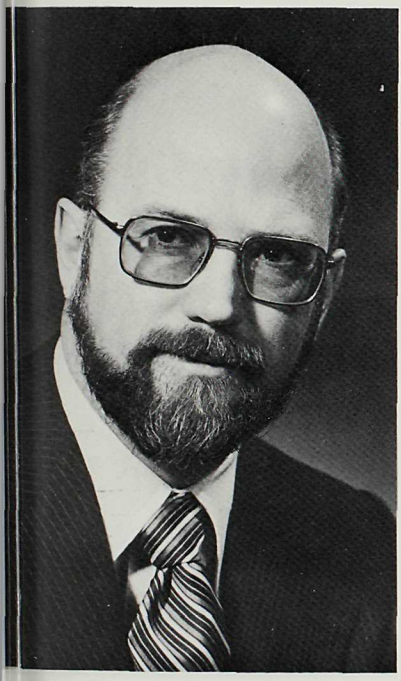

To Colonel the Honourable
HENRY P. BELL-IRVING, D.S.O., O.B.E., E.D.
Lieutenant-Governor of the
Province of British Columbia

MAY IT PLEASE YOUR HONOUR

I have the honour to submit for your consideration the Annual Report of the Ministry of Agriculture and Food for the year 1980.

James J. Hewitt
Minister of Agriculture and Food

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Report of the Deputy Minister

) the Honourable James J. Hewitt,
inister of Agriculture and Food

r:

I am pleased to present the 1980 annual report of e British Columbia Ministry of Agriculture and od. This report summarizes activities of your nistry for the twelve months ending December , 1980.

The year 1980 can be heralded as one in which ajor changes took place in the method of deliver- g ministry programs and services to farmers; anges that will improve ministry responsiveness farmer concerns and lay the foundation for creat- g and capturing new opportunities in the produc- n and marketing of British Columbia's agri- ltural commodities.

The expanded mandate of the ministry to in- ude the processing sector of the industry recog- es the economic importance of a vibrant and trepreneurial food processing industry to the ll-being of basic agriculture. The growth poten- l of the industry beyond the farmgate is enorm- s; the gains can be realized in this sector in the eseeable future which will help minimize British lumbia's dependence on outside sources of food. e ministry is now ready to meet this challenge.

The ministry also adopted in 1980 a new regional proach to program delivery with the establish- nt of five distinct administrative regions each ving a full complement of specialists and regional tension staff. I fully expect that this regional proach, combined with direct farmer involvement, will ensure a more balanced development of the province's agriculture and food industry.

In spite of several adverse economic factors such as escalating interest rates, higher cost of farm inputs and increased capital costs, the overall performance of British Columbia's agriculture and food industry was generally satisfactory. Yields of many crops, particularly apples, were excellent and in some cases surpassed all-time records. In the expanding livestock sector, hog production continued to make impressive gains. Although prices were adversely affected in some instances, ministry insurance programs helped ease the burden on farmers.

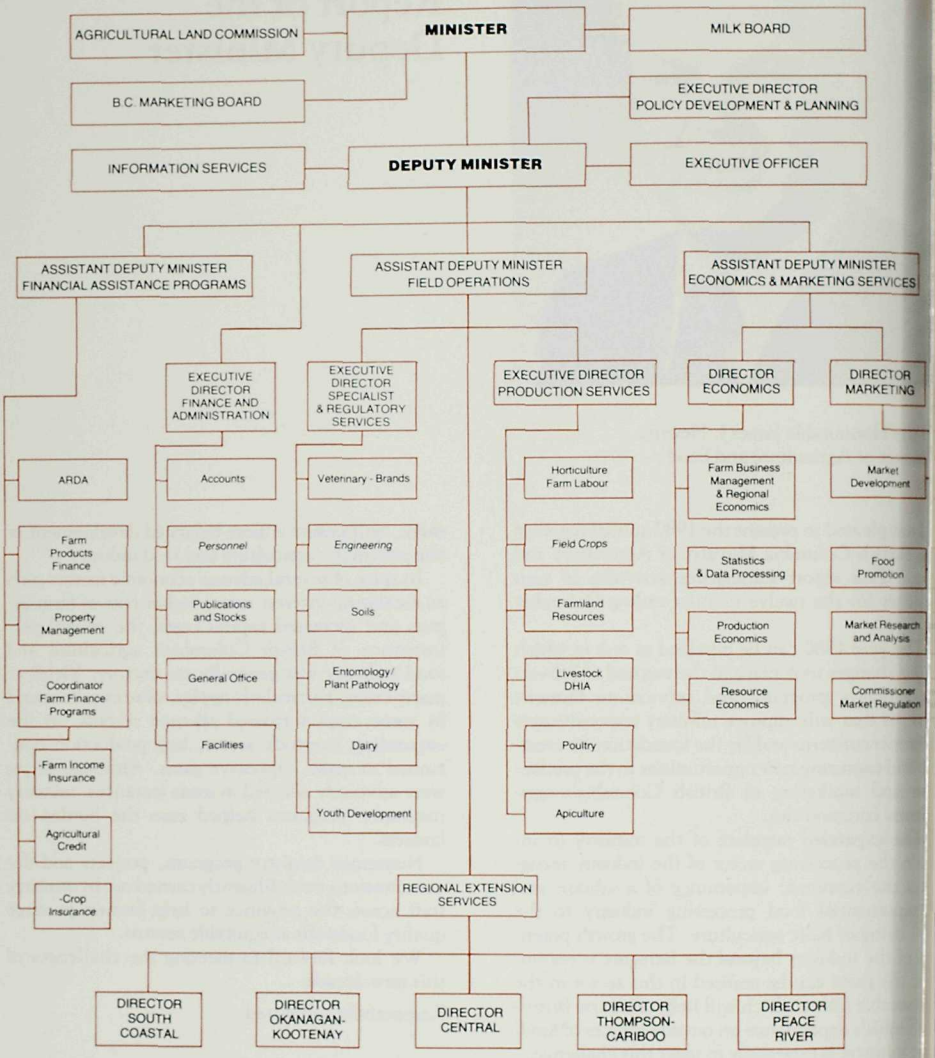
Numerous ministry programs, projects and demonstrations were diligently carried out by ministry staff across the province to help farmers produce quality foodstuffs at equitable returns.

We look forward to meeting the challenges of this new decade.

Respectfully submitted,

S.B. Peterson
Deputy Minister of Agriculture and Food

Organization Chart



Ministry Executive and Directors

1980

inister ..... Hon. James J. Hewitt
eputy Minister ..... S.B. Peterson
ssistant Deputy Minister Economics
and Marketing ..... Dr. G.A. MacEachern (appointed Sept./80)
ssistant Deputy Minister
Financial Assistance Programs ..... I.C. Carne
ssistant Deputy Minister Field Operations ..... E.M. King
xecutive Director Finance and Administration ..... J. Newman
xecutive Director Policy Development and Planning ..... D.M. Matviw
xecutive Director Production Services ..... R.L. Wilkinson (retired July/80)
M.G. Oswell (appointed Aug./80)
xecutive Director Specialist and Regulatory Services ..... R.J. Miller
egional Director Central ..... R.N. Kohlert (appointed Oct./80)
egional Director Okanagan-Kootenay ..... B.A. Hodge (appointed Oct./80)
egional Director Peace River ..... B.E. Baehr (appointed Oct./80)
egional Director Thompson-Cariboo ..... A.N. Isfeld (appointed Oct./80)
egional Director South Coastal ..... W.E.A. Wickens (appointed Oct./80)
griculture and Rural Development ..... J.R. Steele
gricultural Credit ..... M.K. Thompson
piculture ..... J. Corner
op Insurance ..... P.R. Humphry-Baker
airy ..... D.J. Blair
onomics ..... B.A. Hackett
gineering ..... T.A. Windt
tomology-Plant Pathology ..... Dr. H.J. O'Reilly
ecutive Officer ..... P.H. Pettyfer
rm Finance Programs (Coordinator) ..... J.E. Hall
rm Income Insurance ..... F.W. Morton (retired May/80)
S. Thomson (appointed Dec./80)
rm Products Finance ..... J.B. Phillips
rmland Resources ..... M.G. Oswell (to Executive Director Production Services, Aug./80)
J.D. Anderson (appointed Nov./80)
ld Crops ..... J.V. Zacharias
rticulture ..... A.C. Carter
ormation Services ..... R.A. Sera
estock ..... J.A. Pelter
arketing ..... D.A. Rugg
ultry ..... Dr. H.C. Carlson (appointed July/80)
operty Management ..... B.R. Richardson
ils ..... R.S. Bertrand
terinary ..... Dr. R.J. Avery
uth Development ..... D.E. Freed

Distribution of Farm Cash Receipts, 1980

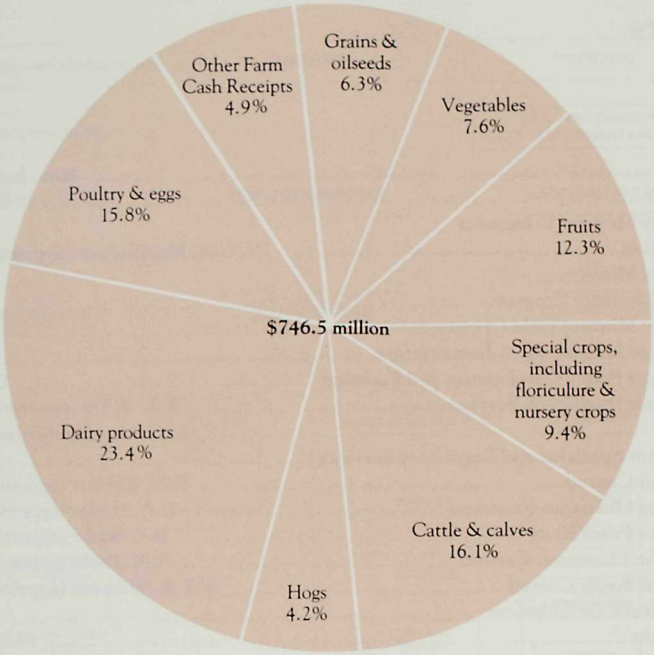


Table I Distribution of Farm Cash Receipts, 1980, British Columbia

	$mil.	per cent
Grains and oilseeds	47.7	6.3
Vegetables	56.6	7.6
Fruits	91.6	12.3
Special crops, including floriculture & nursery crops	70.1	9.4
Cattle and calves	120.0	16.1
Hogs	31.1	4.2
Dairy produce	175.0	23.4
Poultry and eggs	117.8	15.8
Other farm cash receipts	36.6	4.9
TOTAL FARM CASH RECEIPTS	746.5	100.0

Source: Statistics Canada, January 1981

1980 Agricultural Review

'arm Cash Receipts Tables I and II)

British Columbia's farmers experienced a rela-vely good year in 1980 in terms of both production d marketing. Farm cash receipts increased to a cord level of $747 million, 14.4 per cent higher an in 1979. Field crops cash receipts rose to $47.7 illion, a 61 per cent increase over the previous ar. There were impressive increases in all grains, rticularly wheat and barley, due to expanded reage and higher yields. Cash receipts from fruit les reached an estimated $91.6 million, up by .3 per cent from 1979. All tree fruits except erries recorded gains in production volume. Veg-ble receipts increased by 18.1 per cent, a marked provement over the previous year's performance. les of nursery stock and greenhouse increased by 9 per cent.

Cash receipts in the livestock and livestock pro-cts sector reached an estimated $464 million, an crease of 11.5 per cent from 1979 levels. Hog es were up by 54 per cent as the industry con-ued to expand under the influence of strong mand in the United States and Canada. Cash eipts from dairy products increased by 20.2 per nt to an estimated $175 million, due primarily to creases in prices and, to some extent, production. the other hand, sales of poultry meat dropped newhat, poultry in particular being affected by availability of pork at reasonable prices.

rm Operating Expenses Table III)

The cost of farm inputs continued to rise in 1980. gregate input costs rose more rapidly than the nsumer Price Index (C.P.I.), reflecting an in-ase in the price and growth in purchased farm puts. Production expenses for the year totalled 31 million, an increase of 17 per cent over 1979, ereas the (Vancouver) C.P.I. increased by 11.8 cent. Among the items that increased signifi-ntly were rent (up by 15.0 per cent), machinery penses (up by 11.1 per cent), fertilizer and lime by 14.5 per cent), feed (up by 27.9 per cent), ner crop expenses (up by 26.9 per cent) and erest on farm debt (up by 37.4 per cent). Some relief towards the cost of servicing farm debt was afforded by the Partial Interest Reimbursement Program, which in 1980 paid a record $23.3 million in interest reimbursement benefits to farmers on 1979 loans.

Farmland and Number of Farms

The area of cultivated farmland in British Columbia increased by 30,000 acres in 1980, to a total of 2,030,000. Associated with the expansion of acreage was the continued increase in farm numbers in the province, while most other provinces were experiencing declines. The total number of agricultural holdings in British Columbia in 1980 grew to 20,800, an increase of 200 over the number recorded in 1979.

Food Processing (Table IV)

The estimated value of agricultural commodities marketed by British Columbia food and beverage manufacturing firms in the period January - October 1980 was $1,604 million. This represented an increase of 18.1 per cent over the $1,358 million estimated for the same period in the previous year. As of July, 1980, there were 609 firms processing food and beverages in British Columbia, an increase of 80 over the total number recorded in 1979. Increases in the number of establishments occurred chiefly in slaughtering and meat processing, feed, dairy, and the flour and breakfast cereal industries.

Retail Food Prices

British Columbia's retail food prices rose 13.7 per cent in 1980. Major increases occurred in the prices of eggs (up by 18.0 per cent), dairy products (up by 16.2 per cent), and fruits and vegetables (up by 11.7 per cent). The overall increase in British Columbia, however, was below the increase in the national average for all food items.

Table II British Columbia Farm Cash Receipts, 1979-1980

	1979	1980*	Per Cent Change
Wheat	5 869	11 000	+ 87.4
Oats	1 233	1 860	+ 50.9
Barley	8 665	15 600	+ 80.0
Grain Stabilization Payments	1 600	—	—
Rapeseed	12 304	19 260	+ 56.5
Potatoes	10 423	11 900	+ 14.2
Fruit	82 307	91 600	+ 11.3
Vegetables	37 838	44 700	+ 18.1
Floriculture and Nursery	37 719	40 700	+ 7.9
Forage Crops	3 000	3 000	—
Other Crops	21 116	26 380	+ 24.9
TOTAL CROPS	222 074	266 000	+ 19.8
Cattle and Calves	115 150	120 000	+ 4.2
Hogs	20 171	31 100	+ 54.2
Sheep and Lambs	1 641	1 760	+ 7.3
Dairy Products	145 583	175 000	+ 20.2
Poultry	69 777	64 400	− 7.7
Eggs	46 239	53 400	+ 15.5
Honey	3 838	3 700	− 3.6
Other Livestock and Products	13 603	14 640	+ 7.6
TOTAL LIVESTOCK AND PRODUCTS	416 002	464 000	+ 11.5
Forest Products (farm woodlots)	2 406	2 290	− 4.8
Farm Income Insurance	3 885	5 231	+ 34.6
Dairy Supplementary Payments	8 264	8 810	+ 6.6
Deficiency Payments	7	186	—
TOTAL FARM CASH RECEIPTS	652 638	746 517	+ 14.4

Source: Statistics Canada, January 1981
*Preliminary Estimates

Table III British Columbia Farm Operating Expenses and Depreciation Charges, 1979 - 1980

	— Thousands of Dollars — 1979	1980*	Per Cent Change
Taxes	9 488	10 100	+ 6.5
Gross farm rent	11 391	13 100	+ 15.0
Wages to farm labour	71 919	75 300	+ 4.7
Interest on indebtedness	101 388	139 299	+ 37.4
Provincial interest reimbursement	8 251	23 299	+ 182.4
Net interest on indebtedness	93 137	116 000	+ 24.5
Machinery expenses	52 942	58 800	+ 11.1
Fertilizer and lime	19 300	22 100	+ 14.5
Other crop expenses	23 954	30 400	+ 26.9
Feed	101 666	130 000	+ 27.9
Other livestock expenses	20 920	18 400	− 12.0
Repairs to buildings	9 763	10 300	+ 5.5
Electricity and telephone	10 859	11 600	+ 6.8
Miscellaneous	29 014	35 400	+ 22.0
TOTAL OPERATING EXPENSES	454 353	531 500	+ 17.0
Depreciation on buildings	21 280	25 100	+ 18.0
Depreciation on machinery	46 693	53 800	+ 15.2
TOTAL OPERATING EXPENSES AND DEPRECIATION CHARGES	522 326	610 400	+ 16.9

Source: Statistics Canada, January 1981

*Preliminary Estimates

Table IV Number of Food and Beverage Industries, British Columbia, 1980

Slaughtering and Meat Processors	106	Biscuit and Confectionary Manufacturers	16
Poultry Processors	17	Nuts	10
Egg Processors	21	Bakeries	39
Fish Products Industry	100	Sugar and Honey Processors	20
Fruit and Vegetable Canners, Preservers and Frozen Fruit and Vegetable Processors	67	Miscellaneous Food Processors	55
Dairy Products Industry	42	Soft Drink Manufacturers	19
Flour and Breakfast Cereal Processors	15	Distilleries	6
Feed Industry	64	Breweries	7
		Wineries	5
		JANUARY 1981 TOTAL	609

Policy Development and Planning

The policy development and planning division is responsible within the ministry for the development, analysis and evaluation of government policies and programs, and development strategies for the agriculture and food industry in the province.

