

CAMBRIDGE: PRINTED BY
W. LEWIS, M.A.
AT THE UNIVERSITY PRESS

INDEX TO AUTHORS

- AGRICULTURAL EDUCATION ASSOCIATION. Mechanical analysis of soils, 1906, 1, 470
- AGRICULTURAL EDUCATION ASSOCIATION: a sub-committee of the. The mechanical analysis of soils: a report on the present position, and recommendations for a new official method, 1926, 16, 123
- AGRICULTURAL EDUCATION ASSOCIATION: a sub-committee of the. The revised official British method for mechanical analysis, 1928, 18, 734
- ALLAN, F. E. and WISHART, J. A method of estimating the yield of a missing plot in field experimental work, 1930, 20, 399
- ALLEN, L. A. Calorific value of soluble carbohydrates in feeding stuffs, 1928, 18, 691
- ALWAY, F. J. Studies of soil moisture in the "Great Plains" region, 1908, 2, 333
- AMOS, A. A method for the determination of carbonates in soils, 1905, 1, 322
- AMOS, A. The effect of fungicides upon the assimilation of carbon dioxide by green leaves, 1907, 2, 257
- AMOS, A. and WILLIAMS, G. Temperature and other factors affecting the quality of silage, 1922, 12, 323
- AMOS, A. and WOODMAN, H. E. An investigation into the changes which occur during the ensilage of oats and tares, 1922, 12, 337
- AMOS, A. and WOODMAN, H. E. Sunflower silage, 1923, 13, 163
- AMOS, A. and WOODMAN, H. E. A study of the process of making clamp silage, 1925, 15, 444
- AMOS, A., *see also* WOODMAN, H. E.
- AMPT, G. A., *see* GREEN, W. H.
- ANNETT, H. E. and KAR, S. C. Amount of copper in tea sprayed with Bordeaux mixture, 1910, 3, 314
- ANNETT, H. E. and RUSSELL, E. J. The composition of green maize and of the silage produced therefrom, 1908, 2, 382
- ANNETT, H. E. and SEN, J. N. The use of poppy seed cake as a cattle food and its effect on yield of milk and composition of the butter fat, 1919, 9, 416
- APPLEYARD, A. and RUSSELL, E. J. Soil gases: reply to Dr Leather, 1915, 7, 242
- APPLEYARD, A., *see also* RUSSELL, E. J.
- ARMSBY, H. P. and FRIES, J. A. Net energy values and starch values, 1919, 9, 182
- ARMSTRONG, S. F. The botanical and chemical composition of the herbage of pastures and meadows, 1907, 2, 283
- ARMSTRONG, S. F. The Mendelian inheritance of susceptibility and resistance to yellow rust (*Puccinia glumarum* Erikss. et Henn.) in wheat, 1922, 12, 57
- ARNOLD, C. W. B. and PAGE, H. J. Studies on the carbon and nitrogen cycles in the soil. II. The extraction of the organic matter of the soil with alkali, 1930, 20, 460
- ASDELL, S. A. The inception of lactation in the cow and goat, 1925, 15, 358
- ASDELL, S. A. Variation in the onset of the breeding year in the goat, 1926, 16, 632
- ASDELL, S. A. Variation in the duration of gestation in the goat, 1929, 19, 382
- ASHEY, S. F. A contribution to the study of factors affecting the quality and composition of potatoes, 1905, 1, 347
- ASHEY, S. F. Note on the fate of calcium cyanamide in the soil, 1905, 1, 358
- ASHEY, S. F. Some observations on the assimilation of atmospheric nitrogen by a free-living soil organism—*Azotobacter chroococcum* of Beijerinck, 1907, 2, 35
- ASHEY, S. F. Some observations on "nitrification," 1907, 2, 52
- ASKEW, H. O., *see* EASTERFIELD, T. H.
- ATKINS, W. R. G. The rapid determination of available phosphate in soil by the coeruleo-molybdate reaction of Denigès, 1924, 14, 192
- ATKINS, W. R. G. The electrical conductivity of extracts from soils of various types, and its use in detecting infertility, 1924, 14, 198
- AULD, S. J. M. Cyanogenesis under digestive conditions, 1913, 5, 409
- AULD, S. J. M. Digestibility experiments with sheep. Para rubber seed cake, 1913, 5, 429
- BAGULEY, A. The phosphate nutrition of plants, 1912, 4, 318
- BAILEY, C. H. The relation of certain physical characteristics of the wheat kernel to milling quality, 1916, 7, 432
- BAILEY, M. A., *see* BROOKS, F. T.
- BAILEY, P. G. and ENGLEDDOW, F. L. "Quality" in wool, 1914, 6, 349
- BAL, D. V. The determination of nitrogen in heavy clay soils, 1925, 15, 454
- BALLS, W. L. Note on Mendelian heredity in cotton, 1907, 2, 216
- BALLS, W. L. Mendelian studies of Egyptian cotton, 1908, 2, 346

- BALLS, W. L. The movements of soil-water in an Egyptian cotton-field, 1913, 5, 469
- BALMUKAND, BH. Studies in crop variation. V. The relation between yield and soil nutrients, 1928, 18, 602
- BARKER, B. T. P. The rate of fermentation of ciders and perries, 1908, 3, 1
- BARKER, B. T. P. and GIMINGHAM, C. T. The fungicidal action of Bordeaux mixtures, 1911, 4, 76
- BARKER, B. T. P. and GIMINGHAM, C. T. Further observations on the fungicidal action of Bordeaux mixtures, 1914, 6, 220
- BARKER, B. T. P. and HILLIER, V. F. Cider "sickness," 1912, 5, 67
- BARKER, B. T. P., *see also* PEARCE, E. B.
- BARTLETT, S. Variations in the live weight of dairy cows, 1926, 16, 383
- BARTLETT, S. The effect of pregnancy on the live weight of dairy cows, 1926, 16, 392
- BARTLETT, S. Studies in milk secretion based on the variations and yields of milk and butter fat produced at morning and evening milkings, 1929, 19, 36
- BARTLETT, S. Normal day to day variability of yield of milk and fat of individual cows, 1929, 19, 438
- BECKLEY, V. A. The preparation and fractionation of humic acid, 1921, 11, 66
- BECKLEY, V. A. The formation of humus, 1921, 11, 69
- BEDFORD, DUKE OF, and PICKERING, S. U. The effect of one crop upon another, 1914, 6, 136
- BEE, J. W., *see* WOODMAN, H. E.
- BERRY, R. A. Composition and properties of oat grain and straw, 1920, 10, 359
- BERRY, R. A. Wet and dry feeding of concentrates to dairy cows, 1921, 11, 78
- BERRY, R. A. The production, composition and utilisation of whey, 1923, 13, 192
- BERRY, R. A. The manurial properties of lead nitrate, 1924, 14, 58
- BERRY, R. A. and O'BRIEN, D. G. Errors in feeding experiments with cross-bred pigs, 1921, 11, 275
- BERRY, R. A. and O'BRIEN, D. G. Field experiments, 1924, 14, 407
- BERRY, R. A., *see also* WOOD, T. B.
- BEST, R. J. A rapid electrometric method for determining the chloride content of soils, 1929, 19, 533
- BEWLEY, W. F. and HUTCHINSON, H. B. On the changes through which the nodule organism (*P. radicum*) passes under cultural conditions, 1920, 10, 144
- BHATT, P. J. Composition of gas lime, 1910, 3, 317
- BIFFEN, R. H. Mendel's laws of inheritance and wheat breeding, 1905, 1, 4
- BIFFEN, R. H. The inheritance of sterility in the barleys, 1905, 1, 250
- BIFFEN, R. H. Studies in the inheritance of disease-resistance, 1907, 2, 109
- BIFFEN, R. H. The hybridisation of barleys, 1907, 2, 183
- BIFFEN, R. H. On the inheritance of "strength" in wheat, 1908, 3, 86
- BIFFEN, R. H. The inheritance of "strength" in wheat, 1909, 3, 223
- BIFFEN, R. H. Studies in the inheritance of disease resistance. II, 1912, 4, 421
- BIFFEN, R. H., LEATHER, J. W. and HALL, A. D. Mendel's laws of inheritance and wheat breeding, 1906, 1, 475
- BIFFEN, R. H., *see also* HUMPHRIES, A. E.
- BILLMANN, E. On the measurement of hydrogen-ion concentrations in soil by means of the quinhydrone electrode, 1924, 14, 232
- BLACKMAN, V. H. Field experiments in electro-culture, 1924, 14, 240
- BLACKMAN, V. H. and LEGG, A. T. Pot-culture experiments with an electric discharge, 1924, 14, 268
- BLAIR, A. W., *see* LIPMAN, J. G.
- BLAIR, G. W. S., *see* KEEN, B. A.
- BLINKINSOP, A. A new volumetric method for the estimation of sodium, 1930, 20, 511
- BLISSETT, A. H. and GOLDING, J. Some preliminary experiments on the value of small quantities of whole cows' milk when fed to pigs, 1928, 18, 642
- BLUNT, D. L., *see* WOODMAN, H. E.
- BRENCHLEY, W. E. Buried weed seeds, 1918, 9, 1
- BRENCHLEY, W. E. and HALL, A. D. The development of the grain of wheat, 1909, 3, 195
- BRENCHLEY, W. E., *see also* HALL, A. D.
- BROOKS, F. T. "Silver-leaf" disease, 1911, 4, 133
- BROOKS, F. T. "Silver-leaf" disease. II, 1913, 5, 288
- BROOKS, F. T. and BAILEY, M. A. "Silver-leaf" disease. III (including observations upon the injection of trees with anti-septics), 1919, 9, 189
- BROWN, W. R., *see* NEWTON, R.
- BROWNLEE, G. Note on the absorption of atmospheric moisture by certain nitrogenous manures, 1908, 2, 380
- BRUCE, J. A., *see* EASTERFIELD, T. H.
- BRYAN, H. Wart disease infection tests, 1928, 18, 507
- BUDDIN, W. Partial sterilisation of soil by volatile and non-volatile antiseptics, 1914, 6, 417
- BUDDIN, W. Note on the increased nitrate content of a soil subjected to temporary drying in the laboratory, 1914, 6, 452
- BURD, J. S. and MARTIN, J. C. Water displacement of soils and the soil solution, 1923, 13, 265
- BURGESS, P. S., *see* LIPMAN, C. B.

- BUTLER, E. J. The bearing of Mendelism on the susceptibility of wheat to rust, 1905, 1, 361
- CALDER, R. B. Cause and prevention of rancidity in palm nut kernel cake, 1916, 7, 470
- CALTON, W. E., *see* WOODMAN, H. E.
- CAMEK, J. Investigations of the hair of different breeds of cattle, 1920, 10, 12
- CAMPBELL, A. V. Carbohydrates of the mangold leaf, 1912, 4, 248
- CAMPBELL, K. W. D. Milking at three eight-hour intervals as a means of investigating variations in the fat and solids-not-fat, 1930, 20, 213
- CAPSTICK, J. W. A calorimeter for use with large animals, 1921, 11, 408
- CAPSTICK, J. W. and WOOD, T. B. The effect of change of temperature on the basal metabolism of swine, 1922, 12, 257
- CAPSTICK, J. W., *see also* WOOD, T. B.
- CARTER, R. H., *see* GIMMINGHAM, C. T.
- CAVE, T. W. "Black-quarter" in sheep, 1905, 1, 230
- CAYLEY, D. M. Bacterial disease of *Pisum sativum*, 1917, 8, 461
- CHANNON, H. J., *see* DRUMMOND, J. C.
- CLAPHAM, A. R. The estimation of yield in cereal crops by sampling methods, 1929, 19, 214
- CLAPHAM, A. R., *see* WISHART, J.
- CLAYTON, J., *see* HUTCHINSON, H. B.
- CODLING, A. J. and WOODMAN, H. E. Sugar-beet pulp as a source of pectin, 1929, 19, 701
- COLLINS, S. H. Variation in the chemical composition of the swede, 1905, 1, 89, 374
- COLLINS, S. H. and THOMAS, B. The sugars and albuminoids of oat straw, 1922, 12, 280
- COLVER, C. W., *see* JONES, J. S.
- COMBER, N. M. A qualitative test for sour soils, 1920, 10, 420
- COMBER, N. M. The flocculation of soils, 1920, 10, 425
- COMBER, N. M. The flocculation of soils. II, 1921, 11, 450
- COMBER, N. M. The availability of mineral plant food. A modification of the present hypothesis, 1922, 12, 363
- COMBER, N. M. A modified test for sour soils, 1922, 12, 370
- COMBER, N. M. The flocculation of soils. III, 1922, 12, 372
- COOPER, W. F. "Five-day-spraying." The brown tick and the East Coast fever, 1910, 3, 285
- COOPER, W. F. and FREAK, G. A. Oxidation of arsenites to arsenates in cattle-dipping tanks, 1911, 4, 177
- COOPER, W. F., NUTTALL, W. H. and FREAK, G. A. The fat globules of milk in relation to churning, 1911, 4, 150
- COOPER, W. F., NUTTALL, W. H. and FREAK, G. A. Observations on the fat globules in milk, 1913, 5, 331
- COOPER, W. F., NUTTALL, W. H. and FREAK, G. A. The enumeration and measurement of fat globules in milk, 1913, 5, 357
- COOPER, W. F. and NUTTALL, W. H. The theory of wetting, and the determination of the wetting power of dipping and spraying fluids containing a soap basis, 1915, 7, 219
- COOPER, W. F., *see also* NUTTALL, G. H. F.
- COUTTS, J. R. H. "Single value" soil properties: a study of the significance of certain soil constants. II. Studies in Natal soils, 1929, 19, 325
- COUTTS, J. R. H. "Single value" soil properties: a study of the significance of certain soil constants. III. Note on the technique of the Keen-Raczkowski box experiment, 1930, 20, 407
- COUTTS, J. R. H. "Single value" soil properties: a study of the significance of certain soil constants. V. On the changes produced in a soil by oven drying, 1930, 20, 541
- COUTTS, J. R. H., *see also* KEEN, B. A.
- COWARD, K. H., *see* DRUMMOND, J. C.
- COWIE, G. A. Decomposition of cyanamide and dicyanodiamide in the soil, 1919, 9, 113
- COWIE, G. A. The mechanism of the decomposition of cyanamide in the soil, 1920, 10, 163
- CRAIG, N. and LINCOLN, R. The availability of potash in a typical Mauritius soil, 1929, 19, 397
- CRAMPTON, C. B., *see* SMITH, W. G.
- CRANFIELD, H. T. Preliminary investigation into the variation in the physical composition of wheat milling offals, 1914, 6, 102
- CRANFIELD, H. T. The influence of feeding on the composition of milk. Mangels versus dried sugar beet pulp, 1929, 19, 302
- CRANFIELD, H. T., GRIFFITHS, D. G. and LING, E. R. The composition of milk. Part I. Variation in the solids not fat, fat and protein content of cows' milk, and their relationship, 1927, 17, 62
- CRANFIELD, H. T., GRIFFITHS, D. G. and LING, E. R. The composition of milk. Part II. Variation in the percentage of mineral constituents in cows' milk, and their relationship with the solids not fat and protein content, 1927, 17, 72
- CRANFIELD, H. T. and LING, E. R. Variation in the composition of the milk of an abnormal cow, 1929, 19, 491
- CRICHTON, A., *see* ELLIOT, W. and ORR, J. B.
- CROUCHER, H. H. Dye adsorption by hydrous alumina in soils. 1928, 18, 350

- CROWTHER, C. Variation in the composition of cows' milk, 1905, **1**, 149
- CROWTHER, C. Probable error in pig-feeding trials, 1915, **7**, 137
- CROWTHER, C. and RUSTON, A. G. The nature, distribution and effects upon vegetation of atmospheric impurities in and near an industrial town, 1911, **4**, 25
- CROWTHER, C. and RUSTON, A. G. The influence of time of cutting upon the yield and composition of hay, 1912, **4**, 305
- CROWTHER, C. and RUSTON, A. G. Town smoke and plant growth, 1914, **6**, 387
- CROWTHER, C. and RUSTON, A. G. The influence on crop and soil of manures applied to permanent meadow, 1915, **7**, 197
- CROWTHER, C. and STEUART, D. W. The distribution of atmospheric impurities in the neighbourhood of an industrial city, 1913, **5**, 391
- CROWTHER, C. and STEUART, D. W. Further studies of the effects of smoke from towns upon vegetation in the surrounding areas, 1914, **6**, 395
- CROWTHER, C. and WOODHOUSE, H. The influence of palm kernel cake upon the composition of milk-fat, 1917, **8**, 451
- CROWTHER, C. and WOODMAN, H. E. The comparative digestibility of palm kernel cake, extracted palm kernel meal and undecorticated cottonseed cake, 1917, **8**, 429
- CROWTHER, C. and WOODMAN, H. E. The digestibility of dried yeast, 1917, **8**, 448
- CROWTHER, C. and WOODMAN, H. E. A study of nitrogen metabolism in the dairy cow, 1922, **12**, 40
- CROWTHER, E. M. Studies on soil reaction. III. The determination of the hydrogen-ion concentration of soil suspensions by means of the hydrogen electrode, 1925, **15**, 201
- CROWTHER, E. M. Studies on soil reaction. IV. The soil reaction of continuously manured plots at Rothamsted and Woburn, 1925, **15**, 222
- CROWTHER, E. M. Studies on soil reaction. V. The depth-distribution of reaction and flocculation in continuously manured soils, 1925, **15**, 232
- CROWTHER, E. M. A note on the availability of organic nitrogen compounds in pot experiments, 1925, **15**, 300
- CROWTHER, E. M. Further experiments on the effect of removing the soluble humus from a soil on its productiveness, 1925, **15**, 303
- CROWTHER, E. M. and HAINES, W. B. An electrical method for the reduction of draught in ploughing, 1924, **14**, 221
- CROWTHER, E. M. and MARTIN, W. S. Studies on soil reaction. VI. The interaction of acid soils, calcium carbonate and water, in relation to the determination of "lime requirements," 1925, **15**, 237
- CROWTHER, E. M., *see also* KEEN, B. A. and PURI, A. N.
- CRUICKSHANK, E. M. Investigation on the mineral content of pasture grass and its effect on herbivora. IV. Report on the seasonal variations in the mineral content of pastures, 1926, **16**, 89
- CRUMP, L. M. Numbers of protozoa in certain Rothamsted soils, 1920, **10**, 182
- CUNNINGHAM, A. Studies on soil protozoa, 1915, **7**, 49
- CUNNINGHAM, A. and JENKINS, H. Studies on *Bacillus amylobacter*, A. M. et Brede mann, 1927, **17**, 109
- CUTLER, D. W. Observations on soil protozoa, 1919, **9**, 430
- CUTLER, D. W. A method for estimating the number of active protozoa in the soil, 1920, **10**, 135
- DAISH, A. J. Methods of estimation of carbohydrates. III. The cupric reducing power of the pentoses-xylose and arabinose, 1914, **6**, 255
- DAISH, A. J., *see also* DAVIS, W. A.
- DARBYSHIRE, F. V. and RUSSELL, E. J. Oxidation in soils and its relation to productiveness, 1907, **2**, 305
- DAVIDSON, H. R. Reproductive disturbances caused by feeding protein-deficient and calcium-deficient rations to breeding pigs, 1930, **20**, 233
- DAVIES, W. L. The proteins of green forage plants. I. The proteins of some leguminous plants, 1926, **16**, 280
- DAVIES, W. L. The proteins of green forage plants. II. The proteins of the mangold root. Comparison with the proteins of mangold seed, 1926, **16**, 293
- DAVIES, W. L. The proteins of green forage plants. III. The proteins of forage plants of the natural order Cruciferae (genus *Brassica*). Comparison with colzalin, a globulin from rapeseed, 1927, **17**, 33
- DAVIES, W. L. The proteins of green forage plants. IV. The proteins of some plants of the natural order Umbelliferae, 1927, **17**, 41
- DAVIES, W. L. The proteins of different types of peat soils, 1928, **18**, 682
- DAVIES, W. L. and SULLIVAN, R. S. The nutritive value of dried spent hops, 1927, **17**, 380
- DAVIES, W. M. A preliminary investigation into the draft of the plough, 1924, **14**, 370
- DAVIES, W. M. Experiments in the cultivation of the sugar beet crop in the West Midlands during 1927, 1928, **18**, 628

- DAVIES, W. M. and DUDLEY, F. J. Experiments in the cultivation of the sugar beet crop in the West Midlands during 1928. A statistical examination of the effect of spacing, 1929, **19**, 619
- DAVIS, W. A. The estimation of potassium, especially in fertilisers, soil extracts and plant ashes, 1912, **5**, 52
- DAVIS, W. A. A simple laboratory apparatus for the continuous evaporation of large volumes of liquid *in vacuo*, 1913, **5**, 434
- DAVIS, W. A. The hydrolysis of maltose by hydrochloric acid under the Herzfeld conditions of inversion. A reply to A. J. Kluyver, 1914, **6**, 413
- DAVIS, W. A. Studies of the formation and translocation of carbohydrates in plants. II. The dextrose-laevulose ratio in the mangold, 1916, **7**, 327
- DAVIS, W. A. The estimation of carbohydrates. V. The supposed precipitation of reducing sugars by basic lead acetate, 1916, **8**, 7
- DAVIS, W. A. and DAISH, A. J. A study of the methods of estimation of carbohydrates, especially in plant-extracts, 1913, **5**, 437
- DAVIS, W. A. and DAISH, A. J. Methods of estimating carbohydrates. II. The estimation of starch in plant material. The use of taka-diastase, 1914, **6**, 152
- DAVIS, W. A., DAISH, A. J. and SAWYER, G. C. Studies of the formation and translocation of carbohydrates in plants. I. The carbohydrates of the mangold leaf, 1916, **7**, 255
- DAVIS, W. A. and PRESCOTT, J. A. Note on the loss of phosphoric acid during fusion with ammonium fluoride, 1916, **8**, 136
- DAVIS, W. A. and SAWYER, G. C. The estimation of carbohydrates. IV. The presence of free pentoses in plant extracts and the influence of other sugars on their estimation, 1914, **6**, 406
- DAVIS, W. A. and SAWYER, G. C. Studies of the formation and translocation of carbohydrates in plants. III. The carbohydrates of the leaf and leaf stalks of the potato. The mechanism of the degradation of starch in the leaf, 1916, **7**, 352
- DEIGHTON, T. Some investigations on the electrical method of soil moisture determination, 1922, **12**, 207
- DEIGHTON, T. The effect of movement of soil salts on standardisation values of electrodes used in moisture determinations, 1923, **13**, 440
- DEIGHTON, T. A new calorimeter for use with young farm animals, 1926, **16**, 376
- DEIGHTON, T. A study of the metabolism of two breeds of pig. (With some remarks on a third), 1929, **19**, 140
- DIXON, J. K. S. Citrate solubility of phosphoric acid in fertilisers, 1906, **1**, 430
- DODD, A. H. The determination of potash in soils, 1924, **14**, 139
- DOUGHTY, L. R. and ENGLEDDOW, F. L. Investigations on yield in the cereals. V. A study of four wheat fields: the limiting effect of population-density on yield and an analytical comparison of yield, 1928, **18**, 317
- DOUGHTY, L. R., ENGLEDDOW, F. L. and SANSOM, T. K. Investigations on yield in cereals. VI. A. A developmental study of the influence of nitrogenous top-dressing on wheat. B. A measurement of the influence of disease ("take-all") upon the yield of wheat, 1929, **19**, 472
- DOW, W. T., *see* OGG, W. G.
- DOYNE, H. C., *see* MARTIN, F. J. and MORISON, C. G. T.
- DRAKELEY, T. J. and WHITE, M. K. The influence of the stage of lactation and the breed of the cow on the yield and quality of the milk, 1927, **17**, 118
- DRAKELEY, T. J. and WHITE, M. K. The joint influence of the period of lactation and the age of the cow on the yield and quality of the milk, 1928, **18**, 496
- DRAKELEY, T. J., *see also* WHITE, M. K.
- DRUMMOND, J. C., CHANNON, H. J., COWARD, K. H., GOLDING, J., MACKINTOSH, J. and ZILVA, S. S. The influence of the administration of certain oils on the nutritive value of the butter fat of cows on winter rations, 1924, **14**, 531
- DRUMMOND, J. C., COWARD, K. H., GOLDING, J., MACKINTOSH, J. and ZILVA, S. S. Cod liver oil in the winter feeding of milch cows, 1923, **13**, 144
- DRUMMOND, J. C., ZILVA, S. S. and GOLDING, J. The use of cod liver oil in the feeding of farm animals, 1923, **13**, 153
- DUCKHAM, A. N., *see* WOODMAN, H. E.
- DUDLEY, F. J., *see* DAVIES, W. M.
- DU TOIT, M. M. S. and PAGE, H. J. Studies on the carbon and nitrogen cycles in the soil. III. The formation of natural humic matter, 1930, **20**, 478
- DU TOIT, M. M. S., *see also* MALAN, A. I. and THELLER, A.
- DYER, B. Town stable manure: its chemical composition and the changes it undergoes on keeping, 1905, **1**, 108
- DYMOND, T. S., HUGHES, F. and JUPE, C. W. C. The influence of sulphates as manure upon the yield and feeding value of crops, 1905, **1**, 217
- EASTERFIELD, T. H., RIGG, T., ASKEW, H. O. and BRUCE, J. A. A widespread occurrence of xanthin calculi in sheep, 1929, **19**, 573
- EDEN, T. A note on the colorimetric estimation of humic matter in mineral soils, 1924, **14**, 469

- EDEN, T. and FISHER, R. A. Studies in crop variation. IV. The experimental determination of the value of top dressings with cereals, 1927, 17, 548
- EDEN, T. and FISHER, R. A. Studies in crop variation. VI. Experiments on the response of the potato to potash and nitrogen, 1929, 19, 201
- EDEN, T. and MASKELL, E. J. The influence of soil heterogeneity on the growth and yield of successive crops, 1928, 18, 163
- ELLIOT, W. Investigation on the mineral content of pasture grass and its effect on herbivora. I. General report, 1926, 16, 59
- ELLIOT, W. and CRICHTON, A. Investigation on the mineral content of pasture grass and its effect on herbivora. II. Report on the effect of the addition of mineral salts to the ration of sheep, 1926, 16, 65
- ELLIS, J. C. B. and MORISON, C. G. T. The ammoniacal nitrogen of peats and humus soils. Part I, 1916, 8, 1
- ELLIS, J. C. B. and MORISON, C. G. T. The ammoniacal nitrogen of peats and humus soils. Part II, 1928, 18, 346
- ELTRINGHAM, H. Some experiments on the house-fly in relation to the farm manure heap, 1916, 7, 443
- ELVEDEN, *Viscount*. A contribution to the investigation into the results of partial sterilisation of the soil by heat, 1921, 11, 197
- ENGLEDOW, F. L. Inheritance in barley. II. The awn and the lateral floret, 1921, 11, 159
- ENGLEDOW, F. L. Investigations on yield in the cereals. II. A spacing experiment with wheat, 1925, 15, 125
- ENGLEDOW, F. L. A census of an acre of corn (by sampling), 1926, 16, 166
- ENGLEDOW, F. L. Investigations on yield in the cereals. IV. The action of the seed drill, 1928, 18, 1
- ENGLEDOW, F. L., MAHER, C. A., HUNTER-SMITH, J., WILLIAMS, H. R., FAIL, H. and RAYNS, F. Yield and plant population in sugar beet, 1928, 18, 574
- ENGLEDOW, F. L. and RAMIAH, K. Investigations on yield in cereals. VII. A study of development and yield of wheat based upon varietal comparison, 1930, 20, 265
- ENGLEDOW, F. L. and SHELTON, J. P. An investigation upon certain metrical attributes of wheat plants, 1922, 12, 197
- ENGLEDOW, F. L. and WADHAM, S. M. Investigations on yield in the cereals. I, 1923, 13, 390
- ENGLEDOW, F. L. and WADHAM, S. M. Investigations on yield in the cereals. I. Part II (continued), 1924, 14, 66
- ENGLEDOW, F. L. and WADHAM, S. M. Investigations on yield in the cereals. I. Part II (continued), 1924, 14, 287
- ENGLEDOW, F. L. and WADHAM, S. M. Investigations on yield in the cereals. I, 1924, 14, 325
- ENGLEDOW, F. L., *see also* BAILEY, P. G., DOUGHTY, L. R. and WOODMAN, H. E.
- EVANS, I. B. P. South African cereal rusts, with observations on the problem of breeding rust-resistant wheats, 1911, 4, 95
- EVANS, R. E. Protein and mineral metabolism in pregnant sows on a normal or high calcium diet compared with a calcium-deficient diet, 1929, 19, 752
- EVANS, R. E. The influence of the addition of calcium carbonate to a ration low in lime on the appetite and digestibility of the food in swine, 1929, 19, 799
- EVANS, R. E. The influence of a low and high calcium diet on the development and chemical composition of the skeleton in swine, 1930, 20, 117
- EVANS, R. E., *see also* WOODMAN, H. E.
- EVERSHED, A. F. C.-H. and WARBURTON, C. Pheasants and agriculture, 1918, 9, 63
- EYRE, J. V. and FISHER, E. A. Some considerations affecting the growing of linseed as a farm crop in England. I. Variations in the oil content, 1915, 7, 120
- EYRE, J. V. and SALMON, E. S. The fungicidal properties of certain spray-fluids, 1916, 7, 473
- EYRE, J. V., SALMON, E. S. and WORMALD, L. K. The fungicidal properties of certain spray-fluids. II, 1919, 9, 283
- FAIL, H., *see* ENGLEDOW, F. L.
- FAIR, T. K., *see* WALTON, A.
- FELTZEN, H. von, and LUGNER, I. The quantity of ammonia and nitric acid in the rain-water collected at Flahult in Sweden, 1910, 3, 311
- FISHBURN, H. P., *see* JONES, J. S.
- FISHER, E. A. Studies on soil reaction. I. A résumé, 1921, 11, 19
- FISHER, E. A. Studies on soil reaction. II. The colorimetric determination of the hydrogen-ion concentration in soils and aqueous soil extracts. (Preliminary communication), 1921, 11, 45
- FISHER, E. A. Some factors affecting the evaporation of water from soil, 1923, 13, 121
- FISHER, E. A. A note on soil shrinkage, 1924, 14, 126
- FISHER, E. A. Remarks and observations on imbibitional soil moisture, 1924, 14, 204
- FISHER, E. A. Some factors affecting the evaporation of water from soil. II. The discontinuity of the drying process, 1927, 17, 407
- FISHER, E. A. and JONES, C. R. The determination of moisture in wheat and flour. A study of "moisture testing" in water ovens and electric ovens, 1928, 18, 649
- FISHER, E. A., *see also* EYRE, J. V.
- FISHER, R. A. Studies in crop variation. I. An examination of the yield of dressed grain from Broadbalk, 1921, 11, 107

- FISHER, R. A. On the capillary forces in an ideal soil, 1926, **16**, 492
- FISHER, R. A. Further note on the capillary forces in an ideal soil, 1928, **18**, 406
- FISHER, R. A. A preliminary note on the effect of sodium silicate in increasing the yield of barley, 1929, **19**, 132
- FISHER, R. A. and MACKENZIE, W. A. Studies in crop variation. II. The manurial response of different potato varieties, 1923, **13**, 311
- FISHER, R. A., *see also* EDEN, T.
- FLETCHER, F. Mendelian heredity in cotton, 1907, **2**, 281
- FLETCHER, F. Toxic excreta of plants, 1912, **4**, 245
- FLETCHER, F., *see also* FOADEN, G. P.
- FOADEN, G. P. and FLETCHER, F. A text-book of Egyptian agriculture. Vol. II, review of, 1911, **4**, 106
- FOREMAN, F. W. Soils of Cambridgeshire, 1907, **2**, 161
- FOREMAN, F. W. Hydrolysis of the protein of linseed, 1910, **3**, 358
- FOREMAN, F. W. The fungicidal properties of liver of sulphur, 1910, **3**, 400
- FOREMAN, F. W. Studies in protein hydrolysis, 1912, **4**, 430
- FREAK, G. A., *see* COOPER, W. F.
- FRED, E. B., *see* VILJOEN, J. A.
- FRENCH, M. H., *see* WOODMAN, H. E.
- FRIES, J. A., *see* ARMSBY, H. P.
- FURLONG, J. R. The rancidity of palm kernel and other feeding cakes, 1919, **9**, 137
- GADD, C. H. A simple method for the determination of the pH values of turbid soil and other solutions, 1928, **18**, 206
- GALLAGHER, P. H. Estimation of nitric nitrogen and total nitrogen in plant tissue extracts, 1923, **13**, 63
- GARDNER, H. W., HUNTER-SMITH, J., REID, J. W. and WILLIAMS, H. R. Some observations on the nitrogenous manuring of grassland, 1929, **19**, 500
- GAVIN, W. Studies in milk records: the influence of foetal growth on yield, 1913, **5**, 309
- GAVIN, W. Studies in milk records: on the accuracy of estimating a cow's milking capability by her first lactation yield, 1913, **5**, 377
- GEAKE, A. Enquiry into the factors which control the texture of Cheddar cheese. Part I, 1914, **6**, 169
- GEAKE, A. A new method of testing cheeses, 1920, **10**, 86
- GIBSON, T. Observations on *B. radicola*, Beijk, 1928, **18**, 76
- GIBSON, T. The decomposition of urea in soils, 1930, **20**, 549
- GIMINGHAM, C. T. The action of carbon dioxide on Bordeaux mixtures, 1911, **4**, 69
- GIMINGHAM, C. T. The formation of calcium carbonate in the soil by bacteria, 1911, **4**, 145
- GIMINGHAM, C. T. The scouring lands of Somerset and Warwickshire, 1914, **6**, 328
- GIMINGHAM, C. T. On the colorimetric determination of hydrogen-ion concentration in soils, 1923, **13**, 69
- GIMINGHAM, C. T. and CARTER, R. H. On the estimation of nitrates in soils by the phenol disulphonic acid method, 1923, **13**, 60
- GIMINGHAM, C. T. and TATTERSFIELD, F. Laboratory and field experiments on the use of 3:5-dinitro-o-cresol and the sodium salt for winter spraying, 1927, **17**, 162
- GIMINGHAM, C. T., *see also* BARKER, B. T. P., TATTERSFIELD, F. and WARREN, R. G.
- GLEN, J. and M'CANDLISH, A. C. Factors affecting the yield and quality of milk. II. Variations in successive lactations, 1930, **20**, 45
- GLYNNE, M. D. and JACKSON, V. G. The distribution of dry matter and nitrogen in the potato tuber. Variety, King Edward, 1919, **9**, 237
- GODDEN, W. The comparative keeping qualities of palm kernel, coconut, groundnut and other oil-cakes, 1917, **8**, 419
- GODDEN, W. The digestibility of straw after treatment with soda, 1920, **10**, 437
- GODDEN, W. Digestibility of peat moss after treatment with acid, 1920, **10**, 457
- GODDEN, W. Notes on the drainage from tower silos, 1923, **13**, 462
- GODDEN, W. Investigation on the mineral content of pasture grass and its effect on herbivora. III. Report on the chemical analyses of samples of pasture from various areas in the British Isles, 1926, **16**, 78
- GODDEN, W. Investigation on the mineral content of pasture grass and its effect on herbivora. V. Report on the effect of fertilisers on the mineral content of pastures, 1926, **16**, 98
- GODDEN, W. and GRIMMETT, R. E. R. Factors affecting the iron and manganese content of plants with special reference to herbage causing "Pining" and "Bush-sickness," 1928, **18**, 363
- GOLDING, J. The importance of the removal of the products of growth in the assimilation of nitrogen by the organisms of the root nodules of leguminous plants, 1905, **1**, 59
- GOLDING, J., *see also* BLISSETT, A. H., DRUMMOND, J. C. and RUSSELL, E. J.
- GOODEY, T. On the susceptibility of clover and some other legumes to stem-disease caused by the eelworm, *Tylenchus dipsaci*, syn. *devastatrix*, Kühn, 1922, **12**, 20

