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- GARNER, F. H. and SANDERS, H. G. Investigations in crop husbandry. II. On the age of seed beans, 1935, **25**, 361
- GARNER, F. H. and SANDERS, H. G. The effects of different methods of castration and docking on the growth of lambs, 1936, **26**, 296
- GARNER, F. H. and SANDERS, H. G. Investigations in crop husbandry. III. Effect of time of application of sulphate of ammonia to wheat, 1936, **26**, 316
- GARNER, F. H. and SANDERS, H. G. Investigations in crop husbandry. IV. The preparation of the seed bed for wheat after potatoes, 1936, **26**, 415
- GARNER, F. H. and SANDERS, H. G. On the spring cultivation of autumn-sown wheat, 1937, **27**, 447
- GARNER, F. H. and SANDERS, H. G. The water consumption of suckling sows, 1937, **27**, 638
- GARNER, F. H. and SANDERS, H. G. The effect of the 'gyrotiller' on crop yield, 1938, **28**, 401
- GARNER, F. H. and SANDERS, H. G. A study of the effect of feeding oils to dairy cows and of the value of the Latin square lay-out in animal experimentation, 1938, **28**, 541
- GARNER, F. H. and SANDERS, H. G. Experiments on the spacing of sugar beet. I. Results based on plot yields, 1939, **29**, 48
- GARNER, F. H. and SANDERS, H. G. Experiments on the spacing of sugar beet. II. Results based on weights of individual plants, 1939, **29**, 58

- GARNER, F. H. and SANDERS, H. G. Four-year leys: the inclusion of red clover: first-year management, 1939, **29**, 164
- GARNER, F. H. and SANDERS, H. G. Studies with lucerne (*Medicago sativa*)—row distances and 'smother' crops, 1940, **30**, 182
- GILSON, M. R., *see* BELL, G. D. H.
- GLASSCOCK, H. H. and WAIN, R. L. Distribution of manganese in the pea seed in relation to marsh spot, 1940, **30**, 132
- GLASSCOCK, H. H., *see also* FURNEAUX, B. S.
- GLATHE, H. and CUNNINGHAM, A. The obligate anaerobic micro-flora of farm-yard manure, 1933, **23**, 541
- GODDEN, W., *see* DUCKWORTH, J.
- GOOCH, M. An analysis of the time change in milk production in individual lactations, 1935, **25**, 71
- GOWEN, J. W. Conformation of the cow as related to milk secretion, Jersey Registry of Merit, 1933, **23**, 485
- GOWEN, J. W. The conformation of the parents as related to the milk secretion of the daughters, Jersey Registry of Merit, 1933, **23**, 514
- GRANTHAM, J., *see* GARNER, F. H.
- GREEN, W. H. The representation of soil analyses by the device of double plotting, 1932, **22**, 548
- GREENE, H. and PETO, R. H. K. The effect of irrigation on soil salts at the Gezira Research Farm, Wad Medani, Sudan, 1934, **24**, 42
- GREENE, H. and SNOW, O. W. Soil improvement in the Sudan Gezira, 1939, **29**, 1
- GREENHILL, A. W. and PAGE, H. J. Investigations into the intensive system of grassland management by the Agricultural Research Staff of Imperial Chemical Industries, Limited. II. The mineral content of intensively treated pasture and a relationship between the nitrogen and phosphorus contents, 1931, **21**, 220
- GREENHILL, A. W. and PAGE, H. J. A note on the employment of a mixture of sand and calcium bentonite as the growth medium in pot culture and the establishment therein of a sward of perennial rye grass, 1933, **23**, 329
- GREENHILL, A. W., *see also* BARTLETT, M. S.
- GREENWOOD, A. W., BLYTH, J. S. S. and GALPIN, N. A study of fecundity in the domestic fowl: the behaviour of persistency in individual hens, 1940, **30**, 202
- GREGORY, F. G., CROWTHER, F. and LAMBERT, A. R. The inter-relation of factors controlling the production of cotton under irrigation in the Sudan, 1932, **22**, 617
- GROVES, R. C. The chemical analysis of clays, with special reference to clay fractions of soils, 1933, **23**, 519
- GUPTA, R. S., *see* RUSSELL, E. W.
- HADFIELD, J. W. and CALDER, R. A. A genetic analysis of the seed characters wrinkled, dimpled and smooth in *Pisum*, 1935, **25**, 264
- HALE, R. W. Experimental errors in chicken-rearing experiments, 1931, **21**, 716
- HALE, W., *see also* BOLTON, W. and COMMON, R. H.
- HALNAN, E. T. Digestibility trials with poultry. VII. The digestibility of wheat offals, with a note on the apparent discrepancy between the digestibility coefficients and nutritive values of these products, 1937, **27**, 126
- HALNAN, E. T. Digestibility trials with poultry. VIII. The digestibility of dried molassed sugar-beet pulp, 1937, **27**, 137
- HALNAN, E. T. On the influence of protein on the fattening of fowls, 1938, **28**, 341
- HALNAN, E. T. Some observations on the normal variations in composition of Light Sussex cockerels, 1938, **28**, 379
- HALNAN, E. T. Observations on the value of whale-meat as a constituent of chick diets, with a note on the influence of added protein on the efficiency of utilization of the gross energy of a ration, 1942, **32**, 179
- HALNAN, E. T. Digestibility trials with poultry. IX. The digestibility and metabolizable energy of sunflower seeds, 1943, **33**, 113
- HALNAN, E. T. Digestibility trials with poultry. X. The effect of war-time changes in milling practice on the composition and nutritive value of fine and coarse wheat bran, 1944, **34**, 133
- HALNAN, E. T. Digestibility trials with poultry. XI. The digestibility and metabolizable energy of raw and cooked potatoes, potato flakes, dried potato slices and dried potato shreds, 1944, **34**, 139
- HAMILTON, S. N., *see* SHUTT, F. T.
- HAMMOND, J. jun. On the breeding season in the sheep, 1944, **34**, 97
- HAMMOND, J. jun. and BHATTACHARYA, P. Control of ovulation in the cow, 1944, **34**, 1
- HAMMOND, J. jun., HAMMOND, J. and PARKES, A. S. Hormonal augmentation of fertility in sheep. I. Induction of ovulation, superovulation and heat in sheep, 1942, **32**, 308
- HAMMOND, J. jun., *see also* DAY, F. T.

- HAMMOND, J. and MURRAY, S. N. Grading meat: the prices given for carcasses of different weights and qualities, 1934, **24**, 233
- HAMMOND, J. and MURRAY, G. N. The body proportions of different breeds of bacon pigs, 1937, **27**, 394
- HAMMOND, J., *see also* HAMMOND, J. jun. and WISHART, J.
- HANLEY, F., *see* WESTON, W. A. R. D.