Economic Factors

1980 was characterized by significant elements of instability in the national economy, and the division's activities were heavily oriented towards evaluating the impact of these economic factors on British Columbia farmers. Dominating the issues that affected the economic environment of British Columbia farmers were increases in interest rates in Canada to unprecedented levels, following the pattern in the United States; increases in national energy prices and the possibility of fuel shortages; an escalation of land prices as speculation and hedging established new levels of price expectation; and a rise in wage levels.

The ability of the government to stabilize the provincial economy is limited owing to the interdependence with other economies, both within and outside Canada. These interdependencies tend to limit the level of assistance that can be extended to farmers and place greater emphasis upon effective planning within the agricultural sector by government. Improved planning should enable the ministry to foresee future problems and ease the adjustment process of farmers, as well as create new opportunities that farmers can profitably exploit.

With an eye to its planning responsibilities, the ministry undertook several initiatives in 1980 to improve its capacity to react to emerging opportunities and complexities over the next decade. The ministry's mandate was broadened to include a direct interest in the vast food processing, distribution and retailing sector of B.C.'s food production systems. Economic and marketing services of the ministry were strengthened and regional administration was implemented to provide a strong framework for regional planning and program evaluation.

Division Programs

The activities of policy development and planning during the year were directed mainly at helping to resolve problems and issues bearing significantly on the British Columbia farmers' operatin costs. Work was also directed toward aiding th long-term planning efforts of the ministry. Th major activities can be grouped under the division principal areas of responsibility as follows:

a) **Policy Development and Analysis** - Feder and/or provincial policy proposals with respe to statutory rates on export grain, feed freigh assistance, the emergency allocation of energ supplies in the event imports are disrupted, th economic union of the provinces under a ne constitution, and the foreign ownership of farm land were some of the issues studied to dete mine their impact on agriculture in the pr vince. Advice was provided to senior manag ment or to other ministries and agencies seekir inputs for the development of a provinci position.

A major activity during the second half of th year related to the B.C. Hydro Site C Reserv project. Staff assisted independent consultan (appointed by the Environmental Land U Committee Secretariat) to estimate the size the agricultural resource loss resulting from da construction and flooding, and to organize internal ministry working committee to devel a submission in support of compensation for t social loss that may be created by the dam. T material was prepared for presentation at publ hearings to be held by the B.C. Utilities Co mission.

b) **Strategic Planning** - The ARDSA project compile regional profiles and develop a pil plan for the Peace River Region was successful completed to the final draft stage. The profile when published, will provide useful sources information to field staff when servicing f mers; to the general public who seek reliab data at a subprovincial level; and to manag ment in developing strategic plans for the f newly created administrative regions. The pil plan should help determine appropria methods and procedures for regional plannir Also, with a view to developing criteria for t evaluation of ministry programs, staff assist with a sample evaluation of the ALDA p gram.

) **Economic Analysis** - Efforts to improve the methodology of analysis and planning included a proposal to construct an agriculturally oriented input-output model of the British Columbia economy. The model should lead to a more precise understanding of the inter-relationships between the various agricultural subsectors, and between the agricultural sector as a whole and other industry and service sectors in the provincial economy. It should also be a highly useful tool for the internal evaluation of ministry programs, and an aid to the development of strategic plans for regions and commodities.

d) **Interdepartmental Liaison** - Policy development and planning provided staff for several inter-ministerial technical committees, notably the planning processes committee; the environment resource land use working committee of the energy project coordinating committee; the working group on socio-economic approaches for allocating Crown land; the cost-benefit working group; the working group on compensation and mitigation of social and environmental impacts; and the emergency supplies allocation program working group.

Executive Officer

The executive officer is responsible for the consolidation of legislative matters within the ministry. In 1980, 51 orders-in-council were processed relating to 19 acts.

During the 1980 session of the Legislative Assembly, the following agricultural legislation was enacted:

Ministry of Agriculture and Food Act, replacing the Ministry of Agriculture Act and allowing an expanded mandate for the ministry.

Livestock Act, which updates and consolidates the Animals Act, Livestock Production Act and Livestock Act (1979).

Livestock Brand Act, which replaces an outdated statute of the same name.

Amendment to the **Livestock Protection Act,** which allows regional districts to retain the sections of the act considered necessary for effective dog control while exempting them from the remainder of the act.

The executive officer serves as secretary to the British Columbia Agricultural Aid to Developing Countries Advisory Committee which, during 1980, recommended support for 29 projects and seven disaster operations in 21 countries sponsored by 17 charitable organizations.

The executive officer is responsible for the administration of the ministry's policy of financial assistance to many agricultural associations. Under this policy, operating grants were given during 1980 to fair and exhibition associations, the Provincial Women's Institute, district farmers' institutes, and others. As superintendent of farmers' institutes, he provided a liaison between their members and the ministry and organized the annual meeting of the Farmers' Institutes Advisory Board.

Additional duties of the executive officer included that of secretary at senior management meetings and secretary to the B.C. Agricultural Services Coordinating Committee. This committee, through direction of six lead committees, maintains a watch on agricultural research, education and extension activities in the province and encourages the organization of seminars, workshops and projects to identify and overcome problems of importance to the agricultural industry.

Information Services

Farmers in British Columbia continuously look for new ways to produce food of superior quality and at reasonable cost. They are eager to learn about cost-saving techniques, marketing innovations or new varieties that will boost yields and provide the consumer with a nourishing, attractive commodity at a reasonable price.

The ministry's corps of production and management specialists communicate daily with farmers in a variety of ways: personal contact, articles in the press and on radio, publications, farm demonstrations, seminars, direct-mail newsletters, and so on. The ministry's information services branch plays its major role at this communications stage.

Although the ministry/farmer communications link remained as the branch's major informational role in 1980, more effort was directed to informing the public of the significance of a prosperous agriculture and food industry in B.C.

During 1980, branch programs were carried out in two distinct areas:

1. Technical information services for farmers, and
2. Public relations projects aimed at rural and urban audiences

Technical Information

Publications, brochures, pamphlets, factsheets, feature articles for farm press, films and slide-tape presentations were prepared to inform farmers of ministry services or new production techniques that would increase output as well as farm income.

Numerous publications were prepared in 1980, one of which was a colour booklet describing the control and damaging effects of knapweed, a noxious weed that threatens the productive use of large tracts of range in B.C. Work also began on an update of the ministry's Agricultural Services Guide booklet which will describe the ministry's reorganization into a regionalized system of program delivery.

The 1980 Production Guides, the major series of annual publications published by the ministry, were printed and distributed to producers of greenhouse crops, tree fruits, grapes, mushrooms, vegetables, nursery crops, berries, and field crops. At mid-year, arrangements were made to have the manuscripts typeset onto computerized magnetic disks. This innovation enabled the manuscripts to be reviewed and corrected more quickly and with considerably less chance of error in preparation for the 1981 editions. With the installation in late-1980 of word processing equipment in the branch's Victoria office, necessary text changes in future editions of the Production Guides will result in substantial time savings at the editing and proofing stages.

The word processing equipment was also used to prepare many of the increasingly popular factsheets which include Agrimarket Reporter, Engineering Notes, Farm Business Management, Field Crop Facts, B.C. Food Markets, Pest Control Notes, Stock Talk, Soils Notes, Animal Health Information and Poultry Facts. These factsheets were distributed to farmers either through the ministry's district and regional offices or direct to farmers on a commodity mailing list.

Numerous feature articles describing new ministry projects such as the innovative bird control devices, pesticide seminars, renewed income insurance programs, etc. were prepared and sent to the farm media.

Several films and slide-tape presentations were completed on technical topics including the benefits of feed testing, the advantages of finishing beef on forage rations, irrigation systems, automated feeding systems in dairy barns, knapweed control, and the ministry's rangeland reseeder.

Advertisements were placed in newspapers and on radio to alert farmers of ministry-sponsored seminars, deadlines on financial assistance programs, new programs and regulations.

Public Relations

Simultaneous to the announcement in mid-198 of the ministry's expanded agriculture and food mandate, a colourful publication entitled "Agriculture and Food - A New Mandate" was printed and distributed to the media, industry and farm community across Canada. The booklet outlined the ministry's commitment to the food processing and marketing segment of the industry beyond the farmgate. It also described new ministry objectives within the context of provincial agriculture resources to meet more of the province's future food needs.

A total of 60 news releases were issued during 1980 to advise the rural and urban audience of current agricultural trends, changes to ministry programs, new staff, and new policies affecting the agriculture and food industry.

An additional 57 news releases were prepared to describe projects approved under the federal/provincial ARDSA program.

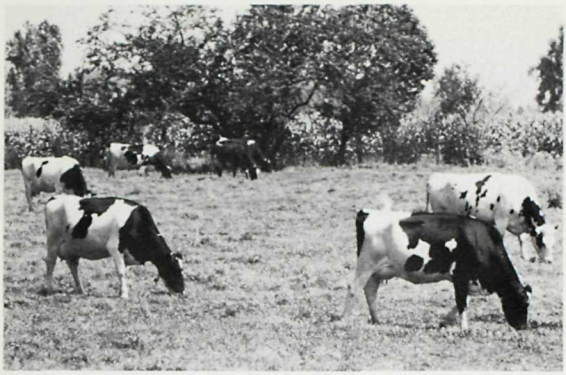
Audio-visual presentations and feature articles ere prepared to inform the non-farm audience of ıe significance of B.C.'s agriculture and food sec- ɔr. Articles were sent to dailies, weeklies and spe- al trade magazines such as the New Westminster 'olumbian, the Financial Post, B.C. Business, and ıany others. Revisions were made in the ministry's Food in Perspective" slide-tape presentation to flect the ministry's new regional structure. The lm "Prey for Predators" was completed and used idely throughout the province to inform ranchers ıd the general public of correct predator manage- ent methods. A slide-tape presentation entitled Finding a Balance" was started in mid-1980 and will explain the impact and need for the judicious use of pesticides combined with integrated pest control methods in modern agriculture.

A 15-minute film interview with a part-time and full-time B.C. farmer was completed for presentation at the annual Canadian Agricultural Extension Council conference in eastern Canada. The film depicted the farmer's view of ministry services related to their part-time and full-time farm operations.

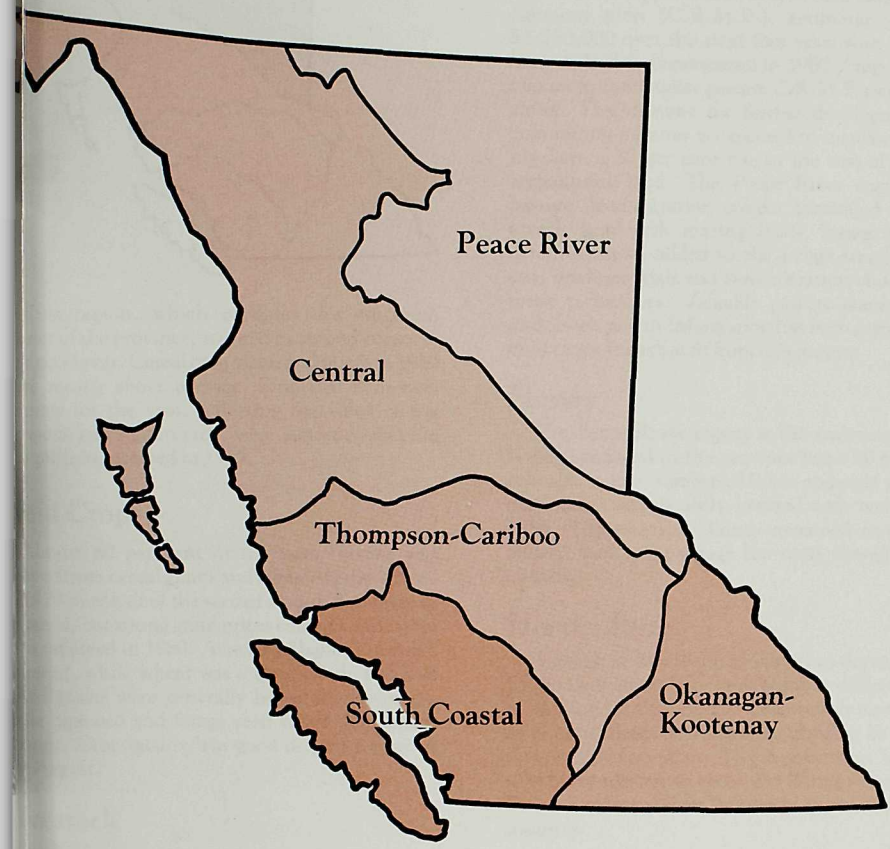
A large display depicting the diversity of B.C.'s agriculture industry was designed and installed at the B.C. Ferry terminal at Tsawwassen.

s display, titled "Our Neighbours in the Country", at the Tsawwassen ferry terminal was aimed at giving urban travellers an appreciation for the . agriculture and food industry.

Assistant Deputy Minister Field Operations

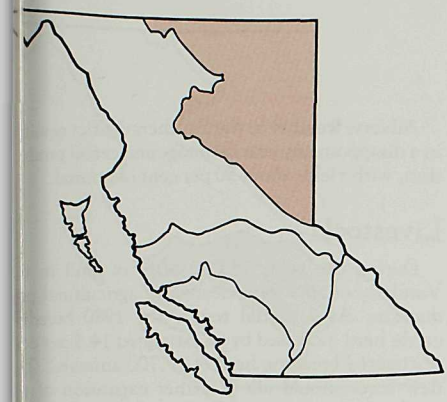


egional Extension Services.



s part of the ministry's reorganization in 1980, province was divided into five administrative ons — Peace River, Central, Thompson-boo, Okanagan-Kootenay and South Coastal ased on agricultural cropping areas and natural daries. Each regional director, appointed in October 1980, administers his region's district offices and directs extension program development in the region. District agriculturists and horticulturists provide the major extension contact with farmers and ranchers, with support from ministry specialist staff.

Peace River



This region, which occupies the northeast corner of the province, enjoyed its second consecutive good year. Cereal crop yields and prices in 1980 were mostly above average. Estimated farm cash receipts for the year, reflecting the value of the previous year's grain crop, were almost double the $5 million received in 1979.

Field Crops

Almost 80 per cent of the farm income was derived from cereal grains and rapeseed production. In 1979 over half of the seeded acreage had been in rapeseed, but strong grain prices caused a shift away from rapeseed in 1980. Acreage of barley exceeded rapeseed, while wheat was a close third. Yields of cereal grains were generally better than average, while rapeseed and forage seed yields were below average. Crop quality was good despite a frost in late August.

Livestock

Beef, sheep, poultry and dairy numbers remained similar to those reported in1979 despite soft marketing conditions. The lack of a strong local market for sheep continued to hinder development of that industry. Dairy producers in the North Peace area faced increased competition in local markets due to increasing imports of fluid milk from other parts of the province. A similar situation affected local marketing of poultry products.

Extension activities for the livestock industry included farm visits or office consultations, financial management courses presented by the economics branch for swine and beef producers and a seminar and field day on branding presented by the brands division of the veterinary branch.

