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Report for 1935

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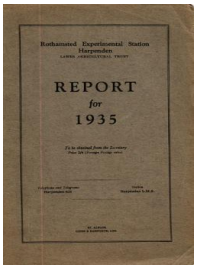

General

Rothamsted Research

Rothamsted Research (1936) *General ;* Report For 1935, pp 123 - 124 **- DOI: https://doi.org/10.23637/ERADOC-1-67**

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(*c*) FUNGUS DISEASES.

LXX. M. D. GLYNNE. "*Incidence of Take-all on Wheat and Barley on Experimental Plots at Woburn.*" Annals of Applied Biology, 1935, Vol. XXII, pp. 225-235.

Surveys made in 1931, 1932 and 1933 of the incidence of Take-all, *Ophiobolus graminis* Sacc. in the continuous wheat and barley manurial experiments at Woburn Experimental Station showed the disease was present in varying amount in most plots; the percentage being usually higher in wheat than in barley and little or no disease occurring in plots with a *p*H value of 5 or less. In wheat Take-all appeared to increase in each plot until 35 per cent. of the plants were infected and then to decrease.

TECHNICAL AND OTHER PAPERS

GENERAL.

LXXI. E. J. RUSSELL. "*Jacob G. Lipman and Soil Science.*" Soil Science, 1935, Vol. 40, pp. 3-7.

LXXII. R. K. SCHOFIELD and G. W. SCOTT BLAIR. "*The Infuence of the Proximity of a Solid Wall on the Consistency of Viscous and Plastic Materials.*" Journal of Physical Chemistry, 1935, Vol. XXXIX, pp. 973-981.

Measurements have been made of the rate of flow of an aqueous paste of barium sulphate through tubes differing considerably both in radius and length under a series of pressure heads. The results show that for tubes of the same radius and under the same pressure gradient, the rate of flow is independent of the length of the tube; from which it is concluded that under the conditions of these experiments, this material shows no progressive breakdown with time under shear, as suggested by Ambrose and Loomis for bentonite.

For different radii, however, curves for $V/\pi R^3$ against $PR/2L$ were obtained which, as previously recorded, do not coincide as they should if at every point in the tube the velocity gradient depends only on the shearing stress.

The hypothesis previously advanced that the proximity of the wall of the tube causes a sheath of material to shear more easily than does the bulk of the material, appears therefore to be the only one at present that accounts for the facts.

The case of this barium sulphate paste is particularly interesting, as the particles are roughly cubical in form, and the thickness of the modified layer is many times the average particle diameter.

LXXIII. C. B. WILLIAMS and G. A. EMERY. "*A Photographic Moonlight Recorder.*" Journal of Scientific Instruments, 1935, Vol. XII, pp. 111-115.

An apparatus in which a cylindrical lens produces a line image of the moon on a strip of photographic paper. The lens is moved by clockwork to follow the moon's apparent movement across the sky and the sensitised strip is darkened when the moon is shining. The apparatus can also be used, with some adjustments, as a sunshine recorder.

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LXXIV. W. G. COCHRAN: "*Recent Advances in Mathematical Statistics* 1934." Journal of the Royal Statistical Society, 1936, Vol. XCIV, pp.

The sections contributed to this review cover papers dealing with moments and semi-invariants of sampling distributions, orthogonal polynomial theory and the analysis of variance.

LXXV. C. N. ACHARYA. "*Structure and Oxidation of Nitrogenous Substances.*" Nature, 1935, Vol. CXXXVI, p. 644.

LXXVI. M. D. GLYNNE and H. V. GARNER. "*Research at Rothamsted of Importance in Horticulture.*" Scientific Horticulture, 1935, Vol. III, pp. 215-221.

CROPS, SOILS AND FERTILISERS.

LXXVII. E. J. RUSSELL. "*Soils and Fertilisers.*" The Farmer's Guide to Agricultural Research in 1934. Royal Agricultural Society of England, 1935, pp. 185-223.

LXXVIII. F. YATES and W. G. COCHRAN. "*Sampling Observations on Wheat.*" Journal of the Ministry of Agriculture, 1935, Vol. XLI, pp. 1152-4; Vol. XLII, pp. 211-4, pp. 528-31, pp. 642-4.

LXXIX. HUGH NICOL. "*Leguminous and Mixed Cropping: Some Important Consequences.*" The Fertiliser, Feeding Stuff and Farm Supplies Journal, 1935, Vol. XX, pp. 550-552.

LXXX. E. W. RUSSELL. "*Physical Description of Soil Tilth.*" Sands, Clays and Minerals, 1936, Vol. II, pp. 57-71.

LXXXI. E. M. CROWTHER. "*Soil Analysis and Manuring.*" Sugar Beet Annual, 1936, The Lincolnshire Sugar Company Ltd., 1936, pp. 33-43.

LXXXII. E. M. CROWTHER. "*Soils and Fertilisers.*" Reports on the Progress of Applied Chemistry, 1935, Vol. XX, pp. 536-573.

LXXXIII. H. H. MANN. "*Tea Soils.*" Imperial Bureau of Soil Science, Technical Communication No. 32, 1935, pp. 1-64.

LXXXIV. H. V. GARNER. "*The Choice of Phosphates for Grass Land.*" Journal of the British Dairy Farmers' Association, 1935, Vol. XLVII, pp. 25-34.

LXXXV. E. H. RICHARDS. "*The Manurial Value of Sewage Sludge.*" Journal of the Ministry of Agriculture, 1935, Vol. XLII, p. 737.