

Manitoba, Saskatchewan and Alberta, and a research into the question has been initiated.

Associate Committees.—The Council has appointed Associate Committees composed of experts from the various parts of the Dominion, usually under the chairmanship of a member of the Council: one on Chemistry, to report and advise on problems in industrial chemistry; one on Mining and Metallurgy, to deal with outstanding questions regarding the mining and mineral industries and resources of Canada; one on Forestry, to investigate forest resources and recommend scientific action for their conservation; one on Cold Storage, to develop the scientific application of cold storage principles to Canadian industries; and one on Flax Fibre, to investigate and report upon the possibility of the growth in Canada of large quantities of the best quality of flax to be ultimately used in the manufacture of airplane wings.

Utilization of Fish Waste.—Fish waste in Canada amounts to over 300,000 tons per annum, of which perhaps half is available for conversion into nitrogenous and phosphate fertilizers and as a protein food for cattle, hogs and poultry. The Council is engaged upon a thorough survey of this question.

Industrial Alcohol from Wood Waste.—The Imperial Munitions Board, in November last, called the attention of the Research Council to the desirability of stimulating the production of ethyl alcohol from sources other than food grain, two of which might be profitably utilized in Canada, viz., the utilization of wood waste and the fermentation of the sugar found in the sulphite liquor waste from pulp mills. The former is likely to prove very economical in British Columbia, where large supplies of sawdust are available throughout the whole year, while the latter might be established at any of the eastern Canadian pulp mills. Negotiations are at present being carried on with a view to the establishment of this industry.

Western Lignites.—The provinces of Manitoba and Saskatchewan import annually from Pennsylvania about half a million tons of anthracite for domestic fuel, and send out of the country, therefore, more than \$4,000,000. There are in these provinces, it is estimated, about 57 billion tons of lignites of a poor grade and, consequently, disqualified from serving as domestic fuel. It has been demonstrated, however, that they can be carbonized and briquetted and that the product thus treated is an equivalent of anthracite. As a result of these investigations, conducted by the Lignite Committee, of which Mr. R. A. Ross, of Montreal, is the chairman, the Council recommended that the Government establish a plant in southern Saskatchewan to turn out 30,000 tons of this fuel yearly, the estimated cost of which would not, probably, exceed \$7 per ton at the plant.

Sockeye Salmon.—Urgent representations had been made to the Research Council by the British Columbia Cannery Association and other organizations in that province, in regard to the fish industry, which stated that the reckless, and even criminal, over-fishing in the international waters of the Straits and at the mouth of the Fraser river had reached such a point that the complete extinction of the