Development of community pastures continued in 1980 with $292,000 of ARDSA funds spent on six of the seven pastures in the Peace. A total of 10,602 head of cattle were pastured during the year, approximately 25 per cent of the total cattle in the region. The Upper Cache coordinated range management plan (C.R.M.P.), estimated to cost $1,750,000 over the next four years with support from ARDSA, commenced in 1980. Proposals for two more community pasture C.R.M.P.s were prepared. The demand for further development of community pastures is expected to increase resulting from a 30 per cent rise in the cost of deeded agricultural land. The Peace River community pasture demonstration project continued into its fourth year with grazing trials, forage nursery demonstrations added to the forage sample analysis, fertilizer trials and demonstration of development techniques. Valuable pasture management and development information has been gathered by field crops branch staff from this project.

Honey

The Peace River region is the major source of honey produced in the province but a 20 per cent cutback in the number of hives and only average production significantly lowered cash receipts in 1980. The prices for honey remained strong but labour, fuel and package bee costs slowed development.

Horticulture

Acreage in horticultural crops has decreased by 75 per cent since 1975 largely due to difficulties in marketing locally and the uncertain future of the river benchlands scheduled for flooding by hydroelectric developments. The appointment in 1980 of a horticulturist to serve the Prince George and Peace Regions will be helpful in rejuvenating the industry.

Special Activities

Extension services staff were involved in a variety of special assignments or activities including the hosting of the B.C. and Alberta Farm Writers Tour, initiation of a dugout-filling pump program with the assistance of the engineering branch, production of broadcasts three times each week on radio stations in Fort St. John and Dawson Creek, organization of a seminar dealing with oil industry-agriculture conflicts and, in cooperation with field crops branch, the first ever field day for farmers in Fort Nelson.

Central

The Central region, comprised of the agricultural districts of Smithers, Vanderhoof, Prince George and Quesnel, covers a large geographic area with a wide diversity of climatic and soil types. The agricultural industry is expanding with numerous new entrants into the industry. District agriculturists in each district are supported by a staff of regional specialists located in Prince George and by provincial specialists.

Field Crops

Forage yields were generally good for the Prince George area but of variable quality because of harvest conditions. There was a surplus of hay in the Prince George area. Cereal acreage for grain and silage increased in the Prince George and Robson Valley areas. Field barley was produced and sold locally. Rapeseed growers in the Robson Valley produced an excellent crop for export.

At Vanderhoof renewed interest has developed in cereal production primarily for silage. Of 10,000 acres in cereal production, 10 per cent was harvested as grain and the remainder as silage. The grain met about 10 per cent of a keen local market.

The wet autumn in the Quesnel area caused deterioration in the hay quality, depending on local circumstances. *Verticillium* wilt is proving to be a serious disease in alfalfa fields under moist conditions. Cereal acreage may increase due to more land being cleared and the use of cereals as a rotation crop where disease is a problem in alfalfa stands. Knapweed is a key concern of this district and plans are underway to increase the control measures. There were 12 acres of horticultural crops produced in the Quesnel area plus 106 acres of seed potatoes.

Adverse weather in the Smithers district resulte in a disappointing year for forage and cereal produ tion, with yields about 50 per cent of normal.

Livestock

During the year, 18,000 acres of land in th Vanderhoof area were cleared for agricultural pr duction. As a partial result, the 1980 breedir cattle herd increased by an estimated 14.5 per cer (estimated breeding herd of 15,700 animals). Th new acres should allow further expansion of th beef sector.

In the Prince George area the community pa tures were stocked to capacity. There was a kee interest in future expansion of some of the pastur facilities. Ninety per cent of the farmers in th district reported having some livestock.

At Smithers, summer range was a limiting fact to any increase in livestock numbers. Dairy produc tion in the district increased by 8.7 per cent fro the previous year.

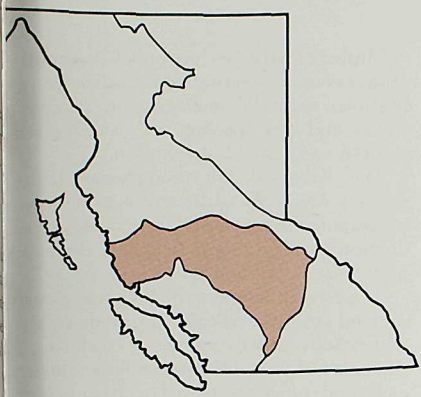
Horticulture

The establishment of a vegetable grading an packing facility at Telkwa prompted the growing 150 acres of horticulture crops such as broccol cauliflower, carrots, parsnips and rutabagas. Ap proximately $10,000 worth of vegetables were pr duced in 1980 with indications that there would b 300 acres in production for the 1981 season o farms from Burns Lake to Terrace.

Staff Activities

The extension activities of the region are geare to providing a broad range of support to a deve oping farm population. The district agriculturis conducted office consultations and farm visits. I conjunction with regional staff, demonstratio were held on topics such as land clearing, livesto management, forage and cereal variety trials, wee control, fertilizer correlation and fertilizer respons Cooperative extension programs were conducte with the University of British Columbia and th College of New Caledonia. The close working rel tionship continued with the federal research st tion at Prince George.

'hompson-Cariboo



The Thompson-Cariboo region, with offices at mloops and Williams Lake, encompasses a large tion of the province's open rangeland. Beef cat- enterprises comprise about 90 per cent of the ion's agricultural activity and represent about 40 cent (1976 census) of the provincial beef herd. alfa hay farming, corn production and fruit and etable enterprises, with the benefit of irrigation, ntribute to the area's agriculture industry.

eld Crops

Although May to September rainfall was approx- tely 170 per cent of normal, it came too late to enish irrigation reservoirs for the season, forc- some cutback in corn acreage and allowing only ial irrigation of some hay fields. Fortunately, a g frost-free season allowed corn to mature and to be cut late, resulting in the storage of ade- te winter feed.

vestock

Depressed cattle markets and increased produc- n costs discouraged any increase in the size of the f herd. The co-op sale yards reported a decreased rly volume of 13.5 per cent through the Wil- ns Lake yard and four per cent through the nloops yard. Fewer steers than cows and heifers e sold through the yards; cows and heifers were ng to feed yards rather than breeding herds. A ll number of new feed yards were built but the nber of calves being held for backgrounding did increase.

Horticulture

Horticultural production increased slowly and steadily in the Kamloops district. A vineyard has been established at Basque; this producer was also growing field tomatoes and melons. A vegetable seed enterprise was started at Pritchard.

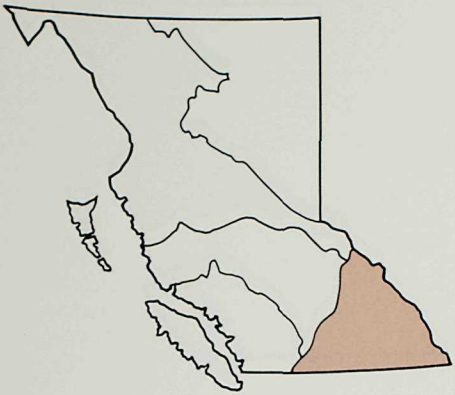
Programs

In the Williams Lake district, Agricultural Land Development Act funds requested to clear land exceeded funds requested to establish irrigation. In the Kamloops district, the reverse was true.

Activities

Regional extension services staff continued to provide a high standard of service to agriculture and the community. Individual consultation was popular with clients and staff as indicated by the large number of office visits and farm calls in both districts. In cooperation with other branches, Agriculture Canada Research Station and producer groups, staff members conducted and assisted with trials and demonstrations, designed to evaluate and demonstrate the benefits to their districts of crop varieties, fertilizer response, management practices, irrigation techniques, range seeding and others. The regional extension staff represented the ministry on a number of committees, dealing with resource management regional planning and problem wildlife.

Okanagan-Kootenay



The Okanagan-Kootenay region takes in the southeast corner of B.C. and encompasses eight district offices. The regional office is located at Summerland.

Tree Fruits

Production of apples in the region reached an all-time high of 450 million pounds. Pear and prune yields were up substantially although sizing problems in Bartlett pears caused economic loss. Weather problems caused significant losses in the fresh market for cherry producers; fortunately the cannery market was strong and 48 per cent of the crop was diverted for canning.

Over 19 million pounds of peaches and about 7 million pounds of apricots were harvested with good returns.

Extensive grower participation in the ministry-sponsored farm income insurance program was expected to help alleviate cash flow problems prevalent among growers.

Orchard land prices which averaged $2500-$3000 per acre in 1972 approached $20,000 per acre in 1980. Although beginning farmers suffer hardship, some of the established producers have purchased additional planted acreage or brought new land into production.

Production levels are expected to rise with improved cultural techniques, rejuvenation of old plantings and the coming into production of new plantings. Additional controlled atmosphere storage for the crop, partially funded by ARDSA, was expected to help stabilize markets resulting from this increased production.

Ministry extension personnel presented man grower courses covering topics such as sprayer cali bration, financial management, pruning, roo stocks and row spacing, soil sampling and lea analysis and pesticide application.

The chautauqua television program for tree frui growers was replaced by a new grower educatio program featuring classroom lectures, printed pro duction guides, on-farm field days, demonstratio plots, newsletters and radio broadcasts.

The establishment of the B.C. fruit growers' tes orchard at Oliver reflects a total industry approac which will, under commercial conditions, reflec the latest in production technology. Ministry offi cials and programs played a major role in thi development.

An irrigation scheduling program to optimiz water use, involving 43 growers and 425 acres o production, proved successful and was to be ex panded in 1981.

The ministry's apple and nursery specialis worked closely with six nurseries involved in th B.C.F.G.A. budwood program. During the yea 240,762 one-year-old trees were certified as to vari ety under this program. A new opportunity existe for nectarine production and a ministry progra was started to find a satisfactory variety. Th ministry coordinated research into nematodes an their potential economic consequence to tre fruits.

Vegetables

Although the vegetable industry was expandin in the region, production of "heat loving" crop declined due to weather conditions while root an cole crop production was excellent. Amalgamatio of the Interior Vegetable Marketing Board and th British Columbia Coast Vegetable Board occurre in July.

The B.C. Asparagus Growers' Association use the ministry's asparagus production incentive pr gram to encourage producers to expand their plant ings. Ministry specialists organized seminars an field days with the association resulting in applic tions to bring an additional 130 acres into pr duction.

Expanded vegetable variety evaluation progra were carried out by the ministry and cost of produ tion studies for field tomatoes, peppers and swe corn were underway.

ivestock

Dairy production during the year was stable; in-rest was developing in sheep production; more lves were being "fed out" and there was a signifi-nt expansion in the swine industry.

ield Crops

Forage crop, field corn and cereal grain crop reages continued to expand. Programs to dem-strate better management practices were pre-nted and variety trials were underway throughout e region. Weed control caused increasing con-rn and required more support from local agencies government. Ministry officials in cooperation th local livestock associations, initiated a com-ehensive Russian knapweed control program.

Field personnel set up trials of *Verticillium* wilt resistant alfalfa varieties and emphasized better management in a region-wide alfalfa management seminar. Stem nematodes in alfalfa were also given attention.

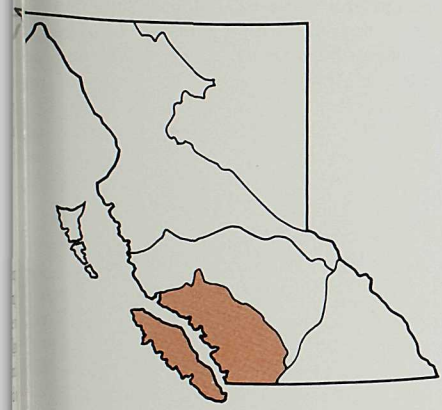
Corn ear smut in the North Okanagan was also detected during the year.

Staff Activities

Ministry officials acted closely as advisors on two effluent waste projects (Vernon and Cranbrook). A beef feeding guide was produced and livestock and crop production courses were carried on throughout the region.

District agriculturists in the region found increased demands on their time for participation in coordinated resource management planning, completing ALDA applications and resolving resource use conflicts.

outh Coastal



he south coastal region, which generates ap-ximately 58 per cent of the total farm cash eipts for British Columbia, encompasses the ncouver Island and Fraser Valley (including the Paberton Valley) areas. District offices are lo-ed at Duncan, Courtenay, Cloverdale, Chilli-k and Abbotsford (regional office).

Veather conditions in 1980 were generally mer and wetter than usual with record precipi-on occurring throughout the region. Unusually cool, wet weather during May, June and July (188 per cent and 197 per cent of normal respectively), resulted in heavy losses to berry crops, delayed hay operations and generally slow crop growth. The early fall season was warm and dry, which helped efforts to complete the delayed harvest and adjust field work schedules. At year end, above normal temperatures and heavy rainfall caused some flooding throughout the region.

Horticulture

Record production levels were achieved and expansion of plantings continued in many commodities. The small fruit industry witnessed record yields and increased mechanization and acreage. The strawberry crop exceeded 15 million pounds and raspberries 17.5 million pounds. Both blueberry and cranberry production levels were normal, with a 60 per cent increase being forecast for cranberry production over the next two years. However, problems associated with quality, fruit rot, labour and marketing created concern for raspberry and, to a lesser degree, strawberry production. The advent of unionized labour and shortages of pickers resulted in the use of 60 mechanical raspberry harvesters in 1980 (11 in 1979). The major

disappointment of the 1980 production year for berry and small fruit crops was the distress selling of raspberries. As processors underbid each other to sell their packs, the price fell from 60 cents to 37 cents per pound.

Vegetable production was slow, coupled with a high occurrence of disease and heavy competition from weeds. While prices received for crops were generally good, reduced yields and harvest delays upset continuity of supply resulting in importations and loss of market. Mushrooms fared better with both satisfactory prices and a vigorous new grower-owned cannery.

Field Crops

Forage crops suffered during the late spring and early summer as the cool, wet weather limited planting and harvesting operations. Adequate hay and feed supplies were eventually secured, although quality was lacking and feeding adjustments had to be made. On the positive side, the wet weather favoured an excellent pasture season which helped reduce pressure to feed stored winter feeds.

Livestock

The dairy industry had a steady year; milk prices were increased to offset increased production costs. Beef cattle, aided by good pasture, had good weight gains and weaning weights. Cattle prices at local markets were fair to average. Interest and activity in veal production were renewed and a new veal producer organization was formed. The pork industry continued to increase its production in spite of depressed prices during 1980. Two diseases, transmissible gastro enteritis and hemaphilus pneumonia, occurred for the first time in the region and caused concern. Remedies associated with the problem of siting hog operations and other intensive livestock operations were pursued through the green zone program. Steady growth was evident in the poultry industry although problems associated with processing facilities and high feed costs caused concern during 1980.

Staff Activities

Extension staff assisted producers through on-farm consultations as well as development and implementation of a range of extension programs, production courses, field days and trials. Much of the extension activity revolved around core committees of ministry education committees of staff and producers. These committees function in three commodities: forage, swine and dairy. The horticulture activities involved primarily horticulture branch staff working directly with various grower groups and associations. Jointly organized extension programs with various associations, agribusiness and community colleges were also carried out.

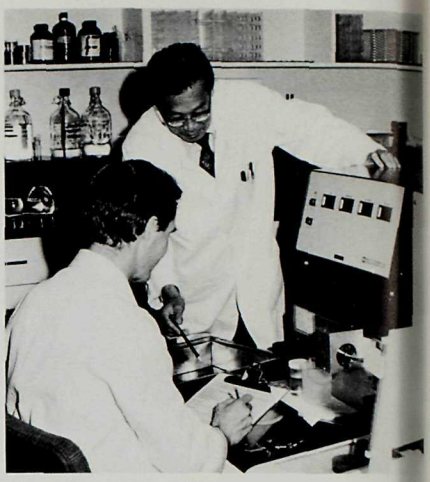
Specialist and Regulatory Services

Dairy

Consolidation within the production sector of the dairy industry continued in 1980, but at a much slower pace than in the past. The number of approved dairy farm premises decreased by only six, compared to 31 during 1979 and 51 in 1978. Nevertheless, farm milk sales from the combined milk board areas of production increased by 5.1 per cent to 443.7 million litres. The provincial dairy herd increased by 3.6 per cent to 114,000 head of dairy cows and heifers. Production from the 1,129 dairy farms was processed in 37 licensed dairy plants.