- HARDY, F. Studies in tropical soils. I. Identification and approximate estimation of sesquioxide components by adsorption of alizarin, 1931, **21**, 150
- HARDY, F. Studies in tropical soils. III. The shrinkage behaviour of lateritic and kaolinitic soils, 1934, **24**, 59
- HARDY, F. and FOLLETT-SMITH, R. R. Studies in tropical soils. II. Some characteristics of igneous rock soil profiles in British Guiana, South America, 1931, **21**, 739
- HARDY, F., McDONALD, J. A. and RODRIGUEZ, G. Leaf analysis as a means of diagnosing nutrient requirements of tropical orchard crops, 1935, **25**, 610
- HARRIS, L. J. Note on the vitamin B₁ potency of wheat as influenced by soil treatment, 1934, **24**, 410
- HARRISON, J., *see* ALLEN, L. A.
- HART, R. Soil studies in relation to geology in an area in north-east Scotland. I. The mineralogy of the soil parent materials, 1941, **31**, 438
- HART, R. Soil studies in relation to geology in an area in north-east Scotland. II. The soils and their development, 1942, **32**, 373
- HARTLEY, H. O., *see* HUNTER, H.
- HATCHER, E. S. J. and PURVIS, O. N. On the behaviour in the field of small grain obtained by premature harvesting, 1945, **35**, 177
- VON HAUSEN, S., *see* VIRTANEN, A. I.
- HAVAS, L. Some effects of radioactive mud upon germination of seeds and growth of seedlings, 1935, **25**, 198
- HEATH, O. V. S. A study in soil cultivation. The effects of varying soil consolidation on growth and development of rain-grown cotton, 1937, **27**, 511
- HEINTZE, S. G. The use of the glass electrode in soil reaction and oxidation-reduction potential measurements, 1934, **24**, 28
- HEINTZE, S. G. Readily soluble manganese of soils and marsh spot of peas, 1938, **28**, 175
- HENDRICKS, W. A. The use of 'differential regression' in analysis of variance, 1935, **25**, 258
- HENDRICKS, W. A. A note on the method of 'differential regression' in analysis of variance, 1937, **27**, 188
- HENDRICKS, W. A. and TITUS, H. W. A note on Wood and Capstick's method of calculating the maintenance requirements of the adult sheep, 1931, **21**, 726
- HENDRY, F. W. F., *see* KNOWLES, F.
- HENRY, K. M., *see* FOOT, A. S.
- HEY, G. B. and KEMSLEY, W. F. F. Experiments on the spacing of sugar beet. III. Further statistical considerations, 1939, **29**, 69
- HINE, H. J., *see* RUSSELL, E. W.
- HIRZEL, R. Note on the effect of 'condition' on the colour of body fat in rabbits, 1935, **25**, 541
- HOBSON, R. P. Calcium and hydrogen-ion concentration and the interfacial tension of pyrethrum extracts, 1931, **21**, 101
- HOBSON, R. P. and PAGE, H. J. Studies on the carbon and nitrogen cycles in the soil. VI. The extraction of the organic nitrogen of the soil with alkali, 1932, **22**, 297
- HOBSON, R. P. and PAGE, H. J. Studies on the carbon and nitrogen cycles in the soil. VII. The nature of the organic nitrogen compounds of the soil: 'humic' nitrogen, 1932, **22**, 497
- HOBSON, R. P. and PAGE, H. J. Studies on the carbon and nitrogen cycles in the soil. VIII. The nature of the organic nitrogen compounds of the soil: 'non-humic' nitrogen, 1932, **22**, 516
- HORTON, E. A., *see* WATSON, S. J.
- HOSKING, J. S. The influence of hydrogen-ion concentration on the decomposition of soil organic matter by hydrogen peroxide, 1932, **22**, 92
- HOSKING, J. S. The ignition at low temperatures of the organic matter in soils, 1938, **28**, 393
- HUDSON, H. G. Population studies with wheat. I. Sampling, 1939, **29**, 76
- HUDSON, H. G. Population studies with wheat. II. Proximity, 1941, **31**, 116
- HUDSON, H. G. Population studies with wheat. III. Seed rates in nursery trials and field plots, 1941, **31**, 138
- HUMPHRIES, E. C. and RODRIGUEZ, G. Decomposition of cacao leaves under natural conditions, 1945, **35**, 247
- HUNTER, H. The improvement of winter oats, 1935, **25**, 419
- HUNTER, H. Relation of ear survival to the nitrogen content of certain varieties of barley. With a statistical study by H. O. Hartley, 1938, **28**, 472
- HUNTER-SMITH, J., *see* GARDNER, H. W.
- HUTCHINSON, J. C. D., *see* DEIGHTON, T.
- INNES, R. F. and BIRCH, H. F. A comparison of four methods for the estimation of the exchangeable hydrogen content of soils, 1945, **35**, 236

- IRWIN, J. O. On the influence of soil temperature on the germination interval of crops, 1931, **21**, 241
- ISAAC, W. E. The rate of decay in relation to soil types and vegetative covering in Glamorgan, 1933, **23**, 31
- ISAACHSEN, H. Accessory food factors. The fat-soluble vitamin requirements of cattle and pigs during growth, with remarks on some other questions as to the vitamin problem in cattle and pig feeding, 1932, **22**, 460
- JACQUES, W. A. Manuring of meadow-hay land. The effect of manures and lime on the botanical composition and yield of hay, 1933, **23**, 146
- JANERT, H. The application of heat of wetting measurements to soil research problems, 1934, **24**, 136
- JENSEN, H. L. The microbiology of farm-yard manure decomposition in soil. I. Changes in the microflora, and their relation to nitrification, 1931, **21**, 38
- JENSEN, H. L. The microbiology of farm-yard manure decomposition in soil. II. Decomposition of cellulose, 1931, **21**, 81
- JENSEN, H. L. A comparison of two agar media for counting soil micro-organisms, 1931, **21**, 832
- JENSEN, H. L. The microbiology of farm-yard manure decomposition in soil. III. Decomposition of the cells of micro-organisms, 1932, **22**, 1
- JEWITT, T. N. Dispersion studies on Gezira soil, 1941, **31**, 466
- JEWITT, T. N. Nitrification in Sudan Gezira soil, 1945, **35**, 264
- JOHNSON, D. A., *see* WOODMAN, R. M.
- JOHNSTONE-WALLACE, D. B. and KENNEDY, K. Grazing management practices and their relationship to the behaviour and grazing habits of cattle, 1944, **34**, 190
- JONES, C. R., *see* FISHER, E. A.
- JUSTESEN, S. H. Influence of size and shape of plots on the precision of field experiments with potatoes, 1932, **22**, 366
- KALAMKAR, R. J. Experimental error and the field-plot technique with potatoes, 1932, **22**, 373
- KALAMKAR, R. J. A study in sampling technique with wheat, 1932, **22**, 783
- KALAMKAR, R. J. A statistical examination of the yield of mangolds from Barnfield at Rothamsted, 1933, **23**, 161
- KALAMKAR, R. J. The influence of rainfall on the yield of mangolds at Rothamsted, 1933, **23**, 571
- KEEN, B. A. and CASHEN, G. H. Studies in soil cultivation. VI. The physical effect of sheep folding on the soil, 1932, **22**, 126
- KEEN, B. A., *see also* RUSSELL, E. W.
- KELLEY, W. P. The formation, evolution, reclamation, and the absorbed bases of alkali soils, 1934, **24**, 72
- KEMSLEY, W. F. F., *see* HEY, G. B.
