

merce through an inter-departmental technical committee upon which both departments are represented with the view of examining New Zealand's local resources of minerals and all other raw materials with the view of supplying substitutes for those materials which are more difficult to obtain or are unavailable as a result of the War.

The Geological Survey has carried out quantitative surveys of deposits of such minerals as bentonite, manganese, chromite, clays, refractories, oil shale, sulphur and coal which are of special industrial importance at the present time. The Survey has also actively assisted the Mines Department and various companies engaged in the exploration of the potential petroliferous areas of the Dominion.

The detailed survey of New Zealand's coal resources is being further extended and the necessary chemical investigations have been carried out in the Dominion Laboratory, which has also undertaken special work in relation to the gas storage of fruit as well as investigations of substitute fuels for use in emergency. The Research Associations for Leather and Shoe Manufacturing and the Wool Manufacturing Industries have given special attention to maintaining the standard of quality of the products of these industries. Through these associations very great help has been rendered in technical problems arising from the greatly increased demands to meet Government contracts as well as supplying the ordinary requirements of the trade. On the outbreak of war, the Meteorological Office and Apia Observatory were immediately transferred to the control of the Air Department for the period of the War so that the service supplied by this office should be primarily available to the defence forces. The Department has also compiled a register of the scientific personnel of New Zealand and the detailed information thus obtained has already been of real practical use.

The Dairy Research Institute has continued its research in cheese-making, particularly on the determination of methods of preventing the failure of cheese starters in factories as well as on butter-making, including the keeping properties of butter and the hardness of butter. The Plant Research Bureau has continued its work on the development of pure and smut-free seed-wheat and has also made important contributions to the establishment of the linen flax industry. The Plant Diseases Division has been concerned with work on the diseases of cereals, Brassica, grass and tomatoes, etc., as well as seed disinfectants, copper sprays, both in the field and in glass-houses. The results obtained with copper sprays indicate that so far none of the Bordeaux substitutes is equal to Bordeaux mixture in disease control when compared on the basis of equal concentrations of copper. Excellent control of tomato leaf mould has been obtained with Shirlan AG in glasshouse tests under commercial conditions. The Plant Chemistry Laboratory has been responsible for work on the cyanogenetic glucoside of white clover as well as on plant hormones. Fruit research of the Department has covered fertilizer experiments on apples, the biological control of woolly aphis, chemical control of various insect pests such as red mite, leaf hopper, and bronze beetle, biological studies of mouldy core of apples and spraying experiments. Tobacco research has also included experimental work with fertilizers, investigations on mosaic and on collar rot disease, on the damping-off fungi, and on the effect of steam sterilization of the soil on seed germination.

## FORTHCOMING EVENTS

Thursday, October 17

INSTITUTE OF FUEL (at the Connaught Rooms, Great Queen Street, London, W.C.2), at 2.15 p.m.—Mr. W. M. Selvey: Presidential Address.

Friday, October 18

NORTH-EAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS (in the Lecture Theatre of the Literary and Philosophical Society, Newcastle-upon-Tyne), at 6 p.m.—Annual General Meeting. Mr. W. A. Woodeson: Presidential Address.

## APPOINTMENTS VACANT

APPLICATIONS are invited for the following appointments on or before the dates mentioned:

TEACHER OF SCIENCE, MATHEMATICS AND TECHNICAL DRAWING at the County Technical School, Halesowen—The Director of Education, Education Office, County Buildings, Worcester (October 17).

HEAD OF THE BUILDING DEPARTMENT AND LECTURER IN CIVIL ENGINEERING—The Secretary, Technical College, Sunderland (October 21).

LECTURER IN ELECTRICAL ENGINEERING AND PHYSICS—The Clerk to the Committee of Management, Technical College, Shrewsbury.

WIRELESS ENGINEER for the POSTS AND TELEGRAPHS DEPARTMENT, Gold Coast—The Crown Agents for the Colonies, 4 Millbank, London, S.W.1 (quoting M/5976).

## REPORTS AND OTHER PUBLICATIONS

(not included in the monthly Books Supplement)

### Great Britain and Ireland

Ministry of Home Security. Air Raid Precautions Memorandum No. 16: Emergency Protection in Factories. Pp. 8. (London: H.M. Stationery Office.) 1d. net. [259]

Medical Research Council. Bulletin of War Medicine. No. 1, September. Pp. iv+64. (London: H.M. Stationery Office.) 2s. 6d. net. [309]

Proceedings of the Royal Society of Edinburgh, Session 1939-1940. Vol. 60, Part 3, No. 19: The Effect of the Inhibition of Respiration and Assimilation of the Diatom *Ditylum Brightwellii* (West). By Dr. D. Bhatia. Pp. 245-259. 1s. 3d. Vol. 60, Part 3, No. 20: The Structure and Behaviour of the Chromosomes of the Sheep during Mitosis and Meiosis. By I. A. Ahmed. Pp. 260-270. 1s. (Edinburgh: Robert Grant and Son, Ltd.; London: Williams and Norgate, Ltd.) [309]

War-Time Problems: Training Industrial Workers. Pp. 12. (London: National Institute of Industrial Psychology.) 3d. [309]

Ministry of Health. Memorandum on Measures for the Control of Mosquito Nuisances in Great Britain. By Lt.-Col. J. A. Sinton and P. G. Shute. (Memo. 238 Med.) Pp. 30. (London: H.M. Stationery Office.) 6d. net. [210]

### Other Countries

Indian Lac Research Institute. Annual Report for the Financial Year 1939-40. Pp. ii+38. Bulletin No. 42: The Viscosity of Shellac-Urea Solutions. By G. N. Bhattacharya. Pp. 14. 3 annas. (Namkum: Indian Lac Research Institute.) [259]

Report on the Department of Agriculture, St. Lucia, 1939. Pp. ii+38. (St. Lucia: Government Printing Office.) 6d. [110]

Report of the Aeronautical Research Institute, Tôkyô Imperial University. No. 188: Application of the Similarity Theory of Turbulence to the Flow through a Straight Pipe of Annular Cross-Section. By Susumu Tomotika, Kô Tamada and Yukimasa Saito. Pp. 27-60. 45 sen. No. 189: Note on the Application of the Momentum Transport Theory to the Turbulent Flow through a Straight Pipe of Annular Cross-Section. By Susumu Tomotika and Hazimu Umemoto. Pp. 61-76. 30 sen. No. 190: Application of the Vorticity Transport Theory to the Turbulent Flow through a Straight Pipe of Annular Cross-Section. By Susumu Tomotika and Kô Tamada. Pp. 77-96. 35 sen. (Tôkyô: Kôgyô Toshô Kabushiki Kaisha.) [110]

New Zealand: State Forest Service. Annual Report of the Director of Forestry for the Year ended 31st March 1940. Pp. 40. (Wellington: Government Printer.) 1s. [310]

Union of South Africa: Department of Mines. The Mineral Resources of the Union of South Africa. Pp. 544. (Pretoria: Government Printer.) 5s. [410]

### Catalogues

Dunns Seed Wheats, 1940. Pp. 12. (Salisbury: Dunns Farm Seeds, Ltd.)