Fluid milk retail sales in milk board areas of production increased by 2.7 per cent to 292.9 million litres. Butter production was down 13.8 per cent or 370 tonnes at 2,303 tonnes. Cheddar cheese production was up 6.5 per cent from 2,096 tonnes to 2,232 tonnes. Ice cream mix production of 20,417 kilolitres was up 4.3 per cent over 1979.

Farm cash receipts from the sale of dairy products were estimated at $175 million. Milk used in fluid retail sales increased by $4.50/hL to $46.683/hL for December, 1980. The butterfat differential was 35¢/kg at year end. Supplementary payments to dairymen from the Canadian dairy commission program were estimated at approximately $10 million. The target price for industrial milk was $34.61/hL from August 1980. The industrial milk subsidy remained at $6.03/hL.



Over 300,000 milk samples were analyzed at the Dairy Laboratory in Burnaby during 1980.

The milk quality program was continued with inspection of premises and equipment, plus regular monitoring of farm milk and finished product quality. Farm premises, transportation facilities, dairy plants and depots were inspected for compliance to sanitary standards. Over 300,000 milk samples were analyzed at the dairy laboratory. A province-wide survey was again completed for contaminants in milk. The following penalties for sub-quality milk were applied in 1980, with 1979 figures in

Table I Five Year Production/Fluid Utilization Summary For Milk Board Areas

Year	Milk Production	Quota Milk	Fluid Sales	Per Cent of Production	Per Cent of Quota
	— Millions of Litres —				
1976	386.4	301.5	254.2	65.7	84.3
1977	398.2	307.1	261.4	65.6	85.1
1978	399.8	314.3	272.5	68.1	86.7
1979	422.2	329.8	284.9	67.5	86.4
1980 (est)	443.7	346.4	292.9	66.0	84.5

lackets: warning letters were issued to 176 (464) producers while 107 (128) producers were levied a tal of $43,105 ($37,939). Penalty funds were rned over to the dairy products promotional fund mmittee. The quality of finished dairy products as monitored regularly: 96.2 per cent (96.7 per cnt) of all products tested complied with requirements for the standard plate count and 90.3 per cnt (91.6 per cent) were in compliance of coliform requirements.

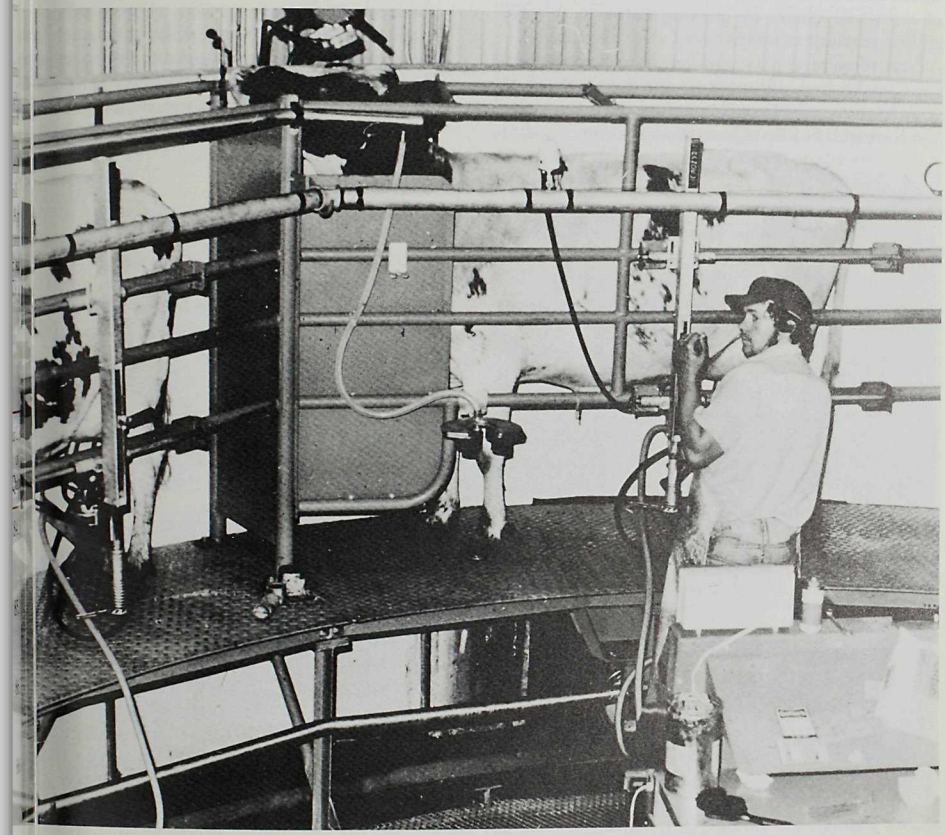
The mastitis control program was continued, with testing of 10,144 cows in 170 herds. The B.C. Federation of Agriculture continued to financially support a field technician to take milk samples for diagnostic analysis at the veterinary laboratory.

The dairy laboratory provided analytical services for the dairy goat herd improvement program. In its initial year, 2,021 samples from 39 herds were tested. This program is organized by the Canadian Goat Society with test results being reported to MacDonald College, Quebec, for data processing.

Agriculture Canada was provided with laboratory analytical services for the R.O.P. dairy program. A contract for 22,500 samples was signed and first samples were tested in August. It is anticipated that central testing of R.O.P. samples will increase because of the laboratory capability to perform multiple component analysis and the probability of being able to report somatic cell counts.

The illegal sale of raw milk continued to be a risk to public health. One violator was charged and fined in court and numerous complaints were investigated.

A new dairy processing plant was completed and equipped to process dairy products with ultra high temperature (UHT) in order to provide consumers with milk that does not require refrigeration.



Raw milk sales increased by 5.1% to 443.7 million litres in 1980.

DATE (Demonstration of Agricultural Technology and Economics)

The DATE (Demonstration of Agricultural Technology and Economics) program continued in 1980 to fund projects aimed at demonstrating new advances in agricultural technology.

Virus-free grape plants of selected varieties were produced at the Saanichton Research & Plant Quarantine Station utilizing a newly developed tissue culture technique. The system significantly reduces the time required to produce a large number of virus-free plants by growing cuttings in controlled nutrient solutions.

Virus-free seed potato propagation greenhouses were established in Pemberton and the Cariboo.

A solar greenhouse will be tested at the Saanichton Research & Plant Quarantine Station.

Testing was completed on water supplies in the Okanagan in order to provide the irrigation industry with design recommendations on filtration equipment to minimize trickle irrigation "plugging" problems.

A new approach to the use of DATE funds was initiated in 1980 in the form of a program that provides information to cauliflower growers to allow them to more closely meet the requirements of the fresh market.

A program was launched to produce selected honeybee stock that will operate efficiently under British Columbia conditions.

A more efficient sprayer was designed and tested for use in raspberry plantings.

Dr. N.S. Wright (left) of the Agriculture Canada Research Station in Vancouver, Attorney-General Allan Williams (middle) and Agriculture and Food Minister Jim Hewitt (far right) tour one of the greenhouses used for the virus-free seed potato project.

Engineering

The engineering branch continued to provide an engineering design and advisory service to farmers and ranchers in the province. The advisory service covered most aspects of on-farm engineering needs; drainage, irrigation, farm structures, mechanization, waste management and land and range development.

From engineering offices located in four regions of the province, branch services were provided through direct producer consultations, short courses, field days, blueprints, publications and press articles.

Irrigation

Despite the wet summer of 1980, demands for irrigation continued to be high. Two hundred and fifty-six irrigation plans prepared by commercial dealers were checked for adequacy of design, prior to loaning of funds under the Agricultural Land Development Act. This represented a 56 per cent increase over 1979 and a potential expenditure of $5 million.

Updating and expanding the Irrigation Design Manual and implementation of the Irrigation Association's Guidelines for Irrigation System Design and Installations set new standards for irrigation system design in the province. Formation of the B.C. Irrigation Association and adoption of irrigation standards have been significant steps in a rapidly developing irrigation industry.

High energy costs and a shortage of water, along with the potential for improved production, increased interest in trickle irrigation among orchardists and small fruit growers. The branch demonstrated a filter system that makes trickle irrigation a viable option.

Travelling guns became popular as producers continued efforts to reduce labour requirements for irrigation. Proper operation of this new equipment was stressed in the revised design manual and through field demonstration.

Drainage

The scope of the drainage advisory service was broadened from individual farm work to increased emphasis on implementing ARDA funded regional water management projects and development of interior wetland meadows. Branch staff served as liaison officers between farm groups applying for funds and the various resource and government agencies, ensuring that projects moved forward to implementation stage. Forty-five farm and regional water management projects were worked on during 1980. The projects involved 7,684 acres and a potential expenditure of $1,269,210.

Farm Structures

Farmstead layout plans along with complete sets of building drawings continued to be in strong demand. Approximately 1,000 farmers and ranchers used the farm structures service during the year.

The service is well established in the Fraser Valley, particularly in the dairy and poultry industries. With dairy herd sizes continuing to grow, the branch's wide dairy barn plan, with two rows of free stalls on either side of a drive-through feed alley, continued to be very popular with producers.

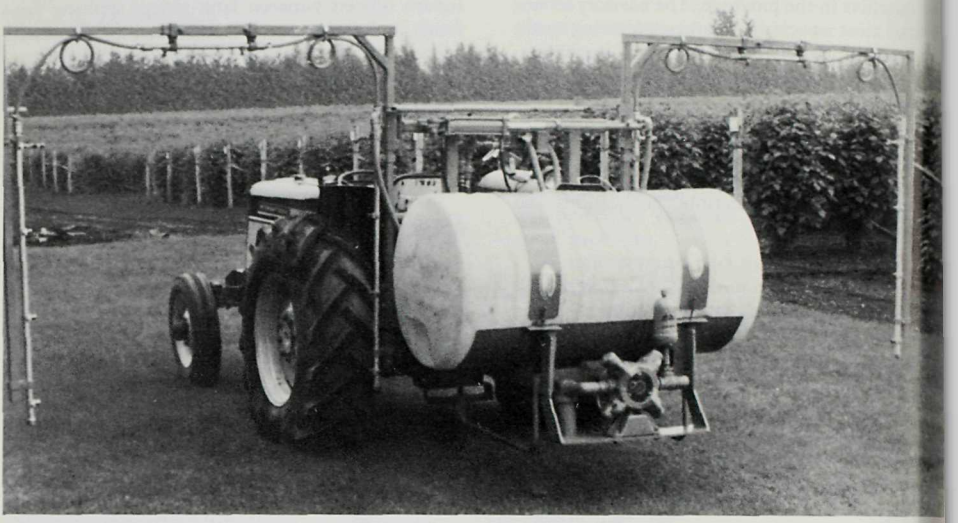
Efforts are underway, through individual contact, field days and extension material, to provide this design service to other regions of the province.

Waste Management

The waste management advisory service continued to provide farmers with up-to-date technical advice on waste management systems including collection, storage, handling and disposal of waste water, manure and dead animals. The dramatic increase in swine production units over the past three years has caused some severe environmental problems that have strained the agricultural environmental control and green zone program and produced strong conflicts in some of the more densely populated areas surrounding the agricultural land reserve.

The branch, through research projects, field demonstrations and published extension material, continued to develop manure handling systems that minimize flies, odours, and other nuisances.

Maintaining the credibility and effectiveness of the agricultural environment control program and the green zone method of siting farm buildings continued as a high priority.



This sprayer was designed by the engineering branch to control insect pests on raspberries. Special equipment electronically monitors pesticide application.

Mechanization and Agricultural Land Development

Testing and development of the rangeland discs and seeders continued. A total of 15,277 acres has been reseeded to date. The demand for range seeding equipment increased to the extent that the two available machines are fully booked for the 1981 seeding season.

A two-row raspberry sprayer, the first of its kind, was designed and built under the DATE program. Plans for this sprayer have been made available to the public and a local farm equipment dealer is now manufacturing the units.

Several farmers made use of the farm machinery spare parts and service complaint program and the mechanization advisory service. Extension efforts pertaining to farm safety were also continued.

Special Projects Section

In an effort to find solutions to the many engineering problems facing the agricultural industry, a special projects section was established. This section, staffed by one engineer and a part-time technician, was working on a number of projects at year end:

- aeration of swine manure for odour control
- minimum tillage for cereal crop production
- range renovation and seeding equipment
- brush control on community pasture
- equipment for developing native meadows
- crop spraying equipment
- alternatives for disposing of milking parlour wastes

ntomology - lant Pathology

The entomology-plant pathology branch pro- les information on controlling plant diseases, ects and mites. The branch also develops con- ls for vertebrates including deer, rodents, moles d birds.

Throughout 1980, the staff conducted training rses and educational programs for farmers, or- ardists, greenhouse operators and homeowners; addition, field trials were carried out to evaluate ticides and other pest control techniques.

iagnostic and Advisory Services

Disease and insect diagnostic clinics for home deners, commercial growers, farmers and other nches of the ministry were operated at Clover- e, Victoria and Summerland.

Throughout the early summer, in cooperation h the University of British Columbia, a mobile nt clinic was provided at garden centres from st Vancouver to Chilliwack.

ee Fruits and Grapes

n the Interior, brown rot was serious on cherries minimal on peaches and apricots. Little cherry ase occurred on 116 trees. Fewer infected trees were found in two orchards receiving sprays for the insect vector, apple mealy bug, suggesting that the spray program may reduce spread. Apple scab was at a low level in 1980 despite several infection periods. The need for codling moth control was minimal in 1980.

Pheromone leafroller warnings aided growers in control of leafrollers in cherries. In other tree fruits the leafroller pheromones permitted adjustments in spray programs when leafrollers were detected.

Mite identification schools for packing house staffs were conducted and expanded to monitor other fruit pests. Assistance was given to packing house technicians in pear psylla detection and in other apple and pear pest determinations. Three commercial pest managers now aid the industry by providing a complete apple and pear pest management service.

In grapes a resistance of *Botrytis* to benomyl appeared. A survey of vineyard ground litter showed 10 of 13 vineyards displayed *Botrytis* resistance. Later at harvest benomyl resistance occurred in nine out of 20 vineyards.

A new regulation was introduced governing importation of grape plants into B.C. to prevent the entry of virus infected planting stock.

ers of greenhouse cucumbers and tomatoes were trained in the application of biological control agents.

Field Crops

The European skipper, a potential new insect pest of pasture and forage grasses, was collected in the Salmon Arm - Revelstoke area.

Grasshopper populations were high in several north Okanagan locations. Some crop damage occurred, suggesting that migrations from range lands into domestic crops had taken place. Gardens and ornamentals in newer urban areas close to range lands were also infested. Surveys of other insect species on grasses used in range and seeding programs were initiated in cooperation with the field crops branch.

Alfalfa *Verticillium* wilt continued to spread throughout the southern half of the province, recently appearing in the Fraser Valley and on Vancouver Island. Of 205 fields surveyed, 87 (43 per cent) were infected compared to 31 per cent of fields surveyed in 1979. Trials with European resistant varieties are underway and the federal research station at Lethbridge has started a resistance breeding program.

High populations of alfalfa stem nematode *Ditylenchus dipsaci* were found in some interior areas. Holcus *(Pseudomonas)* leaf spot of sorghum and *Verticillium* wilt of bird's foot trefoil were identified for the first time at the federal research station at Kamloops.

Vegetables, Small Fruits and Berries

A new pest, asparagus aphid, was found near Spences Bridge and Armstrong. Interior plantings will require management of this aphid. Preliminary insecticide trials were begun and an application submitted for minor use pesticide registration.

Head smut of corn was identified in nine fields in the Okanagan - Shuswap area. Onion downy mildew and tomato bacterial speck, both associated with wet weather, were at a high level in the Okanagan. A survey of Okanagan asparagus fields found that 11 of 13 fields had *Fusarium* wilt, but little damage resulted.

In the Fraser Valley, potato late blight, bean root rot and gray mould, onion downy mildew, white rot, blast and flooding damage all occurred as well as carrot cavity spot and lateral root dieback. Onion white rot was spreading. Liming of soils for minimizing crucifer clubroot continued.

Imported strawberry plants contained nematodes, red stele and some viruses.

Pear Trellis Rust

Only 138 pear trellis rust infected junipers were located and destroyed as compared to 352 in 1979. Pear leaf infections were up and only eight out of 32 nurseries were certified compared to 13 out of 33 in 1979. The Yarrow area is now virtually free of this disease, unlike 1975 when it was a major infection centre.