- KENNEDY, K., *see* JOHNSTONE-WALLACE, D. B.
- KISLOVSKY, D. A. and LARCHIN, B. A. The periods of embryonic growth in cattle, 1931, **21**, 659
- KNOWLES, F. and WATKIN, J. E. The assimilation and translocation of plant nutrients in wheat during growth, 1931, **21**, 612
- KNOWLES, F. and WATKIN, J. E. The amounts and distribution of some phosphorus and nitrogen compounds in wheat during growth, 1932, **22**, 755
- KNOWLES, F., WATKIN, J. E. and COWIE, G. A. Some effects of fertilizer interactions on growth and composition of the potato plant, 1940, **30**, 159
- KNOWLES, F., WATKIN, J. E. and HENDRY, F. W. F. The nature of the calcium and phosphorus combination in the excreta of the non-laying pullet, 1933, **23**, 196
- KNOWLES, F., WATKIN, J. E. and HENDRY, F. W. F. A chemical study of sugar beet during the first growth year, 1934, **24**, 368
- KON, S. K., *see* FOOT, A. S.
- KOSHAL, R. S. The effects of rainfall and temperature on percolation through drain gauges, 1934, **24**, 105
- KYAW, M. H. Rapid method of standardization of the density of bull semen; 1944, **34**, 106
- LACHOWER, D. The movement of potassium in irrigated and fertilized red sandy clay, 1940, **30**, 498
- LAINÉ, T., *see* VIRTANEN, A. I.
- LAING, J. A. Observations on the survival of stored spermatozoa in the genital tract of the mare, 1943, **33**, 64
- LAING, J. A. Observations on the characteristics of the semen in relation to fertility in the bull, 1945, **35**, 1
- LAING, J. A. Observations on the effect of method of management at mating on bovine fertility, 1945, **35**, 25
- LAING, J. A. Observations on the survival time of the spermatozoa in the genital tract of the cow and its relation to fertility, 1945, **35**, 72
- LAMBERT, A. R., *see* GREGORY, F. G.
- LARCHIN, B. A., *see* KISLOVSKY, D. A.
- LEWIS, A. H. The effects of ammonium and nitrate nitrogen on the growth of perennial rye grass, 1936, **26**, 249
- LEWIS, A. H. The fertilizer value of some concentrated materials, particularly urea and guanidine and their nitrates and phosphates, 1936, **26**, 509

- LEWIS, A. H. The effect of nitrogenous fertilizers on the calcium status of soil, 1938, **28**, 197
- LEWIS, A. H. The placement of fertilizers. I. Root crops, 1941, **31**, 295
- LEWIS, A. H. The teart pastures of Somerset. II. Relation between soil and teartness, 1943, **33**, 52
- LEWIS, A. H. The teart pastures of Somerset. III. Reducing the teartness of pasture herbage, 1943, **33**, 58
- LEWIS, A. H. The uptake of nutrients by flax, 1943, **33**, 169
- LEWIS, A. H. and MARMOY, F. B. The effect of ammonium sulphate on plant growth, 1933, **23**, 1
- LEWIS, A. H., PROCTER, J. and TREVAINS, D. The effect of time and rate of application of nitrogen fertilizers on the yield of wheat, 1938, **28**, 618
- LEWIS, A. H. and STRICKLAND, A. G. The placement of fertilizers. II. Cereals, 1944, **34**, 73
- LEWIS, A. H., *see also* FERGUSON, W. S.
- LINES, E. W. L. An apparatus and technique for measuring the respiratory exchange of fed sheep over periods of forty-eight hours, 1938, **28**, 663
- LINTON, R. G. The composition of mare's milk, 1931, **21**, 669
- LINTON, R. G., WILSON, A. N. and WATSON, S. J. The nutritive value of legume husks, 1934, **24**, 260
- LORD, L. A uniformity trial with irrigated broadcast rice, 1931, **21**, 178
- LUGG, J. W. H. Identification and measurement of the combustible gases that occur in the gaseous metabolic products of sheep, 1938, **28**, 688
- MCCALL, R. J. S., *see* ELDER, S.
- MCCALLUM, J. W., *see* STEWART, J.
- MACDONALD, D., FIELDING, W. L. and RUSTON, D. F. Experimental methods with cotton. I. The design of plots for variety trials, 1939, **29**, 35
- MACDONALD, D., FIELDING, W. L. and RUSTON, D. F. Experimental methods with cotton. II. A study of the effects of seed rate and time of thinning on the development and yield of cotton plants in hand-planted cotton trials, 1939, **29**, 418
- MCDONALD, J. A., *see* HARDY, F.
- MCDOUGALL, E. I., *see* SHEARER, G. D.
- MACRONE, C. and WALTON, A. Fecundity of male rabbits as determined by 'dummy matings', 1938, **28**, 122
- MACKINTOSH, J., *see* FOOT, A. S.
- MCLEAN, W. Effect of hydrogen peroxide on soil organic matter, 1931, **21**, 251
- MCLEAN, W. The nature of soil organic matter as shown by the attack of hydrogen peroxide, 1931, **21**, 595
- MCLEAN, W. The determination of phosphorus in soils, 1936, **26**, 331
- MCLEAN, W. Note on 'the significance of the pH determination in the evaluation of quality in silages', 1941, **31**, 518
- MCMAHON, P. R., *see* ELPHICK, B. L.
- MCMEEKAN, C. P. The nature and variability of the carcass characters of Danish and English bacon pigs, 1939, **29**, 131
- MCMEEKAN, C. P. Growth and development in the pig with special reference to carcass quality characters. I, 1940, **30**, 276
- MCMEEKAN, C. P. Growth and development in the pig with special reference to carcass quality characters. II. The influence of the plane of nutrition on growth and development, 1940, **30**, 387
- MCMEEKAN, C. P. Growth and development in the pig with special reference to carcass quality characters. III. The effect of the plane of nutrition on the form and composition of the bacon pig, 1943, **30**, 511
- MCMEEKAN, C. P. Growth and development in the pig, with special reference to carcass quality characters. IV. Use of sample joints and of carcass measurements as indices of the composition of the bacon pig. V. Bearing of the main principles emerging upon the many problems of animal production and human development, 1941, **31**, 1
- MCMURRAY, M. R., *see* PARKHURST, R. T.
- MALHOTRA, R. C. The distribution of some reserve substances in hard winter wheat plant at successive growth stages and their possible utilization, 1932, **22**, 485
- MANN, H. H. The character of barley grown on soil made acid with sulphate of ammonia, 1937, **27**, 108
- MANN, H. H. Investigations on clover sickness, 1938, **28**, 437
- MANN, H. H. The influence of fallowing on the yield of wheat or barley on very exhausted land, 1943, **33**, 207
- MANN, H. H. and BARNES, T. W. Studies of soil after fifty years of wheat or barley cropping, especially of soil made acid with sulphate of ammonia, 1940, **30**, 345
- MANN, H. H., *see also* RUSSELL, E. W.
