

new crops in a given area, agrometeorology has become increasingly important. Particular attention is focused on new crops and outstanding success has been achieved; a highlight is the development of new varieties of rapeseed with oil quality-tailored to specification. More than 80 new varieties of crops have been developed and put into commercial production in the past 10 years, including almost all of the cereal crops produced in western Canada.

Feed grains and forage crops are receiving special attention for economical livestock production. The application of genetics to animal improvement and better animal nutrition are the two main avenues being explored to improve livestock production. More recently increasing emphasis has been placed on developing procedures to improve the reproductive efficiency of all classes of stock. Additional attention is also being given to the disposal of animal wastes, a problem that is increasing in severity as livestock concentrations become larger.

An aggressive battle is being fought to control crop diseases and pests. Although chemicals have proved to be a potent weapon, the added pollution has caused concern and other methods of control are now receiving greater attention. The development of resistant varieties, the use of parasites, predators, insect pheromones, and radiation-induced sterility and the destruction of insects by non-chemical means are all in the arsenal of research workers. In this, as in most other aspects of agricultural research, the team or inter-disciplinary approach is being used more and more.

Agriculture has made outstanding advances in the past quarter-century in increasing output per man. This has been made possible through farm mechanization on a large scale. To assist this advance, the Research Branch has expanded its agricultural engineering staff to deal with specific problems and to provide more liaison with universities and provincial extension officers. The Branch conducts a continuing soil survey in all provinces in co-operation with provincial departments of agriculture and with faculties of agriculture in universities; it also conducts a program of research on soil fertility and cultural practices, with a view to using agricultural soils most effectively and conserving them for the future.

In addition to research done by Branch staff, considerable co-operative work is undertaken with staff of university faculties and provincial governments. Through operating and extramural grants, support is given to research workers at universities. Close liaison is maintained with these agencies to avoid unnecessary duplication of programs and special attention is given to maintaining contact with provincial extension officers. Branch establishments across the country are represented on provincial committees concerned with making recommendations on crop varieties, fertilizers, cultural practices, pest control, animal management, and other problems. Such collaboration ensures that research results are made available to extension officers and to producers as quickly as possible.

The Production and Marketing Branch conducts many of the promotional and regulatory functions of the Department. Six specialized divisions administer legislation and policies in the production and marketing of livestock, poultry, fruits and vegetables, dairy and plant products, and policies concerned with the control of disease in plants.

The Livestock Division administers legislation dealing with the grading of meat, wool and fur, with the registration of livestock pedigrees, with performance testing of cattle and hogs and with the supervision of race-track betting. Other activities include the promotion of livestock improvement and the compilation of market statistics. The Poultry Division carries out the policies of the national poultry breeding program, including Record of Performance for poultry, and hatchery inspection, as well as administering the regulations for the grading of poultry products. The Fruit and Vegetable Division administers legislation having to do with the grading of fruit and vegetables in both fresh and processed form, and with maple products and honey. It is also responsible for the licensing of interprovincial and international dealers and brokers who deal in fresh fruit and vegetables.

The Dairy Division administers legislation covering grades and standards for dairy products, including butter, cheese, concentrated milk products and ice cream. The Plant Products Division administers Acts and Regulations respecting seeds, feeds, fertilizers and pest-control products, conducts field inspections of seeds and maintains regional testing laboratories for agricultural product samples taken by Branch inspectors. The Plant Protection Division is responsible, under the Destructive Insect and Pest Act, for safeguarding against the introduction of serious plant insects or diseases into Canada or their spread in Canada, for certifying freedom from disease and pests in plant exports, and for seed potato certification. Other