- GOODWIN, W. and MARTIN, H. The estimation of "polysulphide" sulphur in spray materials, 1925, 15, 96
- GOODWIN, W. and MARTIN, H. An investigation of the chemical changes taking place in the mixed lime sulphur-lead arsenate spray, 1925, 15, 307
- GOODWIN, W. and MARTIN, H. The chemical effect of the addition of a "spreader" to the mixed lime sulphur-lead arsenate spray, 1925, 15, 476
- GOODWIN, W. and MARTIN, H. The lime sulphur-calcium arsenate spray, 1926, 16, 596
- GOODWIN, W. and MARTIN, H. Bordeaux mixture in combination with arsenical sprays, 1928, 18, 460
- GOODWIN, W., MARTIN, H. and SALMON, E. S. The fungicidal properties of certain spray-fluids. IV, 1926, 16, 302
- GOODWIN, W., MARTIN, H. and SALMON, E. S. The fungicidal properties of certain spray-fluids. V, 1929, 19, 405
- GOODWIN, W., MARTIN, H. and SALMON, E. S. The fungicidal properties of certain spray-fluids. VI, 1930, 20, 18
- GOODWIN, W., MARTIN, H. and SALMON, E. S. The fungicidal properties of certain spray-fluids. VII, 1930, 20, 489
- GOODWIN, W., SALMON, E. S. and WARE, W. M. The action of certain chemical substances on the zoospores of *Pseudoperonospora Humuli* (Miy. et Takah.) Wils., 1929, 19, 185
- GRAHAM-SMITH, G. S. Some observations on "swollen head" in turkeys, 1907, 2, 227
- GREAVES, J. E. and STEWART, R. Distribution of the nitrogen of wheat between the flour, bran and shorts, 1912, 4, 376
- GREEN, H. H. Studies in mineral metabolism. IV. Determination of phosphorus compounds in blood by dry combustion, 1928, 18, 372
- GREEN, H. H. and MACASKILL, E. H. Studies in mineral metabolism. VI. Comparison of the blood of cow and calf in respect to mineral constituents, 1928, 18, 384
- GREEN, H. H., *see also* MALAN, A. I. and THEILER, A.
- GREEN, W. H. and AMPT, G. A. Studies on soil physics, 1911, 4, 1
- GREEN, W. H. and AMPT, G. A. Studies on soil physics. Part II. The permeability of an ideal soil to air and water, 1912, 5, 1
- GREENE, H. A soil boring apparatus, 1928, 18, 515
- GREENE, H. Soil profile in the Eastern Gezira, 1928, 18, 518
- GREENE, H. Soil permeability in the Eastern Gezira, 1928, 18, 531
- GREENE, H., *see also* PETO, R. H. K.
- GREENHILL, A. W. The availability of phosphatic fertilisers as shown by an examination of the soil solution and of plant growth, 1930, 20, 559
- GREENHILL, A. W. Investigations into the extensive system of grassland management by the Agricultural Research Staff of Imperial Chemical Industries, Limited. I. The chemical composition of intensively treated pasture, 1930, 20, 573
- GRIFFITH, G., *see* WOODMAN, H. E.
- GRIFFITH, J. J. Influence of mines upon land and livestock in Cardiganshire, 1919, 9, 366
- GRIFFITHS, D. G., *see* CRANFIELD, H. T.
- GRIMMETT, R. E. R., *see* GODDEN, W.
- GROVES, R. C. The mechanical analysis of heavy ferruginous soils, 1928, 18, 200
- HACKETT, F. E. and STRETTAN, J. S. The capillary pull of an ideal soil, 1928, 18, 671
- HAINES, W. B. The volume-changes associated with variations of water content in soil, 1923, 13, 296
- HAINES, W. B. Studies in the physical properties of soils. I. Mechanical properties concerned in cultivation, 1925, 15, 178
- HAINES, W. B. Studies in the physical properties of soils. II. A note on the cohesion developed by capillary forces in an ideal soil, 1925, 15, 529
- HAINES, W. B. Studies in the physical properties of soils. III. Observations on the electrical conductivity of soils, 1925, 15, 536
- HAINES, W. B. Studies in the physical properties of soils. IV. A further contribution to the theory of capillary phenomena in soil, 1927, 17, 264
- HAINES, W. B. Studies in the physical properties of soil. V. The hysteresis effect in capillary properties, and the modes of moisture distribution associated therewith, 1930, 20, 97
- HAINES, W. B. and KEEN, B. A. Studies in soil cultivation. II. A test of soil uniformity by means of dynamometer and plough, 1925, 15, 387
- HAINES, W. B. and KEEN, B. A. Studies in soil cultivation. III. Measurements on the Rothamsted classical plots by means of dynamometer and plough, 1925, 15, 395
- HAINES, W. B. and KEEN, B. A. Studies in soil cultivation. IV. A new form of traction dynamometer, 1928, 18, 724
- HAINES, W. B., *see also* CROWTHER, E. M. and KEEN, B. A.
- HALL, A. A., *see* MALCOLM, J.
- HALL, A. D. The analysis of the soil by means of the plant, 1905, 1, 65
- HALL, A. D. Calcium cyanamide, 1905, 1, 146

- HALL, A. D. On the accumulation of fertility by land allowed to run wild, 1905, **1**, 241
- HALL, A. D. Variation in composition of the swede, 1905, **1**, 258
- HALL, A. D. The book of the Rothamsted experiments, review of, 1906, **1**, 481
- HALL, A. D. The feeding of crops and stock, review of, 1911, **4**, 105
- HALL, A. D. Note on the effect of sodium silicate in increasing the yield of barley, 1929, **19**, 586
- HALL, A. D., BRENCHLEY, W. E. and UNDERWOOD, L. M. The soil solution and the mineral constituents of the soil, 1914, **6**, 278
- HALL, A. D. and MILLER, N. H. J. The nitrogen compounds of the fundamental rocks, 1908, **2**, 343
- HALL, A. D. and MILLER, N. H. J. On the absorption of ammonia from the atmosphere, 1911, **4**, 56
- HALL, A. D. and MORISON, C. G. T. The flocculation of turbid liquids by salts, 1907, **2**, 244
- HALL, A. D. and RUSSELL, E. J. Soil surveys and soil analyses, 1911, **4**, 182
- HALL, A. D. and RUSSELL, E. J. On the causes of the high nutritive value and fertility of the fattening pastures of Romney Marsh and other marshes in the S.E. of England, 1912, **4**, 339
- HALL, A. D., *see also* BIFFEN, R. H., BRENCHLEY, W. E. and MERCER, W. B.
- HALLETT, H. S., *see* MATTICK, E. C. V.
- HALNAN, E. T. The maintenance ration of oxen and the starch equivalent theory, 1915, **7**, 163
- HALNAN, E. T. Digestibility trials with poultry. I. The digestibility of English wheats, with a note on the digestibility of fibre in Sussex ground oats, 1926, **16**, 451
- HALNAN, E. T. Digestibility trials with poultry. II. The digestibility of "weak" and "strong" wheats, and their value for poultry feeding. III. The digestibility of "whole" and "flaked" maize, 1928, **18**, 421
- HALNAN, E. T. Digestibility trials with poultry. IV. The digestibility of certain varieties of oats. V. The digestibility and feeding value of bulrush millet, 1928, **18**, 634
- HALNAN, E. T. Digestibility trials with poultry. VI. On the influence of the size of a ration upon its digestibility, 1928, **18**, 766
- HALNAN, E. T., *see also* ROBINSON, G. W.
- HALTON, P. The chemistry of the strength of wheat flour, 1924, **14**, 587
- HAMILTON, S. N., *see* SHUTT, F. T.
- HAMMOND, J. An investigation concerning the food of certain birds, 1912, **4**, 380
- HAMMOND, J. On some factors controlling fertility in domestic animals, 1914, **6**, 263
- HAMMOND, J. On the relative growth and development of various breeds and crosses of cattle, 1920, **10**, 233
- HAMMOND, J. Further observations on the factors controlling fertility and foetal atrophy, 1921, **11**, 337
- HAMMOND, J. On the relative growth and development of various breeds and crosses of sheep, 1921, **11**, 367
- HAMMOND, J. On the relative growth and development of various breeds and crosses of pigs, 1922, **12**, 387
- HAMMOND, J. and HAWK, J. C. Studies in milk secretion. I. The effect of nutrition on yield and composition, 1917, **8**, 139
- HAMMOND, J. and HAWK, J. C. Studies in milk secretion. II. The relation of the glands of internal secretion to milk production, 1917, **8**, 147
- HAMMOND, J. and SANDERS, H. G. Some factors affecting milk yield, 1923, **13**, 74
- HAMMOND, J., *see also* MACKENZIE, K. J. J. and WOODMAN, H. E.
- HANLEY, F., *see* WOODMAN, H. E.
- HANLEY, J. A. Estimation of the surface of soils, 1914, **6**, 58
- HANLEY, J. A. The humus of acid and alkaline peats, 1914, **6**, 63
- HARDY, F. A preliminary investigation into the occurrence of different kinds of carbonates in certain soils, 1921, **11**, 1
- HARDY, F. The physical significance of the shrinkage coefficient of clays and soils, 1923, **13**, 243
- HARDY, F. The maximum water-retaining capacity of colloidal soils: the interpretation of this and of certain other soil moisture constants, 1923, **13**, 340
- HARDY, F. The soil-point method for directly estimating the water-supplying power of a soil in the field, 1923, **13**, 355
- HARDY, F. Cohesion in colloidal soils, 1925, **15**, 420
- HARDY, F. Percolation in colloidal soils, considered in relation to swelling and cohesiveness, 1925, **15**, 434
- HARDY, F. The rôle of aluminium in soil infertility and toxicity, 1926, **16**, 616
- HARDY, F. An index of soil texture, 1928, **18**, 252
- HARDY, F. A note on the determination of soil organic matter. A wet combustion method, 1929, **19**, 727
- HARDY, F. Some aspects and methods of soil survey work, 1929, **19**, 734
- HARDY, F. and LEWIS, A. H. A rapid electrometric method for measuring "lime requirements" of soils, 1929, **19**, 17

- HART, R. Studies in the geology and mineralogy of soils. I. A detailed study of a region characterised by diverse rocks and partly covered by glacial drift, 1929, 19, 90
- HART, R. Studies in the geology and mineralogy of soils. II. Soils of South-east Scotland, 1929, 19, 802
- HARTLEY, K. T. The slaking of dry soils with water, 1928, 18, 41
- HARVEY, H. W. Note on the composition of soot, 1910, 3, 398
- HAWK, J. C., *see* HAMMOND, J.
- HENDRICK, J. The preservation of eggs by water glass, and the composition of preserved eggs, 1907, 2, 100
- HENDRICK, J. and NEWLANDS, G. The value of mineralogical examination in determining soil types, with a method of examination and a comparison of certain English and Scottish soils, 1923, 13, 1
- HENDRICK, J. and NEWLANDS, G. The mineralogical composition of some Scottish soils, 1925, 15, 257
- HENDRICK, J. and NEWLANDS, G. Studies of a Scottish drift soil. Part IV, 1926, 16, 584
- HENDRICK, J. and OGG, W. G. Studies of a Scottish drift soil. I. The composition of the soil and of the mineral particles which compose it, 1916, 7, 458
- HENDRICK, J., *see also* OGG, W. G.
- HILL, A. V., *see* WOOD, T. B.
- HILL, C. F., *see* ROBINSON, G. W.
- HILLIER, V. F., *see* BARKER, B. T. P.
- HOBSON, R. P., *see* TATTERSFIELD, F.
- HORNE, A. S. The symptoms of internal disease and sprain (streak-disease) in potato, 1910, 3, 322
- HORTON, E. On the use of taka-diastrase in estimating starch, 1921, 11, 240
- HORTON, E. and SALMON, E. S. The fungicidal properties of certain spray fluids. III, 1922, 12, 269
- HOWARD, A. The influence of pollination on the development of the hop, 1905, 1, 49
- HOWARD, A. and HOWARD, G. L. C. Note on immune wheats, 1907, 2, 278
- HOWARD, G. L., *see* HOWARD, A.
- HOWLETT, F. M., *see* MAXWELL-LEFROY, H.
- HUDIG, J. The amounts of nitrogen as ammonia and nitric (and nitrous) acid in the rain-water at Uithuizermeeden, Groningen, 1912, 4, 260
- HUGHES, F., *see* DYMOND, T. S.
- HUMPHRIES, A. E. and BIFFEN, R. H. The improvement of English wheat, 1907, 2, 1
- HUNTER-SMITH, J., *see* ENGLEADOW, F. L. and GARDNER, H. W.
- HUSBAND, A. D., *see* TAYLOR, W.
- HUTCHINSON, H. B. The partial sterilisation of the soil by means of caustic lime, 1913, 5, 320
- HUTCHINSON, H. B. The influence of plant residues on nitrogen fixation and on losses of nitrate in the soil, 1918, 9, 92
- HUTCHINSON, H. B. and CLAYTON, J. On the decomposition of cellulose by an aerobic organism (*Spirochaeta cytophaga*, n. sp.), 1919, 9, 143
- HUTCHINSON, H. B. and MACLENNAN, K. The relative effect of lime as oxide and carbonate on certain soils, 1914, 6, 302
- HUTCHINSON, H. B. and MACLENNAN, K. The determination of soil carbonates, 1914, 6, 323
- HUTCHINSON, H. B. and MACLENNAN, K. Studies on the lime requirements of certain soils, 1915, 7, 75
- HUTCHINSON, H. B. and MILLER, N. H. J. Direct assimilation of ammonium salts by plants, 1909, 3, 179
- HUTCHINSON, H. B. and MILLER, N. H. J. The direct assimilation of inorganic and organic forms of nitrogen by higher plants, 1912, 4, 282
- HUTCHINSON, H. B. and THAYSEN, A. C. The non-persistence of bacterio-toxins in the soil, 1918, 9, 43
- HUTCHINSON, H. B., *see also* BEWLEY, W. F. and RUSSELL, E. J.
- INGLE, H. The mineral constituents of foods, 1908, 3, 22
- INTERNATIONAL CONGRESS OF SOIL SCIENCE. Preliminary announcement, 1927, 17, 140
- IVANOFF, E. I. On the use of artificial insemination for zoo-technical purposes in Russia, 1922, 12, 244
- JACKSON, V. G., *see* GLYNNE, M. D.
- JENKIN, T. J., *see* STAPLEDON, R. G.
- JENKINS, H., *see* CUNNINGHAM, A.
- JENSEN, H. L. On the influence of the carbon:nitrogen ratios of organic material on the mineralisation of nitrogen, 1929, 19, 71
- JENSEN, H. L. Decomposition of keratin by soil micro-organisms, 1930, 20, 390
- JOHNSON, S. T. A note on the sampling of sugar beet, 1929, 19, 311
- JONES, C. R., *see* FISHER, E. A.
- JONES, G. H. G. Note on the action of hydrogen peroxide on farmyard manure in different stages of decomposition, 1927, 17, 104
- JONES, J. O., *see* ROBINSON, G. W.
- JONES, J. S. and COLVER, C. W. The composition of irrigated and non-irrigated apples, 1913, 5, 424
- JONES, J. S., COLVER, C. W. and FISHBURN, H. P. The protein content of wheat grown with irrigation, 1920, 10, 290
- JONES, S. G. A bacterial disease of turnip (*Brassica napus*), 1922, 12, 292

- JØRGENSEN, I. and PRIESTLEY, J. H. The distribution of the overhead electrical discharge employed in recent agricultural experiments, 1914, 6, 337
- JOSEPH, A. F. The composition of some Sudan soils, 1924, 14, 490
- JOSEPH, A. F. Alkali investigations in the Sudan, 1925, 15, 407
- JOSEPH, A. F. The moisture equivalent of heavy soils. II, 1927, 17, 12
- JOSEPH, A. F. and MARTIN, F. J. The determination of clay in heavy soils, 1921, 11, 293
- JOSEPH, A. F. and MARTIN, F. J. The moisture equivalent of heavy soils, 1923, 13, 49
- JOSEPH, A. F. and MARTIN, F. J. The hydrogen-ion concentration of heavy alkaline soils, 1923, 13, 321
- JOSEPH, A. F. and OAKLEY, H. B. The properties of heavy alkaline soils containing different exchangeable bases, 1929, 19, 121
- JOSEPH, A. F. and SNOW, O. W. The dispersion and mechanical analysis of heavy alkaline soils, 1929, 19, 106
- JOSEPH, A. F. and WHITEFIELD, B. W. The organic matter in heavy alkaline soils, 1927, 17, 1
- JUPE, C. W. C., *see* DYMOND, T. S.
- KALAMKAR, R. J. Studies in crop variation. VIII. An application of the resistance formula to potato data, 1930, 20, 440
- KAR, S. C., *see* ANNETT, H. E.
- KAY, R. R. and M'CANDLISH, A. C. Factors affecting the yield and quality of milk. I. The age of the cow, 1929, 19, 342
- KAYSER, E. Microbiologie agricole, review of, 1907, 2, 106
- KEEN, B. A. The evaporation of water from soil, 1914, 6, 456
- KEEN, B. A. A note on the capillary rise of water in soils, 1919, 9, 396
- KEEN, B. A. A quantitative relation between soil and the soil solution brought out by freezing-point determinations, 1919, 9, 400
- KEEN, B. A. The relations existing between the soil and its water content, 1920, 10, 44
- KEEN, B. A. The evaporation of water from soil. II. Influence of soil type and manurial treatment, 1921, 11, 432
- KEEN, B. A. On the moisture relationships in an ideal soil, 1924, 14, 170
- KEEN, B. A. "Single value" soil properties: a study of the significance of certain soil constants. IV. A further note on the technique of the "box" experiment, 1930, 20, 414
- KEEN, B. A. and BLAIR, G. W. S. Plastometric studies of soil and clay pastes, 1929, 19, 684
- KEEN, B. A. and COUTTS, J. R. H. "Single value" soil properties: a study of the significance of certain soil constants, 1923, 13, 740
- KEEN, B. A., CROWTHER, E. M. and COUTTS, J. R. H. The evaporation of water from soil. III. A critical study of the technique, 1926, 16, 105
- KEEN, B. A. and HAINES, W. B. On the effect of wear on small mesh wire sieves, 1923, 13, 467
- KEEN, B. A. and HAINES, W. B. Studies in soil cultivation. I. The evolution of a dynamometer technique for use in soil cultivation experiments, 1925, 15, 375
- KEEN, B. A. and RACZKOWSKI, H. The relation between the clay content and certain physical properties of a soil, 1921, 11, 441
- KEEN, B. A. and RUSSELL, E. J. The factors determining soil temperature, 1921, 11, 211
- KEEN, B. A., *et al.* Studies in soil cultivation. V. Rotary cultivation, 1930, 20, 364
- KEEN, B. A., *see also* HAINES, W. B. and PURI, A. N.
- KELLY, F. C., *see* ORR, J. B.
- KRISHNA, P. G. Nitrogen fixation by soil micro-organisms, 1928, 18, 432
- LEAKE, H. M. Some preliminary notes on the physical properties of the soils of the Ganges Valley, more especially in their relation to soil moisture, 1906, 1, 454
- LEATHER, J. W. The flow of water and air through soils, 1912, 4, 303
- LEATHER, J. W. The effect of climate on soil-formation, 1915, 7, 135
- LEATHER, J. W. Soil gases, 1915, 7, 240
- LEATHER, J. W., *see also* BIFFEN, R. H.
- LECHMERE, A. E., *see* PRIESTLEY, J. H.
- LEGG, A. T., *see* BLACKMAN, V. H.
- LESLEY, J. W., *see* SALAMAN, R. N.
- LESTER, V. On the measurement of hydron concentration in some dairy products by means of Biilmann's quinhydrone electrode, 1924, 14, 634
- LEWIN, K. R., *see* MARTIN, C. H.
- LEWIS, A. H., *see* HARDY, F.
- LINCOLN, R., *see* CRAIG, N.
- LINE, J. Aluminium and acid soils, 1926, 16, 335
- LING, E. R., *see* CRANFIELD, H. T.
- LIPMAN, C. B. and BURGESS, P. S. The protective action against $MgCO_3$, of $CaCO_3$ for *A. chroococcum*, 1914, 6, 484
- LIPMAN, J. G. A method for the study of soil fertility problems, 1910, 3, 297
- LIPMAN, J. G. and BLAIR, A. W. A comparative study of the value of nitrate of soda, leguminous green manures and stable manure in cylinder experiments, 1907-1919, 1921, 11, 323

- LIPMAN, J. G. and OWEN, I. L. Some bacteriological relations in soils kept under green-house conditions, 1910, **3**, 301
- LLOYD, W. E., *see* ROBINSON, G. W.
- LOCK, R. H. Recent progress in the study of variation, heredity and evolution, review of, 1907, **2**, 217
- LOW, O. On the action of platinum black on free nitrogen, 1910, **3**, 320
- LUGNER, I., *see* FEILITZEN, H. VON
- LUXMOORE, C. M. The hygroscopic capacity of soils, 1905, **1**, 304
- M'CANDLISH, A. C., *see* GLEN, J. and KAY, R. R.
- MACASKILL, E. H., *see* GREEN, H. H.
- MACINTYRE, W. H., SHAW, W. M. and YOUNG, J. B. The repressive effect of lime and magnesia upon soil and subsoil potash, 1930, **20**, 499
- MACKENZIE, K. J. J. and MARSHALL, F. H. A. On ovariectomy in sows; with observations on the mammary glands and the internal genital organs. Part I, 1912, **4**, 410
- MACKENZIE, K. J. J. and MARSHALL, F. H. A. On ovariectomy in sows; with observations on the mammary glands and the internal genital organs. Part II, 1913, **5**, 418
- MACKENZIE, K. J. J., MARSHALL, F. H. A. and HAMMOND, J. On ovariectomy in sows; with observations on the mammary glands and the internal genital organs. Part III, 1914, **6**, 182
- MACKENZIE, K. J. J. and MARSHALL, F. H. A. On ovariectomy in sows; with observations on the mammary glands and the internal genital organs. Part IV, 1915, **7**, 243
- MACKENZIE, K. J. J. and MARSHALL, F. H. A. On the presence of supernumerary mammary glands in cows and on their functional activity, 1925, **15**, 30
- MACKENZIE, W. A. Studies in crop variation. III. An examination of the yield of dressed grain from Hoos Field, 1924, **14**, 434
- MACKENZIE, W. A. Note on a remarkable correlation between grain and straw, obtained at Rothamsted, 1926, **16**, 275
- MACKENZIE, W. A., *see also* FISHER, R. A. and WISHART, J.
- MACKINTOSH, J., *see* DRUMMOND, J. C.
- MCLEAN, W. The control of leaf-roll disease in potatoes by the diagnosis of "primarily infected" tubers. Preliminary note, 1926, **16**, 149
- MCLEAN, W. Effect of leaf-roll disease in potatoes on the composition of the tuber and "mother tuber," 1926, **16**, 318
- MCLEAN, W. The carbon-nitrogen ratio of soil organic matter, 1930, **20**, 348
- MCLEAN, W. and ROBINSON, G. W. A new method for the determination of ammoniacal nitrogen in soils, 1924, **14**, 548
- MCLEAN, W., *see also* ROBINSON, G. W.
- MACLENNAN, K., *see* HUTCHINSON, H. B.
- MAGEE, H. E. Studies on the metabolism of the ruminant by indirect calorimetry. I. The influence of variations in the external temperature on the energy exchange of the goat, 1924, **14**, 506
- MAGEE, H. E. Studies on the metabolism of the ruminant by indirect calorimetry. II. The influence of pregnancy on the energy exchange of the goat, 1924, **14**, 516
- MAGEE, H. E. Studies on the metabolism of the ruminant by indirect calorimetry. III. The influence of work on the energy exchange of the goat, 1924, **14**, 525
- MAGEE, H. E. Studies in the metabolism of the ruminant by indirect calorimetry. IV. The influence of food on the energy exchange of the goat, 1924, **14**, 600
- MAGEE, H. E. and ORR, J. B. Studies in the metabolism of the ruminant by indirect calorimetry. V. The course of metabolism after food in the goat, 1924, **14**, 619
- MAGEE, H. E., *see also* ORR, J. B.
- MAHER, C. A., *see* ENGLEDDOW, F. L.
- MALAN, A. I. Studies in mineral metabolism. VIII. Comparison of phosphorus partition in the blood of calf foetus, sheep foetus, and lambs, with corresponding maternal blood, 1928, **18**, 397
- MALAN, A. I. Studies in mineral metabolism. IX. The phosphorus partition of blood in anaemia of cattle and sheep, 1928, **18**, 401
- MALAN, A. I. and GREEN, H. H. Studies in mineral metabolism. VII. The unknown phosphorus fraction of calf blood, 1928, **18**, 391
- MALAN, A. I., GREEN, H. H. and DU TOIT, P. J. Studies in mineral metabolism. V. Composition of bovine blood on phosphorus deficient pasture, 1928, **18**, 376
- MALCOLM, J. and HALL, A. A. The heat value of milk as a test of its quality, 1907, **2**, 89
- MARCHAND, B. DE C. On some physical properties of Transvaal soils, 1924, **14**, 151
- MARR, F. S. Estimation of calcium carbonate in soils, 1909, **3**, 155
- MARRYAT, D. C. E. Notes on the infection and histology of two wheats immune to the attacks of *Puccinia glumarum*, yellow rust, 1907, **2**, 129
- MARSHALL, C. E. Some recent researches on soil colloids. A review, 1927, **17**, 315
- MARSHALL, F. H. A. The physiology of reproduction, review of, 1911, **4**, 105
- MARSHALL, F. H. A. and PEEL, W. R. "Fatness" as a cause of sterility, 1910, **3**, 383

- MARSHALL, F. H. A., *see also* MACKENZIE, K. J. J.
- MARTIN, C. H. and LEWIN, K. R. Notes on some methods for the examination of soil protozoa, 1915, 7, 106
- MARTIN, F. J. Loss involved by igniting soil fractions during the mechanical analysis of soils, 1928, 18, 123
- MARTIN, F. J. and DOYNE, H. C. Laterite and lateritic soils in Sierra Leone, 1927, 17, 530
- MARTIN, F. J. and DOYNE, H. C. Laterite and lateritic soil in Sierra Leone. II, 1930, 20, 135
- MARTIN, F. J., *see also* JOSEPH, A. F.
- MARTIN, H. The hydrolysis of sulphur in relation to its fungicidal activity, 1930, 20, 32
- MARTIN, H., *see also* GOODWIN, W.
- MARTIN, J. C., *see* BURD, J. S.
- MARTIN, W. S., *see* CROWTHER, E. M.
- MASKELL, E. J., *see* EDEN, T.
- MASON, G. H., *see* PERCIVAL, J.
- MATSON, J. The effect on lactation of the length of the preceding calving interval and its relation to milking capacity, to age and to other factors of influence, 1929, 19, 553
- MATTHEWS, A. Partial sterilisation of soil by antiseptics, 1924, 14, 1
- MATTHEWS, D. J. The determination of ammonia in soil, 1920, 10, 72
- MATTICK, A. T. R. "Apparent ropiness" (thread formation) in milk due to surface influence, 1926, 16, 459
- MATTICK, A. T. R. Oiliness in milk, 1927, 17, 388
- MATTICK, A. T. R., *see also* PROCTER, F.
- MATTICK, E. C. V. and HALLETT, H. S. The effect of heat on milk. A. On the coagulability by rennet. B. On the nitrogen, phosphorus and calcium content, 1929, 19, 452
- MAXWELL-LEFROY, H. and HOWLETT, F. M. A manual of Indian insect life, review of, 1910, 3, 333
- MERCER, W. B. and HALL, A. D. The experimental error of field trials, 1911, 4, 107
- MIDDLETON, T. H. The improvement of poor pastures, 1905, 1, 122
- MILES, H. W. and THOMAS, B. A preliminary study of the relationship between manuring and susceptibility to disease in potatoes, 1925, 15, 89
- MILLER, C. D. The vitamin A and B content of the pigeon pea (*Cajanus indicus*), 1928, 18, 569
- MILLER, N. H. J. The amounts of nitrogen as ammonia and as nitric acid, and of chlorine in the rain-water collected at Rothamsted, 1905, 1, 280
- MILLER, N. H. J. The amount and composition of the drainage through unmanured and uncropped land, Barnfield, Rothamsted, 1906, 1, 377
- MILLER, N. H. J., *see also* HALL, A. D. and HUTCHINSON, H. B.
- MILNE, G. The cobaltinitrite (volumetric) method of estimating potassium in soil-extracts, 1929, 19, 541
- MORISON, C. G. T. The amount of free lime and the composition of the soluble phosphates in basic slag, 1909, 3, 161
- MORISON, C. G. T. The composite character of the soil profile, its relation to soil classification, 1929, 19, 677
- MORISON, C. G. T. and DOYNE, H. C. Ferrous iron in soils, 1914, 6, 97
- MORISON, C. G. T. and SOTHERS, D. B. The solution and precipitation of iron in the formation of iron pan, 1914, 6, 84
- MORISON, C. G. T., *see also* ELLIS, J. C. B. and HALL, A. D.
- MOSSCROP, T. D. Some conditions affecting the value of calcium cyanamide as a manure, 1917, 8, 178
- MURRAY, J. A. The starch equivalent theory, 1915, 7, 154
- MURRAY, J. A. Meat production, 1919, 9, 174
- MURRAY, J. A. Normal growth in animals, 1921, 11, 258
- MURRAY, J. A. The chemical composition of animal bodies, 1922, 12, 103
- MURRAY, J. A. The food capacity of cattle, 1926, 16, 574
- NEVILLE, A. Linseed mucilage, 1913, 5, 113
- NEWLANDS, G. Certain acid soils and growth of sugar beet, 1928, 18, 704
- NEWLANDS, G., *see also* HENDRICK, J.
- NEWTON, R. A comparative study of winter wheat varieties with especial reference to winter-killing, 1922, 12, 1
- NEWTON, R. Colloidal properties of winter wheat plants in relation to frost resistance, 1924, 14, 178
- NEWTON, R. and BROWN, W. R. Seasonal changes in the composition of winter wheat plants, in relation to frost resistance, 1926, 16, 522
- NICHOLS, J. E. Fertility in Southdown sheep, 1926, 16, 365
- NICHOLSON, H. H. and PANTIN, B. The leaching out of autumnal dressings of nitrogenous fertilisers, 1929, 19, 297
- NIERENSTEIN, M. Contributions to the chemistry of Cheddar cheese, 1912, 4, 225
- NIERENSTEIN, M. and STUBBS, J. The action of rennet on milk, 1912, 4, 371
- NORMAN, D. B., *see* WOODMAN, H. E.
- NUTTALL, G. H. F., WARBURTON, C., COOPER, W. F. and ROBINSON, L. E. Ticks, a monograph of the Ixodoidea. Part I, review of, 1908, 3, 109
- NUTTALL, W. H., *see* COOPER, W. F.
- OAKLEY, H. B., *see* JOSEPH, A. F.
- O'BRIEN, D. G., *see* BERRY, R. A.

- OGG, W. G. and DOW, W. T. The reaction, exchangeable calcium, and "lime requirement" of certain Scottish soils, 1928, **18**, 131
- OGG, W. G. and HENDRICK, J. Studies of a Scottish drift soil. II, 1920, **10**, 333
- OGG, W. G. and HENDRICK, J. Studies of a Scottish drift soil. III, 1920, **10**, 343
- OGG, W. G., *see also* HENDRICK, J.
- OLDERSHAW, A. W. The effect of basic slag upon grassland, and upon the corn crops obtained when that grassland is ploughed up, 1921, **11**, 287
- ORR, J. B. and CRICHTON, A. The requirements of the pig for "vitamin A" and "vitamin C," 1924, **14**, 114
- ORR, J. B., KELLY, F. C. and STUART, G. L. The effect of iodine manuring on the iodine content of plants, 1928, **18**, 159
- ORR, J. B. and MAGEE, H. E. The application of the indirect method of calorimetry to ruminants, 1923, **13**, 447
- ORR, J. B., *see also* MAGEE, H. E.
- OWEN, O. The analysis of tomato plants. Part I, 1929, **19**, 413
- PAGE, H. J. On the perchlorate method for the estimation of potassium in soils, fertilisers, etc., 1924, **14**, 133
- PAGE, H. J. Studies on the carbon and nitrogen cycles in the soil. I. Introductory, 1930, **20**, 455
- PAGE, H. J. and WILLIAMS, W. The effect of flooding with sea-water on the fertility of the soil, 1926, **16**, 551
- PAGE, H. J., *see also* ARNOLD, C. W. B., DU TOIT, M. M. S. and WARREN, R. G.
- PAINÉ, S. G. Studies in bacteriosis. I. "Blackleg" of the potato, 1917, **8**, 480
- PANTIN, B., *see* NICHOLSON, H. H.
- PARASITOLOGY, Review of, 1908, **3**, 108
- PARKER, W. H. A case of correlation in wheat, 1914, **6**, 179
- PARKER, W. H. Lax and dense-eared wheats, 1914, **6**, 371
- PARKES, A. S. Studies on the sex-ratio and related phenomena. VII. The foetal sex-ratio in the pig, 1925, **15**, 284
- PEARCE, E. B. and BARKER, B. T. P. The yeast flora of bottled ciders, 1908, **3**, 55
- PEEL, W. R., *see* MARSHALL, F. H. A.
- PERCIVAL, J. and MASON, G. H. The micro-flora of Stilton cheese, 1913, **5**, 222
- PETERSON, W. H., *see* VILJOEN, J. A.
- PETHERBRIDGE, F. R. Some observations on the flora and fauna of flooded fenland, 1916, **7**, 508
- PETHERBRIDGE, F. R. Observations on the life history of the wheat-bulb fly (*Leptohylemyia coarctata*, Fall.), 1921, **11**, 99
- PETHERBRIDGE, F. R., *see also* RUSSELL, E. J.
- PETO, R. H. K. and GREENE, H. Water loss at Wad Medani. Part I, 1929, **19**, 715
- PICKERING, S. U. Studies on germination and plant-growth, 1908, **2**, 411
- PICKERING, S. U. The action of heat and antiseptics on soils, 1908, **3**, 32
- PICKERING, S. U. Bordeaux spraying, 1909, **3**, 171
- PICKERING, S. U. Studies of the changes occurring in heated soils, 1910, **3**, 258
- PICKERING, S. U. Plant-growth in heated soils, 1910, **3**, 277
- PICKERING, S. U. Copper fungicides, 1912, **4**, 273
- PICKERING, S. U. The fruiting of trees in consecutive seasons, 1916, **8**, 131
- PICKERING, S. U. and RUSSELL, E. J. The effect of bastard trenching on the soil and on plant growth, 1913, **5**, 483
- PICKERING, S. U., *see also* BEDFORD, DUKE OF
- PIPER, G. R., *see* PRESCOTT, J. A.
- POTTER, M. C. On a method of checking parasitic diseases in plants, 1908, **3**, 102
- POTTER, M. C. Bacterial diseases of plants, 1912, **4**, 323
- PRESCOTT, J. A. The estimation of phosphates in soil extracts, 1914, **6**, 111
- PRESCOTT, J. A. The phenomenon of absorption in its relation to soils. A résumé of the subject, 1916, **8**, 111
- PRESCOTT, J. A. Nitrification in Egyptian soils, 1919, **9**, 216
- PRESCOTT, J. A. A note on the sheraqi soils of Egypt. A study in partial sterilisation, 1920, **10**, 177
- PRESCOTT, J. A. The efficiency of ammonium sulphate as a fertiliser, 1923, **13**, 333
- PRESCOTT, J. A. and PIPER, G. R. Nitrate fluctuations in a South Australian soil, 1930, **20**, 517
- PRESCOTT, J. A., *see also* DAVIS, W. A. and RUSSELL, E. J.
- PRIESTLEY, J. H. and LECHMERE, A. E. A bacterial disease of swedes, 1910, **3**, 390
- PRIESTLEY, J. H., *see also* JØRGENSEN, I.
- PROCTER, F. Chamomile (mayweed) and a taint in milk, 1926, **16**, 443
- PROCTER, F. and MATTICK, A. T. R. Alkaline milk and its detection by the brom cresol purple test. I, 1926, **16**, 145
- PROCTER, F. and WRIGHT, N. C. Bulk in animal feeding, 1927, **17**, 392
- PUGH, A. J., *see* WARREN, R. G.
- PUNNETT, R. C. Mendelism, review of, 1907, **2**, 217
- PURI, A. N. A critical study of the hygroscopic coefficient of soil, 1925, **15**, 272
- PURI, A. N. Some experiments on the interaction between soil and dilute acids, 1925, **15**, 334
- PURI, A. N., CROWTHER, E. M. and KEEN, B. A. The relation between the vapour pressure and water content of soils, 1925, **15**, 68

