

Among innovations or discoveries in diagnosis or control of diseases and pests were: a fast, simple method of detecting little cherry disease throughout the growing season; the use of new computer technology to give early warning of grasshopper attacks on the prairies; and a reduction in the time required for diagnosis of rabies from 12 days to about five. Other highlights during 1975-76 included a method for estimating prairie wheat yields based on weather and climatic information; development of new techniques to improve nitrogen fixation by plants and reduce demands for nitrogen fertilizer; advances in remote sensing and aerial photography to gather agricultural data; development of a biological method of finding the energy value of feeds; and production of lambs on schedule every eight months using artificial insemination and synchronization of estrus.

The DREAM program — Development, Research and Evaluation in Agricultural Mechanization — moved into its second year, with the Engineering Research Service awarding nearly \$1 million in contracts to provincial governments, universities, and private agencies for the evaluation and design of machinery to improve farm output. One of the most successful projects was the production of a small tomato harvester designed by a tomato farmer in southern Ontario.

The New Crop Development Fund with an annual budget of \$1 million provided funds to assist the development of peanuts, vinifera grapes and disease-free geraniums in Ontario; baby carrots in Quebec; sunflowers in Saskatchewan; new barley varieties in Manitoba; forage oats in Alberta; and better rapeseed varieties on the prairies. Funds were also provided to carry out an evaluation of machinery and cropping systems for larger-scale grain crop production in Nova Scotia. In addition to continuation of most of these programs, new projects announced for funding in 1976 aimed at expanding the production of flax and winter rye in Saskatchewan, and establishing mustard crops and expanding mustard seed production in eastern Canada.

The Feeds Act was amended to cover changes in the livestock and feed manufacturing industries since the last revision of the act in 1960. The main change affecting farmers concerned on-farm feed mixing; federal inspectors now have the authority to check feeds manufactured on the farm to ensure that the ingredients do not leave residues harmful to health.

The Animal Contagious Diseases Act, renamed the Animal Disease and Protection Act, was amended in 1975 to strengthen Canada's animal health programs, already recognized as among the best in the world. Changes included improved compensation for farmers whose animals are slaughtered and farm supplies ordered destroyed in disease eradication programs; regulations covering zoos and game farms, and for humane care of animals in transportation; a requirement that foreign ships keep their meat lockers sealed while in Canada; and a broader definition of animals, to give the Health of Animals Branch authority over birds, bees and animal semen.

### 11.1.2 Agricultural regions

Climate, soil conditions and geography have combined to form several distinct farming regions in Canada. A harsh northern climate restricts most agriculture to the southern portion of the country and nearly all farms in Canada lie within 300 miles (483 km) of the southern border. In the Atlantic provinces and central Canada farming is limited to coastal regions and river valleys, and soils vary in depth and fertility. In the Prairie region soil is fertile but rain is light. Farming is limited to high plateaus and river valleys in the western mountainous region.

Farming is nonetheless an important business in Canada. About 169.6 million acres (69 million hectares) in 10 provinces are cultivated; 108.2 million acres (43.8 million ha) are improved land. Farm income exceeds \$5 billion annually and in 1973 agricultural exports exceeded \$3 billion for the first time.