Pesticides and Pesticide Safety

Most pesticide inquiries concerned toxicity. Pesticide applicator courses were provided for B.C. orchardists, and other pesticide education courses were offered to the public.

Livestock Insects

Livestock producers received information on the control of sheep keds, hog lice, cattle grubs, fleas, barn flies, stable flies, ticks, mites, black flies, chicken lice and mink lice.

An integrated pest management program was started to control horn flies and face flies attacking cattle. Native parasites were found which may serve as biological control agents. The use of parasites to minimize flies around egg farms has increased.

Greenhouse Industry

Biological control agents for controlling mites and whiteflies were distributed to greenhouse cucumber and tomato growers. The growers were trained in the application of biological agents and pest release management as well as in the use of compatible chemicals.

Mosquito Control

Mosquitoes occurred in low numbers in the southern areas of the province and in average numbers in the north. There were no confirmed cases of human or horse encephalitis. Mosquito control agencies were given training in mosquito control.

Vertebrate Pest Control

Orchard and vineyard damage by deer increased and the testing of repellents was underway. Starlings remained a problem in orchards, vineyards and berry plantings.

oils

The soils branch assists in protection, mainte-nce, development and effective use of the ag-ultural soils resource in B.C. Branch activity i:luded: advisory services on all aspects of soils to owers, agribusiness, industry and other govern-nt agencies; demonstration of soil management thniques to growers and investigation of soil and ter related problems; operation of the provincial sl, feed and tissue testing laboratory; and provi-sn of technical services to the provincial agri-ctural land commission pursuant to the Agri-ctural Land Commission and Soil Conservation ts.

dvisory Services

Branch staff, located in Cloverdale, Kelowna al Prince George, provide advisory services, rela-t to aspects of soil and water management, to the aicultural industry and other agencies. Staff con-dted drainage investigations on 800 acres outside he Fraser Valley and checked 12 drainage plans ppared by consultants concerning land in the Fser Valley. Drain installation in 1980 decreased t..6 million feet of pipe compared to two million f in 1979.

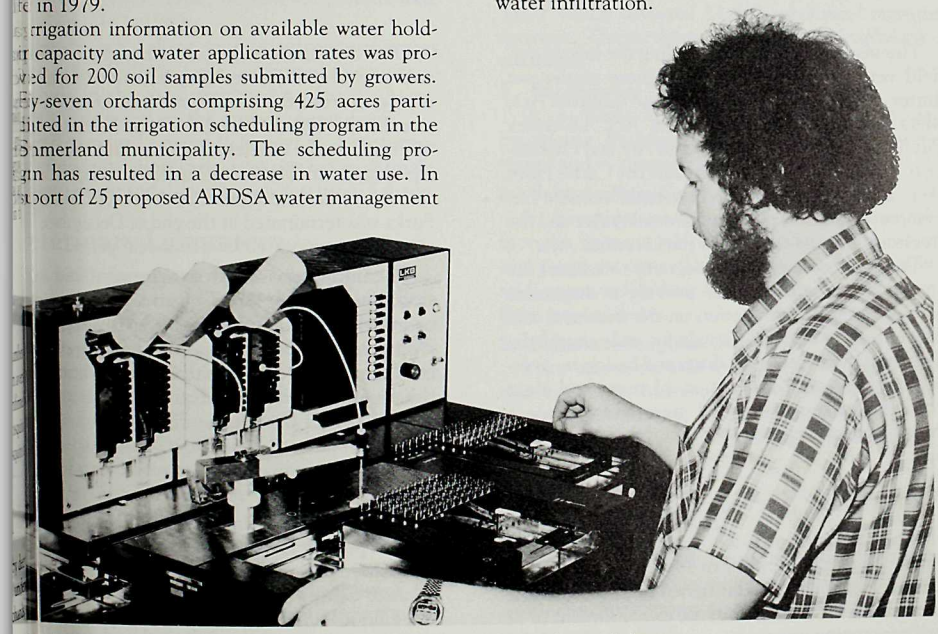
rrigation information on available water hold-r capacity and water application rates was pro-ed for 200 soil samples submitted by growers. y-seven orchards comprising 425 acres parti-ated in the irrigation scheduling program in the merland municipality. The scheduling pro-m has resulted in a decrease in water use. In port of 25 proposed ARDSA water management projects, information on land use and irrigation and/or drainage requirements was provided. Information on soils, land suitability and irrigation developments was provided for effluent irrigation projects at Kamloops, Penticton, Osoyoos, Oliver, Kelowna, Fort St. John, Vernon, Logan Lake and Westbank.

A bulletin on soil management for turf farms and guidelines for monitoring turf operations was prepared. Soil and plant sampling and analysis was undertaken in support of the ministry of health's study of uranium deposits in the Okanagan. Information concerning the effects of the proposed B.C. Hydro dam at Site C on the Peace River on irrigation, drainage and soil erosion was collected.

Demonstration and Investigation

The soils branch initiated or participated in projects to demonstrate soil and water management techniques and investigations of soils and water related problems.

The effect of deep tillage (sub-soiling) on soil drainage was investigated at 10 sites in the Fraser Valley. Initial observations indicated improved water infiltration.



t the ministry's soil and tissue testing lab at Kelowna analyzed numerous soil and plant samples sent in by farmers.

A project to develop a soil nitrogen test for the Central Interior was initiated.

Forage crops grown on high calcium soils in south-eastern B.C. have had some nutrient deficiency problems. A study involving various rates of potassium fertilizer indicated that above normal potassium is required on these soils. The effectiveness of soil-applied phosphorus in apple orchards was investigated. Results indicated that apple trees do not respond well to phosphorus fertilization in the year of application.

The feasibility of improving growth of native forage on Central Interior wetland meadows was studied. Native sedges did not respond to fertilization.

Field corn in the Okanagan was fertilized with various rates of N, P and K in order to check the accuracy of the provincial soil test recommendations. The fertilizer requirements were predicted from the soil test. The branch cooperated with Agriculture Canada in determining the need for sulphur fertilization in the Fraser Valley.

The branch participated in the program to fine-tune the agricultural land reserve boundaries which was initiated by the commission in 1980. Major projects undertaken or participated in by the branch were development of methodologies for assessing critical forage producing lands in the Ashcroft-Kamloops area and the Bulkley Nechako Regional District.

Soil Conservation

The branch assisted local governments, regional districts and the provincial agricultural land commission with administration of the Soil Conservation Act. Twenty-four on-site inspections were carried out and reports submitted relative to applications for soil removal from or placement of fill on land within agricultural land reserves. Reports contained recommendations on whether or not to allow the applications and, if permitted, details on acceptable removal and filling procedures and methods for site rehabilitation.

Veterinary

The veterinary branch including the laboratory, field veterinarian and brand divisions carries out duties under the Livestock Disease Control Act, Meat Inspection Act, Fur Farm Act, Livestock Public Sale Act, Livestock Brand Act and Pharmacists Act. The branch administers the Cattle Horn Act, Livestock Lien Act, Livestock Industry Development Act, Veterinary Laboratory Act and the livestock trespass sections of the Livestock Act.

The branch carries out programs to control the spread of animal disease, provide a diagnostic service, provide information on the treatment and prevention of disease, provide for and control the distribution of veterinary drugs and biologics, oversee the sale and distribution of meat and meat products in the designated areas and provide a brand inspection service.

Veterinary Service District

The veterinary service district policy was established by the ministry in 1957. Since that time 29 agreements have been signed in 15 areas of the province which resulted in the establishment of 12 self-supporting practices.

One district, which was initiated in 1978-79, was terminated due to the departure of the veterinarian from the Clearwater area to join a practice in the Fraser Valley. A new district was established in the Golden area for a three year period; the district in McBride-Dunster was extended for one more year and support to the practice in Grand Forks was terminated at the end of December 1980 after being supported for a four-year period.

The initial service district agreement and extension, if warranted, is recommended to the ministry by an advisory committee made up of a representative of the B.C. Veterinary Medical Association, the regional director, health of animals branch and the provincial veterinarian.

Meat Inspection

Gem Foods at Prince George came under the federal/provincial domestic system in 1980 and with three plants on Vancouver Island, two in the Agassiz-Chilliwack area and one poultry plant in the Coquitlam area, a total of seven plants are now under inspection.

A new fee-for-service charge adopted in 1980, based on the hourly cost of providing inspection, resulted in a more equitable system of charges than the previous charge per carcass which did not encourage efficiency.

Animal Health

There were no major outbreaks of current or new diseases in our livestock population during the year ending November 30, 1980.

As of January 1, 1980 livestock inspection service was removed from four sale yards that handle primarily beef cattle in the Interior. Inspection was retained at a sale yard at Armstrong as well as at sale yards in the Fraser Valley in view of the high percentage of dairy stock and swine handled. On April 1, 1980 the inspection procedure was modified to allow for "conditional" sales of animals at these five yards. In this system, defects found by the inspector are announced during the sale of an animal rather than sending the defective animal to slaughter. Yellow tagging for slaughter was limited to animals exhibiting acute symptoms of infectious and contagious diseases and animals whose owner requested that they be sent to slaughter. Yellow tagged animals were required to be slaughtered in 72 hours. This change in policy removed the requirement for approved feedlots which were phased out as of April 1, 1980; no renewal permits were issued on July 1, 1980.

The branch, along with a private veterinary practice in Williams Lake, supported a seminar to ranchers in the area presented by Dr. S. Acres, VDO, Saskatoon on the subject of calf scours.

Staff arranged several field days to demonstrate branding and dehorning cattle, castration of cattle, pigs and sheep and shearing and crotching of sheep.

Veterinary Laboratory

In 1980 there were 8,850 submissions to the laboratory, an increase of 20 per cent over 1979. This resulted in the receipt and examination of 78,300 specimens, 65 per cent more than in 1979. The greatest increase occurred in pig specimens which totalled 950, up by more than 100 per cent. Alteration to facilities allowed for the resumption of toxicology work and, because of the outbreak of parvovirus in the province's canine population, a diagnostic service was provided to the small animal practitioners.

Several investigational projects were either continued or initiated during 1980. Some were supported by VIDO and the B.C. Federation of Agriculture dairy committee funds, while others either wholly involved branch funds or were carried out in conjunction with other branches, viz. dairy or under the DATE program.

Some of these projects are:

1. Avivan Adenovirus Infection and Egg Drop Syndrome

In co-operation with VIDO and with a projected program for one more year, 50 to 100 Avian Adenoviruses from problem flocks showing infertility and egg production drops are being serotyped. These are from Canada-wide sources.

2. Hemorrhagic Enteritis Vaccine

A pheasant spleen virus vaccine has been produced for use in turkeys. It is in the final testing stage before being released to the industry.

3. Trace Mineral Salt Mix

Attempts are being made to ascertain whether the feeding of a salt-selenium mixture over the winter months will result in a sufficiently high selenium level in the blood of the dam to protect her calves from subsequent deficiency problems. Duplicate samples are being taken before and after the winter range period. Three herds, in each of five geographical regions known to be selenium deficient, are being checked.

4. Bovine Subclinical Mastitis Survey

In co-operation with the dairy lab and the B.C. Federation of Agriculture, 11,000 cows in 152 herds resulted in 44,000 CMTs (California Mastitis Test) which detected 11,600 subclinical mastitic quarters. The predominant isolate was *Staphylococcus aureus.*

5. Bacterin for "Snuffles" in Rabbits

In co-operation with the poultry branch, several promising Pasteurella (snuffles) bacterin were tested and evaluated.

6. Salmonella in Calves - Bacterin Studies

In co-operation with VIDO, a new live salmonella bacterin was derived and tested in calves and pregnant cows. The vaccine was non-invasive and protected calves which were fed colostrum from treated dams.

7. Selenium-Response Survey

In co-operation with the B.C. Artificial Insemination Centre, Milner, the status of selenium and other minerals, i.e. iodine, was determined in herds which were showing a high percentage of repeat breeders.

Brand Inspection

The new Livestock Brand and Livestock Acts were passed by the Legislature and will be in effect when new regulations, pursuant to these Acts, are passed early in 1981.

The new Livestock Brand Act will not change the brand inspection procedures now in place. The new Act recognizes current practices involved in the transport of cattle and inspection of brands.

The Livestock Act regulates livestock trespass on privately owned land in the unorganized areas of the province. This new Act streamlines procedures related to the establishment of pound districts. It will also require that pound districts be more self administered than is required at the present time.

B.C.'s livestock population was relatively disease-free during 1980 due to effective control methods.

There was a two per cent decrease (269,724 to 4,231) in the total number of inspections made the brands division during 1980. However, venue increased four per cent ($191,568.15 to 99,315.23) mainly due to the increased number brand registrations that were renewed. Cattle ports from the province decreased 10 per cent 7,008 in 1979 to 115,681 in 1980). The Cattle rn Act imposes a $2 penalty on owners of cattle rying horns which are shipped for slaughter or of the province. Collections under this act were stantially less than the previous year i.e. 5,352 to $11,088 and in the past two years have pped from $28,796 which is a 61.5 per cent uction.

Assistance to VIDO

The agreement to match dollar for dollar donations from the livestock and poultry industry in British Columbia to the Veterinary Infectious Diseases Organization (VIDO) was continued. VIDO is a privately funded research organization, located on the campus of the University of Saskatchewan, and operates in close cooperation with the Western College of Veterinary Medicine. During the period covered by this report, the ministry matched donations from the B.C. Egg Marketing Board, Kamloops Stockmen's Association, B.C. Cattlemen's Association and the Thompson Valley Hereford Association, totalling $12,402.

outh Development

The three main programs administered by the th development branch are: 4-H, farm vacations and the International Agricultural Exchange pgram.

4-H

-H is a personal growth program for young pple between the ages of nine and 19 years. The nch offers project and resource material in 24 erent areas of interest to young people. In 1980, 2 clubs enrolled under the direction of 824 volueer leaders. Some of the more popular projects we: beef, dairy, horse, lamb, clothing and dairy gt. Participants had the opportunity to develop technical and public speaking skills.

4-H'ers participated in national and international 4-H events, including conferences in Ottawa, Toronto, Washington, D.C. and interprovincial and interstate exchanges. In 1980 the Western Provinces 4-H Seminar was held at the University of Victoria. Forty-eight members from Western Canada participated in an excellent "Your Life/Your Style" program, which focused on fitness, nutrition and attitude toward a healthful life. Another highlight of 1980 was the Shell Canada sponsored Canada-Great Britain 4-H exchange. The British Columbia delegate on this first ever exchange was Ken Keis of Matsqui.

outh Development Branch Program rticipation Statistics

	1980	1979	1978	1977	1976
4-H Programs - members	3435	3620	3576	3943	4305
- clubs	243	254	262	267	271
- leaders	824	825	776	819	840
Farm Vacations - number of guests	529	623	500	400	350
- vacation days	2645	3175	2480	2125	1750
I.A.E.A. - trainees to B.C.	36	33	40	43	41
- trainees from B.C.	16	11	11	12	6

In June of 1980 the head office of the branch was transferred from Victoria to the ministry's regional office located at Summerland.

The B.C. 4-H Foundation experienced good growth in 1980. This 4-H community-initiated self-help project has accumulated over $72,000, the interest from which goes toward the sponsorship of additional 4-H programs.

Farm Vacation Programs

In 1980, over 500 people enjoyed holidays on farms and ranches throughout B.C. Vacations averaged five days for a total of 2,645 vacation days. The branch prepared a listing of farm vacation hosts and advertised the program, which also provides farmers and ranchers with an additional source of revenue.

International Agricultural Exchange Association Program

The branch acts as provincial coordinator for this international program in which over 15 countries participate. Young rural people between the ages of 19 and 27 have the opportunity to live and work on a farm or ranch in another country. In 1980, 30 trainees from Australia, New Zealand and many European countries were hosted on British Columbia farms. Sixteen young people from British Columbia travelled to Australia and New Zealand in the fall of 1980 to start a six-month program there.

Youth exchanges are one of the many activities that 4-H staff, leaders and parents coordinate for the benefit of 4-H members.

Production Services

Apiculture

The apiculture branch provides specialist service and advice to honey producers, packers, fruit and seed growers, as well as to government agencies and their staff. Branch work covers three main areas: extension, regulation and applied research.

Apiculture branch staff members chair two national committees. One standing committee liaises with industry and professionals to advise the federal animal health division on importation of disease-free honeybee stock. The other committee formulates recommendations concerned with the use of antibiotics and drugs to control bee diseases throughout Canada.