- PURI, A. N. and KEEN, B. A. The dispersion of soil in water under various conditions, 1925, 15, 147
- PURVIS, O. N. The effect of potassium salts on the anatomy of *Dactylis glomerata*, 1919, 9, 338
- PYNE, G. T. The determination of nitrates in plant materials, 1927, 17, 153
- PYNE, G. T. The action of viscogen (calcium saccharate) on milk and cream, 1929, 19, 463
- QUINLAN, J. Vasectomy as a method of sterilising ram lambs. A comparison with castration, 1928, 18, 446
- RACZKOWSKI, H., *see* KEEN, B. A.
- RAMIAH, K., *see* ENGLEDDOW, F. L.
- RAMSAY, A. A. The preparation and composition of lime-sulphur sprays, 1914, 6, 194
- RAMSAY, A. A. Lime-sulphur sprays, their composition and analysis, 1914, 6, 476
- RAMSAY, A. A. The solubility of calcium phosphates in citric acid, 1917, 8, 277
- RAYNS, F., *see* ENGLEDDOW, F. L.
- REID, J. W., *see* GARDNER, H. W.
- RICHARDS, E. H. The fixation of nitrogen in faeces, 1917, 8, 299
- RICHARDS, E. H. Dissolved oxygen in rain-water, 1917, 8, 331
- RICHARDS, E. H., *see also* RUSSELL, E. J.
- RIGG, T. The soils and crops of the market-garden district of Biggleswade, 1916, 7, 385
- RIGG, T., *see also* EASTERFIELD, T. H.
- ROACH, B. M. B. On the algae of some normal English soils, 1927, 17, 563
- ROACH, W. A. Sulphur as a soil fungicide against the potato wart disease organism, 1930, 20, 74
- ROBERTS, A. W. R., *see* TATTERSFIELD, F.
- ROBERTS, E. J. Comparison of dairy short-horn and Welsh black cattle as milk producers; and effect of time of calving on the yield of milk, 1926, 16, 416
- ROBERTS, E. J. Some observations on the secondary sex ratio in a group of dairy shorthorn and Welsh black cattle, 1930, 20, 359
- ROBERTS, H. F. The relation of protein content to variety types in American wheat, 1920, 10, 121
- ROBERTS, R. A. Correlation of yield in oats with meteorological observations at the University College Farm, Bangor, for the period 1903-1926, 1928, 18, 297
- ROBERTSON, G. S. Notes on the nature of the phosphates contained in mineral phosphates, 1916, 8, 16
- ROBINSON, G. W. Note on the effect of changes in the viscosity of water on the results of mechanical analyses conducted at varying temperatures, 1915, 7, 142
- ROBINSON, G. W. Studies on the palaeozoic soils of North Wales, 1917, 8, 338
- ROBINSON, G. W. Note on the mechanical analysis of humus soils, 1922, 12, 287
- ROBINSON, G. W. A new method for the mechanical analysis of soils and other dispersions, 1922, 12, 306
- ROBINSON, G. W. The form of mechanical composition curves of soils, clays, and other granular substances, 1924, 14, 626
- ROBINSON, G. W. The development of the soil profile in North Wales as illustrated by the character of the clay fraction, 1930, 20, 618
- ROBINSON, G. W. and HALNAN, E. T. Probable error in pig feeding trials. 1912, 5, 48
- ROBINSON, G. W. and HILL, C. F. Further studies on the soils of North Wales, 1919, 9, 259
- ROBINSON, G. W. and JONES, J. O. A method for determining the degree of humification of soil organic matter, 1925, 15, 26
- ROBINSON, G. W. and JONES, J. O. Losses of added phosphate by leaching from North Welsh soils, 1927, 17, 94
- ROBINSON, G. W. and LLOYD, W. E. On the probable error of sampling in soil surveys, 1915, 7, 144
- ROBINSON, G. W. and MCLEAN, W. Note on the occurrence of elementary carbon in soils, 1930, 20, 345
- ROBINSON, G. W., MCLEAN, W. and WILLIAMS, R. The determination of organic carbon in soils, 1929, 19, 315
- ROBINSON, G. W., *see also* MCLEAN, W.
- ROBINSON, L. E., *see* NUTTALL, G. H. F.
- RUSSELL, E. J. Oxidation in soils, and its connexion with fertility, 1905, 1, 261
- RUSSELL, E. J. The recent work of the American soil bureau, 1905, 1, 327
- RUSSELL, E. J. Note on an apparent secular change in the Rothamsted drain gauges, 1907, 2, 29
- RUSSELL, E. J. The chemical changes taking place during the ensilage of maize, 1908, 2, 392
- RUSSELL, E. J. The ammonia in soils, 1910, 3, 233
- RUSSELL, E. J. The effect of earthworms on soil productiveness, 1910, 3, 246
- RUSSELL, E. J. The nature and amount of the fluctuations in nitrate contents of arable soils, 1914, 6, 18
- RUSSELL, E. J. and APPLEYARD, A. The atmosphere of the soil: its composition and the causes of variation, 1915, 7, 1
- RUSSELL, E. J. and APPLEYARD, A. The influence of soil conditions on the decomposition of organic matter in the soil, 1917, 8, 385
- RUSSELL, E. J. and GOLDING, J. Investigations on "sickness" in soil. I. Sewage "sickness," 1912, 5, 27

- RUSSELL, E. J. and HUTCHINSON, H. B. The effect of partial sterilisation of soil on the production of plant food, 1909, **3**, 111
- RUSSELL, E. J. and HUTCHINSON, H. B. 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, 1913, **5**, 152
- RUSSELL, E. J. and PETHERBRIDGE, F. R. Investigations on "sickness" in soil. II. "Sickness" in glasshouse soils, 1912, **5**, 86
- RUSSELL, E. J. and PETHERBRIDGE, F. R. On the growth of plants in partially sterilised soils, 1913, **5**, 248
- RUSSELL, E. J. and PRESCOTT, J. A. The reaction between dilute acids and the phosphorus compounds of the soil, 1916, **8**, 65
- RUSSELL, E. J. and RICHARDS, E. H. The changes taking place during the storage of farmyard manure, 1917, **8**, 495
- RUSSELL, E. J. and RICHARDS, E. H. The amount and composition of rain falling at Rothamsted. (Based on analyses made by the late N. H. J. Miller), 1919, **9**, 309
- RUSSELL, E. J. and RICHARDS, E. H. The washing out of nitrates by drainage water from uncropped and unmanured land. (Based on analyses made by the late N. H. J. Miller), 1920, **10**, 22
- RUSSELL, E. J. and SMITH, N. On the question whether nitrites or nitrates are produced by non-bacterial processes in the soil, 1906, **1**, 444
- RUSSELL, E. J., *see also* ANNETT, H. E., APPELYARD, A., DARBYSHIRE, F. V., HALL, A. D., KEEN, B. A., PICKERING, S. U. and VINSON, R. S.
- RUSTON, A. G., *see* CROWTHER, C.
- SALAMAN, R. N. The influence of size and character of seed on the yield of potatoes, 1922, **12**, 182
- SALAMAN, R. N. The determination of the best method for estimating potato yields, together with a further note on the influence of size of seed on the character and yield of the potato. III, 1923, **13**, 361
- SALAMAN, R. N. A note on the production of premature sprouting in the potato, and its application to the study of virus diseases, 1927, **17**, 524
- SALAMAN, R. N. and LESLEY, J. W. Genetic studies in potatoes; sterility, 1922, **12**, 31
- SALMON, E. S. Notes on the hop mildew (*Sphaerotheca Humuli* (DC.) Burr.), 1907, **2**, 327
- SALMON, E. S. Observations on the perithecial stage of the American gooseberry-mildew (*Sphaerotheca mors-uvae* (Schwein Berk.), 1914, **6**, 187
- SALMON, E. S. On forms of the hop (*Humulus Lupulus* L.) resistant to mildew (*Sphaerotheca Humuli* (DC.) Burr.), 1917, **8**, 455
- SALMON, E. S., *see also* EYRE, J. V., GOODWIN, W. and HORTON, E.
- SANDERS, H. G. The shape of the lactation curve, 1923, **13**, 169
- SANDERS, H. G. On the fertility of stallions, 1926, **16**, 466
- SANDERS, H. G. On the accuracy of three measurements of heifers, 1926, **16**, 607
- SANDERS, H. G. The length of the interval between calvings, 1927, **17**, 21
- SANDERS, H. G. The variations in milk yields caused by season of the year, service, age, and dry period, and their elimination. Part I. Season of the year, 1927, **17**, 339
- SANDERS, H. G. The variations in milk yields caused by season of the year, service, age, and dry period, and their elimination. Part II. Service, 1927, **17**, 502
- SANDERS, H. G. The variations in milk yields caused by season of the year, service, age, and dry period, and their elimination. Part III. Age, 1928, **18**, 46
- SANDERS, H. G. The variations in milk yields caused by season of the year, service, age, and dry period, and their elimination. Part IV. Dry period and standardisation of yields, 1928, **18**, 209
- SANDERS, H. G. A note on the value of uniformity trials for subsequent experiments, 1930, **20**, 63
- SANDERS, H. G. The analysis of the lactation curve into maximum yield and persistency, 1930, **20**, 145
- SANDERS, H. G., *see also* HAMMOND, J.
- SANSOM, T. K., *see* DOUGHTY, L. R.
- SANSOME, F. W. Dry matter of swedes. I, 1926, **16**, 51
- SAUNDERS, C. E. The inheritance of "strength" in wheat, 1909, **3**, 218
- SAWYER, G. C., *see* DAVIS, W. A.
- SEBELEIN, J. Modern methods for experiments with fertilisers and manures, 1920, **10**, 415
- SELWYN, H. H., *see* SHUTT, F. T.
- SEN, J. N. The influence of potsherds on nitrification in the Indian alluvium, 1918, **9**, 32
- SEN, J. N., *see also* ANNETT, H. E.
- SEN-GUPTA, N. N. Dephenolisation in soil, 1921, **11**, 136
- SEN-GUPTA, N. N. Dephenolisation in soil. II, 1925, **15**, 497
- SHAW, W. M., *see* MACINTIRE, W. H.
- SHAW, W. N. The law of sequence in the yield of wheat for Eastern England, 1885-1905, 1907, **2**, 17
- SHELTON, J. P., *see* ENGLEDDOW, F. L.

- SHUTT, F. T. Some characteristics of the western prairie soils of Canada, 1910, 3, 335
- SHUTT, F. T. The influence of grain growing on the nitrogen and organic matter content of the western prairie soils of Canada, 1925, 15, 162
- SHUTT, F. T., HAMILTON, S. N. and SELWYN, H. H. The protein content of grass, chiefly meadow foxtail (*Alopecurus pratensis*), as influenced by frequency of cutting, 1928, 18, 411
- SHUTT, F. T., HAMILTON, S. N. and SELWYN, H. H. The protein content of grass, chiefly meadow foxtail (*Alopecurus pratensis*), as influenced by frequency of cutting, 1930, 20, 126
- SMITH, A. M. The exchangeable bases in some Scottish soils, 1925, 15, 466
- SMITH, A. M. The relative proportions of exchangeable bases in some Scottish soils, 1928, 18, 68
- SMITH, N., see RUSSELL, E. J.
- SMITH, W. G. and CRAMPTON, C. B. Grassland in Britain, 1914, 6, 1
- SNOW, O. W., see JOSEPH, A. F.
- SOTHERS, D. B., see MORISON, C. G. T.
- SOUTHGATE, B. A. The maintenance requirement of the fattening cockerel, with a note on a proposed new method for the determination of the surface area of birds, 1930, 20, 206
- SPIERS, C. W. The estimation of tannin in cider, 1914, 6, 77
- SPINKS, G. T. Factors affecting susceptibility to disease in plants. Part I, 1913, 5, 231
- STAPLEDON, R. G. Pasture problems: drought resistance, 1913, 5, 129
- STAPLEDON, R. G. Pasture problems: the response of individual species under manures, 1914, 6, 499
- STAPLEDON, R. G. Seed studies: Red clover, with special reference to the country of origin of the seed, 1920, 10, 90
- STAPLEDON, R. G. and JENKIN, T. J. Pasture problems: indigenous plants in relation to habitat and sown species, 1916, 8, 26
- STEWART, D. W., see CROWTHER, C.
- STEWART, J. A short note on the nutritive value of linseed cake, 1928, 18, 702
- STEWART, J. A study of nitrogen metabolism in sheep on high protein diets, 1930, 20, 1
- STEWART, J., see also WOODMAN, H. E.
- STEWART, R. The availability of the potassium in some Scottish soils, 1929, 19, 524
- STEWART, R., see also GREAVES, J. E.
- STRATTON, F. J. M., see WOOD, T. B.
- STRETTAN, J. S., see HACKETT, F. E.
- STUART, G. L., see ORR, J. B.
- STUBBS, J., see NIERENSTEIN, M.
- SUBRAHMANYAN, V. Biochemistry of water-logged soils. Part I. The effect of water-logging on the different forms of nitrogen, on the reaction, on the gaseous relationships, and on the bacterial flora, 1927, 17, 429
- SUBRAHMANYAN, V. Biochemistry of water-logged soils. Part II. The presence of a deaminase in water-logged soils and its rôle in the production of ammonia, 1927, 17, 449
- SUBRAHMANYAN, V. An improved method for the determination of dissolved oxygen in water, 1927, 17, 468
- SUBRAHMANYAN, V. Biochemistry of water-logged soils. Part III. Decomposition of carbohydrates with special reference to formation of organic acids, 1929, 19, 627
- SUBRAHMANYAN, V. Determination of soluble carbohydrates, lactic acid and volatile fatty acids in soils and biological media, 1929, 19, 649
- SULLIVAN, R. S., see DAVIES, W. L.
- TATTERSFIELD, F. The relationship between the chemical constitution of organic compounds and their toxicity to insects, 1927, 17, 181
- TATTERSFIELD, F., HOBSON, R. P. and GIMMINGHAM, C. T. Pyrethrin I and II. Their insecticidal value and estimation in pyrethrum (*Chrysanthemum cinerariaefolium*). I, 1929, 19, 266
- TATTERSFIELD, F. and HOBSON, R. P. Pyrethrin I and II. Their estimation in pyrethrum (*Chrysanthemum cinerariaefolium*). II, 1929, 19, 433
- TATTERSFIELD, F. and ROBERTS, A. W. R. The influence of chemical constitution on the toxicity of organic compounds to wireworms, 1920, 10, 199
- TATTERSFIELD, F., see also GIMMINGHAM, C. T.
- TAYLOR, A. M. *Eriophyes ribis* (Nal.) on *Ribes nigrum*, 1914, 6, 121
- TAYLOR, A. M. *Eriophyes ribis* (Nal.) on *Ribes grossularia*, 1914, 6, 129
- TAYLOR, A. M. Black currant eelworm, 1917, 8, 246
- TAYLOR, E. MCK. Soil temperatures under cotton in Egypt, 1927, 17, 489
- TAYLOR, E. MCK. Soil temperatures in Egypt, 1928, 18, 90
- TAYLOR, W. and HUSBAND, A. 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, 1922, 12, 111
- TEMPANY, H. A. The shrinkage of soils, 1917, 8, 312
- THAYSEN, A. C., see HUTCHINSON, H. B.
- THEILER, A., GREEN, H. H. and DU TOIT, P. J. Minimum mineral requirements in cattle, 1927, 17, 291

- THEILER, A., GREEN, H. H. and DU TOIT, P. J. Studies in mineral metabolism. III. Breeding of cattle on phosphorus deficient pasture, 1928, **18**, 369
- THOMAS, B., *see* COLLINS, S. H. and MILES, H. W.
- THORNTON, H. G. On the vibration method of obtaining a suspension of the bacteria in a soil sample, developed by C. L. Whittles, 1923, **13**, 352
- THORNTON, H. G. The "inoculation" of lucerne (*Medicago sativa* L.) in Great Britain, 1929, **19**, 48
- THORNTON, H. G. The influence of the number of nodule bacteria applied to the seed upon nodule formation in legumes, 1929, **19**, 373
- THORNTON, H. G. The effect of fresh straw on the growth of certain legumes, 1929, **19**, 563
- TIPPETT, L. H. G. On the effect of sunshine on wheat yield at Rothamsted, 1926, **16**, 159
- TOCHER, J. F. The citric solubility of mineral phosphates, 1922, **12**, 125
- TULÁKOFF, N. M. The genetic classification of soils, 1908, **3**, 80
- TULÁKOV, N. Use of water by cultivated plants in the field, 1929, **19**, 1
- TURNER, P. E. An investigation of the method of Page and Williams for the determination of the saturation capacity of soils, 1923, **13**, 257
- TURNER, P. E. The lime status of soil in relation to an insect pest of sugar-cane, 1929, **19**, 26
- TURNER, P. E. Liming as a factor in the amelioration of deteriorated tropical soils, 1929, **19**, 83
- UNDERWOOD, L. M. A note on onion couch, 1912, **4**, 270
- UNDERWOOD, L. M., *see also* HALL, A. D.
- VAN DER MERWE, C. R. A contribution to the study of the infertility of the subsoil, 1926, **16**, 507
- VANSTONE, E. Basic slags and mineral phosphates, 1925, **15**, 36
- VANSTONE, E. The available phosphate in soils, 1925, **15**, 460
- VANSTONE, E. A new method of evaluating basic slags and mineral phosphates, 1925, **15**, 491
- VANSTONE, E. The chemistry of basic slags, 1927, **17**, 143
- VILJOEN, J. A., FRED, E. B. and PETERSON, W. H. The fermentation of cellulose by thermophilic bacteria, 1926, **16**, 1
- VINSON, R. S. and RUSSELL, E. J. Some air temperature readings at several stations on sloping ground, 1907, **2**, 221
- WADHAM, S. M., *see* ENGLEDDOW, F. L.
- WAKSMAN, S. A. Influence of micro-organisms upon the carbon-nitrogen ratio in the soil, 1924, **14**, 555
- WALTON, A. and FAIR, T. K. Preliminary investigation on the fecundity of premium stallions, 1928, **18**, 772
- WARBURTON, C., *see* EVERSLED, A. F. C.-H. and NUTTALL, G. H. F.
- WARE, W. M. Experiments and observations on forms and strains of *Trifolium repens* L., 1925, **15**, 47
- WARE, W. M., *see also* GOODWIN, W.
- WARREN, R. G., GIMMINGHAM, C. T. and PAGE, H. J. The chemistry of basic slag. I. The determination of fluorine in basic slag, 1925, **15**, 516
- WARREN, R. G. and PUGH, A. J. The colorimetric determination of phosphoric acid in hydrochloric acid and citric acid extracts of soils, 1930, **20**, 532
- WATT, R. D. On the evolution of gas during churning, 1907, **2**, 96
- WEIR, W. The effect of removing the soluble humus from a soil on its productivity, 1915, **7**, 246
- WHEELER, E. G. British ticks, 1906, **1**, 400
- WHITE, M. K. and DRAKELEY, T. J. The influence of the age of the cow on the yield and quality of the milk, 1927, **17**, 420
- WHITE, M. K., *see also* DRAKELEY, T. J.
- WHITEFIELD, B. W., *see* JOSEPH, A. F.
- WHITTLES, C. L. A note on the classification of soils on the basis of mechanical analyses, 1922, **12**, 166
- WHITTLES, C. L. The determination of the number of bacteria in soil. (Preliminary communication), 1923, **13**, 18
- WHITTLES, C. L. The determination of the number of bacteria in soil. II. Methods for the disintegration of soil aggregates and the preparation of soil suspensions, 1924, **14**, 346
- WILD, L. J. Some soils of the Southern Island of New Zealand with special reference to their lime requirements, 1917, **8**, 154
- WILLIAMS, G. Hydrolysis of the soluble protein of swede turnips, 1917, **8**, 182
- WILLIAMS, G., *see also* AMOS, A.
- WILLIAMS, H. R., *see* ENGLEDDOW, F. L. and GARDNER, H. W.
- WILLIAMS, R. Effect of dressings of basic slag on the lime status of soils, 1926, **16**, 196
- WILLIAMS, R. The determination of exchangeable calcium in carbonate-free soils, 1928, **18**, 439
- WILLIAMS, R. The determination of exchangeable bases in soils. Magnesium, potassium and total bases, 1929, **19**, 539
- WILLIAMS, R. Note on the determination of exchangeable sodium in soils, 1930, **20**, 355

- WILLIAMS, R., *see also* ROBINSON, G. W.
 WILLIAMS, W., *see* PAGE, H. J.
 WILSDON, B. H. A physical theory of soil moisture relations, 1924, 14, 473
 WILSON, J. H. The hybridisation of cereals, 1907, 2, 68
 WISHART, J. and CLAPHAM, A. R. A study in sampling technique: the effect of artificial fertilisers on the yield of potatoes, 1929, 19, 600
 WISHART, J. and MACKENZIE, W. A. Studies in crop variation. VII. The influence of rainfall on the yield of barley at Rothamsted, 1930, 20, 417
 WISHART, J., *see also* ALLAN, F. E.
 WOLF, C. G. L. The survival of motility in mammalian spermatozoa, 1921, 11, 310
 WOOD, T. B. Note on the inheritance of horns and face colour in sheep, 1905, 1, 364
 WOOD, T. B. Note on "Bericht über die Arbeiten der Internationalen Kommission für die Analyse der Kunstdünger und Futtermittel des V. Internationalen Kongresses für Angewandte Chemie zu Berlin, 1903," 1905, 1, 366
 WOOD, T. B. The chemistry of strength of wheat flour, 1907, 2, 139
 WOOD, T. B. Losses in making and storing farmyard manure, 1907, 2, 207
 WOOD, T. B. The chemistry of strength of wheat flour, 1907, 2, 267
 WOOD, T. B. The inheritance of horns and face colour in sheep, 1909, 3, 145
 WOOD, T. B. The feeding value of mangels, 1910, 3, 225
 WOOD, T. B. Studies of the nutrition of young animals. I. Energy exchanges in the growing pig, 1926, 16, 425
 WOOD, T. B. and BERRY, R. A. Soil analysis as a guide to the manurial treatment of poor pastures, 1905, 1, 114
 WOOD, T. B. and BERRY, R. A. Variation in the chemical composition of mangels, 1905, 1, 176
 WOOD, T. B. and CAPSTICK, J. W. The maintenance requirement of the adult sheep, 1926, 16, 325
 WOOD, T. B. and CAPSTICK, J. W. The scientific basis of rationing animals, 1928, 18, 486
 WOOD, T. B. and HILL, A. V. Skin temperature and fattening capacity in oxen, 1914, 6, 252
 WOOD, T. B. and STRATTON, F. J. M. The interpretation of experimental results, 1910, 3, 417
 WOOD, T. B. and WOODMAN, H. E. The digestibility of oat and tare silage, 1921, 11, 304
 WOOD, T. B. and WOODMAN, H. E. Digestion trials with swine. I. Description of harness and metabolism crate. II. Digestibility of barley meal, 1924, 14, 498
 WOOD, T. B. and YULE, G. U. Statistics of British feeding trials and the starch equivalent theory, 1914, 6, 233
 WOOD, T. B., *see also* CAPSTICK, J. W.
 WOOD, W. A. Experiments on the treatment of parasitic gastritis in sheep and lambs, 1930, 20, 186
 WOODHOUSE, H., *see* CROWTHER, C.
 WOODMAN, H. E. Notes on the extraction of milk sugar from whey, 1920, 10, 1
 WOODMAN, H. E. Comparative determinations of the digestibility and metabolisable energy of green oats and tares, oat and tare hay and oat and tare silage, 1922, 12, 144
 WOODMAN, H. E. The chemistry of the strength of wheat flour, 1922, 12, 231
 WOODMAN, H. E. The nature of the pigment of silage, 1923, 13, 240
 WOODMAN, H. E. Wheat offals: their grading, composition and digestibility, 1923, 13, 483
 WOODMAN, H. E. A method for the estimation of uric acid in poultry excreta, 1924, 14, 413
 WOODMAN, H. E. Critical note on the method of correcting protein digestion coefficients, 1924, 14, 428
 WOODMAN, H. E. Digestion trials with swine. II. Comparative determinations of the digestibility of dry-fed maize, soaked maize, cooked maize and flaked maize, 1925, 15, 1
 WOODMAN, H. E. Digestion trials with swine. III. The digestibility of a coarse grade of middlings, 1925, 15, 19
 WOODMAN, H. E. Digestion trials with swine. IV. Note on the utilisation of whole milk by swine, 1925, 15, 22
 WOODMAN, H. E. The nutritive value of stack silage (rye grass and clover), 1925, 15, 327
 WOODMAN, H. E. Critical examination of the methods employed in silage analysis, with observations on some special chemical characteristics of "sour" silage, 1925, 15, 343
 WOODMAN, H. E. The mechanism of cellulose digestion in the ruminant organism, 1927, 17, 333
 WOODMAN, H. E. and AMOS, A. Further investigations into the changes which occur during the ensilage of a green crop, 1924, 14, 99
 WOODMAN, H. E. and AMOS, A. Maize silage. I, 1924, 14, 461
 WOODMAN, H. E. and AMOS, A. The ensilage of sugar beet tops, 1926, 16, 406
 WOODMAN, H. E. and AMOS, A. The losses in the tower silo, 1926, 16, 539
 WOODMAN, H. E. and AMOS, A. Maize silage. II, 1928, 18, 194

- WOODMAN, H. E. and BEE, J. W. The nutritive and manurial values of sugar beet tops, 1927, 17, 477
- WOODMAN, H. E., BEE, J. W. and GRIFFITH, G. Nutritive value of pasture. V. Pasture grass conservation: the influence of artificial drying on the digestibility of pasture herbage, 1930, 20, 53
- WOODMAN, H. E., BLUNT, D. L. and STEWART, J. Nutritive value of pasture. I. Seasonal variations in the productivity, botanical and chemical composition, and nutritive value of medium pasturage on a light sandy soil, 1926, 16, 205
- WOODMAN, H. E., BLUNT, D. L. and STEWART, J. Nutritive value of pasture. II. Seasonal variations in the productivity, botanical and chemical composition, and nutritive value of pasturage on a heavy clay soil, 1927, 17, 209
- WOODMAN, H. E. and CALTON, W. E. The composition and nutritive value of sugar beet pulp, 1928, 18, 544
- WOODMAN, H. E., DUCKHAM, A. N. and FRENCH, M. H. The value of dried sugar beet pulp and molasses-sugar beet pulp in the nutrition of swine, 1929, 19, 656
- WOODMAN, H. E., DUCKHAM, A. N. and FRENCH, M. H. The value of whole sugar beet in the nutrition of swine, 1929, 19, 669
- WOODMAN, H. E. and ENGLEADOW, F. L. A chemical study of the development of the wheat grain, 1924, 14, 563
- WOODMAN, H. E. and EVANS, R. E. Nutritive value of pasture. VI. The utilisation by sheep of mineral deficient herbage, 1930, 20, 587
- WOODMAN, H. E. and HAMMOND, J. Note on the composition of a fluid obtained from the udders of virgin heifers, 1922, 12, 97
- WOODMAN, H. E. and HAMMOND, J. The composition of secretions obtained from the udders of heifers during pregnancy, 1923, 13, 180
- WOODMAN, H. E. and HAMMOND, J. The mucous secretion of the cervix of the cow, 1925, 15, 107
- WOODMAN, H. E. and HANLEY, F. A study of the process of making stack silage, 1926, 16, 24
- WOODMAN, H. E., NORMAN, D. B. and BEE, J. W. Nutritive value of pasture. III. The influence of the intensity of grazing on the composition and nutritive value of pasture herbage (Part I), 1928, 18, 266
- WOODMAN, H. E., NORMAN, D. B. and BEE, J. W. Nutritive value of pasture. IV. The influence of the intensity of grazing on the yield, composition and nutritive value of pasture herbage (Part II), 1929, 19, 236
- WOODMAN, H. E. and STEWART, J. The composition of flaked maize, 1927, 17, 60
- WOODMAN, H. E. and STEWART, J. The mechanism of cellulose digestion in the ruminant organism. II. The transformation of cellulose into glucose by the agency of cellulose-splitting bacteria, 1928, 18, 713
- WOODMAN, H. E., *see also* AMOS, A., CODLING, A. J., CROWTHER, C. and WOOD, T. B.
- WOODMAN, R. M. The solubility of some likely spray substances in solvents containing soap. The preparation of spraying emulsions, 1927, 17, 44
- WORMALD, H. A bacterial rot of celery, 1914, 6, 203
- WORMALD, H. Variation in the male hop, *Humulus Lupulus* L., 1915, 7, 175
- WORMALD, H. The celery-rot bacillus, 1917, 8, 216
- WORMALD, L. K., *see* EYRE, J. V.
- WRIGHT, C. H. The relations between certain soil moisture constants and the determination of the vesicular coefficients of soils, 1926, 16, 18
- WRIGHT, C. H. The specific conductivities of soil extracts, 1928, 18, 186
- WRIGHT, N. C. Studies in calcium-caseinogen equilibria, and their bearing on the secretion of calcium in milk. (Preliminary paper), 1926, 16, 640
- WRIGHT, N. C. The mechanism of secretion of calcium and phosphorus in milk, 1928, 18, 478
- WRIGHT, N. C., *see also* PROCTER, F.
- YOUNG, J. B., *see* MACINTIRE, W. H.
- YULE, G. U., *see* WOOD, T. B.
- ZILVA, S. S., *see* DRUMMOND, J. C.

INDEX TO SUBJECTS

- Acid(s)**, dilute, and phosphorus compounds of the soil, reaction between (Russell and Prescott), 1916, 8, 65
 dilute, interaction with soil (Puri), 1925, 15, 334
 effect of, on digestibility of peat moss (Godden), 1920, 10, 457
- Adrenalin**, effect of, on milk secretion (Hammond and Hawk), 1917, 8, 147
- Age**, effect of, on sex-ratio in cattle (Roberts), 1930, 20, 359
 effect of, on yield and quality of milk in the cow (Kay and M'Candlish), 1929, 19, 342
 effect of, on yield of milk (Hammond and Sanders), 1923, 13, 74
 influence of, on yield and quality of milk (White and Drakeley), 1927, 17, 420; 1928, 18, 496
- Air**, flow of, through soils (Leather), 1912, 4, 303
 permeability of soil to (Green and Ampt), 1911, 4, 1; 1912, 5, 1
 temperature on sloping ground, readings at several stations (Vinson and Russell), 1907, 2, 221
- Albuminoids** and sugars of oat straw (Collins and Thomas), 1922, 12, 280
- Algae** of some normal English soils (Roach), 1927, 17, 563
- Alkali**, extraction of soil organic matter with (Arnold and Page), 1930, 20, 460
- Alkaline milk**, detection of, by brom cresol purple test (Procter and Mattick), 1926, 16, 145
- Alopecurus pratensis*, see Meadow foxtail
- Alumina** in soils, dye adsorption by (Croucher), 1928, 18, 350
- Aluminium** and acid soils (Line), 1926, 16, 335
 in soil infertility and toxicity, rôle of (Hardy), 1926, 16, 616
 phosphate, see Phosphate, aluminium toxicity of, to plant growth (Hardy), 1926, 16, 616
- American gooseberry mildew**, see Gooseberry mildew
- Ammonia** absorbed by powdered granite (Ogg and Hendrick), 1920, 10, 343
 absorption of, by soil (Ogg and Hendrick), 1920, 10, 333
 absorption of, from the atmosphere (Hall and Miller), 1911, 4, 56
 in rainwater (Miller), 1905, 1, 280; (Feilitzen and Lugner), 1910, 3, 311; (Hudig), 1912, 4, 260
- Ammonia** in soil, determination of (Matthews), 1920, 10, 72
 in soils (Russell), 1910, 3, 233
 production of, in water-logged soils by the presence of a deaminase (Subrahmanyam), 1927, 17, 449
 retention of, by unweathered soil material (Ogg and Hendrick), 1920, 10, 343
- Ammonium** chloride, effect of, on basic slags (Vanstone), 1927, 17, 144
 salts, assimilation of, by plants (Hutchinson and Miller), 1909, 3, 179
 sulphate, efficiency of, as a fertiliser (Prescott), 1923, 13, 333
- Anaemia**, phosphorus partition of blood in, of cattle and sheep (Malan), 1928, 18, 401
- Analysis of variance** of potatoes (Fisher and Mackenzie), 1923, 13, 311
- Animal(s)** bodies, chemical composition of (Murray), 1922, 12, 103
 extracts and drugs, effect of, on milk secretion (Hammond and Hawk), 1917, 8, 147
 feeding, bulk in (Procter and Wright), 1927, 17, 392
 fertility of, factors controlling (Hammond), 1914, 6, 263; 1921, 11, 337
 normal growth in (Murray), 1921, 11, 258
 rationing of, scientific basis of (Wood and Capstick), 1928, 18, 486
- Antiseptics**, action of, on soils (Pickering), 1908, 3, 32
 injection of trees with (Brooks and Bailey), 1919, 9, 189
 partial sterilisation of soil by (Buddin), 1914, 6, 417; (Matthews), 1924, 14, 1
- Apatite**, citric solubility of (Vanstone), 1925, 15, 43
- Appetite** in pigs, influence of calcium carbonate on (Evans), 1929, 19, 799
- Apples**, composition of irrigated and non-irrigated (Jones and Colver), 1913, 5, 424
- Arabinose**, cupric reducing power of (Daish), 1914, 6, 255
- Arachis** oil, effect of, on butter fat (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1924, 14, 531
 effect of, on growth of rats (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1924, 14, 539
- Arsenate(s)**, calcium, preparation of (Goodwin and Martin), 1926, 16, 596
 compounds and hydrated lime, addition of copper sulphate to (Goodwin and Martin), 1928, 18, 460

- Arsenate(s)** fungicidal properties of (Goodwin, Martin and Salmon), 1925, 15, 307; 1926, 16, 302; 1929, 19, 405
lead, *see* Lead arsenate
lime sulphur-calcium spray, action of lime on (Goodwin and Martin), 1926, 16, 596
lime sulphur-calcium spray, decomposition of (Goodwin and Martin), 1926, 16, 596
lime sulphur-lead spray, action of carbon dioxide on (Goodwin and Martin), 1925, 15, 307
lime sulphur-lead spray, addition of casein to (Goodwin and Martin), 1925, 15, 476
lime sulphur-lead spray, addition of gelatine to (Goodwin and Martin), 1925, 15, 476
lime sulphur-lead spray, addition of lime-casein to (Goodwin and Martin), 1925, 15, 476
lime sulphur-lead spray, chemical changes in (Goodwin and Martin), 1925, 15, 307
lime sulphur-lead spray, effect of addition of a spreader to (Goodwin and Martin), 1925, 15, 476
oxidation of arsenites to, in cattle-dipping tanks (Cooper and Freak), 1911, 4, 177
Arsenites, oxidation of, to arsenates in cattle-dipping tanks (Cooper and Freak), 1911, 4, 177
Ash in wheat grain (Brenchley and Hall), 1909, 3, 195
plant, estimation of potassium in (Davis), 1912, 5, 52
Atmosphere, absorption of ammonia from (Hall and Miller), 1911, 4, 56
composition and causes of variation in soil (Russell), 1915, 7, 1
Atmospheric impurities, distribution of, near an industrial centre (Crowther, Ruston and Steuart), 1911, 4, 25; 1913, 5, 391
impurities, effect of, on plant growth (Crowther, Ruston and Steuart), 1911, 4, 25; 1913, 5, 391; 1914, 6, 387, 395
moisture, absorption of, by nitrogenous manures (Brownlee), 1908, 2, 380
nitrogen, assimilation of, by *Azotobacter* (Ashby), 1907, 2, 35
Azotobacter, assimilation of atmospheric nitrogen by (Ashby), 1907, 2, 35
Chroococcum, protective action of CaCO_3 against MgCO_3 for (Lipman and Burgess), 1914, 6, 484
Bacillus amylobacter, A. M. et Bredemann, coccoid phase of (Cunningham and Jenkins), 1927, 17, 109
amylobacter, A. M. et Bredemann, studies on (Cunningham and Jenkins), 1927, 17, 109
Bacillus apiovorus, *see* Celery
carotovorus, *see* Celery
radicicola, morphology of (Gibson), 1928, 18, 76
radicicola, observations on (Gibson), 1928, 18, 76
radicicola, reproductive processes in (Gibson), 1928, 18, 76
radicicola, *see also* *P. radicicola*
Bacteria, cellulose-splitting, transformation of cellulose into glucose by (Woodman and Stewart), 1928, 18, 713
formation of calcium carbonate in soil by (Gimingham), 1911, 4, 145
soil, *see* Soil, bacteria
suspension of, in soil, vibration method developed by C. L. Whittles (Thornton), 1923, 13, 352
thermophilic, fermentation of cellulose by (Viljoen, Fred and Peterson), 1926, 16, 1
Bacterial disease of swedes (Priestley and Lechmere), 1910, 3, 390
diseases of plants (Potter), 1912, 4, 323
numbers, limitation of, in soils and its consequences (Russell and Hutchinson), 1913, 5, 152
rot of celery (Wormald), 1914, 6, 203
Bacteriosis, studies in (Paine), 1917, 8, 480
Bacterio-toxins, non-persistence of, in soil (Hutchinson and Thaysen), 1918, 9, 43
Barley, effect of sodium silicate on yield of (Fisher), 1929, 19, 132; (Hall), 1929, 19, 586
growth of, in soil solutions (Hall, Brenchley and Underwood), 1914, 6, 281
hybridisation of (Biffen), 1907, 2, 183
inheritance of awn and lateral floret (Engledow), 1921, 11, 159
meal, digestibility of (Wood and Woodman), 1924, 14, 498
sterility in, inheritance of (Biffen), 1905, 1, 250
yield of, influence of rainfall on (Wishart and Mackenzie), 1930, 20, 417
Bases, exchangeable, effect of, on Atterberg numbers (Joseph and Oakley), 1929, 19, 121
exchangeable, effect of, on mechanical properties of soil (Joseph and Oakley), 1929, 19, 121
exchangeable, effect of, on moisture equivalent (Joseph), 1927, 17, 12
exchangeable, effect of, on soil dispersion (Joseph and Snow), 1929, 19, 106
exchangeable, effect of, on soil properties (Joseph and Oakley), 1929, 19, 121
exchangeable, in Scottish soils (Smith), 1925, 15, 466
exchangeable, in soils, the determination of magnesium, potassium and total (Williams), 1929, 19, 589

