Watts, C.M.G., Barbados
Dr H. J. Wheeler, American Agricultural Chemical Co., Boston, Mass, U.S.A.

VOLUME X 1920

CAMBRIDGE

AT THE UNIVERSITY PRESS

1920
## Contents

**PRESCOTT, JAMES ARTHUR.** A note on the sheraqi soils of Egypt. A study in partial sterilisation. (One figure in text) ........................................... 177

**CRUMP, LETTICE M.** Numbers of protozoa in certain Rothamsted soils. (Twenty figures in text) ................................................................. 182

**TATTERSFIELD, F. and ROBERTS, A. W. R.** The influence of chemical constitution on the toxicity of organic compounds to wireworms. (Eighteen diagrams in text) ........................................... 199

### Part 3 (July 1920)

**HAMMOND, J.** On the relative growth and development of various breeds and crosses of cattle ................................................................. 233

**JONES, J. S., COLVER, C. W. and FISHBURN, H. P.** The protein content of wheat grown with irrigation. (Eleven figures in text) ........................................... 290

**OGG, WILLIAM GAMMIE and HENDRICK, JAMES.** Studies of a Scottish drift soil. II. (One figure in text) ........................................... 333

**OGG, WILLIAM GAMMIE and HENDRICK, JAMES.** Studies of a Scottish drift soil. III. (Four figures in text) ........................................... 343

### Part 4 (October 1920)

**BERRY, REGINALD A.** Composition and properties of oat grain and straw. (Five figures in text) ........................................... 359

**SEBELIEN, JOHN.** Modern methods for experiments with fertilizers and manures ................................................................. 415

**COMBER, NORMAN M.** A qualitative test for sour soils ........................................... 420

**COMBER, NORMAN M.** The flocculation of soils ........................................... 425

**GODDEN, WILLIAM.** The digestibility of straw after treatment with soda ........................................... 437

**GODDEN, WILLIAM.** Digestibility of peat moss after treatment with acid ........................................... 457