- MANN, T. B. Chick rearing. I. The effect of diet on mortality with special reference to six-day disease, 1945, **35**, 95
- MANN, T. B. Chick rearing. II. The bacterial syndrome arising from a diet which is conducive to six-day disease, 1945, **35**, 98
- MANN, T. B. Chick rearing. III. The effect of diet on vitamin A, xanthophyll and carotene metabolism, 1945, **35**, 101

- MANN, T. B. Chick rearing. IV. The mechanism of infection in six-day disease with special reference to intestinal putrefaction, 1945, 35, 108
- MANN, T. B. Chick rearing. V. The influence of diet on epidemic bacillary white diarrhoea (*pullorum* disease), 1945, 35, 207
- MANN, T. B. Chick rearing. VI. The bacterial syndrome encountered in epidemic bacillary white diarrhoea of chicks (*pullorum* disease), 1945, 35, 214
- MANN, T. B. Chick rearing. VII. The control of epidemic bacillary white diarrhoea, 1945, 35, 225
- MANN, T. B. Chick rearing. VIII. The preparation of a sensitive and diagnostic stained antigen for the rapid whole blood test for bacillary white diarrhoea of chicks, 1945, 35, 232
- MARCHAND, B. DE C. The sticky point water of soils. II, 1931, 21, 324
- MARMOY, F. B., *see* LEWIS, A. H.
- MARSHALL, W. and CRUICKSHANK, D. B. The function of the cuticle in relation to the porosity of eggs, 1938, 28, 24
- MARSTON, H. R. Studies on the relationship between nutrition and wool production of Merino sheep. I. The technique employed for determining the utilization of foodstuffs and for estimating the wool produced over short periods by Merino sheep, 1935, 25, 103
- MARSTON, H. R. Studies on the relationship between nutrition and wool production of Merino sheep. II. The effect of the administration of cystine, cystein, sulphur and methionine on the growth of wool of a Merino ewe on a protein-poor ration, 1935, 25, 113
- MARSTON, H. R. A note on the estimation of the sulphur content of fodder and excreta, 1938, 28, 679
- MARTIN, H. and SALMON, E. S. The fungicidal properties of certain spray-fluids. VIII. The fungicidal properties of mineral, tar and vegetable oils, 1931, 21, 638
- MARTIN, H. and SALMON, E. S. The fungicidal properties of certain spray-fluids. IX. The fungicidal properties of the products of hydrolysis of sulphur, 1932, 22, 595
- MARTIN, H. and SALMON, E. S. The fungicidal properties of certain spray-fluids. X. Glyceride oils, 1933, 23, 228
- MARTIN, H. and SALMON, E. S. The fungicidal properties of certain spray-fluids. XI. Synthetic solvents, 1934, 24, 469
- MARTIN, J. T. The chemical evaluation of pyrethrum flowers (*Chrysanthemum cinerariaefolium*). A comparison of several methods, 1938, 28, 456
- MARTIN, J. T. The chemical evaluation of pyrethrum flowers (*Chrysanthemum cinerariaefolium*). The extraction of the flowers for analysis and the preparation of colourless concentrates of the pyrethrins, 1941, 31, 178
- MARTIN, J. T. and TATTERSFIELD, F. The evaluation of pyrethrum flowers (*Chrysanthemum cinerariaefolium*), 1931, 21, 115
- MARTIN, J. T., *see also* TATTERSFIELD, F.
- MATHER, K. and ANDERSSON, G. The determination of winter hardiness in oats, 1934, 24, 627
- MEHTA, N. P., *see* RUSSELL, E. W.
- MENCHIKOVSKY, F. Pan (Nasas) and its origin in the red sandy soils of Palestine, 1932, 22, 689
- MENZIES-KITCHIN, A. W. Fertility, mortality and growth rate in pigs, 1937, 27, 611
- MENZIES-KITCHIN, A. W., *see also* WOODMAN, H. E.
- MEYER, H., *see* BONDI, A. H.
- MILTON, W. E. J., *see* CHIPPIINDALE, H. G.
- MIRCHANDANI, T. J. The effects of summer green manures on the ammonia and nitrate contents of soils cropped for winter wheat. An examination of the Woburn green manure plots, 1931, 21, 458
- MIRCHANDANI, T. J., *see also* CROWTHER, E. M.
- MITCHELL, R. L. The base status of Scottish soils. I. The effects of lime on five typical soils from north-east Scotland, 1936, 26, 664
- MITCHELL, R. L. Base exchange equilibria in soil profiles, 1937, 27, 557
- MOON, F. E. The quantitative extraction of carotene from grass, 1939, 29, 295
- MOON, F. E. The influence of manurial treatment on the carotene content of pasture grass, and on the relationship of this constituent to the ash and organic fractions, 1939, 29, 524
- MOON, F. E. and THOMAS, B. The digestion of huskless oats by poultry, 1937, 27, 458
- MORRIS, S., *see* WILSON, W. K.
- MUKERJI, B. K. Studies on calcium cyanamide. II. Micro-biological aspects of nitrification in soils under varied environmental conditions, 1932, 22, 335
- MUNRO, S. S. The relation of production to mortality in the domestic fowl, 1936, 26, 101
- MURRAY, A. The quality factor in feeding stuffs, 1933, 23, 185
- MURRAY, G. N., *see* HAMMOND, J.
- MURRAY, R. K. S. The value of a uniformity trial in field experimentation with rubber, 1934, 24, 177

- NAGELSCHMIDT, G. The identification of minerals in soil colloids, 1939, 29, 477
- NEAVE, O., *see* FERGUSON, W. S.
- NEILSON-JONES, W. Biological aspects of soil fertility, 1941, 31, 379
- NICHOLS, J. E. Wool characters in 'half-bred' sheep (Border Leicester rams × Cheviot ewes), 1933, 23, 473
- NICHOLSON, H. H. The effects of varied dressings of ground limestone in the field, 1931, 21, 262
- NICHOLSON, H. H. The durability of mole drains, 1934, 24, 185
- NICHOLSON, H. H. The role of field drains in removing excess water from the soil. I. Some observations on rates of flow from outfalls, 1934, 24, 349
- NICHOLSON, H. H. and CHILDS, E. C. The transport of water through heavy clay soils. II, 1936, 26, 128
- NICOL, H., *see* THORNTON, H. G.
- NORMAN, A. G. A preliminary investigation of the development of structural constituents in the barley plant, 1933, 23, 216
- NORMAN, A. G. The composition of crude fibre, 1935, 25, 529
- NORMAN, A. G., *see also* WATSON, D. J.
- NORMAN, D. B., *see* WOODMAN, H. E.
- NOWOTNÓWNA, A. An investigation of nitrogen uptake in mixed crops not receiving nitrogenous manure, 1937, 27, 503
- NOWOTNY, A., *see* NOWOTNÓWNA, A.
- NURMIA, M., *see* VIRTANEN, A. I.
- O'DONOHUE, F., *see* WALSH, T.