- Bases**, exchangeable, of Craibstone soil (Hendrick and Newlands), 1926, **16**, 584
exchangeable, relative proportions of, in Scottish soils (Smith), 1928, **18**, 68
store of, in silicates (Hendrick and Ogg), 1916, **7**, 458
- Basic slag(s)**, amount of free lime in, and composition of soluble phosphates (Morison), 1909, **3**, 161
and mineral phosphates (Vanstone), 1925, **15**, 36
chemistry of (Warren, Gimingham and Page), 1925, **15**, 516; (Vanstone), 1927, **17**, 143
citric solubility of (Vanstone), 1925, **15**, 39
effect of ammonium chloride on (Vanstone), 1927, **17**, 144
effect of dressings of, on lime status of soils (Williams), 1926, **16**, 196
effect of, on corn crops grown on ploughed up grassland (Oldershaw), 1921, **11**, 287
evaluating, new method of (Vanstone), 1925, **15**, 491
fluorine in, determination of (Warren, Gimingham and Page), 1925, **15**, 516
solubility of, in oxalic acid (Vanstone), 1925, **15**, 495
- Bastard trenching**, effect of, on soil and plant growth (Pickering and Russell), 1913, **5**, 483
- Beans**, assimilation of phosphates by (Vanstone), 1925, **15**, 44
- Birds**, food of (Hammond), 1912, **4**, 380
food of, seasonal changes in (Hammond), 1912, **4**, 380
surface area of, method of determination of (Halnan and Southgate), 1930, **20**, 210
- Black currant eelworm** (Taylor), 1917, **8**, 246
mite, *see Eriophyes ribis*
- "Blackleg"** of the potato (Paine), 1917, **8**, 430
- "Black-quarter"** in sheep (Cave), 1905, **1**, 230
- Blood**, bovine, composition of, on phosphorus deficient pasture (Malan, Green and Du Toit), 1928, **18**, 376
influence of calcium-deficiency on (Evans), 1929, **19**, 752
maternal, comparison of phosphorus partition in, with blood of calf foetus, sheep foetus, and lambs (Malan), 1928, **18**, 397
mineral constituents of, in cow and calf (Green and Macaskill), 1928, **18**, 384
of calf, unknown phosphorus fraction of (Malan and Green), 1928, **18**, 391
phosphorus compounds in, determination of, by dry combustion (Green), 1928, **18**, 372
- Blood**, phosphorus partition of, in anaemia of cattle and sheep (Malan), 1928, **18**, 401
phosphorus partition of, of calf foetus, sheep foetus, and lambs, comparison of, with maternal blood (Malan), 1928, **18**, 397
- Bones**, calcium-phosphate ratio of, in swine (Evans), 1930, **20**, 117
composition of, on low-lime diet (Evans), 1930, **20**, 117
- Bordeaux mixture**, action of carbon dioxide on (Gimingham), 1911, **4**, 69
mixture, amount of copper in tea sprayed with (Annett and Kar), 1910, **3**, 314
mixture, fungicidal action of (Barker and Gimingham), 1911, **4**, 76; 1914, **6**, 220
mixture in combination with arsenical sprays (Goodwin and Martin), 1928, **18**, 460
spraying (Pickering), 1909, **3**, 171
- Bran**, nitrogen in (Greaves and Stewart), 1912, **4**, 376
- Brassica**, proteins of (Davies), 1927, **17**, 33
- Brown tick** and East Coast fever (Cooper), 1910, **3**, 285
- Buckwheat**, growth of, in soil solutions (Hall, Brencley and Underwood), 1914, **6**, 281
- Bulk** in animal feeding (Procter and Wright), 1927, **17**, 392
- "Bush-sickness"**, herbage causing (Godden and Grimmett), 1928, **18**, 363
- Butter-fat**, effect of poppy seed cake on composition of (Annett and Sen), 1919, **9**, 416
influence of oils on nutritive value of (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1923, **13**, 144, 153; 1924, **14**, 531
variability of yield of (Bartlett), 1929, **19**, 438
variation and yield of, at morning and evening milkings (Bartlett), 1929, **19**, 36
variations in fat and solids-not-fat of, as affected by milking at three eight-hour intervals (Campbell), 1930, **20**, 213
- Cajanus indicus*, *see* Pigeon pea
- Calcification**, influence of maturity on, in swine (Evans), 1930, **20**, 117
- Calcium arsenates**, *see* Arsenates
carbonate, estimation of, in soils (Marr), 1909, **3**, 155
carbonate, formation of, in soil by bacteria (Gimingham), 1911, **4**, 145
carbonate, influence of, on digestibility in swine (Evans), 1929, **19**, 799
carbonate, interaction of, in relation to determination of "lime requirements" (Crowther and Martin), 1925, **15**, 237
carbonate, protective action of, against MgCO₃ for *A. chroococcum* (Lipman and Burgess), 1914, **6**, 484

- Calcium**, caseinogen equilibria and their bearing on secretion of calcium in milk (Wright), 1926, **16**, 640
 content of milk, effect of heat on (Mattick and Hallett), 1929, **19**, 452
 cyanamide (Hall), 1905, **1**, 146
 cyanamide, decomposition of, in soils (Ashby), 1905, **1**, 358
 cyanamide, value of, as manure, conditions affecting (Mosscrop), 1917, **8**, 178
 deficiency and composition of skeleton in swine (Evans), 1930, **20**, 117
 deficiency, effect of, on breeding pigs (Davidson), 1930, **20**, 233
 deficiency, influence of, on blood (Evans), 1929, **19**, 752
 deficiency, physiological effects of, on pregnant sows (Evans), 1929, **19**, 752
 exchangeable, in carbonate-free soils, determination of (Williams), 1928, **18**, 439
 exchangeable, in Scottish soils (Ogg and Dow), 1928, **18**, 131
 hydroxide, interaction with lead arsenate (Goodwin and Martin), 1928, **18**, 460
 phosphate, *see* Phosphate, calcium
 saccharate, action of, on milk and cream (Pyne), 1929, **19**, 463
 secretion of, in milk, bearing of calcium-caseinogen equilibria on (Wright), 1926, **16**, 640
 secretion of, in milk, mechanism of (Wright), 1928, **18**, 478
- Calf**, blood, unknown phosphorus fraction of (Malan and Green), 1928, **18**, 391
 foetus, phosphorus partition in blood of (Malan), 1928, **18**, 397
- Calorific value** of soluble carbohydrates in feeding stuffs (Allen), 1928, **18**, 691
- Calorimeter**, biological tests with (Capstick), 1921, **11**, 424
 description and tests (Capstick), 1921, **11**, 408
 for large animals (Capstick), 1921, **11**, 408
 for young farm animals (Deighton), 1926, **16**, 376
- Calorimetry**, bomb (Allen), 1928, **18**, 691
 indirect, application to ruminants (Orr and Magee), 1923, **13**, 447
 indirect, metabolism of the ruminant by (Magee and Orr), 1924, **14**, 506, 516, 525, 600, 619
- Calving**, length of interval between (Sanders), 1927, **17**, 21
 time of, effect on yield of milk (Roberts), 1926, **16**, 416
- Cambridgeshire**, soils of (Foreman), 1907, **2**, 161
- Cane sugar**, action of hydrochloric acid on, at 70° C. and 100° C. (Davis and Daish), 1913, **5**, 437
- Cane sugar**, inversion estimation of, by invertase and citric acid (Davis and Daish), 1913, **5**, 437
 molasses, action on available potash in soil (Craig and Lincoln), 1929, **19**, 397
see also Sugar-cane
- Capillary coefficient** of soils (Green and Ampt), 1911, **4**, 1
 forces, cohesion developed by, in an ideal soil (Haines), 1925, **15**, 529
 forces in an ideal soil (Fisher), 1926, **16**, 492; 1928, **18**, 406
 phenomena in soil, theory of (Haines), 1927, **17**, 264
 properties of soil, hysteresis effect in (Haines), 1930, **20**, 97
 pull of an ideal soil (Hackett and Strettan), 1928, **18**, 671
 rise of water in soils (Keen), 1919, **9**, 396
- Carbohydrate(s)**, calorific value of, in feeding stuffs (Allen), 1928, **18**, 691
 decomposition in water-logged soils (Subrahmanyan), 1929, **19**, 627
 estimation of, methods of (Davis, Daish and Sawyer), 1913, **5**, 437; 1914, **6**, 152, 255, 406; 1916, **8**, 7
 in plant extracts, estimation of (Davis and Daish), 1913, **5**, 437
 in plants, formation and translocation of (Davis, Daish and Sawyer), 1916, **7**, 255, 327, 352
 of the leaf and leaf stalks of the potato (Davis and Sawyer), 1916, **7**, 352
 of the mangold leaf (Campbell), 1912, **4**, 248; (Davis, Daish and Sawyer), 1916, **7**, 255
 soluble, determination of, in soil and biological media (Subrahmanyan), 1929, **19**, 649
- Carbon dioxide**, action of, on Bordeaux mixtures (Gimingham), 1911, **4**, 69
 dioxide, action of, on lime sulphur-lead arsenate spray (Goodwin and Martin), 1925, **15**, 307
 dioxide, effect of fungicides upon the assimilation of, by green leaves (Amos), 1907, **2**, 257
 elementary, in soils (Robinson and McLean), 1930, **20**, 345
 nitrogen ratio and organic matter, decomposition in soil (Waksman), 1924, **14**, 560
 nitrogen ratio in soil, influence of fungi on (Waksman), 1924, **14**, 559
 nitrogen ratio in soil, influence of micro-organisms on (Waksman), 1924, **14**, 555
 nitrogen ratio, influence of, on mineralisation of nitrogen (Jensen), 1929, **19**, 71
 nitrogen ratio of soil organic matter (McLean), 1930, **20**, 348
 organic, in soils, determination of (Robinson, McLean and Williams), 1929, **19**, 315

- Carbonate(s)**, determination of, in soil (Hutchinson and MacLennan), 1914, 6, 323
 dolomitic, in marine silt soils (Hardy), 1921, 11, 1
 in soils, different kinds of (Hardy), 1921, 11, 1
 in soils, method for the determination of (Amos), 1905, 1, 322
- Casein**, addition of, to lime sulphur-lead arsenate spray (Goodwin and Martin), 1925, 15, 476
 solubility of, in acids (Geake), 1914, 6, 169
- Caseinogen**, solubility of, in acids (Geake), 1914, 6, 169
- Cattle**, anaemia of, phosphorus partition of blood in (Malan), 1928, 18, 401
 breeding of, on phosphorus deficient pasture (Theiler, Green and Du Toit), 1928, 18, 369
 carcase weights of (Hammond), 1920, 10, 233
 dipping for tick control (Cooper), 1910, 3, 285
 dipping tanks, oxidation of arsenites to arsenates in (Cooper and Freak), 1911, 4, 177
 food capacity of (Murray), 1926, 16, 574
 growth and development of (Hammond), 1920, 10, 233
 hair of, investigations of different breeds (Camek), 1920, 10, 12
 mineral requirements in (Theiler, Green and Du Toit), 1927, 17, 291
 organs in, proportions of (Hammond), 1920, 10, 233
 shorthorns, comparison with Welsh black cattle as milk producers (Roberts), 1926, 16, 416
 shorthorn, sex-ratio in (Roberts), 1930, 20, 359
 Welsh black, comparison with shorthorns as milk producers (Roberts), 1926, 16, 416
 Welsh black, sex-ratio in (Roberts), 1930, 20, 359
- Celery**, bacterial rot of (Wormald), 1914, 6, 203
 rot bacillus (Wormald), 1917, 8, 216
- Cellulose**, decomposition of, by *Spirochaeta cytophaga*, n. sp. (Hutchinson and Clayton), 1919, 9, 143
 digestion in the ruminant organism, mechanism of (Woodman and Stewart), 1927, 17, 333; 1928, 18, 713
 fermentation of, by thermophilic bacteria (Viljoen, Fred and Peterson), 1926, 16, 1
 -splitting bacteria, transformation of cellulose into glucose by (Woodman and Stewart), 1928, 18, 713
 transformation of, into glucose by the agency of cellulose-splitting bacteria (Woodman and Stewart), 1928, 18, 713
- Census of an acre of corn** (Engledow), 1926, 16, 166
- Cereal(s)**, hybridisation of (Wilson), 1907, 2, 68
 nitrogenous top dressing of, determination of value of (Eden and Fisher), 1927, 17, 548
 rusts, South African (Evans), 1911, 4, 95
 yield in, estimation of, by sampling (Clapham), 1929, 19, 214
 yield in, investigations on (Engledow, Wadham, Doughty, Sansom and Ramiah), 1923, 13, 390; 1924, 14, 66, 287, 325; 1925, 15, 125; 1928, 18, 1, 317; 1929, 19, 472; 1930, 20, 265
- Cervix** of the cow, mucous secretion of (Woodman and Hammond), 1925, 15, 107
- Chamomile** (mayweed) taint in milk (Procter), 1926, 16, 443
- Cheddar** cheese, *see* Cheese, cheddar
- Cheese**, cheddar, chemistry of (Nierenstein), 1912, 4, 225
 cheddar, texture of, factors controlling the (Geake), 1914, 6, 169
 Stilton, micro-flora of (Percival and Mason), 1913, 5, 222
 testing of, new method of (Geake), 1920, 10, 86
- Chloride** in soil, rapid electrometric method for the determination of (Best), 1929, 19, 533
- Chlorine** in rain-water (Miller), 1905, 1, 280
- Churning**, evolution of gas during (Watt), 1907, 2, 96
 fat globules of milk in relation to (Cooper, Nuttall and Freak), 1911, 4, 150
- Cider**, bottled, yeast flora of (Pearce and Barker), 1908, 3, 55
 rate of fermentation of (Barker), 1908, 3, 1
 "sickness" (Barker and Hillier), 1912, 5, 67
 tannin in, estimation of (Spiers), 1914, 6, 77
- Citric acid**, action of, on maltose (Davis and Daish), 1913, 5, 437
 acid, estimation of cane sugar inversion by (Davis and Daish), 1913, 5, 437
 acid extracts of soil, colorimetric determination of phosphoric acid in (Warren and Pugh), 1930, 20, 532
 acid, solubility of calcium phosphates in (Ramsay), 1917, 8, 277
 solubility of apatite (Vanstone), 1925, 15, 43
 solubility of basic slags (Vanstone), 1925, 15, 39
 solubility of calcium, aluminium, and iron phosphates (Vanstone), 1925, 15, 36
 solubility of mineral phosphates (Tocher), 1922, 12, 125; (Vanstone), 1925, 15, 40

- Clay(s)** and certain physical properties of soil, relation between (Keen and Raczkowski), 1921, 11, 441
 as a binding agent (Hardy), 1925, 15, 420
 determination of, in heavy soils (Joseph and Martin), 1921, 11, 293
 fraction, soil profile development in North Wales as illustrated by character of (Robinson), 1930, 20, 618
 fractions, moisture equivalent of (Joseph), 1927, 17, 12
 fractions, silica-alumina ratio of (Joseph), 1924, 14, 490
 imbibitional water of (Joseph), 1927, 17, 12
 mechanical composition curves of (Robinson), 1924, 14, 626
 moisture equivalent of, relation of silica-alumina ratio to (Joseph), 1927, 17, 12
 pastes, plastometric studies of (Keen and Blair), 1929, 19, 684
 shrinkage coefficient of, physical significance of (Hardy), 1923, 13, 243
 soil, seasonal variations in productivity, botanical and chemical composition, and nutritive value of pasturage on (Woodman, Blunt and Stewart), 1927, 17, 209
 soils, determination of nitrogen in (Bal), 1925, 15, 454
- Climate**, effect of, on soil formation (Leather), 1915, 7, 135
 effect of, on the onset of breeding year in the goat (Asdell), 1926, 16, 632
- Clover**, depressing effect of nitrogen on (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
 nutritive value of silage (Woodman), 1925, 15, 327
 red, seed studies on, with special reference to country of origin (Stapledon), 1920, 10, 90
 stem-disease of, caused by the eelworm, susceptibility to (Goodey), 1922, 12, 20
 white, cyanogenesis in (Ware), 1925, 15, 47
 white, forms and strains of, experiments and observations on (Ware), 1925, 15, 47
 white, pollination of (Ware), 1925, 15, 47
 wild white, Wendon Lofts experiment (Middleton), 1905, 1, 136
- Cockerel**, maintenance requirement of fattening (Southgate), 1930, 20, 206
- Coconut cake**, keeping qualities of (Godden), 1917, 8, 419
 cake, rancidity of (Furlong), 1919, 9, 137
 oil, effect of, on butter fat (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1924, 14, 543
 oil, effect of, on growth of rats (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1924, 14, 539
- Cod liver oil**, effect of, on growth of rats (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1924, 14, 539
 feeding of, to farm animals (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1923, 13, 144, 153; 1924, 14, 531
 influence of, on nutritive value of butter fat (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1923, 13, 144, 153; 1924, 14, 531
 vitamin A increase by feeding of, to farm animals (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1923, 13, 144, 153; 1924, 14, 531
- Coeruleo-molybdate** reaction of Denigès, rapid determination of available phosphate in soil by (Atkins), 1924, 14, 192
- Coitus**, excessive, in males (Hammond), 1921, 11, 337
- Colorimetric** determination of hydrogen-ion concentration of soils (Gimingham), 1923, 13, 69
 determination of soil humus (Joseph and Whitefield), 1927, 17, 1
 estimation of humic matter in mineral soils (Eden), 1924, 14, 469
 estimation of hydrogen-ion concentration in soils and aqueous soil extracts (Fisher), 1921, 11, 45
- Colzalin**, a globulin from rape seed (Davies), 1927, 17, 33
- Combustion**, dry, determination of phosphorus compounds in blood by (Green), 1928, 18, 372
 heat of, in feeding stuffs (Allen), 1928, 18, 691
 heat of, in fibre (Allen), 1928, 18, 691
- Concentrates**, wet and dry feeding of, to dairy cows (Berry), 1921, 11, 78
- Conductivity**, electrical, of soils (Haines), 1925, 15, 536
 of soil extracts (Wright), 1928, 18, 186
- Copper**, action of sulphur on (Martin), 1930, 20, 32
 fungicides, *see* Fungicides, copper
 in tea sprayed with Bordeaux mixture, amount of (Annett and Kar), 1910, 3, 314
 sulphate, *see* Sulphate, copper
- Corn**, census of an acre of (Engledow), 1926, 16, 166
 on ploughed up grassland, effect of basic slag on (Oldershaw), 1921, 11, 287
- Corpora lutea**, number of, in pigs and rabbits (Hammond), 1914, 6, 263; 1921, 11, 337
- Cotton**, Mendelian heredity in (Balls), 1907, 2, 216; 1908, 2, 346; (Fletcher), 1907, 2, 281
 soil temperatures under, in Egypt (Taylor), 1927, 17, 489

- Cotton**, soil-water, movements of (Balls), 1913, 5, 469
 water requirement of, in the Sudan (Greene), 1928, 18, 531
- Cottonseed cake**, digestibility of (Crowther and Woodman), 1917, 8, 429
 rancidity of (Furlong), 1919, 9, 137
- Cow(s)**, abnormal, variation in composition of milk of (Cranfield and Ling), 1929, 19, 491
 age of, effect on yield and quality of milk (Kay and M'Candlish), 1929, 19, 342
 blood of, mineral constituents in, compared with calf (Green and Macaskill), 1928, 18, 384
 calving interval, law of optimum length (Matson), 1929, 19, 553
 cervix of, mucous secretion of the (Woodman and Hammond), 1925, 15, 107
 dairy, feeding of wet and dry concentrates to (Berry), 1921, 11, 78
 dairy, live-weight of, effect of pregnancy on (Bartlett), 1926, 16, 392
 dairy, live-weight of, variations in (Bartlett), 1926, 16, 383
 dairy, nitrogen metabolism in (Crowther and Woodman), 1922, 12, 40
 influence of age on yield and quality of milk (White and Drakeley), 1927, 17, 420; 1928, 18, 496
 influence of breed on yield and quality of milk (Drakeley and White), 1927, 17, 118
 influence of lactation on yield and quality of milk (Drakeley and White), 1927, 17, 118; 1928, 18, 496
 influence of oils on nutritive value of butter fat of (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1923, 13, 144, 153; 1924, 14, 531
 lactation in, inception of (Asdell), 1925, 15, 358
 lactation in, premature (Asdell), 1925, 15, 358
 mammary gland in, inception of (Asdell), 1925, 15, 358
 milking capability of, estimation by first lactation yield (Gavin), 1913, 5, 377
 supernumerary mammary glands in, functional activity of (Mackenzie and Marshall), 1925, 15, 30
- Cream**, action of viscogen (calcium saccharate) on (Pyne), 1929, 19, 463
- Cresols**, disappearance of, in soil (Sen-Gupta), 1921, 11, 151
- Crop(s)** and stock, feeding of, review of (Hall), 1911, 4, 105
 feeding value of, influence of sulphates on (Dymond, Hughes and Jupe), 1905, 1, 217
 green, ensilage of, changes during (Woodman and Amos), 1924, 14, 99
- Crop(s)** growth of, effect of soil heterogeneity on successive (Eden and Maskell), 1928, 18, 163
 of the market-garden district of Biggleswade (Rigg), 1916, 7, 385
 successive, influence of soil heterogeneity on growth and yield of (Eden and Maskell), 1928, 18, 163
 variation, studies in (Fisher, Mackenzie, Eden, Balmukand, Wishart and Kalamkar), 1921, 11, 107; 1923, 13, 311; 1924, 14, 434; 1927, 17, 548; 1928, 18, 602; 1929, 19, 201; 1930, 20, 417, 440
 yield of, effect of soil heterogeneity on successive (Eden and Maskell), 1928, 18, 163
 yield of, effect of spacing on (Eden and Maskell), 1928, 18, 163
 yield, influence of sulphates on (Dymond, Hughes and Jupe), 1905, 1, 217
- Cupric** reducing power of xylose and arabinose (Daish), 1914, 6, 255
- Cutting**, frequency of, as affecting moisture, protein and fibre content of grass (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
- Cyanamide**, decomposition of, in the soil (Cowie), 1919, 9, 113; 1920, 10, 163; *see also* Calcium cyanamide
- Cyanogenesis** in white clover (Ware), 1925, 15, 47
 under digestive conditions (Auld), 1913, 5, 409
- Dactylis glomerata*, effect of potassium salts on anatomy of (Purvis), 1919, 9, 338
- Dairy products**, measurement of H-ion concentration in (Lester), 1924, 14, 634
- Dephenolisation** by mechanical fractions of soil (Sen-Gupta), 1925, 15, 503
 in soil (Sen-Gupta), 1921, 11, 136; 1925, 15, 497
- Dextrose**, action of hydrochloric acid on, at 70° C. and 100° C. (Davis and Daish), 1913, 5, 437
 -laevulose ratio in the mangold (Davis), 1916, 7, 327
- Dicyanodiamide**, decomposition of, in the soil (Cowie), 1919, 9, 113
- Diet**, variations in daily volume and nature of, effect of, on percentage composition of milk (Taylor and Husband), 1922, 12, 111
- Digestibility** and metabolisable energy of green oats and tares, oat and tare hay and oat and tare silage (Woodman), 1922, 12, 144
 influence of calcium carbonate on, in swine (Evans), 1929, 19, 799
 influence of pregnancy on, in swine (Evans), 1929, 19, 799
 influence of size of ration on (Halnan), 1928, 18, 766

- Digestibility** of barley meal (Wood and Woodman), 1924, 14, 498
of bulrush millet by poultry (Halnan), 1928, 18, 634
of cottonseed cake (Crowther and Woodman), 1917, 8, 429
of fibre in Sussex ground oats by poultry (Halnan), 1926, 16, 451
of maize by poultry (Halnan), 1928, 18, 421
of maize, dry-fed, soaked, cooked and flaked, comparative determinations of (Woodman), 1925, 15, 1
of middlings (Woodman), 1925, 15, 19
of oat and tare silage (Wood and Woodman), 1921, 11, 304
of oats by poultry (Halnan), 1928, 18, 634
of palm kernel cake (Crowther and Woodman), 1917, 8, 429
of palm kernel meal (Crowther and Woodman), 1917, 8, 429
of para rubber seed cake by sheep (Auld), 1913, 5, 429
of pasture herbage, influence of artificial drying on (Woodman, Bee and Griffith), 1930, 20, 53
of peat moss after acid treatment (Godden), 1920, 10, 457
of straw, effect of soda on (Godden), 1920, 10, 437
of wheat offals (Woodman), 1923, 13, 483
of wheats by poultry (Halnan), 1926, 16, 451; 1928, 18, 421
of yeast, dried (Crowther and Woodman), 1917, 8, 448
Digestion, cellulose, mechanism of, in the ruminant organism (Woodman and Stewart), 1927, 17, 333; 1928, 18, 713
coefficients, protein, method of correcting, critical note on (Woodman), 1924, 14, 428
cyanogenesis in (Auld), 1913, 5, 409
Dinitro-*o*-cresol and the sodium salt for winter spraying (Gimingham and Tattersfield), 1927, 17, 162
Dipping fluids, determination of wetting power of, containing a soap basis (Cooper and Nuttall), 1915, 7, 219
see also Cattle dipping
Downy mildew, *see Pseudoperonospora Humuli*
Draft, ploughing, *see* Plough, draft of
Drain gauges, secular change in Rothamsted (Russell), 1907, 2, 29
Drainage, amount and composition of, through unmanured and uncropped land (Miller), 1906, 1, 377
from tower silos (Godden), 1923, 13, 462
Draught, ploughing, *see* Plough, draught of
Drill, seed, action of the (Engledow), 1928, 18, 1
Drought resistance, *see* Resistance, drought
Dry matter content of grass per acre (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
distribution of, in the potato tuber (Glynne and Jackson), 1919, 9, 237
Dutch clover, *see* Clover, white
Dye adsorption by hydrous alumina in soils (Croucher), 1928, 18, 350
Dynamometer, measurements on Rothamsted classical plots by (Haines and Keen), 1925, 15, 395
technique in soil cultivation studies (Keen and Haines), 1925, 15, 375
test of soil uniformity by (Haines and Keen), 1925, 15, 387
traction, new form of (Haines and Keen), 1928, 18, 724
Earthworms, effect of, on soil productivity (Russell), 1910, 3, 246
East coast fever, control of, by dipping (Cooper), 1910, 3, 285
Ecology of grassland (Smith and Crampton), 1914, 6, 1
Eelworm, black currant (Taylor), 1917, 8, 246
susceptibility of clover and other legumes to stem-disease caused by (Goodey), 1922, 12, 20
Egg(s), preservation of, by water glass (Hendrick), 1907, 2, 100
preserved, composition of (Hendrick), 1907, 2, 100
shells, composition of (Hendrick), 1907, 2, 100
Egyptian agriculture, textbook of, review of (Foaden and Fletcher), 1911, 4, 106
Electrical discharge, distribution of, in recent agricultural experiments (Jørgensen and Priestley), 1914, 6, 337
pot-culture experiments with (Blackman and Legg), 1924, 14, 268
Electro-culture, field experiments in (Blackman), 1924, 14, 240
Electrodes, effect of soil salts on, in moisture determination (Deighton), 1923, 13, 440
Electrolytes, effect of, on H-ion concentration of soils (Joseph and Martin), 1923, 13, 321
Electrometric method for the determination of chloride in soil (Best), 1929, 19, 533
Energy exchange, influence of food on, of the goat (Magee), 1924, 14, 600
exchange, influence of pregnancy on, of the goat (Magee), 1924, 14, 516

- Energy exchange**, influence of variations in external temperature on, of the goat (Magee), 1924, 14, 506
 exchange, influence of work on, of the goat (Magee), 1924, 14, 525
 exchanges in the growing pig (Wood), 1926, 16, 425
 metabolisable, and digestibility of green oats and tares, oat and tare hay and oat and tare silage (Woodman), 1922, 12, 144
 net values (Armsby and Fries), 1919, 9, 182
 thermic, of pigs (Deighton), 1929, 19, 160
- Ensilage** of a green crop, changes during (Woodman and Amos), 1924, 14, 99
 of maize, chemical changes during (Russell), 1908, 2, 392
 of oats and tares, changes occurring during (Amos and Woodman), 1922, 12, 337
 of sugar beet tops (Woodman and Amos), 1926, 16, 406
- Eriophyes ribis* on *Ribes grossularia* (Taylor), 1914, 6, 129
 on *Ribes nigrum* (Taylor), 1914, 6, 121
- Erysiphe graminis*, effects of various nutrients on susceptibility to (Spinks), 1913, 5, 231
- Evaporation**, *in vacuo*, apparatus for continuous, of large volumes of liquid (Davis), 1913, 5, 434
- Excreta**, poultry, method for estimation of uric acid in (Woodman), 1924, 14, 413
 toxic, of plants (Fletcher), 1912, 4, 245
- Experimental error** in pig-feeding trials (Crowther), 1915, 7, 137; (Berry and O'Brien), 1921, 11, 275
 error of field trials (Mercer and Hall), 1911, 4, 107
 results, interpretation of (Wood and Stratton), 1910, 3, 417
see also Probable error
- Face colour**, inheritance of, in sheep (Wood), 1905, 1, 364; 1909, 3, 145
- Faeces**, nitrogen fixation in (Richards), 1917, 8, 299
- Fat**, butter-, *see* Butter-fat
 globules in milk, enumeration and measurement of (Cooper, Nuttall and Freak), 1913, 5, 357
 globules in milk, observations on (Cooper, Nuttall and Freak), 1913, 5, 331
 globules of milk in relation to churning (Cooper, Nuttall and Freak), 1911, 4, 150
 milk-, *see* Milk-fat
- "**Fatness**" as a cause of sterility (Marshall and Peel), 1910, 3, 383
- Fatty acids**, volatile, determination of, in soil and biological media (Subrahmanyam), 1929, 19, 649
- Fauna and flora** of flooded fenland (Petherbridge), 1916, 7, 508
- Fecundity** of premium stallions (Walton and Fair), 1928, 18, 772
- Feeding experiments**, error in, with pigs (Crowther), 1915, 7, 137; (Berry and O'Brien), 1921, 11, 275
- Feeding stuffs**, analysis and calorific values of (Allen), 1928, 18, 691
 barley meal, digestibility of (Wood and Woodman), 1924, 14, 498
 coconut cake, keeping qualities of (Godden), 1917, 8, 419
 coconut cake, rancidity of (Furlong), 1919, 9, 137
 cod liver oil, feeding of, to farm animals (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1923, 13, 144, 153; 1924, 14, 531
 concentrates, wet and dry feeding of, to dairy cows (Berry), 1921, 11, 78
 cottonseed cake, digestibility of (Crowther and Woodman), 1917, 8, 429
 cottonseed cake, rancidity of (Furlong), 1919, 9, 137
 groundnut cake, keeping qualities of (Godden), 1917, 8, 419
 groundnut cake, rancidity of (Furlong), 1919, 9, 137
 hay, *see* Hay
 heats of combustion of (Allen), 1928, 18, 691
 hops, nutritive value of (Davies and Sullivan), 1927, 17, 380
 linseed cake, nutritive value of (Stewart), 1928, 18, 702
 linseed cake, rancidity of (Furlong), 1919, 9, 137
 lipolytic activity of certain feeding cakes (Furlong), 1919, 9, 137
 maize, digestibility of, by poultry (Halnan), 1928, 18, 421
 maize, digestibility of dry-fed, soaked, cooked and flaked, comparative determinations of (Woodman), 1925, 15, 1
 maize, flaked, composition of (Woodman and Stewart), 1927, 17, 60
 mangels, feeding value of (Wood), 1910, 3, 225
 mangels versus dried sugar beet pulp, effect of, on composition of milk (Cranfield), 1929, 19, 302
 middlings, digestibility of (Woodman), 1925, 15, 19
 millet, bulrush, digestibility and feeding value of, for poultry (Halnan), 1928, 18, 634
 oats, digestibility of certain varieties of, by poultry (Halnan), 1928, 18, 634
 oats, Sussex ground, digestibility of fibre in, by poultry (Halnan), 1926, 16, 451
 oil cakes, keeping qualities of (Godden), 1917, 8, 419

- Feeding stuffs**, palm kernel cake, digestibility of (Crowther and Woodman), 1917, 8, 429
- palm kernel cake, influence of, on composition of milk-fat (Crowther and Woodhouse), 1917, 8, 451
- palm kernel cake, keeping qualities of (Godden), 1917, 8, 419
- palm kernel cake, rancidity of, and other feeding cakes (Furlong), 1919, 9, 137
- palm kernel meal, digestibility of (Crowther and Woodman), 1917, 8, 429
- palm nut kernel cake, rancidity in, cause and prevention of (Calder), 1916, 7, 470
- para rubber seed cake, digestibility experiments with sheep (Auld), 1913, 5, 429
- pasture, *see* Pasture
- peat moss, digestibility of, after acid treatment (Godden), 1920, 10, 457
- poppy seed cake, its effect on yield of butter and composition of butter fat (Annett and Sen), 1919, 9, 416
- silage, *see* Silage
- sugar beet, value of, in the nutrition of swine (Woodman, Duckham and French), 1929, 19, 669
- sugar beet pulp, composition and nutritive value of (Woodman and Calton), 1928, 18, 544
- sugar beet pulp, dried, value of, in the nutrition of swine (Woodman, Duckham and French), 1929, 19, 656
- sugar beet pulp, dried, versus mangels, effect of, on composition of milk (Cranfield), 1929, 19, 302
- sugar beet pulp, molasses-, value of, in the nutrition of swine (Woodman, Duckham and French), 1929, 19, 656
- sugar beet tops, nutritive and manurial values of (Woodman and Bee), 1927, 17, 477
- wheat offals, grading, composition, and digestibility of (Woodman), 1923, 13, 483
- wheats, digestibility of "weak" and "strong," by poultry (Halnan), 1926, 16, 451; 1928, 18, 421
- whey, production, composition and utilisation of (Berry), 1923, 13, 192
- yeast, digestibility of dried (Crowther and Woodman), 1917, 8, 448
- Feeding trials**, British, statistics of, and the starch equivalent theory (Wood and Yule), 1914, 6, 233
- Fenland**, flooded, flora and fauna of (Petherbridge), 1916, 7, 508
- Fermentation**, of ciders and perries, rate of (Barker), 1908, 3, 1
- Fertilisers**, ammonium sulphate, efficiency of (Prescott), 1923, 13, 333
- Fertilisers**, analysis of, "V. Internationalen Kongresses für Angewandte Chemie zu Berlin, 1903," note on (Wood), 1905, 1, 366
- basic slag, *see* Basic slag
- effect of, on mineral content of pasture grass (Godden), 1926, 16, 98
- effect of, on yield of potatoes (Wishart and Clapham), 1929, 19, 600
- estimation of potassium in (Davis), 1912, 5, 52
- experiments with, modern methods for (Sebelein), 1920, 10, 415
- gas lime, effect on plant growth (Bhatt), 1910, 3, 317
- lead nitrate, properties of (Berry), 1924, 14, 58
- mineral phosphates, citric solubility of (Tocher), 1922, 12, 125; (Vanstone), 1925, 15, 36, 40
- mineral phosphates, evaluating, new method of (Vanstone), 1925, 15, 491
- mineral phosphates, solubility of, in oxalic acid (Vanstone), 1925, 15, 491
- nitrogenous, leaching out of autumnal dressings of (Nicholson and Pantin), 1929, 19, 297
- phosphatic, availability of (Greenhill), 1930, 20, 559
- phosphoric acid in, citrate solubility of (Dixon), 1906, 1, 430
- potassium in, perchlorate method for estimation of (Page), 1924, 14, 133
- sodium silicate, effect of, on yield of barley (Fisher), 1929, 19, 132; (Hall), 1929, 19, 586
- sulphates, influence of, on crop yields (Dymond, Hughes and Jupe), 1905, 1, 217
- Fertility** in Southdown sheep (Nichols), 1926, 16, 365
- of animals, factors controlling (Hammond), 1914, 6, 263; 1921, 11, 337
- of males (Hammond), 1921, 11, 337
- of pigs (Hammond), 1914, 6, 263; 1921, 11, 337
- of sheep (Hammond), 1921, 11, 337
- of stallions (Sanders), 1926, 16, 466
- Fibre** content of grass as influenced by frequency of cutting (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
- heat of combustion of (Allen), 1928, 18, 691
- in Sussex ground oats, digestibility of, by poultry (Halnan), 1926, 16, 451
- Field** experiments (Berry and O'Brien), 1924, 14, 407
- experiments, electro-culture in (Blackman), 1924, 14, 240
- experiments, missing plot, method of estimating yield of (Allan and Wishart), 1930, 20, 399
- trials, experimental error of (Mercer and Hall), 1911, 4, 107

