

and many other matters. This work is carried on mainly by the Science Service and the Experimental Farms Service. In addition to providing information on current production problems, the work is of paramount importance to the long-time well-being of agriculture.

Conservation of the soil is of basic importance to agriculture. Research in that field takes the form of soil surveys and study of methods for protecting and conserving soil resources and is carried on 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.

The Department has for many years conducted investigations into the control of insects and diseases of forest trees. The limited silvicultural work carried on has been done with the aim of maintaining a supply of trees suitable for planting on the prairies as shelter belts against the wind and to prevent soil and snow drifting. Basically, this is also a soil-conservation measure.

As might be expected, much of the research and experimental work carried on is concerned with crop plants for, after the soil itself, they 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. Their culture, their nutritional value and, in the case of food crops, their suitability for human consumption—even their appeal or lack of appeal to a somewhat discerning housewife—are continuously under study.

Work on live stock 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 mainly of an applied nature. That is, the Department does not specialize in so-called fundamental research involving the discovery of basic scientific phenomena and laws, but concentrates mainly on the adoption of known processes and the application of such processes to specific aims. At the same time, some discoveries bordering on fundamental research are occasionally made, and it is also found necessary to extend to some degree into the basic field where certain information is lacking in applied science.

Agricultural research, particularly in plant science, must be decentralized to a great extent for most problems must be studied where they occur. Apart from the value to farmers of having a local source of information, the experimental farms and science laboratories are widely distributed because the work can be done in no other way. In addition to the headquarters of the Experimental Farms Service at Ottawa, work is carried on at 28 branch experimental farms and 20 substations. Experimental work of local application is done at 162 illustration stations, 54 district substations and 11 fox and mink illustration stations. The work of the Science Service, centralized at Ottawa, is also augmented by about 100 laboratories throughout the country.