- OLBRYCHT, T. M. The statistical basis of selection in animal husbandry. I. Studies on life performance of brood sows: an analysis of variance and covariance of progeny born and reared, 1943, 33, 28
- OLBRYCHT, T. M. The statistical basis of selection in animal husbandry. II. Studies on life performance of brood sows: the judging of brood sows by their number of offspring born and reared in the earliest litters, 1943, 33, 74
- OLBRYCHT, T. M. Behaviour of some external characteristics in Essex pigs, 1944, 34, 16
- OOSTHUIZEN, P. M., *see* WOODMAN, H. E.
- OWEN, E. C., SNOW, D. and THOM, C. L. The effect of borax dressings on the growth and yield of field beans (*Vicia faba* L.), 1945, 35, 119
- OWEN, O. The analysis of tomato plants. II. The effect of manurial treatment on the composition of tomato foliage, 1931, 21, 442
- PAGE, H. J. Studies on the carbon and nitrogen cycles in the soil. V. The origin of humic matter of the soil, 1932, 22, 291
- PAGE, H. J., *see also* DU TOIT, M. M. S., GREENHILL, A. W. and HOBSON, R. K.
- PAL, B. P., *see* ENGLEADOW, F. L.
- PÁLSSON, H. Meat qualities in the sheep with special reference to Scottish breeds and crosses. I, 1939, 29, 544
- PÁLSSON, H. Meat qualities in the sheep with special reference to Scottish breeds and crosses. II. Part III. Comparative development of selected individuals of different breeds and crosses as lambs and hoggets, 1940, 30, 1
- PARKER-RHODES, A. F. Investigations on certain toxic substances obtained from the wheat plant which inhibit the germination of the uredo-spores of various wheat rusts, 1939, 29, 399
- PARKES, A. S., *see* HAMMOND, J. jun.
- PARKHURST, R. T. and McMURRAY, M. R. The relation of calcium and phosphorus to growth and rachitic leg weakness in chickens, 1932, 22, 874
- PARKHURST, R. T. and McMURRAY, M. R. Factors in the development of deforming leg weakness in chickens, 1933, 23, 311
- PATERSON, D. D. The influence of time of cutting on the growth, yield and composition of tropical fodder grasses. I. Elephant grass (*Pennisetum purpureum*), 1933, 23, 615
- PATERSON, D. D. The growth, yield and composition of certain tropical fodders, 1935, 25, 369
- PAVER, H., *see* WOODMAN, R. M.
- PENMAN, H. L. Gas and vapour movements in the soil. I. The diffusion of vapours through porous solids, 1940, 30, 437
- PENMAN, H. L. Laboratory experiments on evaporation from fallow soil, 1941, 31, 454
- PENMAN, H. L. and SCHOFIELD, R. K. Drainage and evaporation from fallow soil at Rothamsted, 1941, 31, 74
- PEREIRA, H. C. Studies in soil cultivation. IX. The effect of inter-row tillage on the yield of potatoes, 1941, 31, 212
- PETO, R. H. K., *see* GREENE, H.
- PETTIT, G. H. N. Wastage, length of productive life, replacement and depreciation of dairy cows, 1940, 30, 485
- PETTIT, G. H. N., *see also* YATES, F.
- PIPER, C. S. The availability of manganese in the soil, 1931, 21, 762
- PIPER, C. S. The determination of sodium by precipitation as the triple salt sodium-uranyl-magnesium acetate, 1932, 22, 676
- PIPER, C. S. Marsh spot of peas: a manganese deficiency disease, 1941, 31, 448
- PIPER, C. S. Investigations on copper deficiency in plants, 1942, 32, 143

- PITCAITHLY, N. P. and WORLEY, F. P. Distribution of copper in the Karaka tree (*Corynocarpus laevigata*), 1933, **23**, 204
- PIZER, N. H. Investigations into the environment and nutrition of the cultivated mushroom *Psalliota campestris*. I. Some properties of composts in relation to the growth of the mycelium, 1937, **27**, 349
- PIZER, N. H. and THOMPSON, A. J. Investigations into the environment and nutrition of the cultivated mushroom (*Psalliota campestris*). II. The effect of calcium and phosphate on growth and productivity, 1938, **28**, 604
- POMEROY, R. W. The effect of a sub-maintenance diet on the composition of the pig, 1941, **31**, 50
- PONTECORVO, G. Allometric growth of the forelimb in cattle, 1939, **29**, 111
- POOLE, H. G., see PRESCOTT, J. A.
- PRESCOTT, J. A. and POOLE, H. G. The relationships between sticky point, moisture equivalent, and mechanical analysis in some Australian soils, 1934, **24**, 1
- PROCTER, J., see LEWIS, A. H. and WATSON, S. J.
- PURI, A. N. and PURI, B. R. Ultra-mechanical analysis of soils, 1941, **31**, 171
- PURI, B. R., see PURI, A. N.
- PURVIS, O. N., see HATCHER, E. S. J.
- REIMERS, J. H. W. TH. and BARTEL, L. H. The retention of protein by growing pigs, 1935, **25**, 397
- RHOAD, A. O. The influence of environmental temperature on the respiratory rhythm of dairy cattle in the tropics, 1936, **26**, 36
- RICHARDS, E. H. Note on the effect of temperature on a mixed culture of two organisms in symbiotic relation, 1939, **29**, 302
- RICHARDSON, E. G. Cohesion and viscosity of clays, 1933, **23**, 176
- RICHARDSON, E. G. An optical method for mechanical analysis of soils, etc., 1934, **24**, 457
- RICHARDSON, H. L. Studies on calcium cyanamide. III. Storage and mixing with superphosphate, 1932, **22**, 348
- RICHARDSON, H. L. Studies on calcium cyanamide. IV. The use of calcium cyanamide and other forms of nitrogen on grassland, 1934, **24**, 491
- RICHARDSON, H. L. The nitrogen cycle in grassland soils: with especial reference to the Rothamsted Park grass experiment, 1938, **28**, 73
- RICHARDSON, H. L. and CROWTHER, E. M. Studies on calcium cyanamide. V. The utilization of calcium cyanamide in pot culture experiments, 1935, **25**, 132
- RICHARDSON, H. L., see also CALDWELL, J. and CROWTHER, E. M.
- ROBB, W., see SMITH, A. M.
- ROBERTS, J. A. F., see FRASER, A. H. H.
- ROBERTSON, I. M., see SMITH, A. M.
- ROBISON, C. J., see SMITH, A. D. B.
- RODRIGUEZ, G., see also HARDY, F. and HUMPHRIES, E. C.
