## RESEARCH ORGANIZATION.

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## (Concluded from last issue.)

## The Committee, therefore, recommends that :---

(a) The control of the present Commonwealth laboratories be not disturbed, but that they be co-ordinated, their staff increased, and their equipment improved.

(b) Any new national laboratories which may be created for special purposes of research and experimental inquiry, including a physical laboratory for testing and standardizing purposes, should be controlled by the institute.

(i.) "That an Advisory Council consisting of nine members representing science and the principal primary and secondary industries be appointed who shall advise and co-operate with the directors in framing the policy and in the administration of the institute."

(ii.) "That the members be appointed by the Governor-General in Council."

(iii.) "That for the purposes of controlling and administering the institute and of collecting and determining on the researches to be undertaken and directing their elucidation, three highly qualified salaried directors, of whom one should be chairman of the directors, shall be appointed by the Governor-General-in-Council. The directors shall seek the advice and co-operation of the Council and shal be ex-officio members thereof."

(iv.) "That of the three directors one should be an expert business and financial man with ability in organization; the other two should be chosen mainly on account of scientific attainments and wide experience."

(v.) "The tenure of the directors shall be fixed by the Act."

(vi.) "That the scientific staff should be appointed by the Governor-General-in-Council on the recommendation of the directors."

(5) The Committee further resolved as follows:-

(i.) "That all discoveries, inventions, improvements, processes, and machines made by workers directly employed by the institute should be vested in trustees appointed by it as its sole property, and should be made available, under proper conditions and on payment of gratuities or otherwise, for public advantage."

(ii.) "That the council of the institute should be empowered to recommend to the Government the payment of bonuses to successful discoverers or inventors working under the auspices of the institute."

(iii.) "That the institute should be empowered to charge fees for special investigations, subject to regulations approved by the Governor-General-in-Council."

(6) Though these matters are not directly connected with the proposed institute, the Committee passed two further resolutions

(i.) "That steps should be taken with a view to coordinating the work of our technical colleges and trade schools throughout Australia, se that a supply of scientifically taught craftsmen will be available to support the expansion of industry that it is hoped will result from the operations of the Institute of Science and Industry."

(ii.) "That with a view to promoting our export trade in Australian products it is desirable that serious attention be given to the study of modern languages, including Oriental languages, for commercial purposes."

(7) The Committee realizes that the establishment of the institute will necessarily involve some delay, but being impressed with the urgent need for work of the character proposed the Committee resolved as follows:—

(i) "That until the institute is established an Advisory Council be appointed by the Governor-General-in-Council particularly to carry out the objects expressed in resolutions 2 (i.) and (ii.), viz.: To consider and initiate scientific researches in connection wth, or for, the promoton of primary or secondary industries in the Commonwealth, and (ii.) the collection of industrial scientific information and the formation of a bureau for its dissemination amongst those engaged in industry."

(ii.) "That the Federal and State Munitions Committees, heads of the Commonwealth and State scientific departments, and bodies representative of Commonwealth manufacture, commerce, agriculture, mining, and engineering, the universities and technical colleges, and private enterprises, be invited to suggest branches of industrial scientific research in which investigation would be of immediate practical use to producers and manufacturers."

(iii.) "That the Advisory Council be appointed forthwith, and that when appointed it immediately take steps to initiate research work into the most pressing matters needing investigation, and seek the co-operation of existing institutions and utilize the resources of staff and equipment at our disposal at the present time."

The Committee, however, suggests that . .

most valuable work could be done in collecting data, and, in effect, making a preliminary census both as to present discoveries, and the staff and apparatus available in Australia. Such work is an indispensable first step in all research.

"In addition to this there is ample scope for practical work during the interval in vigorously prosecuting the dissemination of known information as to processes, etc., amongst our producers and manufacturers."

Canada also appears to be following the general 'rend. Recently the 'Royal Canadian Institute has inaugurated a bureau of scientific and industrial research, based upon the system in operation at the Mellon Institute.'' [Science, 43, 455 (March 31st, 1916).] Details are not available, however.

Representatives of the movement for governmental organization of research in all three of these countries have already inspected the various research organizations of America within the past few months to see what is being done.

At a discussion on "University and Industry," held on April 7th at the Chemists' Club in New York, Dr. Takamine stated that the Japanese Government had just appropriated \$1,000,000 for a laboratory for physical and chemical research, and that the Emperor has contributed an additional \$500,000.

In the United States scattered efforts toward a general co-ordination of industry and science have not been lacking. Pre-eminent among these has been Mellon Institute of the University of Pittsburg.

"This Institute [Journal of Industrial and Engineering Chemistry, 7, 343-7 (April, 1915)] represents an alliance between industry and learning, the possibilities of which may be said to be without limit.