- Flocculation**, depth-distribution of, in continuously manured soils (Crowther), 1925, **15**, 232
of soils (Comber), 1920, **10**, 425; 1921, **11**, 450; 1922, **12**, 372
of turbid liquids by salts (Hall and Morison), 1907, **2**, 244
- Flora and fauna of flooded fenland** (Petherbridge), 1916, **7**, 508
- Flour**, moisture in, determination of (Fisher and Jones), 1928, **18**, 649
nitrogen in (Greaves and Stewart), 1912, **4**, 376
wheat, *see* Wheat flour
- Fluorine**, determination of, in basic slag (Warren, Gimingham and Page), 1925, **15**, 516
- Foetal atrophy**, effect of nutrition on (Davidson), 1930, **20**, 233
atrophy in pigs (Hammond), 1914, **6**, 263; 1921, **11**, 337
growth, *see* Growth, foetal
- Foetus**, calf, phosphorus partition in blood of (Malan), 1928, **18**, 397
lamb, phosphorus partition in blood of (Malan), 1928, **18**, 397
sex-ratio in the pig (Parkes), 1925, **15**, 284
sheep, phosphorus partition in blood of (Malan), 1928, **18**, 397
weight of, in the pig (Parkes), 1915, **15**, 284
- Food(s)**, influence of, on energy exchange of the goat (Magee), 1924, **14**, 600
mineral constituents of (Ingle), 1908, **3**, 22
of birds (Hammond), 1912, **4**, 380
seasonal changes in, of birds (Hammond), 1912, **4**, 380
- Forage plants**, proteins of (Davies), 1926, **16**, 280, 293; 1927, **17**, 33, 41
- Fractionation and preparation of humic acid** (Beckley), 1921, **11**, 66
- Froghopper blight of sugar-cane**, soil relationships (Turner), 1929, **19**, 26
- Frost resistance**, *see* Resistance, frost
- Fungi**, influence of, on carbon-nitrogen ratio in soil (Waksman), 1924, **14**, 559
- Fungicidal action of Bordeaux mixtures** (Barker and Gimingham), 1911, **4**, 76; 1914, **6**, 220
- Fungicides**, arsenical, tests against *Sphaerotheca Humuli* (Goodwin, Martin and Salmon), 1929, **19**, 405
copper (Pickering), 1912, **4**, 273
effect of, upon the assimilation of carbon dioxide by green leaves (Amos), 1907, **2**, 257
fungal properties of spray fluids (Eyre, Salmon, Wormald, Horton, Goodwin and Martin), 1916, **7**, 473; 1919, **9**, 283; 1922, **12**, 269; 1926, **16**, 302; 1929, **19**, 405; 1930, **20**, 18, 489
- Fungicides**, lead arsenate, value of (Goodwin, Martin and Salmon), 1926, **16**, 302
liver of sulphur, properties of (Foreman), 1910, **3**, 400
polysulphides, properties of (Eyre, Salmon, Horton, Goodwin and Martin), 1916, **7**, 473; 1919, **9**, 283; 1922, **12**, 269; 1926, **16**, 302; 1930, **20**, 489
sulphur, against *Sphaerotheca Humuli* (Goodwin, Martin and Salmon), 1930, **20**, 18
sulphur as a soil fungicide against potato wart disease (Roach), 1930, **20**, 74
sulphur, colloidal, properties of (Goodwin, Martin and Salmon), 1930, **20**, 18
sulphur, flowers of, properties of (Goodwin, Martin and Salmon), 1930, **20**, 18
sulphur, ground, properties of (Goodwin, Martin and Salmon), 1930, **20**, 18
sulphur, hydrolysis of, in relation to its fungicidal activity (Martin), 1930, **20**, 32
sulphur, influence of a spreader on fungicidal activity of (Goodwin and Martin), 1930, **20**, 18, 32
- Gas**, evolution of, during churning (Watt), 1907, **2**, 96
lime, composition of (Bhatt), 1910, **3**, 317
- Gases**, soil (Appleyard and Russell), 1915, **7**, 242
- Gelatine**, addition of, to lime sulphur-lead arsenate spray (Goodwin and Martin), 1925, **15**, 476
- Germination**, studies on (Pickering), 1908, **2**, 411
- Gestation in the goat**, variation of duration of (Asdell), 1929, **19**, 382
- Glands of internal secretion**, effect of, on milk secretion (Hammond and Hawk), 1917, **8**, 147
- Glucose**, transformation of cellulose into, by the agency of cellulose-splitting bacteria (Woodman and Stewart), 1928, **18**, 713
- Goat**, breeding year in, effect of climate on (Asdell), 1926, **16**, 632
breeding year in, variation in onset of (Asdell), 1926, **16**, 632
course of metabolism in, after food (Magee and Orr), 1924, **14**, 619
energy exchange of, influence of food on (Magee and Orr), 1924, **14**, 600
energy exchange of, influence of pregnancy on (Magee), 1924, **14**, 516
energy exchange of, influence of variations in external temperature on (Magee), 1924, **14**, 506
energy exchange of, influence of work on (Magee), 1924, **14**, 525
gestation in, variation of duration of (Asdell), 1929, **19**, 382

- Goat**, lactation in, inception of (Asdell), 1925, 15, 358
 mammary gland in, inception of (Asdell), 1925, 15, 358
 pregnancy in, variation in length of (Asdell), 1929, 19, 382
 premature lactation in (Asdell), 1925, 15, 358
- Gooseberry**, *Eriophyes ribis* on (Taylor), 1914, 6, 129
 mildew, American, observations on the perithecial stage of (Salmon), 1914, 6, 187
- Grain** and straw, correlation between (Mackenzie), 1926, 16, 275
 dressed, examination of yield of (Fisher), 1921, 11, 107; (Mackenzie), 1924, 14, 434
 growing, influence of, on nitrogen and organic matter content of western prairie soils of Canada (Shutt), 1925, 15, 162
- Grass**, botanical analysis of, new method for (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
 chemical analysis of, new method for (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
 chemical composition of, under the intensive system of management (Greenhill), 1930, 20, 573
 dry matter content of, per acre (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
 fibre content of, as influenced by frequency of cutting (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
 moisture content of, as influenced by frequency of cutting (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
 pasture, *see* Pasture grass
 protein content of, as influenced by frequency of cutting (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
 protein content of, per acre (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
 yield and composition of, effect of nitrogen on (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
- Grassland**, effect of basic slag on (Oldershaw), 1921, 11, 287
 in Britain (Smith and Crampton), 1914, 6, 1
 ecology of (Smith and Crampton), 1914, 6, 1
 management, intensive system of, chemical composition of pasture under the (Greenhill), 1930, 20, 573
 management, new system of (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
- Grassland**, nitrogenous manuring of (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
 types of (Smith and Crampton), 1914, 6, 1
- Grazing**, intensive, influence on composition and nutritive value of pasture herbage (Woodman, Norman and Bee), 1928, 18, 266; 1929, 19, 236
- "Great Plains" region, studies of soil moisture in (Alway), 1908, 2, 333
- Green leaves**, effect of fungicides upon the assimilation of carbon dioxide by (Amos), 1907, 2, 257
- Green maize**, composition of (Annett and Russell), 1908, 2, 382
- Green manures**, *see* Manures, green
- Groundnut cake**, keeping qualities of (Godden), 1917, 8, 419
 rancidity of (Furlong), 1919, 9, 137
- Growth** and development of cattle (Hammond), 1920, 10, 233
 and development of pigs (Hammond), 1922, 12, 387
 and development of sheep (Hammond), 1921, 11, 367
 foetal, influence of, on yield of milk (Gavin), 1913, 5, 309
 normal, in animals (Murray), 1921, 11, 258
 plant, *see* Plant growth
- Gypsum**, effect of, on permeability of alkaline soil in the Sudan (Greene), 1928, 18, 531
 occurrence of, in alkaline soil (Greene), 1928, 18, 518
- Hair** of cattle, investigations of different breeds (Camek), 1920, 10, 12
- Hay**, composition of, effect of time of cutting on (Crowther and Ruston), 1912, 4, 305
 oat and tare, digestibility and metabolisable energy of (Woodman), 1922, 12, 144
 yield of, effect of time of cutting on (Crowther and Ruston), 1912, 4, 305
- Heat**, action of, on soils (Pickering), 1908, 3, 32
 effect of, on milk (Mattick and Hallett), 1929, 19, 452
 of combustion of feeding stuffs (Allen), 1928, 18, 691
 of combustion of fibre (Allen), 1928, 18, 691
 of hydration for Sudan soil (Peto and Greene), 1929, 19, 715
 partial sterilisation of soil by (Elveden), 1921, 11, 197
- Heifers**, composition of secretions from udders of, during pregnancy (Woodman and Hammond), 1923, 13, 180
 measurements of, accuracy of three (Sanders), 1926, 16, 607

- Heifers**, virgin, composition of a fluid obtained from the udders of, note on (Woodman and Hammond), 1922, 12, 97
- Herbage**, botanical and chemical composition of (Armstrong), 1907, 2, 283
- Herbivora**, effect of mineral content of pasture grass on (Elliot, Crichton, Godden and Cruickshank), 1926, 16, 59, 65, 78, 89, 98
- Heredity** in cotton (Balls), 1907, 2, 216; 1908, 2, 346; (Fletcher), 1907, 2, 281
- Hop(s)**, development of, influence of pollination on (Howard), 1905, 1, 49
forms resistant to mildew (Salmon), 1917, 8, 455
mildew, *see* Mildew, hop
nutritive value of dried spent (Davies and Sullivan), 1927, 17, 380
variation in the male (Wormald), 1915, 7, 175
- Horns**, inheritance of, in sheep (Wood), 1905, 1, 364; 1909, 3, 145
- House-fly** in relation to the farm manure heap (Eltringham), 1916, 7, 443
- Humic acid**, preparation and fractionation of (Beckley), 1921, 11, 66
matter, colorimetric estimation of, in mineral soils (Eden), 1924, 14, 469
matter, formation of, in soil (Du Toit and Page), 1930, 20, 478
- Humification** of farmyard manure (Jones), 1927, 17, 104
of soil organic matter, method for determining degree of (Robinson and Jones), 1925, 15, 26
- Humulus Lupulus* L., *see* Hop
- Humus**, formation of (Beckley), 1921, 11, 69
of acid and alkaline peats (Hanley), 1914, 6, 63
soil, *see* Soil humus
- Hybridisation** of cereals (Wilson), 1907, 2, 68; (Biffen), 1907, 2, 183
- Hydration**, heat of, for Sudan soil (Peto and Greene), 1929, 19, 715
- Hydrochloric acid**, action of, on cane sugar, maltose, dextrose and laevulose at 70° C. and 100° C. (Davis and Daish), 1913, 5, 437
extracts of soil, colorimetric determination of phosphoric acid in (Warren and Pugh), 1930, 20, 532
hydrolysis of maltose by (Davis), 1914, 6, 413
phosphoric acid in, colorimetric determination of (Warren and Pugh), 1930, 20, 532
- Hydrogen electrode**, determination of hydrogen-ion concentration of soil suspensions by the (Crowther), 1925, 15, 201
exchangeable, in soils, technique of replacement (Turner), 1928, 18, 257
-ion concentration, measurement of, in some dairy products (Lester), 1924, 14, 634
- Hydrogen** -ion concentration of soils, *see* Soils, hydrogen-ion concentration
peroxide, action of, on farmyard manure (Jones), 1927, 17, 104
peroxide treatment in mechanical analysis (Joseph and Snow), 1929, 19, 106
- Hydrolysis** of protein, studies in (Foreman), 1912, 4, 430
of protein of linseed (Foreman), 1910, 3, 358
of soluble protein of swede turnips (Williams), 1917, 8, 182
of sulphur in relation to its fungicidal activity (Martin), 1930, 20, 32
- Hygroscopic capacity** of soils (Luxmoore), 1905, 1, 304
coefficient of soil, critical study of (Puri), 1925, 15, 272
- Impurities**, atmospheric, effect on plant growth (Crowther, Ruston and Stuart), 1911, 4, 25; 1913, 5, 391; 1914, 6, 387, 395
- Inheritance** in wheat, Mendel's laws of (Biffen, Leather and Hall), 1905, 1, 4; 1906, 1, 475
of horns and face colour in sheep (Wood), 1905, 1, 364; 1909, 3, 145
of "strength" in wheat (Biffen), 1908, 3, 86; 1909, 3, 223; (Saunders), 1909, 3, 218
- Inoculation** of legumes (Thornton), 1929, 19, 48, 373
of lucerne in Great Britain (Thornton), 1929, 19, 48, 373
- Insect(s)** life, Indian, review of (Maxwell-Lefroy and Howlett), 1910, 3, 333
toxicity of organic compounds to (Tattersfield), 1927, 17, 181
- Insecticides**, pyrethrin I and II, estimation of, in pyrethrum (*Chrysanthemum cinerariaefolium*) (Tattersfield, Hobson and Gimingham), 1929, 19, 266, 433
pyrethrin I and II, insecticidal value and estimation in pyrethrum (*Chrysanthemum cinerariaefolium*) (Tattersfield, Hobson and Gimingham), 1929, 19, 433
- Insemination**, artificial, for zoo-technical purposes in Russia (Ivanoff), 1922, 12, 244
- Insolation**, effect of, on soil (Peto and Greene), 1929, 19, 715
- Internal disease** of potato, symptoms of (Horne), 1910, 3, 322
genital organs and mammary glands in sows, observations on (Mackenzie, Marshall and Hammond), 1912, 4, 410; 1913, 5, 418; 1914, 6, 182; 1915, 7, 243
secretion, glands of, effect on milk secretion (Hammond and Hawk), 1917, 8, 147

- Invertase**, estimation of cane sugar inversion by (Davis and Daish), 1913, 5, 437
- Iodine** content of plants, effect of iodine manuring on (Orr, Kelly and Stuart), 1928, 18, 159
manuring, effect on iodine content of plants (Orr, Kelly and Stuart), 1928, 18, 159
- Iron** content of plants, factors affecting (Godden and Grimmett), 1928, 18, 363
ferrous, in soils (Morison and Doyne), 1914, 6, 97
phosphates, *see* Phosphates, iron
solution and precipitation of, in formation of iron pan (Morison and Sothers), 1914, 6, 84
- Irrigated** apples and non-irrigated, composition of (Jones and Colver), 1913, 5, 424
wheat, protein content of (Jones, Colver and Fishburn), 1920, 10, 290
- Keratin**, decomposition of, by soil micro-organisms (Jensen), 1930, 20, 390
- Lactation** curve, analysis of, into maximum yield and persistency (Sanders), 1930, 20, 145
curve, shape of (Sanders), 1923, 13, 169
curves, effect of breed on (Roberts), 1926, 16, 416
estimating milking capacity of a cow by yield of first (Gavin), 1913, 5, 377
in cow and goat, inception of (Asdell), 1925, 15, 358
in pigs, effect of calcium deficiency on (Davidson), 1930, 20, 233
influence of, on yield and quality of milk (Drakeley and White), 1927, 17, 118; 1928, 18, 496
influence of preceding calving interval on (Matson), 1929, 19, 553
premature, in the cow and goat (Asdell), 1925, 15, 358
variations in successive (Glen and M^cCandlish), 1930, 20, 45
- Lactic acid**, determination of, in soil and biological media (Subrahmanyam), 1929, 19, 649
- Laevulose**, action of hydrochloric acid on, at 70° C. and 100° C. (Davis and Daish), 1913, 5, 437
- Lamb(s)**, foetus, phosphorus partition in blood of (Malan), 1928, 18, 397
parasitic gastritis in, experiments on the treatment of (Wood), 1930, 20, 186
sterilising of, by vasectomy, a comparison with castration (Quinlan), 1928, 18, 446
- Land**, fertility accumulation by, when allowed to run wild (Hall), 1905, 1, 241
influence of mines on, in Cardiganshire (Griffith), 1919, 9, 366
- Lark**, food of (Hammond), 1912, 4, 380
- Law of sequence** in yield of wheat for Eastern England, 1885-1905 (Shaw), 1907, 2, 17
- Leaching** of nitrogenous fertilisers (Nicholson and Pantin), 1929, 19, 297
of phosphate from North Welsh soils (Robinson and Jones), 1927, 17, 94
- Lead** acetate, basic, precipitation of reducing sugars by (Davis), 1916, 8, 7
arsenate, fungicidal properties of (Goodwin, Martin and Salmon), 1926, 16, 302
arsenate, interaction with calcium hydroxide (Goodwin and Martin), 1928, 18, 460
arsenate, methods of analysis (Goodwin and Martin), 1925, 15, 307
nitrate, *see* Nitrate, lead
- Leaf-roll** disease in potatoes, control of, by diagnosis of "primarily infected" tubers (McLean), 1926, 16, 149
in potatoes, effect of, on composition of the tuber and "mother tuber" (McLean), 1926, 16, 318
- Legumes**, growth of, effect of fresh straw on (Thornton), 1929, 19, 563
inoculation of (Thornton), 1929, 19, 48, 373
nodule formation in, influence of number of nodule bacteria applied to seed on (Thornton), 1929, 19, 373
- Leguminosae**, proteins of (Davies), 1926, 16, 280
stem-disease of, caused by the eelworm, susceptibility to (Goodey), 1922, 12, 20
- Leptohylemyia coarctata**, *see* Wheat-bulb fly
- Lime**, action of, on lime sulphur-calcium arsenate spray (Goodwin and Martin), 1926, 16, 596
-casein, addition of, to lime sulphur-lead arsenate spray (Goodwin and Martin), 1925, 15, 476
caustic, partial sterilisation of soil by (Hutchinson), 1913, 5, 320
effect of, on soils (Hutchinson and MacLennan), 1914, 6, 302
free, in basic slag, amount of (Morison), 1909, 3, 161
gas, composition of (Bhatt), 1910, 3, 317
hydrated, and arsenical compounds, addition of copper to (Goodwin and Martin), 1928, 18, 460
repressive effect of, on soil and subsoil potash (MacIntire, Shaw and Young), 1930, 20, 499
requirement of soils, *see* Soils, lime requirement
requirement, relation of interaction of acid soils, calcium carbonate and water to determination of (Crowther and Martin), 1925, 15, 237
status of soil, effect of dressings of basic slag on (Williams), 1926, 16, 196

- Lime** status of soil in relation to an insect pest of sugar-cane (Turner), 1929, 19, 26
 status of soil in relation to tilth (Turner), 1929, 19, 26
 sulphur-calcium arsenate spray, action of lime on (Goodwin and Martin), 1926, 16, 596
 sulphur-calcium arsenate spray, decomposition of (Goodwin and Martin), 1926, 16, 596
 sulphur-lead arsenate spray, action of carbon dioxide on (Goodwin and Martin), 1925, 15, 307
 sulphur-lead arsenate spray, addition of casein to (Goodwin and Martin), 1925, 15, 476
 sulphur-lead arsenate spray, addition of gelatine to (Goodwin and Martin), 1925, 15, 476
 sulphur-lead arsenate spray, addition of lime-casein to (Goodwin and Martin), 1925, 15, 476
 sulphur-lead arsenate spray, chemical changes in (Goodwin and Martin), 1925, 15, 307
 sulphur-lead arsenate spray, effect of addition of a spreader to (Goodwin and Martin), 1925, 15, 476
 sulphur, methods of analysis (Goodwin and Martin), 1925, 15, 307
 sulphur, polysulphide content of (Goodwin and Martin), 1925, 15, 96
 -sulphur sprays, composition and analysis of (Ramsay), 1914, 6, 476
 -sulphur sprays, preparation and composition of (Ramsay), 1914, 6, 194
- Liming** as a factor in the amelioration of deteriorated tropical soils (Turner), 1929, 19, 83
 effect of, on yield of sugar-cane (Turner), 1929, 19, 83
- Linseed** as a farm crop, factors affecting the growing of (Eyre and Fisher), 1915, 7, 120
 cake, nutritive value of (Stewart), 1928, 18, 702
 cake, rancidity of (Furlong), 1919, 9, 137
 mucilage (Neville), 1913, 5, 113
 oil content of, variations in (Eyre and Fisher), 1915, 7, 120
 potassium in, perchlorate method for estimation of (Page), 1924, 14, 133
 protein of, hydrolysis of (Foreman), 1910, 3, 358
- Lipolytic activity** of certain feeding cakes (Furlong), 1919, 9, 137
- Liquid(s)**, evaporation of, *in vacuo*, apparatus for (Davis), 1913, 5, 434
 turbid, flocculation of, by salts (Hall and Morison), 1907, 2, 244
- Livestock**, influence of mines on, in Cardiganshire (Griffith), 1919, 9, 366
- Lucerne**, inoculation of, in Great Britain (Thornton), 1929, 19, 48, 373
- Lupins**, white, growth of, in soil solutions (Hall, Brenchley and Underwood), 1914, 6, 278
- Magnesia**, repressive effect of, on soil and subsoil potash (MacIntire, Shaw and Young), 1930, 20, 499
- Magnesium**, exchangeable, determination of, in soils (Williams), 1929, 19, 589
- Maintenance** ration of oxen (Halnan), 1915, 7, 163
 requirement of adult sheep (Wood and Capstick), 1926, 16, 325
 requirement of the fattening cockerel (Southgate), 1930, 20, 206
- Maize**, cooked, comparative determinations of the digestibility of (Woodman), 1925, 15, 1
 digestibility of, by poultry (Halnan), 1928, 18, 421
 dry-fed, comparative determinations of the digestibility of (Woodman), 1925, 15, 1
 ensilage of, chemical changes during (Russell), 1908, 2, 392
 flaked, comparative determinations of the digestibility of (Woodman), 1925, 15, 1
 flaked, composition of (Woodman and Stewart), 1927, 17, 60
 green, composition of (Annett and Russell), 1908, 2, 382
 silage (Woodman and Amos), 1924, 14, 461; 1928, 18, 194
 soaked, comparative determinations of the digestibility of (Woodman), 1925, 15, 1
- Maltose**, action of citric acid on (Davis and Daish), 1913, 5, 437
 action of hydrochloric acid on, at 70° C. and 100° C. (Davis and Daish), 1913, 5, 437
 estimation of, by maltase-free yeasts (Davis and Daish), 1913, 5, 437
 hydrolysis of, by hydrochloric acid under the Herzfeld conditions of inversion (Davis), 1914, 6, 413
- Mammary glands** and internal genital organs in sows, observations on (Mackenzie, Marshall and Hammond), 1912, 4, 410; 1913, 5, 418; 1914, 6, 182; 1915, 7, 243
 in cow and goat, inception of (Asdell), 1925, 15, 358
 supernumerary, functional activity of, in cows (Mackenzie and Marshall), 1925, 15, 30
- Manganese** content of plants, factors affecting (Godden and Grimmett), 1928, 18, 363
 contents of soils and their dephenolising power after acid-treatment, correlation between (Sen-Gupta), 1925, 15, 511

- Manganese dioxide**, phenol loss in soil due to (Sen-Gupta), 1925, 15, 511
- Mangels**, chemical composition of, variation in (Wood and Berry), 1905, 1, 176
 feeding value of (Wood), 1910, 3, 225
 versus dried sugar beet pulp, effect of, on composition of milk (Cranfield), 1929, 19, 302
- Mangold**, dextrose-laevulose ratio in (Davis), 1916, 7, 327
 leaf, carbohydrates of (Campbell), 1912, 4, 248; (Davis, Daish and Sawyer), 1916, 7, 255
 leaf, reducing sugars in, errors in estimating of (Davis), 1916, 7, 327
 root, proteins of the (Davies), 1926, 16, 293
 seed, proteins of the (Davies), 1926, 16, 293
- Manure(s)**, analysis of, "V. Internationalen Kongresses für Angewandte Chemie zu Berlin," note on (Wood), 1905, 1, 366
 calcium cyanamide (Hall), 1905, 1, 146
 calcium cyanamide, conditions affecting value of (Mosscrop), 1917, 8, 178
 changes in, on keeping (Dyer), 1905, 1, 108
 chemical composition of town stable (Dyer), 1905, 1, 108
 effect of, on crop and soil of permanent meadows (Crowther and Ruston), 1915, 7, 197
 effect of, on soil reaction (Crowther), 1925, 15, 222, 232
 effect of, on susceptibility to disease in potatoes (Miles and Thomas), 1925, 15, 89
 experiments with, modern methods for (Sebelein), 1920, 10, 415
 farm, in relation to the house-fly (Eltringham), 1916, 7, 443
 farmyard, changes in, during storage (Russell and Richards), 1917, 8, 495
 farmyard, degree of humification of (Jones), 1927, 17, 104
 farmyard, losses in making and storing (Wood), 1907, 2, 207
 farmyard, profile analysis of (Jones), 1927, 17, 104
 green, value of (Lipman), 1921, 11, 323
 iodine manuring, effect on iodine content of plants (Orr, Kelly and Stuart), 1928, 18, 159
 nitrate of soda, value of (Lipman), 1921, 11, 323
 nitrogenous, absorption of atmospheric moisture by (Brownlee), 1908, 2, 380
 nitrogenous, experiments with cereals (Eden and Fisher), 1927, 17, 548
 nitrogenous, grassland treatment with (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
- Manure(s)**, nitrogenous, response of the potato to (Eden and Fisher), 1929, 19, 201
 potassic, response of the potato to (Eden and Fisher), 1929, 19, 201
 response of individual species in pastures under (Stapledon), 1914, 6, 499
 response of potatoes to (Fisher and Mackenzie), 1923, 13, 311
 stable, chemical composition of, and changes in during keeping (Dyer), 1905, 1, 108
 stable, value of (Lipman), 1921, 11, 323
 sulphates, influence of, on yield and feeding value of crops (Dymond, Hughes and Jupe), 1905, 1, 217
see also Fertilisers
- Manurial values** of sugar beet tops (Woodman and Bee), 1927, 17, 477
- Meadow foxtail**, protein content of, as influenced by frequency of cutting (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
- Meadows**, herbage of, botanical and chemical composition of (Armstrong), 1907, 2, 283
 permanent, influence of manures on crop and soil of (Crowther and Ruston), 1915, 7, 197
- Meat production** (Murray), 1919, 9, 174
- Mechanical analysis**, effect of changes in viscosity of water on, at varying temperatures (Robinson), 1915, 7, 142
 Sudan method of (Joseph and Martin), 1921, 11, 293
 use of sodium carbonate in (Joseph and Martin), 1921, 11, 293
see also Soil, mechanical analysis
- Medicago sativa* L., *see* Lucerne
- Mendelism**, review of (Punnett), 1907, 2, 217
- Mercuric chloride**, phenol disappearance in soil treated with (Sen-Gupta), 1921, 11, 148
- Metabolic crate** and harness for pigs, description of (Wood and Woodman), 1924, 14, 498
 for pregnant sows (Evans), 1929, 19, 752
- Metabolism**, basal, of swine, effect of change of temperature on (Capstick and Wood), 1922, 12, 257
 mineral, effect of pregnancy on, in sows (Evans), 1929, 19, 752
 mineral, in cattle (Theiler, Green and Du Toit), 1927, 17, 291
 mineral, studies in (Theiler, Green, Du Toit, Malan and Macaskill), 1927, 17, 291; 1928, 18, 369, 372, 376, 384, 391, 397, 401
 nitrogen, in sheep on high protein diets (Stewart), 1930, 20, 1
 nitrogen, in the dairy cow (Crowther and Woodman), 1922, 12, 40

- Metabolism** of pigs, study on (Deighton), 1929, 19, 140
 of the goat by indirect calorimetry (Magee and Orr), 1924, 14, 506, 516, 525, 600, 619
 of the ruminant by indirect calorimetry (Magee and Orr), 1924, 14, 506, 516, 525, 600, 619
 protein, effect of pregnancy on, in sows (Evans), 1929, 19, 752
- Meteorological observations**, correlation of, with yield in oats (Roberts), 1928, 18, 297
- Microbiologie agricole**, review of (Kayser), 1907, 2, 106
- Micrococcus aurantiacus* Cohn, relationship to *B. amylobacter* (Cunningham and Jenkins), 1927, 17, 109
caudicans Flüge, relationship to *B. amylobacter*, A. M. et Bredemann (Cunningham and Jenkins), 1927, 17, 109
- Micro-flora** of Stilton cheese (Percival and Mason), 1913, 5, 222
- Middlings**, digestibility of a coarse grade of (Woodman), 1925, 15, 19
- Mildew**, American gooseberry, observations on perithecial stage of (Salmon), 1914, 6, 187
 forms of hop resistant to (Salmon), 1917, 8, 455
 hop, fungicides used against (Eyre, Salmon, Wormald, Horton, Goodwin and Martin), 1916, 7, 473; 1919, 9, 283; 1922, 12, 269; 1926, 16, 302; 1929, 19, 405; 1930, 20, 18, 489
 hop, notes on (Salmon), 1907, 2, 327
- Milk**, action of rennet on (Nierenstein and Stubbs), 1912, 4, 371
 action of viscogen (calcium saccharate) on (Pyne), 1929, 19, 463
 alkaline, detection by brom cresol purple test (Procter and Mattick), 1926, 16, 145
 "apparent ropiness" in, due to surface influence (Mattick), 1926, 16, 459
 brom cresol purple test for detection of alkaline (Procter and Mattick), 1926, 16, 145
 calcium content of, effect of heat on (Mattick and Hallett), 1929, 19, 452
 calcium secretion in, bearing of calcium-caseinogen equilibria on (Wright), 1926, 16, 640
 calcium secretion in, mechanism of (Wright), 1928, 18, 478
 chamomile (mayweed) and a taint in (Procter), 1926, 16, 443
 coagulability of, by rennet, effect of heat on (Mattick and Hallett), 1929, 19, 452
 composition of, effect of nutrition on (Hammond and Hawk), 1917, 8, 139
 composition of, effect of phloridzin on (Hammond and Hawk), 1917, 8, 139
- Milk**, composition of, effect of variations in daily volume and nature of diet on (Taylor and Husband), 1922, 12, 111
 composition of, influence of feeding on (Cranfield), 1929, 19, 302
 composition of, variation in (Crowther), 1905, 1, 149; (Cranfield, Griffiths and Ling), 1927, 17, 62, 72
 composition of, variation in, of an abnormal cow (Cranfield and Ling), 1929, 19, 491
 effect of heat on (Mattick and Hallett), 1929, 19, 452
 fat, composition of, influence of palm kernel cake on (Crowther and Woodhouse), 1917, 8, 451
 fat globules in, enumeration and measurement of (Cooper, Nuttall and Freak), 1913, 5, 357
 fat globules in, observations on (Cooper, Nuttall and Freak), 1913, 5, 331
 fat globules of, in relation to churning (Cooper, Nuttall and Freak), 1911, 4, 150
 feeding of, to pigs (Blissett and Golding), 1928, 18, 642
 heat value of, as test of quality (Malcolm and Hall), 1907, 2, 89
 nitrogen content of, effect of heat on (Mattick and Hallett), 1929, 19, 452
 oiliness in (Mattick), 1927, 17, 388
 phosphorus content of, effect of heat on (Mattick and Hallett), 1929, 19, 452
 phosphorus secretion in, mechanism of (Wright), 1928, 18, 478
 quality of, heat value as test of (Malcolm and Hall), 1907, 2, 89
 records, accuracy of occasional tests (Bartlett), 1929, 19, 438
 records, statistical investigation of (Hammond and Sanders), 1923, 13, 74
 records, studies in (Gavin), 1913, 5, 309, 377
 secretion, effect of adrenalin on (Hammond and Hawk), 1917, 8, 147
 secretion, effect of animal extracts and drugs on (Hammond and Hawk), 1917, 8, 147
 secretion, effect of glands of internal secretion on (Hammond and Hawk), 1917, 8, 147
 secretion, effect of nutrition on (Hammond and Hawk), 1917, 8, 139
 secretion, effect of pituitary extract on (Hammond and Hawk), 1917, 8, 147
 secretion, persistency of (Sanders), 1930, 20, 145
 secretion, studies in (Hammond and Hawk), 1917, 8, 139, 147
 secretion, variations in yields at morning and evening milkings (Bartlett), 1929, 19, 36
 sugar, extraction of, from whey (Woodman), 1920, 10, 1

- Milk**, utilisation of, by swine (Woodman), 1925, 15, 22
 variation and yield of, at morning and evening milkings (Bartlett), 1929, 19, 36
 whey, *see* Whey
 yield and composition of, as affected by poppy seed cake (Annett and Sen), 1919, 9, 416
 yield and quality of, factors affecting (Kay, Glen and M'Candlish), 1929, 19, 342; 1930, 20, 45
 yield and quality of, influence of age of cow on (White and Drakeley), 1927, 17, 420; 1928, 18, 496
 yield and quality of, influence of breed on (Drakeley and White), 1927, 17, 118
 yield and quality of, influence of lactation on (Drakeley and White), 1927, 17, 118; 1928, 18, 496
 yield of, effect of age on (Hammond and Sanders), 1923, 13, 74; (Sanders), 1928, 18, 46
 yield of, effect of dry period on (Hammond and Sanders), 1923, 13, 74; (Sanders), 1928, 18, 209
 yield of, effect of season of year on (Sanders), 1927, 17, 339
 yield of, effect of service on (Sanders), 1927, 17, 502
 yield of, effect of service period on (Hammond and Sanders), 1923, 13, 74
 yield of, effect of time of calving on (Roberts), 1926, 16, 416
 yield of, factors affecting (Hammond and Sanders), 1923, 13, 74
 yield of, influence of foetal growth on (Gavin), 1913, 5, 309
 yield of, influence of preceding calving interval on (Matson), 1929, 19, 553
 yield of, seasonal variation in (Hammond and Sanders), 1923, 13, 74
 yield of, variability of (Bartlett), 1929, 19, 438
 yields, standardisation of (Sanders), 1928, 18, 209
 yields, variations in, caused by season of the year, service, age, and dry period, and their elimination (Sanders), 1927, 17, 339, 502; 1928, 18, 46, 209
- Milking** at three eight-hour intervals, effect on fat and solids-not-fat by (Campbell), 1930, 20, 213
- Millet**, bulrush, digestibility and feeding value of, for poultry (Halnan), 1928, 18, 634
- Milling quality** in wheat, relation of certain physical characteristics to (Bailey), 1916, 7, 432
- Mineral(s)** content of pasture grass, effect of, on herbivora (Elliot, Crichton, Godden and Cruickshank), 1926, 16, 59, 65, 78, 89, 98
- Mineral(s)** content of pasture grass, seasonal variations in (Cruickshank), 1926, 16, 89
 deficient pasture, utilisation of, by sheep (Woodman and Evans), 1930, 20, 587
 in foods (Ingle), 1908, 3, 22
 metabolism, *see* Metabolism, mineral phosphates, *see* Phosphates, mineral salts, *see* Salts, mineral
- Mineralisation** of nitrogen, influence of carbon: nitrogen ratios of organic material on (Jensen), 1929, 19, 71
- Mines**, influence of, on land and livestock in Cardiganshire (Griffith), 1919, 9, 366
- Moisture** content of grass as influenced by frequency of cutting (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
 effect of, on nitrification (Prescott and Piper), 1930, 20, 517
 equivalent, effect of exchangeable bases on (Joseph), 1927, 17, 12
 equivalent of clay, relation of silica-alumina ratio to (Joseph), 1927, 17, 12
 equivalent of heavy soils (Joseph and Martin), 1923, 13, 49; 1927, 17, 12
 equivalent of silt fractions (Joseph), 1927, 17, 12
 in flour, determination of (Fisher and Jones), 1928, 18, 649
 in wheat, determination of (Fisher and Jones), 1928, 18, 649
 soil, *see* Soil moisture
 testing in water ovens and electric ovens (Fisher and Jones), 1928, 18, 649
- Molasses**, action on available potash in the soil (Craig and Lincoln), 1929, 19, 397
 -sugar beet pulp, value of, in the nutrition of swine (Woodman, Duckham and French), 1929, 19, 656
- Mycoplasma theory** of origin of epidemics to wheat rust (Butler), 1905, 1, 361
- Net energy**, *see* Energy, net
- Nitrate(s)**, determination of, in plant materials (Pyne), 1927, 17, 153
 fluctuations of, in a South Australian soil (Prescott and Piper), 1930, 20, 517
 in soil, estimation of, by the phenol disulphonic acid method (Gimingham and Carter), 1923, 13, 60
 in soil, increased by drying (Buddin), 1914, 6, 452
 in soils, nature and amount of fluctuations in (Russell), 1914, 6, 18
 lead, manurial properties of (Berry), 1924, 14, 58
 loss of, in soils, influence of plant residues on (Hutchinson), 1918, 9, 92
 of soda, value of (Lipman), 1921, 11, 323
 production of, by non-bacterial processes in soil (Russell and Smith), 1906, 1, 444