Crop Review

The total honey crop during 1980 was 1,771 tonnes (3,897,120 lb.) a decrease of 784 tonnes (1,724,800 lb) from the 1979 crop. Active beekeepers in the province numbered 5,426, an increase of 168 from 1979 numbers. Indications are that the number of beekeepers has stabilized after a dramatic increase during the early to mid seventies.

Tight money, high interest rates, and rapidly increasing costs of inputs contributed to a slowdown of growth of the apiculture industry. This was dramatically emphasized by cost increases of sugar, containers, fuel, vehicles and beekeeping equipment.

Wholesale prices for honey to packers in bulk containers were $1.28 - $1.32/kg ($.58 - $.60/lb.). Farm gate prices of honey were $1.98 - $2.20/kg (.90 - $1.00/lb). Total value of the honey crop was $3,582,000, beeswax - $164,772, pollination rental - $200,000 and pollen - $150,000 for a total of $4,096,772.

These figures do not include the total pollination value of honey bees to all food crops which is estimated to be one hundred times[1] greater than the value of honey.

Honey production from fireweed ranged from 100 pounds plus to zero. Seven years of data is now available on the effects of temperature, altitude, moisture and the production capability of a fireweed burn over a given number of years. Under the right conditions, fireweed has the potential of producing excellent crops of high quality honey.

[1] McGregor, S.E., *Insect Pollination of Cultivated Crop Plants*, U.S.D.A. Agriculture Handbook No. 496, 1976, p. 6.

Branch Programs

Extension and Applied Research - For the fift consecutive year, honey producers in British Col umbia were given financial assistance under th "Beeyard - Bear Protection Incentive Program" t compensate for hive damage by bears and subse quent loss of crop. These grants helped honey pr ducers construct bear-proof electric fences or othe protective devices. Bear predation created losses 300 hives and honey valued at $34,620, a substar tial decrease from 1979 losses.

The use of honeybees by beekeepers to pollinat tree fruits, small fruits, vegetable seed crops, an clover is an integral part of agricultural crop pr duction. A total of 5,544 hives owned by bee keepers were rented by growers of various crops f pollination purposes. The average rental fee w $21.84 per hive.

The "Bee Breeding and Honeybee Stock Im provement Project" completed its third year funding under the ministry's DATE program. Th bee breeding project is designed to make Britis Columbia self-sufficient in the production

Apiculture staff closely monitor breeder queens and their progeny in a matin nuclei.

ckage bees and honeybee queens which are now ported from the United States and New Zealand. nder the program, queens produced in B.C. were ipped to honey producers in Manitoba for test- g. Results from these comparative tests showed at hives headed by B.C. queen bees were equal to superior in brood area and honey production mpared to hives with California packaged bees or erwintered Manitoba hives.

A total of 470 queens reared under the branch's eeding program were selected for testing. Of ese, 300 were distributed to beekeeper cooper- ors for replacement and testing. The remainder re open mated or instrumentally inseminated for in 150 colonies established by the branch for mparative testing and evaluation.

For the second consecutive year, leafcutter bees, *gachile rotundata,* were used to pollinate four es of Angus alfalfa for seed. A similar project is be undertaken on the Creston flats during 1981 h the objective of establishing several pilot al- fa seed growing operations which may encourage d foster an alfalfa seed industry in British lumbia.

Other project work included indoor overwintering of honeybee colonies and selected breeder queens, pollination of strawberries, and testing the effects of the insecticide Ambush (Permethrin) as a bee repellant.

In cooperation with Dr. Cam Jay, of the University of Manitoba, studies on honeybee pollination of tree fruits in the Okanagan valley continued for the second year.

Regulation - The incidence of American foulbrood disease increased 1.28 percent from 1979 levels to 397 colonies during 1980. The incidence of all other bee diseases was down except for Chalkbrood which increased by 0.43 per cent. Contingency plans are being developed to deal with any accidental introduction into Canada of the mites *Varroa jacobsoni* and *Acarapis woodi,* reported to be present in South America. All provincial and federal bee acts were being reviewed to ensure that legislation exists to deal effectively with any future infestation or outbreak of mites now in Canada.

eased beehive equipment and the testing of fumigation effects.

armland Resources

armland resources emerged as a new branch in 10. Staff of the former development and exten- sion branch were decentralized into five regional ces.

The branch mandate is to deal with all policies, grams and developments of provincial and fed- ministries and agencies, regional and munici- governments and Crown corporations which act on the farmland resources of British Colum- The branch also initiates policy development programs which will maintain and enhance the land resource.

nd Resources

ith the Minister of Agriculture and Food as- ng responsibility of the provincial agricultural commission in 1980, the farmland resources ch became responsible for providing the Minis- ith administrative services for all reports from land commission. The branch also prepares ultural land reserve appeal applications for entation by the Minister to the environment land use committee.

Funding was provided in 1980 for an enhanced agricultural land reserve fine-tuning program. The program involved the start of a detailed soil survey of the eastern coastal plain of Vancouver Island. Soil survey crews mapped about 30,000 hectares in the Duncan-Ladysmith areas in 1980. The program enabled the land commission to enhance their internal fine-tuning program. Technical services are provided by the terrestrial studies branch of the ministry of environment.

Land Use

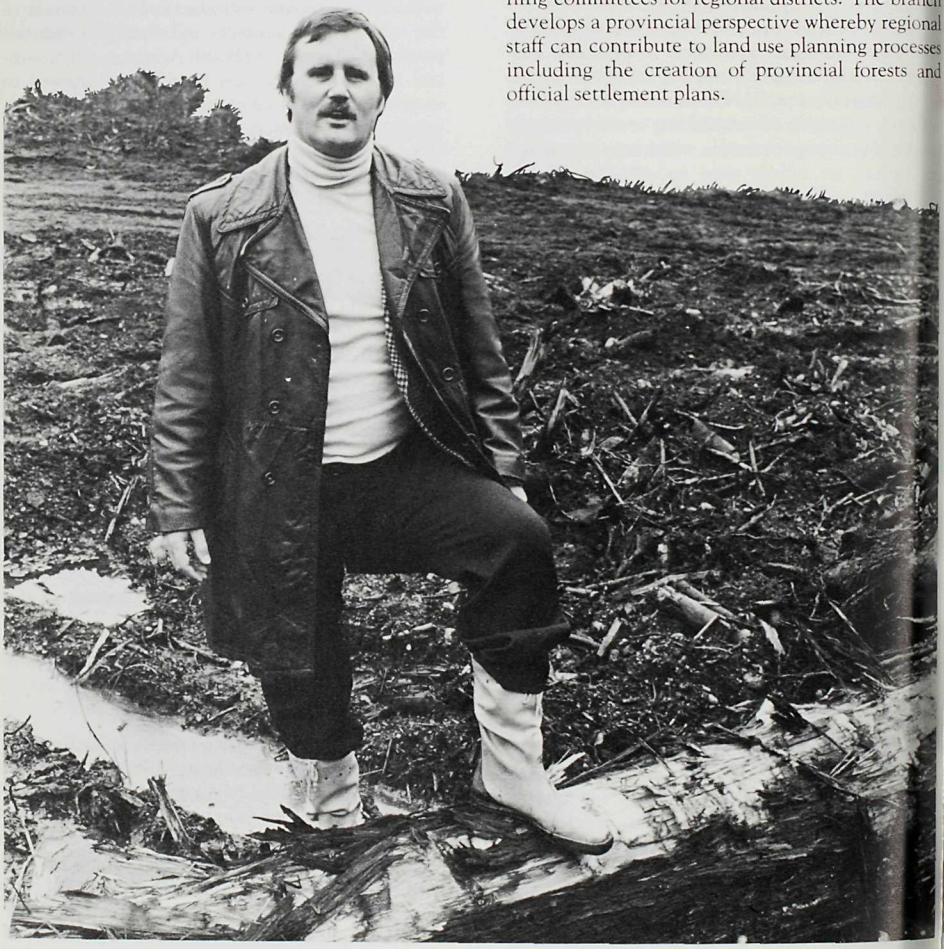
Many general land use and resource management policies were reviewed during 1980. The branch was actively involved in review and assessment of these policies. Legislation proposed in 1980 included the Planning Act - A Discussion Paper, the Utilities Act and the Wildlife Act. Major policies introduced were the creation of provincial forests, the Crown land disposition policy and the change in administration of grazing leases and permits. All of these are the statutory responsibility of other

ministries, but their impact on the agricultural sector must be considered.

The green zone program continued to be promoted as a means of reducing the conflicts that sometimes occur between farm and non-farm neighbours. The green zone bylaw for swine operations was adopted by two local governments and a bylaw for beef operations by one municipality. Eight other local governments have received presentations on the green zone concept and several have initiated the adoption process. The green zone concept of separation distances is being widely used in the province, often voluntarily by the producer and sometimes at the request of local government.

Many land use issues surfaced in 1980 which had some impact on agriculture. Some of the issues which the land use analyst dealt with include drafting the ministry's submission to the Royal Commission of Inquiry into uranium mining in British Columbia, reviewing B.C. Hydro's Peace River Site C project, transmission projects of B.C. Hydro, the Alaska Highway Gas Pipeline project, several new metal and coal mine development proposals, the Annacis Island and supporting road system, and the Parksville-Qualicum Beach bypass.

The branch continued to act as the reference point for ministry regional staff who serve on regional resource management committees, regional problem wildlife committees and technical planning committees for regional districts. The branch develops a provincial perspective whereby regional staff can contribute to land use planning processes including the creation of provincial forests and official settlement plans.



Farmland resources staff deal with many other agencies on the best use of agricultural land.

ield Crops

The principal function of the field crops branch ito increase the skills of producers in field crop pduction and management, range management d weed control by conducting applied research d extension programs. The branch also admin- ers the Weed Control Act.

Production of most field crops during 1980 was od despite adverse climatic conditions in the sing. Interior and northern areas had a very early, c spring which was offset by above average sum- r rainfall. Coastal areas had a very cool and wet ng which inhibited growth until mid-July. Most as enjoyed a warm, open fall with generally good vesting conditions.

rage Crop Production

otal provincial production was estimated at 30,800 tons of hay equivalent, slightly more n 1979 production. Prices of B.C. produced hay ged from $80 to $100 per tonne depending upon ce and quality. Prices of imported alfalfa from Vshington rose to $175 per ton for a short period owing the Mt. St. Helens eruption but softened 160 per ton later in the season.

he branch conducted numerous fertilizer and ety trials of grasses and legumes during the year. Major fertilizer crop correlation study in central B.. was launched with the cooperation of the nistry's soils branch and the B.C. Federation of iculture. Sites have been established at nine tions on two soil types.

x European alfalfa varieties resistant to *Verticil- u* wilt were established at five southern interior t for evaluation.

replicated trial in Delta to compare six grass- ne mixtures was summarized after three years of study. While there were no significant differences in yield between simple and complex perennial mixtures in the year after seeding, the best over-all mixtures were those containing orchardgrass as the major species. Another forage trial of wide interest in the Peace River area was the community pasture demonstration project at Sunset Prairie. A large forage nursery has been established and developed pastures are being evaluated for carrying capacity. Various methods of establishing pastures are also being compared.

n wheat variety trials were conducted at Ladner as part of a nine-variety ial.

Silage Corn Production

Delays in corn planting due to poor weather conditions and slow growth during the summer resulted in immature corn at harvest. Plantings increased to more than 25,000 acres with average yields of 19 tons of green weight per acre.

The branch established demonstration sites of corn hybrids on 25 farms throughout the corn producing areas. Recommendations issued annually by the B.C. Corn Committee assist growers in the selection of hybrids and cultural techniques.

Cereal and Oilseed Production

Stronger prices and better marketing conditions for grains resulted in significant acreage increases of spring wheat and barley. Rapeseed production declined by 50 per cent from the previous year. Although most of the grain and rapeseed production was in the Peace River area, acreages of grain increased substantially in the central B.C. and lower mainland regions. Good crops of rapeseed were produced in the McBride district.

Estimated 1980 acreage and yields of cereals and rapeseed were as follows:

Crop	Acres	Yield (Bu./acre)
Wheat	127,000	39
Oats	56,000	69.6
Barley	200,000	50.5
Rapeseed	132,000	16

Replicated cereal variety trials were conducted in both the north and south Peace River areas with the cooperation of staff at the Beaverlodge Research Station. Demonstration trials were also conducted by the branch at Fort Nelson, Stikine Valley, McBride, North Okanagan, Smithers, Fort Fraser, Agassiz and Ladner.

Potato variety trials at Pemberton were carried out by field crops branch staff during 1980.

Forage Seed Production

Pedigreed seed acreage which almost doubled in 1979 from 1978, increased to a record 11,767 acres in 1980. While most of this was in the Peace River area, there was increased acreage in other districts such as Vanderhoof, Cariboo, Creston and Ladner. An aerial survey of the Peace River region indicated a total Creeping Red Fescue acreage (pedigreed and common) of 23,720 acres. The very dry spring contributed to a decline in yield to 190 pounds per acre. Prices appeared to strengthen in late 1980.

A four-year forage seed evaluation project funded jointly by the B.C. ministry of agriculture and food, Agriculture Canada and the seed trade was launched in the spring of 1980. Replicated trials of species and varieties have been established at Ladner, Creston, Kamloops, Quesnel and Vanderhoof.

A project to demonstrate alfalfa seed production using leafcutter bees was established at Dawson Creek in 1980.

Range Development

As in previous years, staff were involved in coordinated resource management planning in conjunction with other resource agencies. The range extension/education committee actively promoted the use of the range disc-seeder-packer built by the engineering branch and cooperated with the UBC agricultural outreach program in organizing a grazing systems seminar.

Monitoring of range seedings following renovations indicated an increase of 100 - 500 per cent in dry matter production depending on range condition. Range grass variety trials were also established at a number of locations.

Community Pastures

A total of 195 users pastured 13,335 head of cattle on 12 community pastures in central B.C. and the Peace River regions.

Potatoes

Plantings of potatoes in 1980 declined to about 7,500 acres from 9,400 acres in 1979. Poor prices in recent years and a reduction in processing contracts contributed to the decline. Much stronger prices in 1980 reflected the general decline in acreage throughout North America. As in 1979, B.C. growers captured about 63 per cent of the local market.

The virus-free seed potato project was expanded in 1980. Two greenhouses to enable growers to propagate their own virus-free cuttings for nuclear stock were constructed in the Cariboo Seed Con-

l Area in addition to the four greenhouses built the Pemberton Seed Control Area in 1979. all sample shipments of virus-free seed were sent Korea, Sri Lanka and the Philippines in an effort increase seed exports.

Variety trials were conducted at four locations.

Weed Control

The ministry continued its financial assistance to ional district and municipal weed control programs. In 1980, ministry grants of $300,000 generated more than $700,000 of expenditures in 24 ally planned weed control programs.

In cooperation with the ministry of forests and merous other agencies, the knapweed containment program was continued in an effort to prevent s weed from becoming established in areas where s not yet a problem. In an effort to acquaint the blic of this serious menace to rangeland, many ns were erected in strategic locations, a colorful chure was distributed, and a film on knapweed produced for general use. Biological control grams were intensified in an effort to reduce pweed stands. The gall flies which reduce seed duction can now be found in all infestations. eral other bio-control agents released by Agriculture Canada were also becoming established. ministry contributed financially for the testing root borer which could be released by 1982.

ome 45 weed control trials in 17 different crops e conducted in 1980. Branch staff completed a e-year weed impact study in the Peace River irict. "Zero-till" trials were intensified in the ce River area with the approval of an ARDSA nt under sponsorship of Northern Lights College at Dawson Creek. Results of preliminary work done in 1979 and 1980 indicated a good potential for success of zero-till methods.

General Extension Activities

Staff members were active in many ministry extension programs including producer meetings, field days and farm tours. Staff members assisted other ministries and agencies in various programs including regional college education programs, ministry of environment pesticide applicators courses, regional weed control advisory committees, etc. They also served on many provincial and national committees such as the B.C. Corn Committee, B.C. Forage Crops Advisory Council, B.C. Regional Potato Committee, Canada Export Committee on Weeds, Canadian Seed Growers' Association and many others.

