

Prairie Farm Assistance Act.—The Prairie Farm Assistance Act, passed in 1939 and administered by the Federal Department of Agriculture, provides for direct money payments by the Federal Government, on an acreage basis, to farmers in areas of low crop yields in the Prairie Provinces and the Peace River District of British Columbia. The Act was designed to assist the municipalities and provinces in years of crop failure to meet relief expenditures which would normally be too great to be assumed by them. The Act provides that payments be made to farmers under certain conditions and terms and, in order that Federal Government costs may be defrayed to some extent, it is required that 1 p.c. of the purchase price of all grains (wheat, oats, barley and rye) marketed in the Prairie Provinces be paid to the Federal Government and set aside in a special fund for the purposes of the Act.

If the farmer, who may be an owner, a tenant, or a member of a co-operative farm association engaged in farming, is located in a crop failure area, he may be awarded assistance on not more than one-half of the cultivated land or a maximum of 200 acres. The rates of payment range up to \$4 per acre.

From the inception of the scheme to Mar. 31, 1957, the total amount paid out under the Act was \$186,286,055. The amount collected under the 1-p.c. levy to Feb. 28, 1957, was \$97,740,303.

Subsection 2.—Agricultural Research and Experimentation

The Department of Agriculture conducts on a broad scale scientific research and experimentation on the control of pests and diseases, the nutritional requirements of plants and animals, the breeding and testing of new species and varieties, the microbiology of soils and foods, investigations of crop production and cultural methods, and many other matters. This work is carried on mainly by the Science Service and the Experimental Farms Service and, in addition to providing information on current production problems, is of paramount importance to the long-time well-being of agriculture.

Conservation of the soil is of basic importance to agriculture and research in the form of soil surveys and study of methods for the protection and conservation of soil resources is carried on by the Department in collaboration with the provincial governments. Studies include the chemistry of the soil, cover crops, value of manure and fertilizers, cultural methods, use of tillage machinery and development of large land reclamation projects.

For many years the Department has conducted investigations into the control of insects and diseases of forest trees. The limited silvicultural work carried on has aimed at maintaining a supply of trees suitable for planting on the prairies as shelter belts and to prevent soil and snow drifting. Basically this is also a soil conservation measure.

Much of the research and experimental work is concerned with crop plants, for after the soil itself, these are of chief importance. This work includes the breeding and testing of suitable varieties of crops to be grown under the varying climatic conditions throughout Canada. The culture and the nutritional value of crop plants and the suitability of food crops for human consumption—even their appeal or lack of appeal to a housewife—are continuously under study.

Livestock research includes mainly the feeding, care and handling of stock, its protection from insects and diseases and the production of suitable market and breeding types. A limited amount of work has also been done on the production of new strains of animals. Research and study of processed products such as milk, butter, cheese and meat and of fruits and vegetables is a most active item in the scientific work of the Department. Storage of agricultural products creates many problems that call for constant study.

Chemical and biological research and experimentation is chiefly of an applied nature. The Department does not specialize in so-called fundamental research involving the discovery of basic scientific phenomena and laws but concentrates on the adoption of known processes and the application of such processes to specific aims. Some discoveries bordering on fundamental research however are occasionally made, and extension of research is also made to some degree into the basic field where certain information is lacking in applied science.