- Nitrate(s)**, washing out of, by drainage water from uncropped and unmanured land (Russell and Richards), 1920, 10, 22
- Nitric acid** in rain-water (Miller), 1905, 1, 280; (Feilitzen and Lugner), 1910, 3, 311; (Hudig), 1912, 4, 260
- Nitrification** and carbon: nitrogen ratio (Jensen), 1929, 19, 71
 effect of moisture on (Prescott and Piper), 1930, 20, 517
 effect of temperature on (Prescott and Piper), 1930, 20, 517
 in Egyptian soils (Prescott), 1919, 9, 216
 influence of potsherd on (Sen), 1919, 9, 32
 influence of rainfall on (Sen), 1919, 9, 32
 of nitrogen compounds in rocks (Hall and Miller), 1908, 2, 343
 soil, some observations on (Ashby), 1907, 2, 52
- Nitrites**, production of, by non-bacterial processes in soil (Russell and Smith), 1906, 1, 444
- Nitrogen**, ammoniacal, determination of, in soils (McLean and Robinson), 1924, 14, 548
 ammoniacal, of peats and humus soils (Ellis and Morison), 1916, 8, 1; 1928, 18, 346
 atmospheric, assimilation of, by *Azotobacter chroococcum* of Beijerinck (Ashby), 1907, 2, 35
 compounds, nitrification of, in rocks (Hall and Miller), 1908, 2, 343
 compounds of fundamental rocks (Hall and Miller), 1908, 2, 343
 compounds, organic, availability of, in pot experiments (Crowther), 1925, 15, 300
 content of milk, effect of heat on (Mattick and Hallett), 1929, 19, 452
 distribution of, in the potato tuber (Glynné and Jackson), 1919, 9, 237
 effect of, on clovers (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
 effect of, on yield and composition of grass (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
 effect of water-logging on, in soils (Subrahmanyam), 1927, 17, 429
 fixation, assimilation of nitrogen by root nodules (Golding), 1905, 1, 59
 fixation, *Azotobacter* (Ashby), 1907, 2, 35
 fixation, *B. radiculicola*, morphology of (Gibson), 1928, 18, 76
 fixation, *B. radiculicola*, observations on (Gibson), 1928, 18, 76
 fixation, *B. radiculicola*, reproductive processes in (Gibson), 1928, 18, 76
 fixation by soil micro-organisms (Krishna), 1928, 18, 432
- Nitrogen**, fixation in faeces (Richards), 1917, 8, 299
 fixation in legumes, influence of number of nodule bacteria applied to seed on (Thornton), 1929, 19, 373
 fixation, influence of plant residues on (Hutchinson), 1918, 9, 92
 fixation, *P. radiculicola* (Bewley and Hutchinson), 1920, 10, 144
 fixation, removal of growth products from root nodules (Golding), 1905, 1, 59
 free, action of platinum black on (Løw), 1910, 3, 320
 in heavy clay soils, determination of (Bal), 1925, 15, 454
 in plant tissue extracts, estimation of (Gallagher), 1923, 13, 63
 in prairie soils (Shutt), 1925, 15, 162
 in rain-water (Hudig), 1912, 4, 260
 in wheat, distribution of (Greaves and Stewart), 1912, 4, 376
 in wheat grain (Brenchley and Hall), 1909, 3, 195
 inorganic, assimilation of, by higher plants (Hutchinson and Miller), 1912, 4, 282
 metabolism, *see* Metabolism, nitrogen
 mineralisation of, influence of carbon: nitrogen ratios on (Jensen), 1929, 19, 71
 nitric, in plant tissue extracts, estimation of (Gallagher), 1923, 13, 63
 organic, assimilation of, by higher plants (Hutchinson and Miller), 1912, 4, 282
 relation of, to organic matter in prairie soils (Shutt), 1925, 15, 162
- Nitrogenous fertilisers**, *see* Fertilisers, nitrogenous
 manures, *see* Manures, nitrogenous
 top-dressing, *see* Top-dressing, nitrogenous
- Nodule** formation in legumes, influence of number of nodule bacteria applied to seed on (Thornton), 1929, 19, 373
 organisms, *B. radiculicola*, morphology of (Gibson), 1928, 18, 76
 organisms, *B. radiculicola*, observations on (Gibson), 1928, 18, 76
 organisms, *B. radiculicola*, reproductive processes in (Gibson), 1928, 18, 76
 organisms, influence of number of, applied to seed upon nodule formation in legumes (Thornton), 1929, 19, 373
 organisms, *P. radiculicola*, changes occurring in, under cultural conditions (Bewley and Hutchinson), 1920, 10, 144
- Nutrition**, effect of, on milk composition (Hammond and Hawk), 1917, 8, 139
 effect of, on milk secretion (Hammond and Hawk), 1917, 8, 139

- Oat(s)** and tare hay, digestibility and metabolisable energy of (Woodman), 1922, 12, 144
 and tare silage, comparative determinations of the digestibility and metabolisable energy of (Woodman), 1922, 12, 144
 and tare silage, digestibility of (Wood and Woodman), 1921, 11, 304
 correlation of yield in, with meteorological observations (Roberts), 1928, 18, 297
 digestibility of certain varieties of, by poultry (Halnan), 1928, 18, 634
 ensilage of, changes occurring during (Amos and Woodman), 1922, 12, 337
 fibre in Sussex ground, digestibility of, by poultry (Halnan), 1926, 16, 451
 grain, composition and properties of (Berry), 1920, 10, 359
 green, and tares, digestibility and metabolisable energy of (Woodman), 1922, 12, 144
 straw, composition and properties of (Berry), 1920, 10, 359
 straw, sugars and albuminoids of (Collins and Thomas), 1922, 12, 280
- Offals**, wheat, *see* Wheat offals
- Oil(s)**, arachis, *see* Arachis oil cakes, keeping quality of (Godden), 1917, 8, 419
 coconut, *see* Coconut oil
 cod liver, *see* Cod liver oil
 feeding of, to farm animals (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1923, 13, 144, 153; 1924, 14, 531
 influence of, on nutritive value of butter fat (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1923, 13, 144, 153; 1924, 14, 531
 linseed, variations in content of (Eyre and Fisher), 1915, 7, 120
- Oiliness** in milk (Mattick), 1927, 17, 388
- Onion couch**, note on (Underwood), 1912, 4, 270
- Organic acids**, formation of, in water-logged soils (Subrahmanyam), 1929, 19, 627
 carbon in soils, determination of (Robinson, McLean and Williams), 1929, 19, 315
 compounds, toxicity of, to insects, relation of chemical constitution of (Tattersfield), 1927, 17, 181
 compounds, toxicity of, to wireworms, influence of chemical constitution of (Tattersfield and Roberts), 1920, 10, 199
 matter, soil, *see* Soil, organic matter
- Ovariectomy** in sows, with observations on the mammary glands and internal genital organs (Mackenzie, Marshall and Hammond), 1912, 4, 410; 1913, 5, 418; 1914, 6, 182; 1915, 7, 243
- Oven drying** of soil, changes produced by (Coutts), 1930, 20, 541
- Oxalic acid**, solubility of basic slags and mineral phosphates in (Vanstone), 1925, 15, 491
- Oxen**, fattening capacity in (Wood and Hill), 1914, 6, 252
 maintenance ration of, and the starch equivalent theory (Halnan), 1915, 7, 163
 skin temperature and fattening capacity in (Wood and Hill), 1914, 6, 252
- Oxidation** in soil, relation to productivity (Darbyshire and Russell), 1907, 2, 305
 in soils, and its connexion with fertility (Russell), 1905, 1, 261
- Oxygen**, dissolved, determination of, improved method for (Subrahmanyam), 1927, 17, 468
 dissolved, in rain-water (Richards), 1917, 8, 331
- Palm kernel cake**, digestibility of (Crowther and Woodman), 1917, 8, 429
 cake, influence of, on composition of milk-fat (Crowther and Woodhouse), 1917, 8, 451
 cake, keeping qualities of (Godden), 1917, 8, 419
 cake, rancidity in, cause and prevention of (Calder), 1916, 7, 470
 cake, rancidity of, and other feeding cakes (Furlong), 1919, 9, 137
 meal, digestibility of (Crowther and Woodman), 1917, 8, 429
- Para rubber** seed cake, digestibility experiments with sheep (Auld), 1913, 5, 429
- Parasitic diseases** in plants, method of checking (Potter), 1908, 3, 102
 gastritis in sheep and lambs, experiments on the treatment of (Wood), 1930, 20, 186
- Parasitism**, specialisation of, in *Sphaerotheca Humili* (Salmon), 1907, 2, 327
- Parasitology**, a review, 1908, 3, 108
- Partial sterilisation** of soils, *see* Soil, partial sterilisation
- Pasture(s)**, botanical composition of, seasonal variations in, on heavy clay soil (Woodman, Blunt and Stewart), 1927, 17, 209
 botanical composition of, seasonal variations in, on light sandy soil (Woodman, Blunt and Stewart), 1926, 16, 205
 chemical composition of, intensively treated (Greenhill), 1930, 20, 573
 chemical composition of, seasonal variations in, on heavy clay soil (Woodman, Blunt and Stewart), 1927, 17, 209
 chemical composition of, seasonal variations in, on light sandy soil (Woodman, Blunt and Stewart), 1926, 16, 205

- Pasture(s)**, drought resistance (Stapledon); 1913, 5, 129
 fattening and non-fattening properties of Romney Marsh (Ware), 1925, 15, 47
 grass, analyses of Romney Marsh (Hall and Russell), 1912, 4, 339
 grass, chemical analysis of (Godden), 1926, 16, 78
 grass, conservation and digestibility of (Woodman, Bee and Griffith), 1930, 20, 53
 grass, mineral content of, effect of fertilisers on (Godden), 1926, 16, 98
 grass, mineral content of, effect on herbivora (Elliot, Crichton, Godden and Cruickshank), 1926, 16, 59, 65, 78, 89, 98
 grass, mineral content of, seasonal variations in (Cruickshank), 1926, 16, 89
 herbage, artificial drying of, influence on digestibility of (Woodman, Bee and Griffith), 1930, 20, 53
 herbage, botanical and chemical composition of (Armstrong), 1907, 2, 283
 herbage, composition and nutritive value of, influence of intensity of grazing on (Woodman, Norman and Bee), 1928, 18, 266; 1929, 19, 236
 herbage, digestibility of, influence of artificial drying on (Woodman, Bee and Griffith), 1930, 20, 53
 herbage, intensive grazing of, influence on composition and nutritive value of (Woodman, Norman and Bee), 1928, 18, 266; 1929, 19, 236
 improvement of poor (Middleton), 1905, 1, 122
 indigenous plants in relation to habitat and sown species in (Stapledon and Jenkin), 1916, 8, 26
 manurial treatment of poor, soil analysis as a guide to (Wood and Berry), 1905, 1, 114
 mineral deficient, utilisation of, by sheep (Woodman and Evans), 1930, 20, 587
 nutritive value of (Woodman, Bee, Blunt, Stewart, Norman, Griffith and Evans), 1926, 16, 205; 1927, 17, 209; 1928, 18, 266; 1929, 19, 236; 1930, 20, 53, 587
 nutritive value of Romney Marsh (Hall and Russell), 1912, 4, 339
 nutritive value of, seasonal variations in, on heavy clay soil (Woodman, Blunt and Stewart), 1927, 17, 209
 nutritive value of, seasonal variations in, on light sandy soil (Woodman, Blunt and Stewart), 1926, 16, 205
 of Romney Marsh (Hall and Russell), 1912, 4, 339
 phosphorus deficient, breeding of cattle on (Theiler, Green and Du Toit), 1928, 18, 369
- Pasture(s)**, phosphorus deficient, composition of bovine blood on (Malan, Green and Du Toit), 1928, 18, 376
 poor, soil analysis as a guide to manurial treatment of (Wood and Berry), 1905, 1, 114
 problems (Stapledon), 1913, 5, 129; 1914, 6, 499; 1916, 8, 26
 productivity of, seasonal variations in, on heavy clay soil (Woodman, Blunt and Stewart), 1927, 17, 209
 productivity of, seasonal variations in, on light sandy soil (Woodman, Blunt and Stewart), 1926, 16, 205
 response under manures of individual species in (Stapledon), 1914, 6, 499
 seasonal variations in the productivity, botanical and chemical analysis, and nutritive value of, on heavy clay soil (Woodman, Blunt and Stewart), 1927, 17, 209
 seasonal variations in the productivity, botanical and chemical composition, and nutritive value of, on light sandy soil (Woodman, Blunt and Stewart), 1926, 16, 205
- Pea(s)**, bacterial disease of, caused by *Pseudomonas seminum* (Cayley), 1917, 8, 461
 growth of, in soil solutions (Hall and Brenchley), 1914, 6, 278
 pigeon, vitamin A and B content of (Miller), 1928, 18, 569
- Peat(s)**, acid, humus of (Hanley), 1914, 6, 63
 alkaline, humus of (Hanley), 1914, 6, 63
 ammoniacal nitrogen of (Ellis and Morison), 1916, 8, 1; 1928, 18, 346
 moss, digestibility of, after treatment with acid (Godden), 1920, 10, 457
 soils, proteins of (Davies), 1928, 18, 682
 urea in, decomposition of (Gibson), 1930, 20, 549
- Pectin** in sugar beet pulp (Codling and Woodman), 1929, 19, 701
- Pentoses**, cupric reducing power of xylose and arabinose (Daish), 1914, 6, 255
 estimation of, influence of other sugars on (Davis and Sawyer), 1914, 6, 406
 in plant extracts, presence and estimation of (Davis and Sawyer), 1914, 6, 406
- Perries**, rate of fermentation of (Barker), 1908, 3, 1
- Pheasants** and agriculture (Evershed and Warburton), 1918, 9, 63
- Phenol**, disappearance of, effect of steaming on (Sen-Gupta), 1921, 11, 149
 disappearance of, effect of toluene on (Sen-Gupta), 1921, 11, 145
 disappearance of, in different soils, rates of (Sen-Gupta), 1921, 11, 140
 disappearance of, in soil treated with mercuric chloride (Sen-Gupta), 1921, 11, 148

- Phenol**, losses of, due to manganese dioxide (Sen-Gupta), 1925, **15**, 507
 losses of, due to varying concentrations of acids (Sen-Gupta), 1925, **15**, 501
 losses of, in acid treated and untreated soil, correlation between (Sen-Gupta), 1925, **15**, 513
 losses of, in different soils (Sen-Gupta), 1925, **15**, 499
- Phloridzin**, effect of, on milk secretion (Hammond and Hawk), 1917, **8**, 139
- Phosphate(s)**, aluminium, citric solubility of (Vanstone), 1925, **15**, 36
 assimilation of, by beans (Vanstone), 1925, **15**, 44
 available, in soils (Vanstone), 1925, **15**, 460
 available, rapid determination of, in soil (Atkins), 1924, **14**, 192
 calcium, citric solubility of (Ramsay), 1917, **8**, 277; (Vanstone), 1925, **15**, 36
 calcium, solubility of, in citric acid (Ramsay), 1917, **8**, 277
 concentration of, in soil solution (Greenhill), 1930, **20**, 559
 effect of, on plant growth (Greenhill), 1930, **20**, 559
 estimation of, in soil extracts (Prescott), 1914, **6**, 111
 in mineral phosphates, nature of (Robertson), 1916, **8**, 16
 iron, citric solubility of (Vanstone), 1925, **15**, 36
 leaching of, from North Welsh soils (Robinson and Jones), 1927, **17**, 94
 mineral, and basic slags (Vanstone), 1925, **15**, 36
 mineral, and basic slags, new method of evaluating (Vanstone), 1925, **15**, 491
 mineral, citric solubility of (Tocher), 1922, **12**, 125; (Vanstone), 1925, **15**, 40
 mineral, nature of phosphates in (Robertson), 1916, **8**, 16
 mineral, solubility of, in oxalic acid (Vanstone), 1925, **15**, 491
 nutrition of plants (Baguley), 1912, **4**, 318
 soluble, in basic slag, composition of (Morison), 1909, **3**, 161
- Phosphatic fertilisers**, *see* Fertilisers, phosphatic
- Phosphoric acid**, citrate solubility of, in fertilisers (Dixon), 1906, **1**, 430
 in extracts of soil, colorimetric determination of (Warren and Pugh), 1930, **20**, 532
 in wheat grain (Brenchley and Hall), 1909, **3**, 195
 loss of, during fusion with ammonium fluoride (Davis and Prescott), 1916, **8**, 136
- Phosphorus**, availability of, effect of silicate on (Fisher), 1929, **19**, 132
- Phosphorus**, compounds in blood, determination of, by dry combustion (Green), 1928, **18**, 372
 compounds of soil and dilute acids, reaction between (Russell and Prescott), 1916, **8**, 65
 content of milk, effect of heat on (Mattick and Hallett), 1929, **19**, 452
 deficiency in pasture (Theiler, Green and Du Toit), 1928, **18**, 369
 deficiency in pasture, composition of bovine blood on (Malan, Green and Du Toit), 1928, **18**, 376
 fraction, unknown, of calf blood (Malan and Green), 1928, **18**, 391
 partition of blood in anaemia of cattle and sheep (Malan), 1928, **18**, 401
 partition of blood of calf foetus, sheep foetus and lambs, comparison of, with maternal blood (Malan), 1928, **18**, 397
 secretion of, in milk, mechanism of (Wright), 1926, **16**, 478
- Phytophthora infestans*, zoospores of, action of certain chemical substances on (Goodwin, Salmon and Ware), 1929, **19**, 185
 zoospores of, action of saponin on (Goodwin, Salmon and Ware), 1929, **19**, 185
 zoospores of, action of soap on (Goodwin, Salmon and Ware), 1929, **19**, 185
- Pig(s)**, appetite in, influence of calcium carbonate on (Evans), 1929, **19**, 799
 basal metabolism of, effect of change of temperature on (Capstick and Wood), 1922, **12**, 257
 calcium carbonate, influence of, on digestibility in (Evans), 1929, **19**, 799
 calcium-deficiency and composition of skeleton in (Evans), 1930, **20**, 117
 calcium-deficiency, effect of, on pregnant (Evans), 1929, **19**, 752
 carcass weights of (Hammond), 1922, **12**, 387
 corpora lutea in, number of (Hammond), 1914, **6**, 263; 1921, **11**, 337
 digestion trials with (Woodman and Wood), 1924, **14**, 498; 1925, **15**, **1**, 19, 22
 energy exchanges in the growing (Wood), 1926, **16**, 425
 errors in feeding experiments with (Crowther), 1915, **7**, 137; (Berry and O'Brien), 1921, **11**, 275
 feeding of whole cows' milk to (Blissett and Golding), 1928, **18**, 642
 feeding trials, probable error in (Robinson and Halnan), 1912, **5**, 48
 fertility of (Hammond), 1914, **6**, 263; 1921, **11**, 337
 foetal atrophy in (Hammond), 1914, **6**, 263; 1921, **11**, 337
 foetal sex-ratio in (Parkes), 1925, **15**, 284
 foetal weight in (Parkes), 1925, **15**, 284

- Pig(s)**, growth and development of (Hammond), 1922, 12, 387
 lactation in, effect of calcium deficiency on (Davidson), 1930, 20, 233
 mammary glands and internal genital organs in, observations on (Mackenzie, Marshall and Hammond), 1912, 4, 410; 1913, 5, 418; 1914, 6, 182; 1915, 7, 243
 metabolic crate and harness, description of (Wood and Woodman), 1924, 14, 498
 metabolic crate for work with pregnant (Evans), 1929, 19, 752
 metabolism of (Deighton), 1929, 19, 140
 mineral requirements of, during pregnancy (Evans), 1929, 19, 752
 nutrition of, value of dried sugar-beet pulp and molasses-sugar-beet pulp in (Woodman, Duckham and French), 1929, 19, 656
 nutrition of, value of whole sugar beet in (Woodman, Duckham and French), 1929, 19, 669
 organs in, proportions of (Hammond), 1922, 12, 387
 ovariectomy in, with observations on the mammary glands and internal genital organs (Mackenzie, Marshall and Hammond), 1912, 4, 410; 1913, 5, 418; 1914, 6, 182; 1915, 7, 243
 protein requirements of, during pregnancy (Evans), 1929, 19, 752
 reproductive disturbances in, caused by deficient nutrition (Davidson), 1930, 20, 233
 rickets in, calcium-phosphate ratio in bones during (Evans), 1930, 20, 117
 skeleton of, calcium-deficiency and composition of (Evans), 1930, 20, 117
 thermic energy of (Deighton), 1929, 19, 140
 utilisation of milk by (Woodman), 1925, 15, 22
 vitamin A and C requirements of (Orr and Crichton), 1924, 14, 114
- Pigeon pea**, vitamin A and B content of (Miller), 1928, 18, 569
- Pigment** of silage, nature of (Woodman), 1923, 13, 240
- "**Pining**," herbage causing (Godden and Grimmett), 1928, 18, 363
- Pisum sativum*, see Peas
- Pituitary extract**, effect of, on milk secretion (Hammond and Hawk), 1917, 8, 147
- Plant(s)**, analysis of soil by means of the (Hall), 1905, 1, 65
 ash, estimation of potassium in (Davis), 1912, 5, 52
 assimilation of ammonium salts by (Hutchinson and Miller), 1909, 3, 179
 assimilation of inorganic and organic nitrogen by higher (Hutchinson and Miller), 1912, 4, 282
- Plant(s)**, bacterial diseases of (Potter), 1912, 4, 323
 carbohydrates in, formation and translocation of (Davis, Daish and Sawyer), 1916, 7, 255, 327, 352
 cultivated, use of water by, in the field (Tulaikov), 1929, 19, 1
 extracts, carbohydrates in, estimation of (Davis and Daish), 1913, 5, 437
 extracts, pentoses in, presence and estimation of (Davis and Sawyer), 1914, 6, 406
 food content of prairie soils (Shutt), 1925, 15, 162
 food, effect of partial sterilisation of soil on production of (Russell and Hutchinson), 1909, 3, 111; 1913, 5, 152
 food, mineral, availability of (Comber), 1922, 12, 363
 growth, effect of atmospheric impurities on (Crowther, Ruston and Steuart), 1911, 4, 25; 1913, 5, 391; 1914, 6, 387, 395
 growth, effect of bastard trenching on (Pickering and Russell), 1913, 5, 483
 growth, effect of concentration of soil solution on (Hall, Brenchley and Underwood), 1914, 6, 278
 growth, effect of electro-culture on (Blackman), 1924, 14, 240; 1924, 14, 268
 growth, effect of gas lime on (Bhatt), 1910, 3, 317
 growth, effect of one crop upon another (Bedford and Pickering), 1914, 6, 136
 growth, effect of phosphate on (Greenhill), 1930, 20, 559
 growth, effect of time of sowing on (Greenhill), 1930, 20, 559
 growth in heated soils (Pickering), 1910, 3, 277
 growth in partially sterilised soils (Russell and Petherbridge), 1913, 5, 248
 growth, studies on (Pickering), 1908, 2, 411
 growth, toxicity of aluminium to (Hardy), 1926, 16, 616
 indigenous, in relation to habitat and sown species in pastures (Stapledon and Jenkin), 1916, 8, 26
 iodine content of, effect of iodine manuring on (Orr, Kelly and Stuart), 1928, 18, 159
 iodine manuring of, effect on iodine content of (Orr, Kelly and Stuart), 1928, 18, 159
 iron content of, factors affecting (Godden and Grimmett), 1928, 18, 363
 manganese content of, factors affecting (Godden and Grimmett), 1928, 18, 363
 materials, nitrates in, determination of (Pyne), 1927, 17, 153
 nutrition, phosphate in (Baguley), 1912, 4, 318

- Plant(s)**, parasitic diseases in, method of checking (Potter), 1908, 3, 102
 residues, influence on nitrogen fixation and losses of nitrate in soil (Hutchinson), 1918, 9, 92
 starch in, estimation of, by taka-diastase (Davis and Daish), 1914, 6, 152
 sugars in, formation and translocation of (Davis, Daish and Sawyer), 1916, 7, 255
 susceptibility to disease in, factors affecting (Spinks), 1913, 5, 231
 tissue extracts, estimation of nitric nitrogen and total nitrogen in (Galagher), 1923, 13, 63
 toxic excreta of (Fletcher), 1912, 4, 245
- Platinum black**, action of, on free nitrogen (Lœw), 1910, 3, 320
- Plough**, draft of, investigation on the (Davies), 1924, 14, 370
 draught of, and condition of soil (Eden and Maskell), 1928, 18, 163
 draught of, electric method for the reduction of (Crowther and Haines), 1924, 14, 221
 draught of, measurements on the Rothamsted classical plots (Haines and Keen), 1925, 15, 395
 draught of, test of soil uniformity by (Haines and Keen), 1925, 15, 387
- Pollination**, influence on development of the hop (Howard), 1905, 1, 49
 of white clover (Ware), 1925, 15, 47
- Polysulphide(s)**, fungicidal properties of (Eyre, Salmon, Horton, Goodwin and Wormald), 1916, 7, 473; 1919, 9, 283; 1922, 12, 269; 1926, 16, 302; 1930, 20, 489
 spray materials, sampling of (Goodwin and Martin), 1925, 15, 96
 sulphur, estimation of, in spray materials (Goodwin and Martin), 1925, 15, 96
- Poppy seed cake**, as a food for cattle (Annett and Sen), 1919, 9, 416
 effect of, on yield of milk and composition of butter fat (Annett and Sen), 1919, 9, 416
- Pot-culture experiments**, effect of electric discharge on (Blackman and Legg), 1924, 14, 268
 experiments, availability of organic nitrogen compounds in (Crowther), 1925, 15, 300
- Potash**, availability of, in soil (Craig and Lincoln), 1929, 19, 397
 determination of, in soils (Dodd), 1924, 14, 139
 in soil, action of molasses on available (Craig and Lincoln), 1929, 19, 397
 solubility, repression by lime and magnesia (MacIntire, Shaw and Young), 1930, 20, 499
- Potassic manures**, *see* Manures, potassic
- Potassium**, availability of, in Scottish soils (Stewart), 1929, 19, 524
 estimation of, in fertilisers, soil extracts and plant ashes (Davis), 1912, 5, 52
 estimation of, in soil-extracts by the cobaltinitrite (volumetric) method (Milne), 1929, 19, 541
 estimation of, in soils, fertilisers, etc., perchlorate method for (Page), 1924, 14, 133
 exchangeable, determination of, in soils (Williams), 1929, 19, 589
 salts, effect of, on anatomy of *Dactylis glomerata* (Purvis), 1919, 9, 338
- Potato(es)**, analysis of variance of (Fisher and Mackenzie), 1923, 13, 311
 application of resistance formula to data on (Kalamkar), 1930, 20, 440
 "blackleg" of (Paine), 1917, 8, 480
 carbohydrates of leaf and leaf stalks of the (Davis and Sawyer), 1916, 7, 352
 cut sets of, value of (Salaman), 1923, 13, 361
 internal disease in, symptoms of (Horne), 1910, 3, 322
 leaf-roll disease in, control of, by diagnosis of "primarily infected" tubers (McLean), 1926, 16, 149
 leaf-roll disease in, effect of, on composition of the tuber and "mother tuber" (McLean), 1926, 16, 318
Phytophthora infestans, *see* *Phytophthora infestans*
 plots, influence of size and shape of, on accuracy of yield determination (Salaman), 1923, 13, 361
 plots, replication of, in yield trials (Salaman), 1923, 13, 361
 premature sprouting in, and its application to the study of virus diseases (Salaman), 1927, 17, 524
 quality and composition of, factors affecting (Ashby), 1905, 1, 347
 response of, to manures (Fisher and Mackenzie), 1923, 13, 311
 response of, to potash and nitrogen (Eden and Fisher), 1929, 19, 201
 sampling for yield with (Wishart and Clapham), 1929, 19, 600
 secondary growth in potato tuber: not inherited (Salaman), 1922, 12, 182
 secondary growth of potato tuber: value as seed (Salaman), 1922, 12, 182
 seed, influence of size and character of, on yield (Salaman), 1922, 12, 182; 1923, 13, 361
 seed tuber, relation of, to ware size and weight in (Salaman), 1922, 12, 182; 1923, 13, 361
 sprain (streak-disease) in, symptoms of (Horne), 1910, 3, 322
 starch in leaves and leaf stalks of, mechanism of degradation of (Davis and Sawyer), 1916, 7, 352

- Potato(es)**, sugars in leaves and leaf stalks of (Davis and Sawyer), 1916, 7, 352
 susceptibility to disease in, relationship of manuring to (Miles and Thomas), 1925, 15, 89
 tuber and "mother tuber," effect of leaf-roll disease on composition of (McLean), 1926, 16, 318
 tuber, distribution of dry matter and nitrogen in (Glynne and Jackson), 1919, 9, 237
 tuber, secondary growth in: not inherited (Salaman), 1922, 12, 182
 tuber, secondary growth of: value as seed (Salaman), 1922, 12, 182
 tuber-seed size, relation to yield of (Salaman), 1922, 12, 182; 1923, 13, 361
 tubers, "primarily infected," control of leaf-roll disease by diagnosis of (McLean), 1926, 16, 149
 ware-size and weight in, relation of, to seed tuber (Salaman), 1922, 12, 182; 1923, 13, 361
 wart disease infection tests (Bryan), 1928, 18, 507
 wart disease, sulphur as a soil fungicide against (Roach), 1930, 20, 74
 yield determination, influence of size and shape of plot on accuracy of (Salaman), 1923, 13, 361
 yield of, effect of artificial fertilisers on (Wishart and Clapham), 1929, 19, 600
 yield of, influence of size and character of seed on (Salaman), 1922, 12, 182; 1923, 13, 361
 yield trials, replication of plots in (Salaman), 1923, 13, 361
 yield trials, size of plot in (Salaman), 1923, 13, 361
 yields, estimation of, determination of best method for (Salaman), 1923, 13, 361
- Potsheds**, influence of, on nitrification in the Indian alluvium (Sen), 1918, 9, 32
- Poultry**, cockerel, maintenance requirement of fattening (Southgate), 1930, 20, 206
 digestibility of bulrush millet by (Halnan), 1928, 18, 634
 digestibility of fibre in Sussex ground oats by (Halnan), 1926, 16, 451
 digestibility of maize by (Halnan), 1928, 18, 421
 digestibility of oats by (Halnan), 1928, 18, 634
 digestibility of "weak" and "strong" wheats by (Halnan), 1926, 16, 451; 1928, 18, 421
 digestibility trials with (Halnan), 1926, 16, 451; 1928, 18, 421, 634, 766
 excreta, uric acid in, method for estimation of (Woodman), 1924, 14, 413
- Poultry**, surface area of, method of determination of (Halnan and Southgate), 1930, 20, 210
- Pregnancy**, effect of, on live weight of dairy cows (Bartlett), 1926, 16, 392
 effect of, on protein and mineral metabolism in sows (Evans), 1929, 19, 752
 influence of, on digestibility (Evans), 1929, 19, 799
 influence of, on energy exchange of the goat (Magee), 1924, 14, 516
- Probable error** in pig feeding trials (Robinson and Halnan), 1912, 5, 48
 of sampling in soil surveys (Robinson and Lloyd), 1915, 7, 144
see also Experimental error
- Protein** content of American wheat, relation of, to variety types (Roberts), 1920, 10, 121
 content of grass as influenced by frequency of cutting (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
 content of grass per acre (Shutt, Hamilton and Selwyn), 1928, 18, 411; 1930, 20, 126
 deficiency, effect of, on breeding pigs (Davidson), 1930, 20, 233
 diets, high, nitrogen metabolism of sheep on (Stewart), 1930, 20, 1
 digestion coefficients, method of correcting, critical note on (Woodman), 1924, 14, 428
 hydrolysis, studies in (Foreman), 1912, 4, 430
 in irrigated wheat (Jones, Colver and Fishburn), 1920, 10, 290
 metabolism, *see* Metabolism, protein of *Brassica* (Davies), 1927, 17, 33
 of forage plants (Davies), 1926, 16, 280, 293; 1927, 17, 33, 41
 of *Leguminosae* (Davies), 1926, 16, 280
 of linseed, hydrolysis of (Foreman), 1910, 3, 358
 of mangold root (Davies), 1926, 16, 293
 of mangold seed (Davies), 1926, 16, 293
 of peat soils (Davies), 1928, 18, 682
 of *Umbelliferae* (Davies), 1927, 17, 41
 soluble, of swede turnips, hydrolysis of (Williams), 1917, 8, 182
- Protozoa**, soil, *see* Soil protozoa
Pseudomonas radiculicola, changes occurring in, under cultural conditions (Bewley and Hutchinson), 1920, 10, 144
see also *B. radiculicola*
seminum, bacterial disease of *Pisum sativum* caused by (Cayley), 1917, 8, 461
Pseudoperonospora Humuli, zoospores of, action of certain chemical substances on (Goodwin, Salmon and Ware), 1929, 19, 185