Improvements in yields of forage crops were being sought in orchardgrass/ryegrass trials at Ladner.

orticulture

pansion in many segments of the horticultural stry was dramatic during 1980. Its growth was cted in the combined forces of knowledgeable ers, meaningful research and an active horticultural extension program.

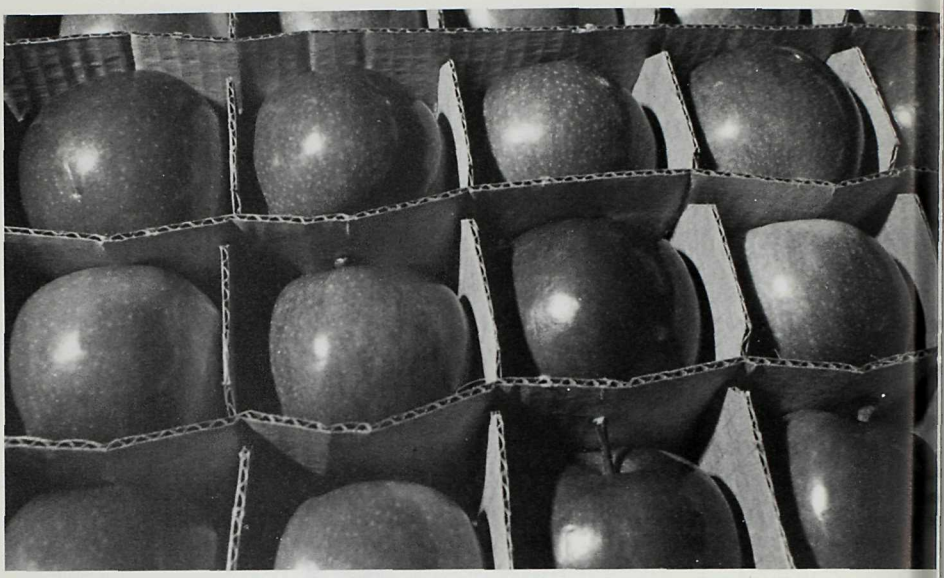
s a result of regionalization of ministry field ations, almost half of the branch's staff was ferred to the regional administration. The culture branch now administers a commodity alist in each of three areas: tree fruits, berries vegetables. Programs will continue to be provided to producers in a manner similar to that of years.

Tree Fruits

The industry is currently marketing the largest apple crop in history. North American markets are heavily supplied with apples from a U.S. crop of about 10.8 billion pounds and a Canadian crop of about 1.1 billion pounds.

Large crops of sweet cherries, apricots, peaches and pears have been sold at good prices. Unusually large crops of Italian prunes and Tydeman apples resulted in lower prices for these commodities.

The 1980 apple crop is estimated to be about 450 million pounds, the largest crop in B.C. history.



The 1980 apple crop was believed to be the largest in B.C. history - about 450 million pounds.

Three factors that contributed to the record crop were the near perfect fall weather which allowed the fruit to continue sizing up to harvest; the presence of many young bearing trees just reaching their first full crop in 1980; and the success of cultural improvements in all areas of horticulture.

B.C. Tree Fruits has recognized the need for expanded C.A. (controlled atmosphere) storage facilities to extend sales of the apple crop into the later more lucrative marketing season. A C.A. building program will be launched in 1981 which will increase the present holding capacity to 125,000 bins from 95,000 bins.

The Anjou pear crop of 17 million pounds was a significant increase over the low 1979 crop. Prices, quality and condition of the crop were good.

The Bartlett pear crop of 25 million pounds was below expectations due partly to small size. Many orchardists dissatisfied with the performance of Bartletts removed smaller tree blocks and unprofitable older trees.

Peaches showed a good recovery from the effects of the 1978-79 winter freeze. Over 26 million pounds were produced compared to 19 million pounds in 1979. Fruit quality was excellent with exceptionally uniform fruit maturity.

Warm spring weather caused apricots to bloom 8 days ahead of 1979. Pollination was excellent. Despite rainy weather, brown rot was held to a minimum and fruit quality at harvest excellent. Almost 7 million pounds were harvested.

Rainy weather during early July caused extensive splitting of sweet cherries in areas north of Summerland. As a result, quality was weak with short shelf life. Owing to an excellent cannery market, a large volume of cherries was diverted to canner thus helping to maintain prices.

The two-million-pound sour cherry crop was a record.

The 1980 prune crop of 10.6 million pounds was of excellent quality with fruit size much larger than usual. The plum crop of 438,000 pounds was a significant increase over the 1979 crop.

Growing and harvesting conditions for the 198 grape crop were relatively poor. As a result, the crop of about 13,000 tons fell short of forecasted production. Sugar content was also lower than expected due to cool weather during grape harvest.

It appeared that 1980 *Vitis vinifera* production would not exceed 130 tons. Much of the acreage is young and should make some impact in 1981 towards the wineries' 10 per cent of crop goal.

The Grape Marketing Board was unable to negotiate a price for the 1980 grape crop with B.C. wineries. As a result, the board set the price and maintained the same sugar standard as that in effect for 1979. This price was an average of 21.5 per cent higher than the 1979 grape price.

erry Crops

The 1980 strawberry crop of about 15 million nds was almost four million pounds greater than 1979 crop and the largest single crop since 70.

However, fruit rot losses were especially high in rly vigorous plantings that were over fertilized. The processors paid 47¢ per pound for fruit in 0 compared to 45.5¢ in 1979.

The 1980 raspberry crop was the largest ever duced in the province. The 17.5 million pound p exceeded the previous record of 17.4 million nds in 1947. The 1980 price for processing fruit, vever, plummeted to an estimated 40¢ per nd from 92¢ in 1979.

980 marked the first widespread use of mechani- raspberry harvesters in the province. From a dest three harvesters in 1978 and 11 in 1979, an mated 60 harvesters operated during 1980.

The B.C. Raspberry Growers' Association voted ask the Minister of Agriculture and Food to ude raspberries under the Natural Products keting Act. A growers' plebiscite on the adop- of a Marketing Commission is expected early 981.

pproximately 1,000 acres of new raspberries e planted in 1980, primarily of the Willamette ety.

lbert production was good despite rainy spring ther. The market was exceptionally strong and grower price ranged from 80 - 85¢ per pound pared to the previous record high price of 60¢ ound in 1979.

he blueberry market was strong with most of rop sold by year end. Prices for the 9.2 million d crop were expected to finalize at about 50¢ ound.

ueberry acreage continued to expand in 1980, about 200 acres planted and plans for more nsion in 1981. Plants were again in short sup- with a significant number imported from the T. The future of the blueberry industry in B.C. ars to be good as export demand increases.

C. cranberry yields continued to be the high- n the continent. Production was expected to out 15 million pounds with an expected price ¢ per pound. The cranberry crop continues to ontrolled by the B.C. Cranberry Marketing d, with the Ocean Spray Cranberry Company ajor selling agency. The board has allocated lditional 600 acres of cranberries to be planted.

Vegetables

Cool, cloudy, wet weather marked the 1980 vegetable season in the lower mainland area. Crops were planted late, were slow in growth, high in moisture content, lush, difficult to keep free of weeds and more susceptible to insects and diseases than those of the 1979 season.

Marketing of cauliflower continued to be a problem. In April 1980, the B.C. Coast Vegetable Marketing Board rejected a petition for deregulation of the crop.

A vegetable storage seminar was held on March 6 - 7, 1980 to identify optimum practices for handling and storage of vegetables. As a follow-up a ministry committee was appointed to identify storage needs and indicate what type of incentive program was needed to develop storage facilities.

Cauliflower, lettuce, onion and spinach variety trials were conducted by the horticulture branch on farms throughout the lower mainland.

Market demand for processed cauliflower and broccoli continues to be strong. Production of these crops are expected to increase in 1981.

Production in the Interior of B.C. of root crops, cole crops, potatoes and onions was excellent although summer vegetables and asparagus was only fair.

The Interior Vegetable Marketing Board and the British Columbia Coast Vegetable Marketing Board amalgamated in July 1980. The newly created British Columbia Vegetable Marketing Commission proposed to establish more orderly marketing of British Columbia vegetables.

Because the marketing of summer vegetables was decontrolled in 1980 the British Columbia Interior Summer Vegetable Growers' Association assumed marketing responsibilities.

The British Columbia Asparagus Growers' Association actively encouraged asparagus production in the province. The association organized seminars, field days and cooperated with the ministry in launching an asparagus production incentive program.

Grower field days and instructional sessions for Okanagan growers dealt with tomato, sweet corn and asparagus variety trials; tomato, seedling asparagus and established asparagus herbicide trials; and Spanish onion cultural trials. A tour of all commercial vegetable greenhouses in the southern interior and a presentation of greenhouse culture were conducted in May.

Mushrooms

Expansion in the mushroom industry slowed during 1980. Due to increasing costs and high market value, many farms were offered for sale during the year. The 1980 crop increased by 20 per cent from 1979 production to 17.0 million pounds and had a farm value of $12.2 million. At year end, the branch was studying the growing techniques and potential market for Shiatake Lentinus edodes and Oyster Pleurotus Ostreatus mushrooms in B.C. Both are grown on hardwood logs and sawdust or other lignin containing substrates. The Oyster mushroom appears to be well adapted to our climatic conditions.

Mushroom production is expected to increase marginally during 1981 as little new production area will be cropped. Production area should reach 1.95 million square feet by the end of 1982.

Nursery Stock

The nursery industry continued to expand during 1980 with sales estimated at $25.5 million. Much of the expansion was attributed to out-of-province sales. About 40 per cent of production left the province with 26 per cent to the prairies (Alberta bought the largest volume), 9 per cent to Eastern Canada and 4.5 per cent to the U.S. Conifers continued to be the mainstay of the industry; however, hardy deciduous shrubs and broadleaf evergreens are gaining a good proportion of sales.

Short courses on nursery production, co-sponsored by the ministry and educational institutions, were popular among the increasing number of new growers.

Fertilizer trials were continued during 1980 to establish rates and formulations of various fertilizers used in container production of nursery stock. Trials for both winter and summer control of weeds in container stock were carried out during 1980.

A shortage of nursery stock was common across North America. High labour costs in Europe and the U.S. and a devalued Canadian dollar favoured local production and discouraged imports. Large wholesale growers increased the practice of purchasing stock from small specialized operations.

Christmas Trees

Christmas tree production became a new specialty for the horticulture branch in 1980. The cultured Douglas fir and Scots pine are the major species grown. Most of the 100 growers are located in the Fraser Valley.

Greenhouse Crops

The greenhouse industry continued to expand in British Columbia. Although production revenue increased from the previous year, costs of production increased as well. Labour and energy costs were the dominant factors influencing costs of production.

Cucumber growers improved their management of the crops grown in sawdust, resulting in higher yields. Tomato growers used more hybrid varieties in an effort to obtain higher yields and offset increases in production costs.

Interest in alternate crops to tomatoes and cucumbers continued with some growers switching to lettuce, Chinese vegetables, green peppers, bunching onions and cole crops.

The nutrient film technique (NFT) lettuce project, partially funded under ARDSA, encountered production difficulties. Lettuce production was terminated for the summer months but was resumed in the fall on a smaller scale. Tip-burn, the main reason for crop failure in the spring, is not fully understood and poses a problem for successful cultivation. Nutrition, propagation and varieties suitable for B.C. sunlight patterns are the main problem areas requiring study.

The greenhouse ornamental and bedding plant segment of the industry continued to expand particularly in potted plant production. Turn around for these crops is fast, giving growers a proportionately higher cash-flow per unit area. Culture of potted plants also enabled growers to use more labour saving devices. Holiday pots or the traditional flowering plants for any occasion are now grown year round in B.C.

Allotment Gardening

Procedures for developing allotment garden sites in Victoria and Vancouver were made available to municipal or community groups should they wish to develop their own sites. The horticulture branch continued to operate the allotment garden program in Victoria and Vancouver with over 800 plots used by urban dwellers.

ivestock

The livestock branch helps producers improve quality and performance of their livestock by viding recording programs and specialist staff o give advice and conduct extension programs oughout the province.

eef

Average prices in 1980 for all classes of beef tle were below 1979 levels. This, coupled with her input costs particularly of feed, reduced net m cash income to the beef producer. The B.C. estock Marketing Cooperative reported an aver- price of $489 per head for all cattle sold up to end of November, as compared to $548 in 1979 d $413 per head in 1978.

The total 1980 beef kill in British Columbia at pected plants was 65,815 head, up 15.5 per cent m the previous year. The Canadian kill was up per cent from the previous year.

The ARDSA funded beef industry study report released in August. The ministry consulted with the British Columbia Cattlemen's Association on their views to implement the recommendations in the report.

The cow-calf manual produced by the branch's beef cattle specialist was more popular than anticipated with a reprinting needed at year end. Revision of the beef feeding and management guide was almost complete by year end, with the second edition scheduled for printing in early 1981.

Beef producers on the record of performance (ROP) program strongly supported the new "herd analysis" supplement provided by the branch. Its main value is the immediacy of useful data for management purposes. The branch, in cooperation with the farm management branch, is also attempting to develop a modified analysis system which could be easily adopted by operators of commercial herds.

The beef cattle test station at Tranquille was modified during the year increasing station capacity to 200 head from 130 head. The year closed with 48 producers consigning eight breeds.

nsive study of the B.C. livestock industry was completed during 1980.

Swine

Hogs of B.C. origin marketed to the end of December totalled 260,962, up 86.8 per cent over 1979 marketings. Weekly hog slaughter during the last quarter of the year averaged about 6,000 animals. Weighted average price for 100 index hogs was estimated to be about five cents per pound lower than the average of $64.35 per hundredweight during 1979. Low market prices for hogs resulted in payouts to producers under the farm income insurance program during the first three quarters of the year. The major problem facing swine expansion in the province is the increasing difficulty in zoning restrictions.

The record of performance (ROP) program concluded the year with 18 subscribers, an increase of four from the previous year.

The branch assisted in the analysis of grading reports under the hog quality competition which provides a profile on the quality of pigs from producers who market 400 or more hogs per year. Data collected in 1980 showed that 76 producers each marketed at least 400 hogs during the 1979 season. Average quality of the total marketings of 90,041 hogs improved with 40 per cent indexing between 105 and 114 (based on a measurement of backfat thickness) compared to 35 per cent of similar indexes the previous year.

Sheep

Prices of good breeding stock were relatively strong compared to general market lamb price. Lamb and sheep of B.C. origin processed through federally and provincially inspected slaughter plants numbered 7,266 head, an increase of 15.7 per cent from the previous year.

The B.C. Sheep and Wool Commission commenced sales of fat lambs every two weeks during May to August. These events met with varied success because of variable quality and number of lambs offered. The 3rd Annual Sale of the B.C. Sheep Breeders Cooperative realized an average of $47.96 per animal, a decrease of $5.71 per head from the previous year. A total of nine B.C. breeders consigned 34 animals to the first all-Canadian sheep classes at an exhibition in Brandon. Sheep from B.C. contributors placed well and sold at good prices.

A survey of lower mainland and Vancouver Island sheep producers indicated that lack of land resources and problems with dogs and indigenous predators were likely to limit expansion in the region.

Goats

For the first time, financial assistance was given to B.C. goat breeders who showed animals at fairs outside of British Columbia. B.C. entries placed particularly well at the Northwest Washington Fair at Lynden, Washington, where they won seven firsts, six seconds, one Grand Champion, two Reserve Champions and one Best-in-Show placing. The ministry continued to seek federal assistance in funding animal freight costs to a national goat show in Canada.

Dairy Herd Improvement

Although the total number of herds on test at the year end was 516, down nine from one year earlier, total animals on test increased to 35,608, up 1,826 from the year previous. Average herd size was 69 animals, an increase of 4.7 from one year earlier. Actual average production was 6757 kg of milk and 244 kg of fat, up from the previous year which reported 6650 kg of milk and 240 kg of fat. The 1980 levels of production represented breed class averages of 141 for milk and 137 for butterfat. These levels are expected to exceed all other herd averages in Canada.

The 1979 survey of enrollees on the DHID program was completed and a detailed report was prepared. A condensed report was made available to all producers who cooperated in the study. While the survey indicated that most users were generally satisfied with the program, a number of recommended changes have been incorporated into the herd reports issued to producers.

Poultry

The poultry branch implements programs and policies designed to provide a specialist extension service to the poultry, egg and rabbit industries in the province. Staff assist producers with current production problems and help them to develop more modern and efficient production units.

nch members provide advice on government grams and new techniques and disseminate information on research applicable to poultry operations. The branch acts as a liaison between producer marketing boards, national agencies and other industry associations.