- ROGERS, W. S. A soil moisture meter depending on the 'capillary pull' of the soil. With illustrations of its use in fallow land, grass orchard, and irrigated orchards, 1935, **25**, 326
- ROMANOFF, A. L. Influence of incubation temperature on the hatchability of eggs, post-natal growth and survival of turkeys, 1935, **25**, 318
- RUSSELL, E. W. The present position of the theory of the coagulation of dilute clay suspensions. A résumé, 1932, **22**, 165
- RUSSELL, E. W. The significance of certain 'single value' soil constants, 1933, **23**, 261
- RUSSELL, E. W. The subdivision of the clay fraction in mechanical analysis, 1943, **33**, 147
- RUSSELL, E. W. and BALCEREK, W. The determination of the volume and air space of soil clods, 1944, **34**, 123
- RUSSELL, E. W. and GUPTA, R. S. On the measurement of imbibitional water, 1934, **24**, 315
- RUSSELL, E. W., HINE, H. J. and KEEN, B. A. The efficiency of pneumatic tyred tractors under farm conditions, 1942, **32**, 1
- RUSSELL, E. W. and KEEN, B. A. Studies in soil cultivation. VII. The effect of cultivation on crop yield, 1938, **28**, 212
- RUSSELL, E. W. and KEEN, B. A. Studies in soil cultivation. X. The results of a six-year cultivation experiment, 1941, **31**, 326
- RUSSELL, E. W., KEEN, B. A. and MANN, H. H. Studies in soil cultivation. XI. The effect of inter-tillage on the sugar-beet crop, 1942, **32**, 330
- RUSSELL, E. W. and MEHTA, N. P. Studies in soil cultivation. VIII. The influence of the seed bed on crop growth, 1938, **28**, 272
- RUSSELL, E. W. and TAMHANE, R. V. The determination of the size distribution of soil clods and crumbs, 1940, **30**, 210
- RUSSELL, J. L. Scientific research in soil drainage, 1934, **24**, 544
- RUSTON, D. F., see MACDONALD, D.
- RUTLEDGE, W. A. and COMMON, R. H. The composition and digestibility of Northern Irish rye-grass seed cleanings. II. Data for 'flatweed', 'hairgrass', and commercial Yorkshire fog seed, with a note on inorganic constituents, 1945, **35**, 123

- SAHNI, P. N. The relation of drainage to rainfall and other meteorological factors, 1941, **31**, 110
- SALGADO, M. L. M. A study of the exchangeable bases of some East Anglian soils derived from the Jurassic and Cretaceous sediments, with special reference to their marine origin, 1933, **23**, 18
- SALMON, E. S., *see* MARTIN, H.
- SANDERS, H. G., *see* GARNER, F. H.
- SCHOFIELD, R. K. Rapid methods of examining soils. II. The use of *p*-nitrophenol for assessing lime status, 1933, **23**, 252
- SCHOFIELD, R. K. Rapid methods of examining soils. III. The use of dihydrogen potassium phosphate in studying base exchange capacity, 1933, **23**, 255
- SCHOFIELD, R. K. and BLAIR, G. W. S. Rapid methods of examining soils. I. Measurements of rolling weights, 1932, **22**, 135
- SCHOFIELD, R. K. and COSTA, J. V. B. DA. The measurement of *p*F in soil by freezing-point, 1938, **28**, 644
- SCHOFIELD, R. K., *see also* DAVIDSON A. L. C. and PENMAN, H. L.
- SELWYN, H. H., *see* SHUTT, F. T.
- SEN, A. The measurement of electrical conductivity of aqueous soil suspension and its use in soil fertility studies, 1932, **22**, 212
- SEN, A. and WRIGHT, C. H. The electrical conductivity of aqueous soil suspensions as a measure of soil fertility, 1931, **21**, 1
- SEN, H. D. A study on the extraction of papain, the active digestive principle from Papaya, 1931, **21**, 209
- SEN, K. C., *see* SESHAN, P. A.
- SESHAN, P. A. and SEN, K. C. Studies on carotene in relation to animal nutrition. I. The technique of carotene estimation in feeding stuffs, 1942, **32**, 194
- SESHAN, P. A. and SEN, K. C. Studies on carotene in relation to animal nutrition. II. The development and distribution of carotene in the plant and the carotene content of some common feeding stuffs, 1942, **32**, 202
- SESHAN, P. A. and SEN, K. C. Studies on carotene in relation to animal nutrition. III. Stability of carotene in plant material with special reference to hay making and storage, 1942, **32**, 275
- SESHAN, P. A. and SEN, K. C. Studies on carotene in relation to animal nutrition. IV. Carotene balance experiments with cows and bullocks, 1942, **32**, 286
- SHEARER, G. D. and MCDUGALL, E. I. Some observations on swayback disease of lambs, 1944, **34**, 207
- SHEEHY, E. J. Methods of experimentation in animal nutrition, 1934, **24**, 312
- SHEWAN, J. M. The proximate analysis of the organic constituents in north-east Scottish soils, with some notes on the methods, 1938, **28**, 324
- SHORLAND, F. B. and DE LA MARE, P. B. D. Studies on the fats of the bacon pig with reference to carcass quality. The effect of diet on the component fatty acids of the back fat, 1945, **35**, 33
- SHORLAND, F. B. and DE LA MARE, P. B. D. Studies on the fats of the bacon pig with reference to carcass quality. The relation between growth rate and chemical composition of depot fat, 1945, **35**, 39
- SHRIKHANDE, J. G. A new method for the determination of total phosphoric acid in soils, 1942, **32**, 406
- SHUTT, F. T. and HAMILTON, S. N. The close-grazing scheme of pasture management. The influence of successive applications of nitrogen on the composition and yield of the herbage, 1934, **24**, 341
- SHUTT, F. T., HAMILTON, S. N. and SELWYN, H. H. High-protein pasture. The rotational or close-grazing system of pasture management, 1932, **22**, 647
- SIEBENGA, J., *see* EDWARDS, J.
- SILK, B. J., *see* WAIN, R. L.
- SIMPSON, T. W. Studies in sampling technique: cereal experiments. II. A small-scale threshing and winnowing machine, 1931, **21**, 372
- SMITH, A. D. B. and DONALD, H. P. Weaning weight of pigs and litter sampling with reference to litter size, 1937, **27**, 485
- SMITH, A. D. B. and DONALD, H. P. Analysis of post-weaning growth in pigs, 1939, **29**, 274
- SMITH, A. D. B. and ROBISON, O. J. The average ages of cows and bulls in six breeds of cattle, 1931, **21**, 136
- SMITH, A. M. and COMRIE, A. The composition of different kinds of silage, 1938, **28**, 203
- SMITH, A. M. and ROBB, W. The carotene and protein in oats and barley at different stages of growth, 1943, **33**, 119
- SMITH, A. M. and ROBERTSON, I. M. The influence of the plant upon seasonal changes in soil acidity, 1931, **21**, 822
- SMITH, A. M. and WANG, T. The carotene content of certain species of grassland herbage, 1941, **31**, 370
- SMITH, H. F. An empirical law describing heterogeneity in the yields of agricultural crops, 1938, **28**, 1
- SMITH, J. A. B., *see* SNOW, D.
- SNOW, D., SMITH, J. A. B. and WRIGHT, N. C. The manufacture and storage of cereal feeding-stuffs with incorporated non-protein nitrogen compounds, 1945, **35**, 65

- SNOW, D. and WRIGHT, N. C. The respiration rate and loss of dry matter from stored bran, 1945, **35**, 126
- SNOW, D., *see also* OWEN, E. C.
- SNOW, O. W., *see* GREENE, H.