- Pseudoperonospora Humuli*, zoospores of, action of saponin on (Goodwin, Salmon and Ware), 1929, 19, 185
zoospores of, action of soap on (Goodwin, Salmon and Ware), 1929, 19, 185
- Puccinia glumarum*, see Rust
- Pyrethrin I and II**, estimation of, in *Pyrethrum* (*Chrysanthemum cinerariaefolium*) (Tattersfield, Hobson and Gimingham), 1929, 19, 266, 433
insecticidal value and estimation in *Pyrethrum* (*Chrysanthemum cinerariaefolium*) (Tattersfield, Hobson and Gimingham), 1929, 19, 266
- Pyrethrums**, pyrethrin I and II in, estimation of (Tattersfield, Hobson and Gimingham), 1929, 19, 266, 433
pyrethrin I and II in, insecticidal value and estimation of (Tattersfield, Hobson and Gimingham), 1929, 19, 266
- Quinhydrone electrode**, measurement of H-ion concentration in some dairy products by (Lester), 1924, 14, 634
measurement of H-ion concentrations in soil by (Builmann), 1924, 14, 232
- Rabbit(s)**, corpora lutea in, number of (Hammond), 1914, 6, 263; 1921, 11, 337
spermatozoa, survival of motility in (Wolf), 1921, 11, 310
- Rain**, amount and composition of, at Rothamsted (Russell and Richards), 1919, 9, 309
effect of, on electrode standard values (Deighton), 1923, 13, 440
-water, ammonia and nitric acid in (Feilitzen and Lugner), 1910, 3, 311
-water, ammonia in (Hudig), 1912, 4, 260
-water, ammonia, nitric acid and chlorine in (Miller), 1905, 1, 280
-water, dissolved oxygen in (Richards), 1917, 8, 331
-water, nitric acid in (Miller), 1905, 1, 280; (Feilitzen and Lugner), 1910, 3, 311; (Hudig), 1912, 4, 260
-water, nitrogen in (Hudig), 1912, 4, 260
- Rainfall**, autumn, relation of, to wheat yield (Shaw), 1907, 2, 17
influence of, on nitrification (Sen), 1918, 9, 32
influence of, on yield of barley (Wishart and Mackenzie), 1930, 20, 417
- Rancidity** in palm nut kernel cake, cause and prevention of (Calder), 1916, 7, 470
of coconut cake (Furlong), 1919, 9, 137
of cottonseed cake (Furlong), 1919, 9, 137
of ground-nut cake (Furlong), 1919, 9, 137
of linseed cake (Furlong), 1919, 9, 137
of palm kernel and other feeding cakes (Furlong), 1919, 9, 137
- Rapeseed**, colzalin, a globulin from (Davies), 1927, 17, 33
- Ration**, influence of size of, on digestibility (Halnan), 1928, 18, 766
maintenance, see Maintenance ration
- Rationing** of animals, scientific basis of (Wood and Capstick), 1928, 18, 486
- Rats**, growth of, effect of cod liver oil, arachis oil, and coconut oil on (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1924, 14, 539
- Red clover**, see Clover
- Rennet**, action of, on milk (Nierenstein), 1912, 4, 371
coagulability of milk by, effect of heat on (Mattick and Hallett), 1929, 19, 452
- Reproduction**, physiology of, review of (Marshall), 1911, 4, 105
- Reproductive disturbances** in pigs, caused by deficient nutrition (Davidson), 1930, 20, 233
- Resistance**, drought: pasture problems (Stapledon), 1913, 5, 129
electrical, of soil (Deighton), 1922, 12, 207
formula, application of, to potato data (Kalamkar), 1930, 20, 440
formula, applied to observed yields (Balmukand), 1928, 18, 602
frost, in wheat, colloidal properties of winter plants in relation to (Newton), 1924, 14, 178
frost, in wheat, comparative study of winter varieties (Newton), 1922, 12, 1
frost, in wheat, seasonal changes in composition of winter plants in relation to (Newton), 1926, 16, 522
mildew, by forms of the hop (Salmon), 1917, 8, 455
rust, breeding of wheat for (Evans), 1911, 4, 95
rust, in wheat, note on (Howard and Howard), 1907, 2, 278
rust, in wheat, notes on infection and histology of (Marryat), 1907, 2, 129
yellow rust, in wheat, Mendelian inheritance of (Biffen), 1907, 2, 109; 1912, 4, 421; (Armstrong), 1922, 12, 57
- Ribes grossularia*, *Eriophyes ribis* on (Taylor), 1914, 6, 129
nigrum, *Eriophyes ribis* on (Taylor), 1914, 6, 121
- Rickets** in pigs, calcium-phosphate ratio in bones during (Evans), 1930, 20, 117
- Rocks**, nitrification of nitrogen compounds of (Hall and Miller), 1908, 2, 343
nitrogen compounds of (Hall and Miller), 1908, 2, 343
- Romney Marsh**, fattening and non-fattening properties of pastures of (Ware), 1925, 15, 47
fattening pastures of (Hall and Russell), 1912, 4, 339

- Romney Marsh**, pastures of, analyses of (Hall and Russell), 1912, 4, 339
 pastures of, nutritive value of (Hall and Russell), 1912, 4, 339
 soils of, composition of (Hall and Russell), 1912, 4, 339
- Root nodules**, assimilation of nitrogen by (Golding), 1905, 1, 59
 removal of growth products (Golding), 1905, 1, 59
- "Ropiness"** in milk due to surface influence (Mattick), 1926, 16, 459
- Rotary cultivation** of soil (Keen *et al.*), 1930, 20, 364
- Rotations**, crop, maintenance of soil fertility by (Shutt), 1925, 15, 168
- Rothamsted experiments**, book of the, review of (Hall), 1906, 1, 481
- Ruminant(s)**, application of indirect calorimetry to (Orr and Magee), 1923, 13, 447
 metabolism of, by indirect calorimetry (Magee and Orr), 1924, 14, 506, 516, 525, 600, 619
 organism, mechanism of cellulose digestion in (Woodman and Stewart), 1927, 17, 333; 1928, 18, 713
- Rust(s)**, cereal, South African (Evans), 1911, 4, 95
 in wheat, bearing of Mendelism on the susceptibility of (Butler), 1905, 1, 361
 in wheat, Mendelian inheritance of susceptibility and resistance to (Biffen), 1907, 2, 109; 1912, 4, 421; (Armstrong), 1922, 12, 57
 in wheat, resistance to, note on (Howard and Howard), 1907, 2, 278
Puccinia glumarum, effects of various nutrients on susceptibility to (Spinks), 1913, 5, 231
P. glumarum, infection and histology of two wheats immune to, notes on (Marryat), 1907, 2, 129
P. glumarum in wheat, bearing of Mendelism on the susceptibility to (Butler), 1905, 1, 361
P. glumarum in wheat, Mendelian inheritance of susceptibility and resistance to (Armstrong), 1922, 12, 57
Puccinia spp. on wheat in India (Butler), 1905, 1, 361
 resistance, *see* Resistance
- Rye-grass**, nutritive value of silage (Woodman), 1925, 15, 327
- Salts**, flocculation of turbid liquids by (Hall and Morison), 1907, 2, 244
 mineral, effect of, on sheep (Elliot and Crichton), 1926, 16, 65
- Sampling** of cereals, estimation of yield by (Clapham), 1929, 19, 214
 of sugar beet, note on (Johnson), 1929, 19, 311
- Sampling**, probable error of, in soil surveys (Robinson and Lloyd), 1915, 7, 144
 technique, a study in, with potatoes (Wishart and Clapham), 1929, 19, 600
- Saponin**, action of, on zoospores of *P. Humuli* and *P. infestans* (Goodwin and Martin), 1929, 19, 185
- Scouring lands** of Somerset and Warwickshire (Gimingham), 1914, 6, 328
- Sea-water**, effect of, on soil fertility (Page and Williams), 1926, 16, 551
- Secretion(s)**, composition of, from udders of heifers during pregnancy (Woodman and Hammond), 1923, 13, 180
 internal, *see* Internal secretion
 milk, *see* Milk secretion
 mucous, of the cervix of the cow (Woodman and Hammond), 1925, 15, 107
- Seed(s)**, legumes, influence of number of nodule bacteria applied to, upon nodule formation (Thornton), 1929, 19, 373
 mangold, proteins of (Davies), 1926, 16, 293
 rape, colzalin, a globulin from (Davies), 1927, 17, 33
 red clover, studies on, with special reference to country of origin (Stapledon), 1920, 10, 90
 weed, effect of cultivation on buried (Brenchley), 1918, 9, 1
 weed, vitality of buried (Brenchley), 1918, 9, 1
- Sewage "sickness"** in soil (Russell and Golding), 1912, 5, 27
- Sex-ratio**, effect of age on, in cattle (Roberts), 1930, 20, 359
 effect of breed on, in cattle (Roberts), 1930, 20, 359
 effect of season on, in cattle (Roberts), 1930, 20, 359
 in cattle (Roberts), 1930, 20, 359
 of pig foetuses (Parkes), 1925, 15, 284
- Sheep**, anaemia of, phosphorus partition of blood in (Malan), 1928, 18, 401
 "black-quarter" in (Cave), 1905, 1, 230
 carcass weights of (Hammond), 1921, 11, 367
 digestibility of para rubber seed cake by (Auld), 1913, 5, 429
 effect of mineral salts on (Elliot and Crichton), 1926, 16, 65
 fertility in Southdown (Nichols), 1926, 16, 365
 fertility of (Hammond), 1921, 11, 337
 foetus, phosphorus partition in blood of (Malan), 1928, 18, 397
 growth and development of (Hammond), 1921, 11, 367
 inheritance of horns and face colour in (Wood), 1905, 1, 364; 1909, 3, 145
 maintenance requirement of adult (Wood and Capstick), 1926, 16, 325

- Sheep**, nitrogen metabolism in, on high protein diets (Stewart), 1930, 20, 1
organs in, proportions of (Hammond), 1921, 11, 367
parasitic gastritis in, experiments on the treatment of (Wood), 1930, 20, 186
rations for fattening (Wood and Capstick), 1928, 18, 486
"struck" disease of (Cave), 1905, 1, 230
utilisation of mineral deficient pasture by (Woodman and Evans), 1930, 20, 587
vaccination of, against "black-quarter" (Cave), 1905, 1, 230
xanthin calculi in (Easterfield, Rigg, Askew and Bruce), 1929, 19, 573
- Shorts**, nitrogen in (Greaves and Stewart), 1912, 4, 376
- Shrinkage coefficient** of clays, physical significance of (Hardy), 1923, 13, 243; of soils, physical significance of (Hardy), 1923, 13, 243
- Sieves**, small mesh wire, effect of wear on (Keen and Haines), 1923, 13, 467
- Silage** analysis, methods employed in, critical examination of (Woodman), 1925, 15, 343
clamp, study of the process of making (Amos and Woodman), 1925, 15, 444
maize (Woodman and Amos), 1924, 14, 461; 1928, 18, 194
maize, green, composition of (Annett and Russell), 1908, 2, 382
oat and tare, comparative determinations of the digestibility and metabolisable energy of (Woodman), 1922, 12, 144
oat and tare, digestibility of (Wood and Woodman), 1921, 11, 304
pigment of, nature of (Woodman), 1923, 13, 240
"sour," some special characteristics of (Woodman), 1925, 15, 343
stack, nutritive value of (Woodman), 1925, 15, 327
stack, process of making, study of (Woodman and Hanley), 1926, 16, 24
sunflower (Amos and Woodman), 1923, 13, 163
temperature and other factors affecting the quality of (Amos and Williams), 1922, 12, 323
see also Ensilage
- Silica-alumina** ratio of clay fractions (Joseph), 1924, 14, 490
-alumina ratio, relation of, to moisture equivalent of clay (Joseph), 1927, 17, 12
- Silicate(s)**, effect of, on availability of phosphorus (Fisher), 1929, 19, 132
sodium, effect of, on yield in barley (Fisher), 1929, 19, 132; (Hall), 1929, 19, 586
soil bases in (Hendrick and Ogg), 1916, 7, 458
- Silo(s)**, tower, drainage from (Godden), 1923, 13, 462
tower, losses in (Woodman and Amos), 1926, 16, 539
- "**Silver-leaf**" disease (Brooks and Bailey), 1911, 4, 133; 1913, 5, 288; 1919, 9, 189
- "**Single value**" soil properties (Coutts and Keen), 1928, 18, 740; 1929, 19, 325; 1930, 20, 407, 414, 541
- Skeleton** in pigs, calcium-deficiency and composition of (Evans), 1930, 20, 117
- Skin** temperature and fattening capacity in oxen (Wood and Hill), 1914, 6, 252
- Smoke**, distribution and effect on plant growth (Crowther, Ruston and Steuart), 1911, 4, 25; 1913, 5, 391; 1914, 6, 387, 395
- Soap**, action of, on zoospores of *P. Humuli* and *P. infestans* (Goodwin, Salmon and Ware), 1929, 19, 185
as a basis for dipping and spraying fluids (Cooper and Nuttall), 1915, 7, 219
solubility of some likely spraying substances in solvents containing (Woodman), 1927, 17, 44
wetting power of dipping fluids containing a soap basis, determination of (Cooper and Nuttall), 1915, 7, 219
- Soda**, effect of, on digestibility of straw (Godden), 1920, 10, 437
- Sodium** carbonate, use of, in mechanical analysis (Joseph and Martin), 1921, 11, 293
estimation of, new volumetric method for (Blenkinsop), 1930, 20, 511
exchangeable, determination of, in soils (Williams), 1930, 20, 355
silicate, *see* Silicate, sodium
- Soil(s)**, absorption in, phenomenon of (Prescott), 1916, 8, 111
absorptive power of, after ignition (Ogg and Hendrick), 1920, 10, 343
absorptive power of Craibstone (Ogg and Hendrick), 1920, 10, 333
absorptive power of, distribution among soil fractions (Ogg and Hendrick), 1920, 10, 333
acid, aluminium and (Line), 1926, 16, 335
acid, effect of, on growth of sugar beet (Newlands), 1928, 18, 704
acid, interaction of, in relation to determination of "lime requirements" (Crowther and Martin), 1925, 15, 237
acid-treatment of, correlations between the manganese content and dephenolising power after (Sen-Gupta), 1925, 15, 511
action of heat and antiseptics on (Pickering), 1908, 3, 32
aggregates, disintegration of, by vibration (Whittle), 1923, 13, 18; 1924, 14, 346
algae of some normal English (Roach), 1927, 17, 563

- Soil(s)**, alkali, investigations in the Sudan (Joseph), 1925, 15, 407
 alkaline, dispersion of (Joseph and Snow), 1929, 19, 106
 alkaline, effect of gypsum on permeability of, in the Sudan (Greene), 1928, 18, 531
 alkaline, gypsum in (Greene), 1928, 18, 518
 alkaline, hydrogen-ion concentration of heavy (Joseph and Martin), 1923, 13, 321
 alkaline, mechanical analysis of (Joseph and Snow), 1929, 19, 106
 alkaline, organic matter in heavy (Joseph and Whitfield), 1927, 17, 1
 alkaline, permeability of, in the Sudan (Greene), 1928, 18, 531
 alkaline, profile of, in the Sudan (Greene), 1928, 18, 518
 aluminium in, rôle of, on infertility and toxicity (Hardy), 1926, 16, 616
 American Bureau, recent work of the (Russell), 1905, 1, 327
 ammonia absorption by (Ogg and Hendrick), 1920, 10, 333
 ammonia in (Russell), 1910, 3, 233
 ammonia in, determination of (Matthews), 1920, 10, 72
 ammonia retention by unweathered material (Ogg and Hendrick), 1920, 10, 343
 ammoniacal nitrogen in, new method for determination of (McLean and Robinson), 1924, 14, 548
 analyses and soil surveys (Hall and Russell), 1911, 4, 182
 analysis as a guide to manurial treatment of poor pastures (Wood and Berry), 1905, 1, 114
 analysis of, by means of the plant (Hall), 1905, 1, 65
 and soil solution, quantitative relation between (Keen), 1919, 9, 400
 atmosphere: its composition and causes of variation (Russell), 1915, 7, 1
 Atterberg numbers, effect of exchangeable bases on (Joseph and Oakley), 1929, 19, 121
 bacteria in, counting of (Whittles), 1923, 13, 18
 bacteria in, determination of number of (Whittles), 1923, 13, 18; 1924, 14, 346
 bacteria in, vibration method of obtaining a suspension of, developed by C. L. Whittles (Thornton), 1923, 13, 352
 bacterial flora of, effect of water-logging on (Subrahmanyam), 1927, 17, 429
 bacterial numbers in, limitation of, and its consequences (Russell and Hutchinson), 1913, 5, 152
 bacteriological relations in, kept under green-house conditions (Lipman and Owen), 1910, 3, 301
- Soil(s)**, bacterio-toxins in, non-persistence of (Hutchinson and Thaysen), 1918, 9, 43
 bastard trenching of (Pickering and Russell), 1913, 5, 483
 boring, apparatus for (Greene), 1928, 18, 515
 "box" experiment, technique of (Coutts and Keen), 1930, 20, 407, 414
 Briggs-Shantz equations, interpretation of (Hardy), 1923, 13, 340
 calcium carbonate formation in, by bacteria (Gimingham), 1911, 4, 145
 calcium carbonate in, estimation of (Marr), 1909, 3, 155
 calcium cyanamide in, decomposition of (Ashby), 1905, 1, 358
 capillary coefficient of (Green and Ampt), 1911, 4, 1
 capillary forces in an ideal (Fisher), 1926, 16, 492; 1928, 18, 406
 capillary properties of (Haines), 1925, 15, 529; 1927, 17, 264; 1930, 20, 97
 capillary pull of an ideal (Hackett and Strettan), 1928, 18, 671
 carbohydrate decomposition in water-logged, with special reference to formation of organic acids (Subrahmanyam), 1929, 19, 627
 carbohydrates in, soluble, determination of (Subrahmanyam), 1929, 19, 649
 carbon and nitrogen cycles in the (Page, Arnold and Du Toit), 1930, 20, 455, 460, 478
 carbonate-free, determination of exchangeable calcium in (Williams), 1928, 18, 439
 carbonates, determination of (Hutchinson and MacLennan), 1914, 6, 323
 carbonates in, different kinds of (Hardy), 1921, 11, 1
 carbonates in, method for the determination of (Amos), 1905, 1, 322
 carbon-nitrogen ratio and organic matter decomposition in (Waksman), 1924, 14, 560
 carbon-nitrogen ratio in, influence of fungi on (Waksman), 1924, 14, 559
 carbon-nitrogen ratio in, influence of micro-organisms on (Waksman), 1924, 14, 555
 chemical composition of Craibstone (Hendrick and Ogg), 1916, 7, 458
 chloride in, rapid electrometric method for the determination of (Best), 1929, 19, 533
 citric acid extracts of, colorimetric determination of phosphoric acid in (Warren and Pugh), 1930, 20, 532
 classification of, genetic (Tuläikoff), 1908, 3, 80
 classification of, on basis of mechanical analyses (Whittles), 1922, 12, 166

- Soil(s)**, classification of, relation of mineralogy to (Hart), 1929, 19, 90, 802
 classification, relation of soil profile to (Morison), 1929, 19, 677
 clay, *see* Clay
 cohesion in colloidal (Hardy), 1925, 15, 420
 cohesion of, due to capillary forces (Haines), 1925, 15, 529
 cohesion of, measurement of (Haines), 1925, 15, 180
 colloidal, cohesion in (Hardy), 1925, 15, 420
 colloidal, Green and Ampt's method applied to (Hardy), 1925, 15, 434
 colloidal material of, detection of variation in (Turner), 1928, 18, 257
 colloidal, percolation in (Hardy), 1925, 15, 434
 colloidal, water-retaining capacity of (Hardy), 1923, 13, 340
 colloids, recent researches on, a review (Marshall), 1927, 17, 315
 colloids, specificity in (Hardy), 1923, 13, 243
 composition of Romney Marsh (Hall and Russell), 1912, 4, 339
 composition of Sudan (Joseph), 1924, 14, 490
 conditions, influence of, on decomposition of organic matter in soil (Russell and Appleyard), 1917, 8, 385
 constants, significance of (Coutts and Keen), 1928, 18, 740; 1929, 19, 325; 1930, 20, 407, 414, 541
 cresols, disappearance in (Sen-Gupta), 1921, 11, 151
 cultivation, studies in (Haines and Keen, *et al.*), 1925, 15, 375, 387, 395; 1928, 18, 724; 1930, 20, 364
 decomposition of cyanamide and dicyanodiamide in (Cowie), 1919, 9, 113
 decomposition of cyanamide in (Cowie), 1920, 10, 163
 decomposition of keratin in (Jensen), 1930, 20, 390
 decomposition of organic matter in, and carbon-nitrogen ratio (Waksman), 1924, 14, 560
 decomposition of organic matter in, influence of soil conditions on (Russell and Appleyard), 1917, 8, 385
 dephenolisation by mechanical fractions of (Sen-Gupta), 1925, 15, 503
 dephenolisation in (Sen-Gupta), 1921, 11, 136; 1925, 15, 497
 dispersion of alkaline (Joseph and Snow), 1929, 19, 106
 dispersion of, effect of exchangeable bases on (Joseph and Snow), 1929, 19, 106
 dispersion of, in water under various conditions (Puri and Keen), 1925, 15, 147
- Soil(s)**, drift, studies of a Scottish (Hendrick, Ogg and Newlands), 1916, 7, 458; 1920, 10, 333, 343; 1926, 16, 584
 drying of, effect on nitrate content (Buddin), 1914, 6, 452
 drying of, effect on pH of (Joseph and Martin), 1923, 13, 321
 dye adsorption by hydrous alumina in (Croucher), 1928, 18, 350
 electrical conductivity of extracts from (Atkins), 1924, 14, 198
 electrical conductivity of, observations on (Haines), 1925, 15, 536
 electrical resistance of (Deighton), 1922, 12, 207
 elementary carbon in (Robinson and McLean), 1930, 20, 345
 exchangeable bases, effect of, on Atterberg numbers (Joseph and Oakley), 1929, 19, 121
 exchangeable bases, effect of, on dispersion (Joseph and Snow), 1929, 19, 106
 exchangeable bases, effect of, on mechanical properties (Joseph and Oakley), 1929, 19, 121
 exchangeable bases, effect of, on soil properties (Joseph and Oakley), 1929, 19, 121
 exchangeable bases in, determination of magnesium, potassium and total (Williams), 1929, 19, 589
 exchangeable bases in, relative proportions of Scottish (Smith), 1928, 18, 68
 exchangeable bases in Scottish (Smith), 1925, 15, 466
 exchangeable bases of Craibstone (Hendrick and Newlands), 1926, 16, 584
 exchangeable bases of, effect of, on moisture equivalent (Joseph), 1927, 17, 12
 exchangeable calcium in carbonate-free, determination of (Williams), 1928, 18, 439
 exchangeable calcium of certain Scottish (Ogg and Dow), 1928, 18, 131
 exchangeable hydrogen in, technique of replacement (Turner), 1928, 18, 257
 exchangeable magnesium in, determination of (Williams), 1929, 19, 589
 exchangeable potassium in, determination of (Williams), 1929, 19, 589
 exchangeable sodium in, determination of (Williams), 1930, 20, 355
 extracts, electrical conductivity of (Atkins), 1924, 14, 198
 extracts, hydrogen-ion concentration in, colorimetric determination of (Fisher), 1921, 11, 45
 extracts, phosphates in, estimation of (Prescott), 1914, 6, 111
 extracts, potassium estimation in, by the cobaltinitrite (volumetric) method (Milne), 1929, 19, 541

- Soil(s)**, extracts, potassium in, estimation of (Davis), 1912, 5, 52
 extracts, specific conductivities of (Wright), 1928, 18, 186
 fatty acids in, determination of (Subrahmanyam), 1929, 19, 649
 ferrous iron in (Morison and Doyne), 1914, 6, 97
 ferruginous, mechanical analysis of heavy (Groves), 1928, 18, 200
 fertility, connexion of oxidation with (Russell), 1905, 1, 261
 fertility, effect of flooding with sea-water on (Page and Williams), 1926, 16, 551
 fertility, effect of grain growing on (Shutt), 1925, 15, 162
 fertility, effect of vegetation on (Hall), 1905, 1, 241
 fertility, maintenance of, by crop rotations (Shutt), 1925, 15, 168
 fertility, study of, method for (Lipman), 1910, 3, 297
 flocculation of (Comber), 1920, 10, 425; 1921, 11, 450; 1922, 12, 372
 flooding of, with sea-water, effect on fertility (Page and Williams), 1926, 16, 551
 forest, urea in, decomposition of (Gibson), 1930, 20, 549
 formation, effect of climate on (Leather), 1915, 7, 135
 fractions, chemical analysis of (Joseph), 1924, 14, 490
 fractions, distribution of absorptive power among (Ogg and Hendrick), 1920, 10, 333
 fractions, igniting of, loss involved during mechanical analysis (Martin), 1928, 18, 123
 fractions, mechanical, dephenolisation by (Sen-Gupta), 1925, 15, 503
 fractions, mechanical relation of nature and origin of soil to composition of (Hendrick and Ogg), 1916, 7, 458
 fractions, mechanical, ultimate analysis of (Hendrick and Ogg), 1916, 7, 458
 fractions, organic matter in (Ogg and Hendrick), 1920, 10, 333
 fractions, silt, moisture equivalent of (Joseph), 1927, 17, 12
 freezing-point determinations of, to show a quantitative relation to soil solution (Keen), 1919, 9, 400
 friction, measurement of (Haines), 1925, 15, 196
 gaseous relationships, effect of water-logging on (Subrahmanyam), 1927, 17, 429
 gases (Leather), 1915, 7, 240; (Appleyard and Russell), 1915, 7, 242
 genetic classification of (Tuläikoff), 1908, 3, 80
 geology of, studies in (Hart), 1929, 19, 90, 802
- Soil(s)**, glasshouse, "sickness" in (Russell and Petherbridge), 1912, 5, 86
 granite, powdered, absorptive power of (Ogg and Hendrick), 1920, 10, 343
 granite, powdered, ammonia absorbed by (Ogg and Hendrick), 1920, 10, 343
 green-house conditions, bacteriological relations under (Lipman and Owen), 1910, 3, 301
 gypsum, *see* Gypsum
 heat of hydration for Sudan (Peto and Greene), 1929, 19, 715
 heated, changes occurring in (Pickering), 1910, 3, 258
 heated, plant-growth in (Pickering), 1910, 3, 277
 heath, urea in, decomposition of (Gibson), 1930, 20, 549
 heterogeneity, influence of, on, growth and yield of successive crops (Eden and Maskell), 1928, 18, 163
 humic matter, formation of (Du Toit and Page), 1930, 20, 478
 humic matter in, colorimetric estimation of (Eden), 1924, 14, 469
 humus, ammoniacal nitrogen of (Ellis and Morison), 1916, 8, 1; 1928, 18, 346
 humus, colorimetric determination of (Joseph and Whitfeild), 1927, 17, 1
 humus, mechanical analysis of (Robinson), 1922, 12, 287
 humus, preparation and properties of (Joseph and Whitfeild), 1927, 17, 1
 humus, soluble, effect of removal of, on productiveness (Weir), 1915, 7, 246; (Crowther), 1925, 15, 303
 hydrochloric acid extracts of, colorimetric determination of phosphoric acid in (Warren and Pugh), 1930, 20, 532
 hydrogen-ion concentration in, and aqueous soil extracts, colorimetric determination of (Fisher), 1921, 11, 45
 hydrogen-ion concentration in, colorimetric determination of (Gimingham), 1923, 13, 69
 hydrogen-ion concentration in, measurement of, by the quinhydrone electrode (Biilmann), 1924, 14, 232
 hydrogen-ion concentration of, effect of drying on (Joseph and Martin), 1923, 13, 321
 hydrogen-ion concentration of, effect of electrolytes on (Joseph and Martin), 1923, 13, 321
 hydrogen-ion concentration of heavy alkaline (Joseph and Martin), 1923, 13, 321
 hydrogen-ion concentration of soilsuspensions, determination of, by the hydrogen electrode (Crowther), 1925, 15, 201
 hydrogen-ion concentration of turbid soil and other solutions, determination of (Gadd), 1928, 18, 206

- Soil(s)**, hygroscopic capacity of (Luxmoore), 1905, 1, 304
 hygroscopic coefficient of, critical study of (Puri), 1925, 15, 272
 ignition, effect on absorptive power of (Ogg and Hendrick), 1920, 10, 343
 ignition of, loss involved by, during mechanical analysis (Martin), 1928, 18, 123
 imbibitional water of (Joseph), 1927, 17, 12
 infertility, detecting of, by electrical conductivity (Atkins), 1924, 14, 198
 infertility of subsoil, contribution to the study of (Van der Merwe), 1926, 16, 507
 infertility, rôle of aluminium in (Hardy), 1926, 16, 616
 insolation of (Peto and Green), 1929, 19, 715
 interaction with dilute acids (Puri), 1925, 15, 334
 International Congress of Soil Science, preliminary announcement, 1927, 17, 140
 Keen-Raczkowski "box" experiment, technique of (Coutts and Keen), 1930, 20, 407, 414
 lactic acid in, determination of (Subrahmanyam), 1929, 19, 649
 laterite and lateritic, in Sierra Leone (Martin and Doynne), 1927, 17, 530; 1930, 20, 135
 leaching of added phosphate from North Welsh (Robinson and Jones), 1927, 17, 94
 lime, effect of, on (Hutchinson and MacLennan), 1914, 6, 302
 lime requirement of certain Scottish (Ogg and Dow), 1928, 18, 131
 lime requirement of, measuring of, by a rapid electrometric method (Hardy), 1929, 19, 17
 lime requirement of New Zealand (Wild), 1917, 8, 154
 lime requirement of, studies on (Hutchinson and MacLennan), 1915, 7, 75
 lime status of, effect of dressings of basic slag on (Williams), 1926, 16, 196
 lime status of, in relation to an insect pest of sugar-cane (Turner), 1929, 19, 26
 lime status of, in relation to tith (Turner), 1929, 19, 26
 manganese contents of, and their dephenolising power, after acid-treatment, correlation between (Sen-Gupta), 1925, 15, 511
 manurial treatments, influence of, on water evaporation from (Keen), 1921, 11, 432
 mapping, spot-sample grouping in (Hardy), 1929, 19, 734
 meadow, effect of manure on (Crowther and Ruston), 1915, 7, 197
- Soil(s)**, mechanical analyses, classification of soils on basis of (Whittles), 1922, 12, 166
 mechanical analysis, loss involved by igniting soil fractions during (Martin), 1928, 18, 123
 mechanical analysis of (Agricultural Education Association), 1906, 1, 470; (Joseph and Martin), 1921, 11, 293
 mechanical analysis of alkaline (Joseph and Snow), 1929, 19, 106
 mechanical analysis of, and other dispersions, new method for (Robinson), 1922, 12, 306
 mechanical analysis of, effect of temperature on (Joseph and Snow), 1929, 19, 106
 mechanical analysis of heavy ferruginous (Groves), 1928, 18, 200
 mechanical analysis of humus (Robinson), 1922, 12, 287
 mechanical analysis of, hydrogen peroxide treatment in (Joseph and Snow), 1929, 19, 106
 mechanical analysis of, report on the present position, and recommendations for a new official method (Agricultural Education Association), 1926, 16, 123
 mechanical analysis of, revised official British method for (Agricultural Education Association), 1928, 18, 734
see also Mechanical analysis
 mechanical composition curves of (Robinson), 1924, 14, 626
 mechanical composition of Craibstone (Hendrick and Ogg), 1916, 7, 458
 mechanical properties of, concerned in cultivation (Haines), 1925, 15, 178
 mechanical properties of, effect of exchangeable bases on (Joseph and Oakley), 1929, 19, 121
 micro-organisms, decomposition of keratin by (Jensen), 1930, 20, 390
 micro-organisms, influence of, on carbon-nitrogen ratio in (Waksman), 1924, 14, 555
 micro-organisms, nitrogen fixation by (Krishna), 1928, 18, 432
 mineral constituents of, and soil solution (Hall, Brenchley and Underwood), 1914, 6, 278
 mineralogical analysis of, method of (Hendrick and Newlands), 1923, 13, 1
 mineralogical composition of English (Hendrick and Newlands), 1923, 13, 1
 mineralogical composition of Scottish (Hendrick and Newlands), 1923, 13, 1; 1925, 15, 257
 mineralogy of, studies in (Hart), 1929, 19, 90, 802
 minerals, weathering of (Hart), 1929, 19, 90, 802
 moisture constants, interpretation of (Hardy), 1923, 13, 340

- Soil(s)**, moisture constants, relation between (Wright), 1926, 16, 18
 moisture content at point of stickiness (Hardy), 1923, 13, 243
 moisture, determination of, effect of soil salts on electrode values in (Deighton), 1923, 13, 440
 moisture, determination of, electrical method for (Deighton), 1922, 12, 207
 moisture, distribution of (Haines), 1930, 20, 97
 moisture, effect on nitrification (Prescott and Piper), 1930, 20, 517
 moisture equivalent of, effect of exchangeable bases on (Joseph), 1927, 17, 12
 moisture equivalent of heavy (Joseph and Martin), 1923, 13, 49; 1927, 17, 12
 moisture, evaporation of (Peto and Greene), 1929, 19, 715
 moisture, evaporation of, factors affecting (Fisher), 1923, 13, 121; 1927, 17, 407
 moisture, imbibitional, remarks and observations on (Fisher), 1924, 14, 204
 moisture, movement of, in the Ganges Valley (Leake), 1906, 1, 454
 moisture relations, a physical theory of (Wilsdon), 1924, 14, 473
 moisture relationships in an ideal (Keen), 1924, 14, 170
 moisture, studies of, in the "Great Plains" region (Alway), 1908, 2, 333
 nitrate content of, increased by drying (Buddin), 1914, 6, 452
 nitrate contents of arable, nature and amount of fluctuations in (Russell), 1914, 6, 18
 nitrate fluctuations in a South Australian (Prescott and Piper), 1930, 20, 517
 nitrate losses in, influence of plant residues on (Hutchinson), 1918, 9, 92
 nitrates in, estimation of, by the phenol disulphonic acid method (Gimingham and Carter), 1923, 13, 60
 nitrification in Egyptian (Prescott), 1919, 9, 216
 nitrification, influence of potsherds on (Sen), 1918, 9, 32
 nitrification, observations on (Ashby), 1907, 2, 52
 nitrogen content of prairie, influence of grain growing on (Shutt), 1925, 15, 162
 nitrogen in, effect of water-logging on (Subrahmanyan), 1927, 17, 429
 non-bacterial processes and the production of nitrites and nitrates (Russell and Smith), 1906, 1, 444
 nutrients, relation to yield (Balmukand), 1923, 13, 602
 of Cambridgeshire (Foreman), 1907, 2, 161
 of New Zealand with reference to their lime requirements (Wild), 1917, 8, 154
- Soil(s)**, of North Wales, studies on (Robinson and Hill), 1917, 8, 338; 1919, 9, 259
 of the market-garden district of Biggleswade (Rigg), 1916, 7, 385
 organic acids, formation of, in water-logged (Subrahmanyan), 1929, 19, 627
 organic carbon in, determination of (Robinson, McLean and Williams), 1929, 19, 315
 organic matter, carbon-nitrogen ratio of (McLean), 1930, 20, 348
 organic matter content of prairie, influence of grain growing on (Shutt), 1925, 15, 162
 organic matter decomposition and carbon-nitrogen ratio in (Waksman), 1924, 14, 560
 organic matter, decomposition of, influence of soil conditions on (Russell and Appleyard), 1917, 8, 385
 organic matter, degree of humification of, method for determining (Robinson and Jones), 1925, 15, 26
 organic matter, determination of, by a wet combustion method (Hardy), 1929, 19, 727
 organic matter, extraction of, with alkali (Arnold and Page), 1930, 20, 460
 organic matter in heavy alkaline (Joseph and Whitfield), 1927, 17, 1
 organic matter in mechanical fractions (Ogg and Hendrick), 1920, 10, 333
 organic matter in Sudan (Joseph and Whitfield), 1927, 17, 1
 organic matter, relation of, to nitrogen in prairie (Shutt), 1925, 15, 162
 organisms, *Azotobacter*, assimilation of atmospheric nitrogen by (Ashby), 1907, 2, 35
 oven drying of, changes produced by (Coutts), 1930, 20, 541
 oxidation in, and its connexion with fertility (Russell), 1905, 1, 261
 oxidation in, and its relation to productivity (Darbyshire and Russell), 1907, 2, 305
 palaeozoic, of North Wales, studies on (Robinson), 1917, 8, 338
 partial sterilisation of, by antiseptics (Matthews), 1924, 14, 1
 partial sterilisation of, by heat (Elveden), 1921, 11, 197
 partial sterilisation of, by means of caustic lime (Hutchinson), 1913, 5, 320
 partial sterilisation of, by volatile and non-volatile antiseptics (Buddin), 1914, 6, 417
 partial sterilisation of, effect of, on production of plant food (Russell and Hutchinson), 1909, 3, 111; 1913, 5, 152
 partial sterilisation of sheraqi (Prescott), 1920, 10, 177

