

SECRETARY'S REPORT.

The Research Council has held five regular meetings during the year, at which there have been full attendances, and, in addition, there have been numerous committee meetings.

The personnel of the Council is as follows :—

Mr. George Shirlcliffe, O.B.E. (Chairman).

Professor Henry George Denham, D.Sc., M.A., Ph.D., Professor of Chemistry, Canterbury College, Christchurch.

Mr. Quentin Donald, Featherston.

Professor John Malcolm, M.B., Ch.B., Professor of Physiology, University of Otago, Dunedin.

Mr. Theodore Rigg, M.Sc., Assistant Director, Cawthron Institute, Nelson.

Mr. Charles Rhodes, Manager of the New Zealand Mines Trust, Auckland.

Mr. Hugh Vickerman, D.S.O., O.B.E., M.Sc., M.Inst.C.E., Wellington.

Dr. Ernest Marsden, M.C., D.Sc., F.N.Z.Inst. (Secretary).

The expenditure of the Department during the year was as follows :—

		Recoverable.
Permanent services—	£	£
Dominion Laboratory (with branches)	15,270	2,280
Geological Survey	7,894	186
Meteorological Office	9,065	298
Petrological Laboratory	668	452
Apia Observatory	2,728	400
Dominion Observatory	2,619	..
Lincoln College	3,700	..
Research investigations (including contributions)	42,028	25,285
Head Office, Publications, Research Scholarships, and miscellaneous, including £2,500 grant to Mawson Expedition	8,385	70

The Secretary of the Department left for England on the 19th July, 1930, to attend the Imperial Wool Research Conference at Leeds and Edinburgh, and the Imperial Conference on Standardization, returning to New Zealand on the 9th February, 1931. He also acted as one of the advisers to the New Zealand delegates to the Imperial Conference. This visit, coinciding with that of the principal research administrative officers of other Dominions and colonies, afforded an opportunity for numerous conferences on major research activities, visits to research stations in England, and conferences regarding the Empire Marketing Board activities and Imperial Agricultural Research Bureaux. The interchange of experiences in research activities, and arrangements for future co-operative effort, should be of considerable benefit. It is obvious that real co-operation in research investigations throughout the Empire, although an invisible link, may be one of the most effective means in binding together the Empire for mutual benefit of its constituent parts. It is unfortunate, perhaps, that the economic depression has been the cause of curtailment of co-operative work in several directions, since, undoubtedly, an excellent atmosphere for such work has been created, and the most cordial and helpful relations established between research organizations in the various parts of the Empire.

Taking a long-range view, the research activities of a country constitute one of the largest factors in economic prosperity; yet it would be calamitous if nationalism and national secretiveness were to be developed in research interrelations.

The activities under the control of the Department have made steady progress during the year, the effect of necessarily decreased finance being largely offset by the maturity of the various units, so that the groundwork of initial preparation has been covered; and experience and training are beginning to produce results more commensurate with the expenditure involved.

A brief *résumé* of the progress of various investigations is given here; the detailed results of investigations are published in bulletins or in the *Journal of Science and Technology* and the *Journal of Agriculture*. As in previous years, the reports of the Dominion Laboratory and the Apia Observatory are separately published.

DOMINION LABORATORY.

The Dominion Laboratory, with its highly trained staff and chemical facilities, is capable of dealing with a wide diversification of problems, and provides the scientific services necessary for the successful conduct of the various State Departments whose activities are concerned with problems of chemistry. Principal among these is the Health Department, for which a considerable amount of work is carried out in connection with the administration of the Pure Foods Act. Eleven other Departments also are served by the Dominion Laboratory, and, in addition, the Laboratory is associated with several specific research activities, among which may be mentioned fuel research, leather research, and investigations into the relation of iodine to human health.

The growing extent to which chemical problems are entering into the successful control of activities of Government and industry has increased the demands made upon the Laboratory.

Though the Laboratory is not concerned with the rendering of chemical services to a private enterprise, need often arises for Departments to explore the possibilities of industrial developments in new directions. On such occasions the facilities provided by the Dominion Laboratory render valuable guidance and indicate whether the proposals in question will assist the industry or will guide the introduction of new processes.