- SREENIVASAN, A. and SUBRAHMANYAN, V. Biochemistry of water-logged soils. Part IV. Carbon and nitrogen transformations, 1935, **25**, 6
- STEPHENS, S. G. Yield characters of selected oat varieties in relation to cereal breeding technique, 1942, **32**, 217
- STEWART, A. B. The genesis and development of two profiles of drift soil in the north-east of Scotland, 1933, **23**, 73
- STEWART, A. B. Soil properties in relation to the occurrence of grass sickness in horses, 1941, **31**, 308
- STEWART, A. B., *see also* WILLIAMS, E. G.
- STEWART, J. and MCCALLUM, J. W. The vitamin A content of the colostrum of dairy cows, 1938, **28**, 428
- STEWART, J., *see also* WOODMAN, H. E.
- STRANGWAYS, D. H. The study of the conditions and factors affecting hair growth in the guinea-pig, 1933, **23**, 359
- STRANGWAYS, D. H. The effect of pregnancy on hair growth and shedding in the guinea-pig, 1933, **23**, 379
- STRICKLAND, A. G., *see* LEWIS, A. H.
- SUBRAHMANYAN, V., *see* SREENIVASAN, A.
- TAMHANE, R. V., *see* RUSSELL, E. W.
- TATTERSFIELD, F. The loss of toxicity of pyrethrum dusts on exposure to air and light, 1932, **22**, 396
- TATTERSFIELD, F. and MARTIN, J. T. The loss of activity of pyrethrum. II, 1934, **24**, 598
- TATTERSFIELD, F., *see also* MARTIN, J. T.
- TAYLOR, E. L. The epidemiology of parasitic gastritis in sheep. Observations on the relative importance of the various factors concerned in the development of the disease, 1934, **24**, 192
- TAYLOR, R. E. and WESTON, W. A. R. D. Seed disinfection. VI. Stripe smut of rye, 1945, **35**, 116
- TAYLOR, R. E., *see also* WESTON, W. A. R. D.
- TEDIN, O. The influence of systematic plot arrangement upon the estimate of error in field experiments, 1931, **21**, 191
- TEMPERTON, H. and DUDLEY, F. J. The feeding of raw and cooked potatoes and sugar beet to laying pullets, 1943, **33**, 204
- TEMPLEMAN, W. G., *see* BLACKMAN, G. E.
- THOM, C. L., *see* OWEN, E. C.
- THOMAS, B. On the composition of common heather (*Calluna vulgaris*), 1934, **24**, 151
- THOMAS, B. and ELLIOTT, F. J. On the yields and composition of pasture grass from the Tree Field Plots of Cockle Park, 1932, **22**, 736
- THOMAS, B., *see also* ELLIOTT, F. J., and MOON, F. E.
- THOMASSET, L. F. A study of the development of the characters of the fleece during growth in the different regions of the body, 1938, **28**, 523
- THOMPSON, A. J., *see* PIZER, N. H.
- THOMPSON, W. B., *see* DAVIES, W. M.
- THOMSON, W., *see* DUCKWORTH, J.
- THORNTON, H. G. and NICOL, H. The effect of sodium nitrate on the growth and nitrogen content of a lucerne and grass mixture, 1934, **24**, 269
- THORNTON, H. G. and NICOL, H. Some effects of clipping the tops upon the root development of lucerne (*Medicago sativa* L.), 1934, **24**, 532
- THORNTON, H. G. and NICOL, H. Further evidence upon the nitrogen uptake of grass grown with lucerne, 1934, **24**, 540
- THORNTON, H. G. and NICOL, H. Reduction of nodule numbers and growth, produced by the addition of sodium nitrate to lucerne in sand culture, 1936, **26**, 173
- TITUS, H. W., *see* HENDRICKS, W. A.
- TREVAINS, D., *see* LEWIS, A. H.
- TROELL, E. The use of sodium hypobromite for the oxidation of organic matter in the mechanical analysis of soils, 1931, **21**, 476
- TURNER, P. E. An analysis of factors contributing to the determination of saturation capacity in some tropical soil types, 1932, **22**, 72
- TURPITT, W. G., *see* WOODMAN, H. E.
- TYAGNY-RYADNO, M. The relations of *Bacillus mycoides* with ammonification, nitrification, and soil fertility, 1933, **23**, 335
- TYLER, C. The porosity of egg shells and the influence of different levels of dietary calcium upon porosity, 1945, **35**, 168
- TYLER, C. and WILLCOX, J. S. Calcium and phosphorus balances with laying birds, 1942, **32**, 43
- TYLER, C. and WILLCOX, J. S. The calcium requirements of poultry with particular reference to their needs for maintenance, 1942, **32**, 62
- UNDERWOOD, E. J., *see* WOODMAN, H. E.
- VARTIOVAARA, U. Investigations on the root nodule bacteria of leguminous plants. XXI. The growth of the root-nodule organisms and inoculated peas at low temperatures, 1937, **27**, 626
- VASEY, A. J., *see* FORSTER, H. C.
- VIRTANEN, A. I. and VON HAUSEN, S. Investigations on the root nodule bacteria of leguminous plants. XVI. Effect of air content of the medium on the function of the nodule and on the excretion of nitrogen, 1935, **25**, 278

- VIRTANEN, A. I. and VON HAUSEN, S. Investigations on the root nodule bacteria of leguminous plants. XVII. Efficiency of different strains of clover nodule bacteria, 1935, 25, 290
- VIRTANEN, A. I. and VON HAUSEN, S. Investigations on the root nodule bacteria of leguminous plants. XVIII. Continued investigations on the effect of air content of the medium on the development and function of the nodule, 1936, 26, 281
- VIRTANEN, A. I., VON HAUSEN, S. and LAINE, T. Investigations on the root nodule bacteria of leguminous plants. XIX. Influence of various factors on the excretion of nitrogenous compounds from the nodules, 1937, 27, 332
- VIRTANEN, A. I., VON HAUSEN, S. and LAINE, T. Investigations on the root nodule bacteria of leguminous plants. XX. Excretion of nitrogen in associated cultures of legumes and non-legumes, 1937, 27, 584
- VIRTANEN, A. I. and NURMIA, M. Studies on the winter hardness of clover. I. Effect of cutting on the carbohydrate reserves in red clover roots, 1936, 26, 288
- WAIN, R. L., SILK, B. J. and WILLS, B. C. The fate of manganese sulphate in alkaline soils, 1943, 33, 18
- WAIN, R. L., *see also* GLASSCOCK, H. H.
- WALKLEY, A. An examination of methods for determining organic carbon and nitrogen in soils, 1935, 25, 598
- WALSH, T. and O'DONOHUE, F. Magnesium deficiency in some crop plants in relation to the level of potassium nutrition, 1945, 35, 254
- WALSH, T., *see also* GALLAGHER, P. H.
- WALTON, A., *see* EDWARDS, J. and MACIRONE, C.
- WANG, T., *see* SMITH, A. M.
- WARD, A. H. and CAMPBELL, J. T. The practical application of age conversion factors to dairy cattle production (butter-fat) records, 1938, 28, 509
- WATKIN, J. E., *see* KNOWLES, F.