- Soil(s)**, partially sterilised, plant growth in (Russell and Petherbridge), 1913, 5, 248
- pastes, plastometric studies of (Keen and Blair), 1929, 19, 684
- peat, *see* Peat
- pencil-point method for estimating water-supplying power of (Hardy), 1923, 13, 355
- percolates, composition of some Indian (Sen), 1918, 9, 32
- percolation in colloidal (Hardy), 1925, 15, 434
- permeability of, to air and water (Green and Ampt), 1911, 4, 1; 1912, 5, 1; (Leather), 1912, 4, 303
- phosphate available in (Vanstone), 1925, 15, 460
- phosphate in, rapid determination of (Atkins), 1924, 14, 192
- phosphate losses in North Welsh, by leaching (Robinson and Jones), 1927, 17, 94
- phosphoric acid, colorimetric determination of, in hydrochloric acid and citric acid extracts of (Warren and Pugh), 1930, 20, 532
- phosphorus compounds of, and dilute acids, reaction between (Russell and Prescott), 1916, 8, 65
- physical properties and clay content of, relation between (Keen and Raczkowski), 1921, 11, 441
- physical properties of, in the Ganges Valley (Leake), 1906, 1, 454
- physical properties of Natal (Coutts), 1929, 19, 325
- physical properties of, studies in (Haines), 1925, 15, 178, 529, 536; 1927, 17, 264; 1930, 20, 97
- physical properties of Transvaal (Marchand), 1924, 14, 151
- physics, studies on (Green and Ampt), 1911, 4, 1; 1912, 5, 1
- plasticity of, measurement of (Haines), 1925, 15, 186
- plastometric studies of (Keen and Blair), 1929, 19, 684
- potash in, action of molasses on available (Craig and Lincoln), 1929, 19, 397
- potash in, availability of (Craig and Lincoln), 1929, 19, 397
- potash in, determination of (Dodd), 1924, 14, 139
- potash in, repressive effect of lime and magnesia on (MacIntire, Shaw and Young), 1930, 20, 499
- potassium in, perchlorate method for estimation of (Page), 1924, 14, 133
- potassium in Scottish, availability of (Stewart), 1929, 19, 524
- prairie, nitrogen and organic matter content of, influence of grain growing on (Shutt), 1925, 15, 162
- Soil(s)**, prairie, of Western Canada, some characteristics of (Shutt), 1910, 3, 335
- prairie, plant food content of (Shutt), 1925, 15, 162
- prairie, relation of nitrogen to organic matter in (Shutt), 1925, 15, 162
- profile, development of, in North Wales as illustrated by the character of the clay fraction (Robinson), 1930, 20, 618
- profile in the Sudan (Greene), 1928, 18, 518
- profile, relation of, to soil classification (Morison), 1929, 19, 677
- properties, effect of exchangeable bases on (Joseph and Oakley), 1929, 19, 121
- properties, "single value" (Coutts and Keen), 1928, 18, 740; 1929, 19, 325; 1930, 20, 407, 414, 541
- protozoa, examination of, notes on some methods for (Martin and Lewin), 1915, 7, 106
- protozoa, influence on ammonification (Cunningham), 1915, 7, 49
- protozoa, influence on bacterial numbers (Cunningham), 1915, 7, 49
- protozoa, numbers of, dilution method for the determination of (Cunningham), 1915, 7, 49
- protozoa, numbers of, in certain Rothamsted soils (Crump), 1920, 10, 182
- protozoa, numbers of, method for estimating the (Cutler), 1920, 10, 135
- protozoa, occurrence and activity of (Cunningham), 1915, 7, 49
- protozoa, studies on (Cunningham), 1915, 7, 49; (Cutler), 1919, 19, 430
- reaction between dilute acids and phosphorus compounds of the (Russell and Prescott), 1916, 8, 65
- reaction, depth-distribution of, and flocculation in manured soils (Crowther), 1925, 15, 232
- reaction, effect of water-logging on (Subrahmanyam), 1927, 17, 429
- reaction of certain Scottish (Ogg and Dow), 1928, 18, 131
- reaction of continuously manured plots (Crowther), 1925, 15, 222, 232
- reaction, studies on (Fisher, Crowther and Martin), 1921, 11, 19, 45; 1925, 15, 201, 222, 232, 237
- rotary cultivation of (Keen *et al.*), 1930, 20, 364
- salts, composition of, in the Sudan (Joseph), 1925, 15, 407
- salts, effect of movement of, on soil electrodes (Deighton), 1923, 13, 440
- salts, vertical distribution of (Greene), 1928, 18, 518
- sampling of, apparatus for (Greene), 1928, 18, 515

- Soil(s)**, sandy, seasonal variations in productivity, botanical and chemical composition, and nutritive value of pasturage on (Woodman, Blunt and Stewart), 1926, 16, 205
- saturation capacity of, determination of (Turner), 1928, 18, 257
- sheraqi, partial sterilisation of (Prescott), 1920, 10, 177
- shrinkage coefficient of, physical significance of (Hardy), 1923, 13, 243
- shrinkage, measurement of, new method for (Haines), 1923, 13, 296
- shrinkage of (Tempany), 1917, 8, 312; (Fisher), 1924, 14, 126
- sickness, investigations on (Russell, Golding and Petherbridge), 1912, 5, 27; 1912, 5, 86
- silt fractions, moisture equivalent of (Joseph), 1927, 17, 12
- silt, marine, dolomitic carbonate in (Hardy), 1921, 11, 1
- slaking of, with water (Hartley), 1928, 18, 41
- sodium in, estimation of, new volumetric method for (Blenkinsop), 1930, 20, 511
- soil-point method for estimating water-supplying power of (Hardy), 1923, 13, 355
- solution and the mineral constituents of the soil (Hall, Brenchley and Underwood), 1914, 6, 278
- solution, characteristics of displaced (Burd and Martin), 1923, 13, 280
- solution, concentration of, effect on plant growth (Hall, Brenchley and Underwood), 1914, 6, 278
- solution, concentration of phosphate in (Greenhill), 1930, 20, 559
- solution, displaced solution as criterion of (Burd and Martin), 1923, 13, 269
- solution, quantitative relation to soil, shown by freezing-point determinations (Keen), 1919, 9, 400
- solution, technique of displacement (Burd and Martin), 1923, 13, 268
- solutions, growth of plants in (Hall, Brenchley and Underwood), 1914, 6, 281
- sour, modified test for (Comber), 1922, 12, 370
- sour, qualitative test for (Comber), 1920, 10, 420
- stickiness of, moisture content at point of (Hardy), 1923, 13, 243
- subsoil, infertility of, contribution to the study of (Van der Merwe), 1926, 16, 507
- suction, measurement of (Haines), 1927, 17, 264
- surface of, estimation of (Hanley), 1914, 6, 58
- survey work, some aspects of (Hardy), 1929, 19, 734
- surveys and soil analyses (Hall and Russell), 1911, 4, 182
- Soil(s)**, surveys, based on index of texture (Hardy), 1928, 18, 252
- surveys, ecological (Hardy), 1929, 19, 734
- surveys, probable error of sampling in (Robinson and Lloyd), 1915, 7, 144
- suspensions, hydrogen-ion concentration determination of, by the hydrogen electrode (Crowther), 1925, 15, 201
- suspensions, preparation of (Whittles), 1924, 14, 346
- temperature, effect of, on mechanical analysis (Joseph and Snow), 1929, 19, 106
- temperature, effect on nitrification (Prescott and Piper), 1930, 20, 517
- temperature, factors determining (Keen and Russell), 1921, 11, 211
- temperatures in Egypt (Taylor), 1928, 18, 90
- temperatures under cotton in Egypt (Taylor), 1927, 17, 489
- tenacity of, measurement of (Hardy), 1925, 15, 420
- texture, index of (Hardy), 1928, 18, 252
- toxicity of, rôle of aluminium in (Hardy), 1926, 16, 616
- tropical, amelioration of deteriorated, lime as a factor in (Turner), 1929, 19, 83
- turbid, hydrogen-ion concentration of, determination of (Gadd), 1928, 18, 206
- type, influence of, on water evaporation from soil (Keen), 1921, 11, 432
- type, mineral examination in determining (Hendrick and Newlands), 1923, 13, 1
- uniformity, test of, by means of dynamometer and plough (Haines and Keen), 1925, 15, 387
- unweathered material, retention of ammonia by (Ogg and Hendrick), 1920, 10, 343
- urea in, decomposition of (Gibson), 1930, 20, 549
- vapour pressure and water content of, relation between (Puri, Crowther and Keen), 1925, 15, 68
- vesicular coefficient of (Hardy), 1923, 13, 243
- vesicular coefficients of, determination of (Wright), 1926, 16, 18
- vibration, disintegration of soil aggregates by (Whittles), 1923, 13, 18; 1924, 14, 346
- water content and vapour pressure of, relation between (Puri, Crowther and Keen), 1925, 15, 68
- water content of, relation between (Keen), 1920, 10, 44
- water displacement of (Burd and Martin), 1923, 13, 265
- water in, capillary rise of (Keen), 1919, 9, 396

- Soil(s)**, water in, evaporation of (Keen, Crowther and Coutts), 1914, 6, 456; 1921, 11, 432; 1926, 16, 105
 water in, horizontal flow of (Hardy), 1925, 15, 434
 water in, permeation of (Hardy), 1925, 15, 434
 water-logged, biochemistry of (Subrahmanyam), 1927, 17, 429, 449; 1929, 19, 627
 water-logged, carbohydrate decomposition in, with special reference to formation of organic acids (Subrahmanyam), 1929, 19, 627
 water-logged, presence of a deaminase in, and its rôle in production of ammonia (Subrahmanyam), 1927, 17, 449
 water-logging of, effect on nitrogen, reaction, gaseous relationships, and bacterial flora (Subrahmanyam), 1927, 17, 429
 water loss from, by evaporation (Peto and Greene), 1929, 19, 715
 water, movements of, in an Egyptian cotton-field (Balls), 1913, 5, 469
 water-retaining capacity of colloidal (Hardy), 1923, 13, 340
 water-supplying power of, soil-point method for estimating the (Hardy), 1923, 13, 355
- Solubility** of spray substances in solvents containing soap (Woodman), 1927, 17, 44
- Soot**, composition of, note on (Harvey), 1910, 3, 398
- Spacing** effect of, on crop yield (Eden and Maskell), 1928, 18, 163
 of sugar beet, statistical examination of effect of (Davies and Dudley), 1929, 19, 619
 of wheat (Engledow), 1925, 15, 125
- Spermatozoa**, mammalian, survival of motility in (Wolf), 1921, 11, 310
 of premium stallions (Walton and Fair), 1928, 18, 772
 rabbit, survival of motility in (Wolf), 1921, 11, 310
- Sphaerotheca Humuli*, forms of hop resistant to (Salmon), 1917, 8, 455
 fungicides used against (Eyre, Salmon, Wormald, Horton, Goodwin and Martin), 1916, 7, 473; 1919, 9, 283; 1922, 12, 269; 1926, 16, 302; 1929, 19, 405; 1930, 20, 18, 489
 notes on (Salmon), 1907, 2, 327
 specialisation of parasitism in (Salmon), 1907, 2, 327
- Sphaerotheca mors-uvae*, observations on perithecial stage of (Salmon), 1914, 6, 187
- Spirochaeta cytophaga*, n. sp., decomposition of cellulose by (Hutchinson), 1919, 9, 143
- Sprain** (streak-disease) of potato, symptoms of (Horne), 1910, 3, 322
- Spray(s)**, arsenical, in combination with Bordeaux mixture (Goodwin and Martin), 1928, 18, 460
 Bordeaux mixture, action of carbon dioxide on (Gimingham), 1911, 4, 69
 Bordeaux mixture, amount of copper in tea sprayed with (Annett and Kar), 1910, 3, 314
 Bordeaux mixture, fungicidal action of (Barker and Gimingham), 1911, 4, 76; 1914, 6, 220
 Bordeaux mixture in combination with arsenical sprays (Goodwin and Martin), 1928, 18, 460
 Bordeaux spraying (Pickering), 1909, 3, 171
 dinitro-o-cresol and the sodium salt for winter (Gimingham and Tattersfield), 1927, 17, 162
 emulsions, preparation of (Woodman), 1927, 17, 44
 fluids, determination of wetting power of, containing a soap basis (Cooper and Nuttall), 1915, 7, 219
 fluids, fungicidal properties of (Eyre, Salmon, Wormald, Horton, Goodwin and Martin), 1916, 7, 473; 1919, 9, 283; 1922, 12, 269; 1926, 16, 302; 1929, 19, 405; 1930, 20, 18, 489
 fungicides, *see* Fungicides
 gas lime, effect on plant growth (Bhatt), 1910, 3, 317
 insecticides, *see* Insecticides
 lime-sulphur, composition and analysis of (Ramsay), 1914, 6, 476
 lime-sulphur, preparation and composition of (Ramsay), 1914, 6, 194
 lime sulphur-calcium arsenate, action of lime on (Goodwin and Martin), 1926, 16, 596
 lime sulphur-calcium arsenate, decomposition of (Goodwin and Martin), 1926, 16, 596
 lime sulphur-lead arsenate, action of carbon dioxide on (Goodwin and Martin), 1925, 15, 307
 lime sulphur-lead arsenate, addition of casein to (Goodwin and Martin), 1925, 15, 476
 lime sulphur-lead arsenate, addition of gelatine to (Goodwin and Martin), 1925, 15, 476
 lime sulphur-lead arsenate, addition of lime casein to (Goodwin and Martin), 1925, 15, 476
 lime sulphur-lead arsenate, chemical changes in (Goodwin and Martin), 1925, 15, 307
 lime sulphur-lead arsenate, effect of addition of a "spreader" to (Goodwin and Martin), 1925, 15, 476

- Spray(s)**, liver of sulphur, fungicidal properties of (Foreman), 1910, 3, 400
 substances, solubility of, in solvents containing soap (Woodman), 1927, 17, 44
 winter, dinitro-*o*-cresol and the sodium salt for (Gimingham and Tattersfield), 1927, 17, 162
- Spreaders**, effect of addition of, to mixed limesulphur-lead arsenate spray (Goodwin and Martin), 1925, 15, 476
 influence of, on fungicidal activity of sulphur (Goodwin, Martin and Salmon), 1930, 20, 18, 32
- Stallions**, fecundity of premium (Walton and Fair), 1928, 18, 772
 fertility of (Sanders), 1926, 16, 466
- Starch**, degradation of, in plants, mechanism of (Davis and Sawyer), 1916, 7, 352
 equivalent of swedes (Wood and Capstick), 1928, 18, 492
 equivalent theory (Murray), 1915, 7, 154
 equivalent theory and the maintenance ration of oxen (Halnan), 1915, 7, 163
 equivalent theory, statistics of British feeding trials and the (Wood and Yule), 1914, 6, 233
 estimation of, by taka-diastase (Davis and Daish), 1914, 6, 152
 estimation of, use of taka-diastase in (Horton), 1921, 11, 240
 in leaf and leaf stalks of the potato, variation in (Davis and Sawyer), 1916, 7, 352
 values (Armsby and Fries), 1919, 9, 182
- Starling**, food of (Hammond), 1912, 4, 380
- Statistics** of British feeding trials and the starch equivalent theory (Wood and Yule), 1914, 6, 233
- Stem-disease** of clover and other legumes caused by the eelworm, susceptibility to (Goodey), 1922, 12, 20
- Stereum purpureum*, "silver-leaf" disease (Brooks and Bailey), 1911, 4, 133; 1913, 5, 288; 1919, 9, 189
- Sterility**, "fatness" as a cause of (Marshall and Peel), 1910, 3, 383
- Stilton cheese**, *see* Cheese, Stilton
- Storage** of farmyard manure, changes in, during (Russell and Richards), 1917, 8, 495
 of farmyard manure, losses during (Wood), 1907, 2, 207
- Straw** and grain, correlation between (Mackenzie), 1926, 16, 275
 digestibility of, after treatment with soda (Godden), 1920, 10, 437
 effect of, on growth of certain legumes (Thornton), 1929, 19, 563
 oat, composition and properties of (Berry), 1920, 10, 359
 oat, sugars and albuminoids of (Collins and Thomas), 1922, 12, 280
- "Strength"** in wheat, inheritance of (Biffen), 1908, 3, 86; 1909, 3, 223; (Saunders), 1909, 3, 218
 of wheat flour, chemistry of (Wood), 1907, 2, 139, 267; (Woodman), 1922, 12, 231; (Halton), 1924, 14, 587
- "Struck"** disease of sheep (Cave), 1905, 1, 230
- Sugar(s)** and albuminoids of oat straw (Collins and Thomas), 1922, 12, 280
 formation and translocation of, in plants (Davis, Daish and Sawyer), 1916, 7, 255
 in potato leaves and leaf stalks, variation in (Davis and Sawyer), 1916, 7, 352
 milk, extraction of, from whey (Woodman), 1920, 10, 1
 reducing, in mangold leaf, errors in estimating (Davis), 1916, 7, 327
 reducing, precipitation of, by basic lead acetate (Davis), 1916, 8, 7
- Sugar beet**, cultivation of, in the West Midlands (Davies and Dudley), 1928, 18, 628; 1929, 19, 619
 growth of, effect of acid soils on (Newlands), 1928, 18, 704
 pulp as source of pectin (Codling and Woodman), 1929, 19, 701
 pulp, composition of (Woodman and Calton), 1928, 18, 544
 pulp, dried, value of, in the nutrition of swine (Woodman, Duckham and French), 1929, 19, 656
 pulp, dried, versus mangels, effect of, on composition of milk (Cranfield), 1929, 19, 302
 pulp, molasses-, value of, in the nutrition of swine (Woodman, Duckham and French), 1929, 19, 656
 pulp, nutritive value of (Woodman and Calton), 1928, 18, 544
 sampling of, note on (Johnson), 1929, 19, 311
 spacing of, statistical examination of effect of (Davies and Dudley), 1929, 19, 619
 tops, ensilage of (Woodman and Amos), 1926, 16, 406
 tops, manurial values of (Woodman and Bee), 1927, 17, 477
 tops, nutritive values of (Woodman and Bee), 1927, 17, 477
 value of, in the nutrition of swine (Woodman, Duckham and French), 1929, 19, 669
 yield and plant population in (Engledow, Maher, Hunter-Smith, Williams, Fail and Rayns), 1928, 18, 574
- Sugar-cane**, froghopper blight, soil relationships (Turner), 1929, 19, 26
 wilting coefficient of (Hardy), 1923, 13, 355
 yield of, effect of liming on (Turner), 1929, 19, 83
see also Cane sugar

- Sulphate(s)**, copper, addition of, to arsenical compounds and hydrated lime (Goodwin and Martin), 1928, 18, 460
influence of, on yield and feeding value of crops (Dymond, Hughes and Jupe), 1905, 1, 217
- Sulphides**, fungicidal properties of (Eyre, Salmon, Horton and Wormald), 1916, 7, 473; 1919, 9, 283; 1922, 12, 269
- Sulphur**, action of, upon copper (Martin), 1930, 20, 32
as a soil fungicide against potato wart disease (Roach), 1930, 20, 74
colloidal, fungicidal properties of (Goodwin, Martin and Salmon), 1930, 20, 18
flowers of, fungicidal properties of (Goodwin, Martin and Salmon), 1930, 20, 18
fungicidal activity of, influence of a spreader on (Goodwin, Martin and Salmon), 1930, 20, 18, 32
ground, fungicidal properties of (Goodwin, Martin and Salmon), 1930, 20, 18
hydrolysis of, in relation to fungicidal activity (Martin), 1930, 20, 32
lime, *see* Lime sulphur
liver of, fungicidal properties of (Foreman), 1910, 3, 400
liver of, polysulphide content of (Goodwin and Martin), 1925, 15, 96
polysulphide, estimation of, in spray materials (Goodwin and Martin), 1925, 15, 96
thiosulphuric acid as fungicidal agent of, in soil (Roach), 1930, 20, 74
- Sunflower(s)**, growth of, in soil solutions (Hall, Brenchley and Underwood), 1914, 6, 281
silage (Amos and Woodman), 1923, 13, 163
- Sunshine**, effect of, on yield of wheat (Tippett), 1926, 16, 159
- Surface area** of birds, method of determination of (Halnan and Southgate), 1930, 20, 210
- Susceptibility** to disease in plants, factors affecting (Spinks), 1913, 5, 231
to disease in potatoes, relationship of manuring to (Miles and Thomas), 1925, 15, 89
to rust in wheat, bearing of Mendelism on (Butler), 1905, 1, 361
to stem-disease by clover and other legumes, caused by eelworm (Goodey), 1922, 12, 20
to yellow rust in wheat, Mendelian inheritance of (Armstrong), 1922, 12, 57
- Swede(s)**, bacterial disease of (Priestley and Lechmere), 1910, 3, 390
chemical composition of, variation in (Collins), 1905, 1, 89; 1905, 1, 374
composition of, variation in (Hall), 1905, 1, 258
dry matter of (Sansome), 1926, 16, 51
starch equivalent of (Wood and Capstick), 1928, 18, 492
- Swede(s)**, turnips, hydrolysis of the soluble protein of (Williams), 1917, 8, 182
"Swollen head" in turkeys (Graham-Smith), 1907, 2, 227
Synchytrium endobioticum, *see* Wart disease
- Taka-diastrase**, estimation of starch in plants by (Davis and Daish), 1914, 6, 152
use of, in starch estimation (Horton), 1921, 11, 240
- "Take-all"** disease of wheat, influence of, on yield (Doughty and Engledow), 1929, 19, 472
- Tannin**, estimation of, in cider (Spiers), 1914, 6, 77
- Tares**, ensilage of, changes occurring during (Amos and Woodman), 1922, 12, 337
- Tea**, amount of copper in, sprayed with Bordeaux mixture (Annett and Kar), 1910, 3, 314
- Temperature**, air, on sloping ground, readings at several stations (Vinson and Russell), 1907, 2, 221
effect of change of, on basal metabolism of swine (Capstick and Wood), 1922, 12, 257
effect of, on mechanical analysis (Joseph and Snow), 1929, 19, 106
effect of, on nitrification (Prescott and Piper), 1930, 20, 517
external, influence of, on energy exchange of the goat (Magee), 1924, 14, 506
in soil; factors determining (Keen and Russell), 1921, 11, 211
- Thermic energy**, *see* Energy, thermic
- Thermophilic bacteria**, *see* Bacteria, thermophilic
- Thiosulphuric acid**, fungicidal agent of sulphur in soil (Roach), 1930, 20, 74
- Ticks**, a monograph of the Ixodoidea. Pt I, review of (Nuttall, Warburton, Cooper and Robinson), 1908, 3, 109
British (Wheler), 1906, 1, 400
control of, on cattle by dipping (Cooper), 1910, 3, 285
see also Brown tick
- Tillering**, effect of, on yield (Eden and Maskell), 1928, 18, 163
- Time of cutting** of hay, effect of, on yield and composition (Crowther and Ruston), 1912, 4, 305
- Time of sowing**, effect of, on plant growth (Greenhill), 1930, 20, 559
- Toluene**, effect of, on disappearance of phenol (Sen-Gupta), 1921, 11, 145
- Tomato**, composition of (Owen), 1929, 19, 413
plants, analysis of (Owen), 1929, 19, 413
plants, effect of manuring on composition of (Owen), 1929, 19, 413

- Tomato plants**, rate of growth of (Owen), 1929, **19**, 413
- Top dressing**, nitrogenous, influence on yield in wheat (Doughty and Engledow), 1929, **19**, 472
nitrogenous, of cereals, determination of value of (Eden and Fisher), 1927, **17**, 548
time of (Eden and Fisher), 1927, **17**, 548
- Toxic excreta** of plants (Fletcher), 1912, **4**, 245
- Toxicity** of organic compounds to insects in relation to chemical constitution (Tattersfield), 1927, **17**, 181
of organic compounds to wireworms, influence of chemical constitution of (Tattersfield and Roberts), 1920, **10**, 199
- Trees**, fruiting of, in consecutive seasons (Pickering), 1916, **8**, 131
injection of, with antiseptics (Brooks and Bailey), 1919, **9**, 189
"silver-leaf" disease of (Brooks and Bailey), 1911, **4**, 133; 1913, **5**, 288; 1919, **9**, 189
- Trifolium repens* L., see Clover, white
- Turkeys**, "swollen head" in (Graham-Smith), 1907, **2**, 227
- Turnip**, bacterial disease of (Jones), 1922, **12**, 292
see also Swede turnips
- Tylenchus dipsaci*, see Eelworm
- Umbelliferae**, proteins of (Davies), 1927, **17**, 41
- Uniformity trials**, value of, for subsequent experiments (Sanders), 1930, **20**, 63
- Urea**, decomposition of, in soils (Gibson), 1930, **20**, 549
- Uric acid** in poultry excreta, method for estimation of (Woodman), 1924, **14**, 413
- Vaccination** of sheep against "black-quarter" (Cave), 1905, **1**, 230
- Vapour pressure** and water-content of soils, relation between (Puri, Crowther and Keen), 1925, **15**, 68
- Variation**, heredity and evolution, recent progress in the study of, review of (Lock), 1907, **2**, 217
- Vasectomy** as a means of sterilising lambs, a comparison with castration (Quinlan), 1928, **18**, 446
- Vegetation**, effect of, on soil fertility (Hall), 1905, **1**, 241
- Vesicular coefficient** of soils (Hardy), 1923, **13**, 243
of soils, determination of (Wright), 1926, **16**, 18
- Vibration**, disintegration of soil aggregates by (Whittles), 1923, **13**, 18; 1924, **14**, 346
- Vibration**, method of obtaining a suspension of the bacteria in a soil sample developed by C. L. Whittles (Thornton), 1923, **13**, 352
- Virus diseases**, premature sprouting in potatoes, and its application to the study of (Salaman), 1927, **17**, 524
- Viscogen**, action of, on milk and cream (Pyne), 1929, **19**, 463
- Vitality** of buried weed seeds (Brenchley), 1918, **9**, 1
- Vitamin A** in cod liver oil (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1923, **13**, 144, 153; 1924, **14**, 531
in oils, effect of, on growth in rats (Drummond, Channon, Coward, Golding, Mackintosh and Zilva), 1924, **14**, 539
in the pigeon pea (Miller), 1928, **18**, 569
requirements of the pig for (Orr and Crichton), 1924, **14**, 114
- Vitamin B** in the pigeon pea (Miller), 1928, **18**, 569
- Vitamin C**, requirements of the pig for (Orr and Crichton), 1924, **14**, 114
- Wart disease** infection tests (Bryan), 1928, **18**, 507
sulphur as a soil fungicide against (Roach), 1930, **20**, 74
- Water** and vapour pressure of soils, relation between (Puri, Crowther and Keen), 1925, **15**, 68
capillary rise of, in soils (Keen), 1919, **9**, 396
dispersion of soil in, under various conditions (Puri and Keen), 1925, **15**, 147
displacement of, in soils (Burd and Martin), 1923, **13**, 265
dissolved oxygen in, improved method for determination of (Subrahmanyam), 1927, **17**, 468
drainage, washing out of nitrates from uncropped and unmanured land by (Russell and Richards), 1920, **10**, 22
evaporation of, from soil (Keen, Crowther and Coutts), 1914, **6**, 456; 1921, **11**, 432; 1926, **16**, 105
evaporation of, from soil, factors affecting (Fisher), 1923, **13**, 121; 1927, **17**, 407
flow of, through soils (Leather), 1912, **4**, 303
imbibitional, of soils and clays (Joseph), 1927, **17**, 12
interaction of, in relation to determination of "lime requirements" (Crowther and Martin), 1925, **15**, 237
loss of, from soil by evaporation (Peto and Greene), 1929, **19**, 715
movements of, in an Egyptian cotton-field (Balls), 1913, **5**, 469
permeability of soil to (Green and Ampt), 1911, **4**, 1; 1912, **5**, 1; (Greene), 1928, **18**, 531

- Water**, permeation of, in soils (Hardy), 1925, 15, 434
 rain-, *see* Rain-water
 relation of, to soil (Keen), 1920, 10, 44
 requirement of cotton in the Sudan (Greene), 1928, 18, 531
 sea-, *see* Sea-water
 slaking of soils with (Hartley), 1928, 18, 41
 use of, by cultivated plants in the field (Tulaikov), 1929, 19, 1
 viscosity of, effect of changes in, on results of mechanical analyses at varying temperatures (Robinson), 1915, 7, 142
- Weed seeds**, buried, effect of cultivation on (Brenchley), 1918, 9, 1
 buried, vitality of (Brenchley), 1918, 9, 1
- Wetting** power, determination of, of dipping and spraying fluids containing a soap basis (Cooper and Nuttall), 1915, 7, 219
 theory of (Cooper and Nuttall), 1915, 7, 219
- Wheat-bulb fly**, *Leptohylemyia coarctata*, Fall., life history of, observations on (Petherbridge), 1921, 11, 99
 colloidal properties of winter, in relation to frost resistance (Newton), 1924, 14, 178
 correlation in, a case of (Parker), 1914, 6, 179
 development and yield of, based upon varietal comparison (Engledow and Ramiah), 1930, 20, 265
 digestibility of "weak" and "strong," by poultry (Halnan), 1926, 16, 451; 1928, 18, 421
 effect of population-density on yield in (Doughty and Engledow), 1928, 18, 317
 flour, chemistry of strength of (Wood), 1907, 2, 139, 267; (Woodman), 1922, 12, 231; (Halton), 1924, 14, 587
 frost resistance, colloidal properties of winter plants in relation to (Newton), 1924, 14, 178
 frost resistance, comparative study of winter varieties (Newton), 1922, 12, 1
 frost resistance, seasonal changes in composition of winter plants in relation to (Newton), 1926, 16, 522
 grain, ash in (Brenchley and Hall), 1909, 3, 195
 grain, development of (Brenchley and Hall), 1909, 3, 195
 grain, development of, chemical study of (Woodman and Engledow), 1924, 14, 563
 grain, migration into (Brenchley and Hall), 1909, 3, 195
 grain, nitrogen in (Brenchley and Hall), 1909, 3, 195
 grain, phosphoric acid in (Brenchley and Hall), 1909, 3, 195
 growth of, in soil solutions (Hall, Brenchley and Underwood), 1914, 6, 281
- Wheat**, improvement of English (Humphries and Biffen), 1907, 2, 1
 influence of nitrogenous top-dressing on yield in (Doughty and Engledow), 1929, 19, 472
 influence of "take-all" disease on yield in (Doughty and Engledow), 1929, 19, 472
 inheritance in, Mendel's laws of (Biffen, Leather and Hall), 1905, 1, 4; 1906, 1, 475
 kernel, milling quality of, relation of certain physical characteristics to (Bailey), 1916, 7, 432
 lax and dense-eared (Parker), 1914, 6, 371
 moisture in, determination of (Fisher and Jones), 1928, 18, 649
 nitrogen distribution in (Greaves and Stewart), 1912, 4, 376
 offals, bran, nitrogen in (Greaves and Stewart), 1912, 4, 376
 offals, middlings, digestibility of (Woodman), 1925, 15, 19
 offals, milling, variation in the physical composition of (Cranfield), 1914, 6, 102
 offals, shorts, nitrogen in (Greaves and Stewart), 1912, 4, 376
 offals, their grading, composition and digestibility (Woodman), 1923, 13, 483
 plants, metrical attributes of (Engledow and Shelton), 1922, 12, 197
 protein content of irrigated (Jones, Colver and Fishburn), 1920, 10, 290
 protein content of, relation of, to variety types of American (Roberts), 1920, 10, 121
 rust in, *see* Rust
 rust resistant, breeding of (Evans), 1911, 4, 95
 rust resistant, note on (Howard and Howard), 1907, 2, 278
 rust resistant, notes on (Marryat), 1907, 2, 129
 seasonal changes in composition of winter plants, in relation to frost resistance (Newton), 1926, 16, 522
 spacing of (Engledow), 1925, 15, 125
 "strength" in, inheritance of (Biffen), 1908, 3, 86; 1909, 3, 223; (Saunders), 1909, 3, 218
 winter, colloidal properties of, in relation to frost resistance (Newton), 1924, 14, 178
 winter-killing of, comparative study of winter varieties (Newton), 1922, 12, 1
 winter varieties, comparative study of, with especial reference to winter-killing (Newton), 1922, 12, 1
 yellow rust in, *see* Rust, *Puccinia glumarum* and Resistance
 yield of, effect of sunshine on (Tippett), 1926, 16, 159
 yield of, law of sequence in, for Eastern England, 1885-1905 (Shaw), 1907, 2, 17

- Wheat**, yield of, relation to autumn rainfall (Shaw), 1907, 2, 17
- Whey**, extraction of milk sugar from (Woodman), 1920, 10, 1
production, composition and utilisation of (Berry), 1923, 13, 192
- White clover**, *see* Clover
- Wild white clover**, *see* Clover
- Wireworms**, toxicity of organic compounds to, influence of chemical constitution on (Tattersfield and Roberts), 1920, 10, 199
- Wool**, quality in (Bailey and Engledow), 1914, 6, 349
- Xanthin calculi** in sheep (Easterfield, Rigg, Askew and Bruce), 1929, 19, 573
- Xylose**, cupric reducing power of (Daish), 1914, 6, 255
- Yeast**, dried, digestibility of (Crowther and Woodman), 1917, 8, 448
flora of bottled ciders (Pearce and Barker), 1908, 3, 55
maltase-free, estimation of maltose by (Davis and Daish), 1913, 5, 437
- Yellow rust**, *see* Rust, *Puccinia glumarum* and Resistance
- Yield**, crop, effect of soil heterogeneity on growth and yield of (Eden and Maskell), 1928, 18, 163
crop, effect of spacing on (Eden and Maskell), 1928, 18, 163
effect of tillering on (Eden and Maskell), 1928, 18, 163
in barley, effect of sodium silicate on (Fisher), 1929, 19, 132
in cereal crops, estimation of, by sampling methods (Clapham), 1929, 19, 214
in cereals, investigations on (Engledow, Wadham, Doughty, Sansom and Ramiah), 1923, 13, 390; 1924, 14, 66, 287, 325; 1925, 15, 125; 1928, 18, 1, 317; 1929, 19, 472; 1930, 20, 265
in crops, influence of sulphates on (Dymond, Hughes and Jupe), 1905, 1, 217
in oats, correlation of, with meteorological observations (Roberts), 1928, 18, 297
in sugar beet (Engledow, Maher, Hunter-Smith, Williams, Fail and Rayns), 1928, 18, 574
in wheat, effect of population-density on (Doughty and Engledow), 1928, 18, 317
in wheat, influence of nitrogenous top-dressing on (Doughty and Engledow), 1929, 19, 472
in wheat, influence of "take-all" disease on (Doughty and Engledow), 1929, 19, 472
missing plot, method of estimating the, in field experimental work (Allan and Wishart), 1930, 20, 399
- Yield**, of barley, effect of sodium silicate on (Hall), 1929, 19, 586
of barley, influence of rainfall on (Wishart and Mackenzie), 1930, 20, 417
of grain, dressed, examination of (Fisher), 1921, 11, 107; (Mackenzie), 1924, 14, 434
of grass, effect of nitrogen on (Gardner, Hunter-Smith, Reid and Williams), 1929, 19, 500
of hay, effect of time of cutting on (Crowther and Ruston), 1912, 4, 305
of milk, as affected by poppy seed cake (Annett and Sen), 1919, 9, 416
of milk, effect of nutrition on (Hammond and Hawk), 1917, 8, 139
of milk, effect of time of calving on (Roberts), 1926, 16, 416
of milk, factors affecting (Hammond and Sanders), 1923, 13, 74; (Kay, Glen and M'Candlish), 1929, 19, 342; 1930, 20, 45
of milk, influence of age of cow on (White and Drakeley), 1927, 17, 420; 1928, 18, 496
of milk, influence of breed on (Drakeley and White), 1927, 17, 118
of milk, influence of foetal growth on (Gavin), 1913, 5, 309
of milk, influence of lactation on (Drakeley and White), 1927, 17, 118; 1928, 18, 496
of milk, influence of preceding calving interval on (Matson), 1929, 19, 553
of milk, variability of (Bartlett), 1929, 19, 438
of milk, variations in, caused by season of the year, service, age, and dry period, and their elimination (Sanders), 1927, 17, 339, 502; 1928, 18, 46, 209
of milk, variations of, at morning and evening milkings (Bartlett), 1929, 19, 36
of potatoes, effect of artificial fertilisers on (Wishart and Clapham), 1929, 19, 600
of potatoes, estimation of, determination of best method for (Salaman), 1923, 13, 361
of potatoes, influence of size and character of seed on (Salaman), 1922, 12, 182; 1923, 13, 361
of potatoes, influence of size and shape of plots on accuracy of determination (Salaman), 1923, 13, 361
of sugar-cane, effect of liming on (Turner), 1929, 19, 83
of wheat, based upon varietal comparison (Engledow and Ramiah), 1930, 20, 265
of wheat, effect of sunshine on (Tippett), 1926, 16, 159
of wheat, law of sequence in, for Eastern England, 1885-1905 (Shaw), 1907, 2, 17
of wheat, relation of autumn rainfall to (Shaw), 1907, 2, 17
relation to soil nutrients (Balmukand), 1928, 18, 602

CAMBRIDGE: PRINTED BY
W. LEWIS, M.A.
AT THE UNIVERSITY PRESS