- WATSON, D. J. The effect of applying a nitrogenous fertilizer to wheat at different stages of growth, 1936, 26, 391
- WATSON, D. J. The estimation of leaf area in field crops, 1937, 27, 474
- WATSON, D. J. Field experiments on the effect of applying a nitrogenous fertilizer to wheat at different stages of growth, 1939, 29, 379
- WATSON, D. J. and NORMAN, A. G. Photosynthesis in the ear of barley, and the movement of nitrogen into the ear, 1939, 29, 321
- WATSON, D. J., *see also* YATES, F.
- WATSON, H. M. S., *see* BOTTOMLEY, A. C.
- WATSON, S. J. The digestibility and feeding value of dreg meal, 1931, 21, 410
- WATSON, S. J. Investigations into the intensive system of grassland management by the Agricultural Research Staff of Imperial Chemical Industries, Limited. IV. The digestibility and feeding value of artificially dried grass, 1931, 21, 414
- WATSON, S. J. Investigations into the intensive system of grassland management by the Agricultural Research Staff of Imperial Chemical Industries, Limited. V. The digestibility and feeding value of grass silage made in a tower, and the digestibility and comparative yield of artificially dried grass obtained from the same source, 1931, 21, 425
- WATSON, S. J. Investigations into the intensive system of grassland management by the Agricultural Research Staff of Imperial Chemical Industries, Limited. VI. The digestibility and feeding value of grass silage made in a stack, 1931, 21, 452
- WATSON, S. J. Investigations into the intensive system of grassland management by the Agricultural Research Staff of Imperial Chemical Industries, Limited. VII. The digestibility and feeding value of grass silage made in a pit, 1931, 21, 469
- WATSON, S. J. and FERGUSON, W. S. Investigations into the intensive system of grassland management by the Agricultural Research Staff of Imperial Chemical Industries, Limited. VIII. The comparative digestibility and feeding value of fresh and artificially dried grass, 1932, 22, 235
- WATSON, S. J. and FERGUSON, W. S. Investigations into the intensive system of grassland management by the Agricultural Research Staff of Imperial Chemical Industries, Limited. IX. The digestibility of artificially dried hay, 1932, 22, 247
- WATSON, S. J. and FERGUSON, W. S. The nutritive value of artificially dried grass and its effect on the quality of milk produced by cows of the main dairy breeds, 1936, 26, 189
- WATSON, S. J. and FERGUSON, W. S. The value of artificially dried grass, silage made with added molasses and A.I.V. fodder in the diet of the dairy cow and their effect on the quality of the milk, with special reference to the value of the non-protein nitrogen, 1936, 26, 337
- WATSON, S. J. and FERGUSON, W. S. The chemical composition of grass silage, 1937, 27, 1
- WATSON, S. J. and FERGUSON, W. S. The losses of dry matter and digestible nutrients in low-temperature silage, with and without added molasses or mineral acids, 1937, 27, 67

- WATSON, S. J., FERGUSON, W. S. and HORTON, E. A. The time of cutting hay, and the losses entailed during hay-making, 1937, 27, 224
- WATSON, S. J. and HORTON, E. A. Composition, digestibility and nutritive value of samples of grassland products, 1936, 26, 142
- WATSON, S. J., PROCTER, J. and FERGUSON, W. S. Investigations into the intensive system of grassland management by the Agricultural Research Staff of Imperial Chemical Industries, Limited. XI. The effect of nitrogen on the yield, composition and digestibility of grassland herbage, 1932, 22, 257
- WATSON, S. J., *see also* ALLEN, L. A., FERGUSON, W. S. and LINTON, R. G.
- WATSON, W. A., *see* DOYNE, H. C.
- WEST, E. S. The value of 'sticky point' determinations in field studies of soil moisture, 1931, 21, 799
- WESTON, W. A. R. D. and BOOER, J. R. Seed disinfection. I. An outline of an investigation on disinfectant dusts containing mercury, 1935, 25, 628
- WESTON, W. A. R. D., HANLEY, F. and BOOER, J. R. Seed disinfection. II. Large-scale trials on the disinfection of seed corn with mercury dust disinfectants, 1937, 27, 43
- WESTON, W. A. R. D. and TAYLOR, R. E. Observations on ergot in cereal crops, 1942, 32, 457
- WESTON, W. A. R. D. and TAYLOR, R. E. Seed disinfection. V. The stripe diseases of barley and oat, 1943, 33, 23
- WESTON, W. A. R. D. and TAYLOR, R. E. Development of mould on the cut surfaces of potato tubers, 1944, 34, 93
- WESTON, W. A. R. D. and TAYLOR, R. E. Seed disinfection. VII. Mechanical principles, 1945, 35, 239
- WESTON, W. A. R. D., *see also* BELL, G. D. H., BRETT, C. C. and TAYLOR, R. E.
- WHELAN, L. A. The base status of Scottish soils. II. Further studies of the effects of lime on typical soils from north-east Scotland, 1939, 29, 306
- WHETHAM, E. O. Factors modifying egg production with special reference to seasonal changes, 1933, 23, 383
- WHITE, W. J., *see* ARMSTRONG, J. M.
- WHITTLES, C. L. Note on a method for the preparation of permanent records of soil colour, 1931, 21, 189
- WILLCOX, J. S. The nitrogen balance of laying hens, 1934, 24, 636
- WILLCOX, J. S., *see also* TYLER, C.
- WILLIAMS, E. G. and STEWART, A. B. Studies on phosphate fixation in Scottish soils. I. The recovery of added phosphate from a soil of the acid igneous group, 1943, 33, 179
- WILLIAMS, H. R., *see* GARDNER, H. W.
- WILLIAMS, R. The determination of exchangeable bases in carbonate soils, 1932, 22, 838
- WILLIAMS, R. The contribution of clay and organic matter to the base exchange capacity of soils, 1932, 22, 845
- WILLIAMS, R. The solubility of soil phosphorus and other phosphorus compounds in sodium hydroxide solutions, 1937, 27, 259
- WILLIAMSON, G. The effect of Beckmann's treatment by sodium hydroxide on the digestibility and feeding value of barley straw for horses, 1941, 31, 488
- WILLS, B. C., *see* WAIN, R. L.
- WILSON, A. N., *see* LINTON, R. G.
- WILSON, P. W. and BURTON, J. C. Excretion of nitrogen by leguminous plants, 1938, 28, 307
- WILSON, W. K. and MORRIS, S. Studies in the composition of rabbit carcasses, 1932, 22, 453
- WILSON, W. K., *see also* DUDLEY, F. J.
- WISHART, J. Field experiments of factorial design, 1938, 28, 299
- WISHART, J. and HAMMOND, J. A statistical analysis of the inter-relations of litter size and duration of pregnancy on the birth weight of rabbits, 1933, 23, 463
- WISHART, J., *see also* WOODMAN, H. E.
- WOODMAN, H. E. and EDEN, A. Nutritive value of lucerne. III. The composition, digestibility, and nutritive value of lucerne hay, lucerne meal (English and American) and lucerne leaf meal (American), 1935, 25, 50
- WOODMAN, H. E. and EVANS, R. E. The value of degermed maize meal (cooked) in the nutrition of swine, 1932, 22, 670
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