'oultry branch staff include specialists in all aspects of production and diseases of poultry and rabbits. The fields of specialty include chicken broiler and hatching egg production; egg, turkey, rabbit, waterfowl and game bird production, and poultry health.

he annual poultry conference was held in September 1980 at the Langley Civic Centre. This conference is traditionally organized and conducted largely by members of the poultry branch staff with the aid of a steering committee from different segments of the industry. There was a large turnout for the three separate sessions which ran concurrently on the topics of egg, chicken meat and turkey production.

oultry diseases continued to be a major problem the industry. The concentration of the industry the lower Fraser Valley facilitates the spread of disease organisms. Infectious laryngotracheitis continued to be a problem with several flocks affected during the year. An increase in Salmonellae mortality in young chicks toward the end of the year emphasized the need for a control program for this organism. Marek's disease resulted in condemnation of four to five per cent in some broiler flocks.

Poultry Test Station

he poultry branch maintains a modern poultry station at Abbotsford, B.C. where various experimental and demonstrational projects are carried out on the production of broilers, layers, turkeys and rabbits.

he station underwent considerable renovations during the year, including the conversion of the layer cage house to a rabbit research facility. The machinery was also updated with the replacement of egg incubators with new units.

he following is a summary of projects carried out at the poultry test station during 1980:

1. A comparison of the performance of four strains of fryer chickens.
2. A comparison of the performance of broiler chicks hatched from breeder multiplier flocks of similar age originating from a common supplier.
3. Two trials for a comparison of the performance of four meat strains of chickens marketed as roasters.
4. The effect of varying feed regimes on growth rate and "flippers" in broiler chickens.
5. A study of on the farm management practices in British Columbia's poultry meat industry.
6. A project to test the efficacy of an Hemorrhagic Enteritis vaccine produced by the British Columbia veterinary laboratory.
7. A test to determine the feasibility of producing a supply of Hemorrhagic Enteritis vaccine for turkeys.
8. A project to determine by laboratory and field trials the efficacy of various vaccine preparations for rabbit "snuffles".
9. A test of fly strips for fly control in deep pit barns was tested using fly strips.
10. An experiment to test the effect of improper debeaking on both floor and cage reared egg type pullets.
11. A comparison between rearing pullets on the floor and in cages at four different densities.
12. The effect of short intermittent light for raising commercial egg production pullets in cages.
13. Two feed trials on rabbits.

Turkey Industry

The turkey industry in British Columbia was in a depressed and erratic state in 1980. Problems included a large storage carryover of turkeys in January 1980 and a turkey processing industry that was in disarray for a good part of 1980. Combined with this was an increased supply of chicken to compete with turkey.

Turkey marketings were 10.3 per cent below 1979 figures. The total number of day-old birds placed on farms in 1980 were 1.6 million compared to 1.8 million in 1979. The number of poults placed for the heavy bird market decreased by 6.3 per cent while poults placed for the broiler market was 14.5 per cent below the year previous.

Producer prices at year-end were 60¾¢ per pound for broilers, 61½¢ for hens and 60¾¢ for toms. This represented price increases during the year of 4 per cent on broilers, 3 per cent on hens and 5 per cent on toms; meanwhile, retail prices of turkey at $1.39 per pound increased by 17 per cent during the year.

Waterfowl

With a new waterfowl hatchery in Yarrow and a processing plant due to open in 1981, the waterfowl industry in B.C. may become a significant factor in the poultry industry. This processing plant being built with the assistance of an ARDSA grant is also destined to become a custom process facility be-

cause of the number of back yard flocks and specialty birds such as pheasants, quail, etc.

Game bird population increased dramatically over the past year with an estimated 75,000 pheasants being produced on commercial farms. Because this is a gourmet item, production was at the market saturation point. These specialty production industries should flourish with the opening in 1981 of the new processing facility in Abbotsford.

Rabbit Industry

The rabbit industry showed steady growth with more growers investing in good facilities to ensure year round production. As in the past however, the processing and marketing segment of this industry was lacking. During the mid-summer, when local production started to increase, storage stocks began to climb because of poor sales. This led to a tie-up of operating capital in the face of rising production costs and little producer income. Many small growers found they could not stay in business. The situation was alleviated slightly during the year by the granting of a guaranteed loan to the processing plant and the assignment of a ministry sales specialist to explore new markets.

Broiler Industry

Production of chicken meat will be down about eight million pounds eviscerated weight from the record 88.7 million pounds in the preceding year.

The national provincial quota allotment for 1981 was established at 88 million pounds with quarterly figures of 20.5, 23.2, and 21.1 million pounds. Filling this quota would require production equal to that of 1979.

Placement of broiler chicks on farms was estimated to be down by 7.5 per cent or 2.25 million birds from the 1979 record high of 30.8 million. Alberta, Saskatchewan, Ontario and Quebec were expected to show placement decreases in 1980 with national placements averaging three percent less than 1979.

The live weight farm price for regular broilers averaged 42.45 cents per pound compared to 40.33 cents in 1979.

For the first time, a ½ cent price differential was quoted for July for product produced and marketed on Vancouver Island. This was to partly compensate for higher feed costs on Vancouver Island.

Egg Industry

Commercial production of eggs in Canada increased by 8.1 per cent from the 1979 level. However, the Canadian Egg Marketing Agency developed cutbacks and fowl removal incentives to reduce this large increase. These production increases coincided with the 1980 provincial allocation of quotas and directly affected B.C. producers. Due to the dramatic increase in feed and other input costs under the CEMA cost of production formula, the average weighted price per dozen eggs to B.C. producers increased from 78.6¢ on January 5, 1980 to 87.1¢ on November 15, 1980. B.C.'s layer allocation as of June was 2,742,040 birds; the Canadian total was 21,958,667 layers. The actual number of laying birds in B.C. was about 2.6 million or 95 per cent of the quota allocation which allows for mortality.

Interprovincial movement of shell eggs supplemented local supplies with 1.2 million dozen Grade A eggs from Alberta and Manitoba. About 3.5 million dozen Grade C eggs from the three western provinces were imported for further processing.

Estimated British Columbia production for 1980 was 63,980,000 dozen eggs.

Poultry branch specialists design programs dealing with production of eggs, chicken meat, hatching eggs, turkeys, rabbits, waterfowl, and game birds.

Assistant Deputy Minister Economics and Marketing

Marketing

During 1980, the name of the branch was changed from marketing services branch to simply marketing branch with the acceptance of a revised structure within the ministry and the appointment of an assistant deputy minister of economics and marketing services. The branch is primarily concerned with the enhancement of the food and agriculture industry within British Columbia through increased consumer use of B.C. food products. To this end, the branch provides timely market research and analysis, and assists food processors and handlers with product and market development.

The marketing branch has five distinct components: administration, market development, food promotion, market research and analysis; and market regulation. Prior to 1980, the market regulation activities relating to the marketing boards and particularly the B.C. Marketing Board were handled outside of this branch. However, a commissioner of market regulation was appointed and is now responsible for the activities related to the Natural Products Marketing Act and the Agricultural Produce Grading Act.

The passage of the Ministry of Agriculture and Food Act placed additional emphasis on the work of the marketing branch as it relates to the major part of the food industry beyond the farm gate. This act legitimized some of the activities which had been undertaken in past with the food processing and distribution industries and opened the door to a considerable increase in extension work in this area.

The market information unit became the market research and analysis unit, more accurately reflecting the complexity of activities being carried out. A research officer was added to this unit in May, 1980 to increase the volume of work which could be undertaken.

A major amount of the work carried out by the director of this branch involves federal/provincial and industry wide liaison, particularly relating to current marketing problems.

The ARDSA program continued to require considerable input, with a further report coming from the market opportunities project outlining significant opportunities for storage of vegetables for off-season sale.

The branch coordinated incoming trade missions, including two from China, two from Japan and one from Korea. The branch took part in a major evaluation of available transportation for oversea shipments of live cattle. Solution of the air transport problems experienced throughout Canada may provide additional impetus for this major export trade.

Market Research and Analysis

Staff updated the B.C. Food and Beverage Industry Directory and conducted a study of the new surtax procedures and applicability to the various horticultural commodities produced in British Columbia.

During 1980, 23 issues of Agrimarket Reporter were released and 13 issues each of the Fresh Fruit and Vegetable Report and B.C. Food Markets were produced. B.C. Food Markets has proven to be a major source of information to media on the reasons for food price increases.

The second edition of the B.C. Vegetable Marketing Guide was produced during 1980.

A new weekly produce report was begun containing price information from competing areas of supply, tariff information, f.o.b. information and general market information on products in season.

The computer capability added in 1979 proved to be a very effective addition to the marketing branch analysis team. During 1980, the team added two new data bases and was working with commodity groups toward further use of this service.

A Victoria chef won top honours for preparing a menu using B.C. fresh fruits and vegetables in a province-wide contest co-sponsored by the marketing branch.

Application of tariffs and surtax requires considerable analysis by this unit as they advise the producer organizations on application for implementation or withdrawal. This activity will continue to stand as the Province becomes responsible for the required analysis in the application of surtax.

The market research and analysis unit also handled about 2,800 inquiries for market information and analysis from all sectors of agriculture, food processing, financial, consulting, educational and government institutions throughout the country.

Market Development

New markets and marketing techniques were explored for commodities such as quality fresh market strawberries and raspberries, milk-fed veal, pork products, Nugget potatoes, and Jersey milk products such as yogurt. Assistance was given in development of honey-sweetened jams by Golden Valley Limited. A project was begun with Clover-Leaf Lettuce in utilization of celery juice. The potential for horseradish production and processing in B.C. was discussed with a local packer. Market potential and recommendations for development were identified for B.C. rabbit producers and for the Nursery Trades Association. A major international display was produced for the B.C. seed potato growers to enhance the marketability of their product in the United States.

Home Economics

The branch home economist maintained the development of the quarterly recipe books and answered hundreds of consumer food enquiries during the year.

To promote B.C. food products, the home economist prepared a monthly press release including recipes and a photograph on a B.C. food. The home economist also conducted a well-received series of school recipe contests co-sponsored by the various commodity groups in an effort to develop metric recipes.

Food Promotion

Branch activities in coordination with the Fresh Fruit Flavour Organization and the B.C. Fruit Wholesalers continued to provide good opportunities to promote B.C. foods during 1980.

Major activities included the publication of the quarterly recipe and home gardening booklet. Approximately 100,000 were distributed in each of the four seasons of the year. Numerous other consumer recipe publications were issued.

A variety of promotional material was used on B.C. ferries to increase awareness of B.C. grown foods.

The retail instore program was conducted with approximately 160 food demonstration conducted over a period of 40 weeks. These demonstrations promoted various B.C. commodities and processed foods with a good response from consumers, retailers, producers and processors alike.

A major co-op advertising program was conducted, with radio, TV and newspaper promotion costs shared by commodity groups, processors and the ministry.

Coordination with the B.C. Purchasing Commission and the B.C. Ferry Corporation in the use of B.C. foodstuffs was effective during 1980. Promotions were carried out in ferry cafeterias with promotion expansion planned for 1981.

Market Regulation

The market regulation function coordinates activities under the Agricultural Produce Grading Act and the Natural Products Marketing Act. Under the Agricultural Produce Grading Act, the branch must ensure the effective carrying out of the grading regulations through some 120 inspectors supplied by the federal departments of agriculture and consumer and corporate affairs. As well, the branch determines short term changes which may be required in order to meet particular commodity marketing circumstances.

Under the Natural Products Marketing Act, the branch has responsibility for the various marketing schemes. During 1980, two new schemes were put in place. One, the B.C. Hog Marketing Commission, controls all hogs marketed for processing in the province. As well, the two vegetable boards, the Coast Vegetable Marketing Board and the Interior Vegetable Marketing Board, amalgamated into one B.C. Vegetable Marketing Commission. Although this amalgamation was not achieved easily, the components of the industry appear to have adjusted well.

Economics

The economics branch provides assistance to farm managers, agri-business firms, commodity organizations and other government agencies in the following areas:

- farm business management
- production economics
- resource economics
- agricultural statistics
- data processing

The branch publishes booklets and factsheets on selected topics, conducts economic studies and surveys, provides instructors for short courses and workshops, provides leadership in the delivery of farm records systems and advanced farm planning techniques and offers individual client counselling in the program areas within its responsibility.

Farm Business Management

During 1980 the following activities were carried out to assist farm managers in improving their farm business management skills and practices:

1. The farm financial management training project (funded by ARDSA) completed its first full year of operation in 1980. The project delivers three levels of four-day financial management courses to various commodity groups on a province-wide basis and is managed by a committee representing the University of British Columbia, B.C. ministry of agriculture and food, and the B.C. Federation of Agriculture. In 1980, 31 courses attracted 420 farmers.
2. Farm business management factsheets were researched, compiled and released on 24 current topics. These factsheets, released monthly, were well received by the agricultural community.
3. A publication entitled "Wills for B.C. Farmers", which provides guidance to farm business managers and their advisors on the topic of wills in the agricultural sector, was released.
4. A publication entitled "Farm Business Corporations in British Columbia - a layman's guide" was prepared to provide farm managers and farm business advisors with basic information on farm companies.
5. Terms of reference were prepared for a publication entitled "Legal Aspects of Farm Leases" which is expected to be written by a law firm under contract. The B.C. Systems Corporation completed the computer programs required to analyze data derived from the lease-rental agreement survey.
6. A major project was the farm business practices survey. This involved staff training, interviewing farm managers, computer programming and analysis of data.
7. To determine the application of micro-computer activities, the branch tested three computer systems. In addition, computer programs were prepared on a loan calculator program, machinery replacement model and range fertilization analysis. A cash flow model was developed as well as a debt management model and a model to evaluate the economics of alfalfa rotation.
8. The Canfarm records system was offered to 265 farm managers. This was the second year of operation for the farm-owned cooperative — Canfarm Cooperative Services — which offers the record system through a number of accountants, consultants and other business firms. The cooperative experienced some financial difficulty in 1980.

Production Economics

During 1980, a number of production economics activities were carried out. The following includes the highlights of this particular program:

1. Costs and returns studies using the consensus approach continued to be developed in 1980. Table I outlines the reports released during the year.
2. The project to gather farm input (factor) cost information from suppliers on a monthly basis continued. Computer programs and systems for survey data input, storage and analysis were developed, tested and implemented. Data collection continued on a routine basis in the mainland agricultural reporting area and the survey was introduced to the Okanagan and Peace agricultural reporting regions.
3. The regional farm economist at Prince George assisted with the experimental design and economic analysis of the results from the fertilizer-crop correlation project being carried out in the interior of British Columbia by the B.C. Federation of Agriculture under funding from the Feed Freight Assistance Adjustment Fund Agreement.

Table I: Published Reports of Producers' Consensus Costs and Returns

CDS No.	Title	District
191	Alfalfa Hay Production (Update and Revision)	Salmon Arm
192	Corn Silage Production (Update and Revision)	Salmon Arm
213	Barley, Wheat, Oats and Alfalfa Production (Update)	Creston
214	Corn Silage, Alfalfa Silage and Alfalfa Hay Production (Update)	Creston
215	Alfalfa Hay Production (Update)	Creston
216	Alfalfa Hay Production (Update)	Williams Lake
217	Upland Timothy-Clover and Native Hay Production (Hay)	Williams Lake
218	Upland Timothy-Clover and Wetland Reed Canary Grass Production (Update)	Williams Lake
226	Corn Silage Production (Update)	Kamloops
235	Dryland Asparagus Production	North Okanagan
236	Vineyard Establishment	Okanagan
237	Grape Production	Okanagan
238	Field Tomato Production	Okanagan and Similkameen
240	Pasture and Hay Production (Update and Revision)	Cowichan
241	Pasture and Silage Production (Update and Revision)	Cowichan
242	Cabbage, Sweet Corn, Lettuce and Potato Production (Update and Revision)	Comox Valley
243	Land Clearing and Development	Prince George
244	Land Clearing and Development	North Peace River
248	Alfalfa Hay Production - 2 Cut System (Update and Revision)	Kamloops
249	Alfalfa Hay Production - 3 Cut System (Update and Revision)	Kamloops

The regional farm economist, Kamloops, was a member of the management committee providing economic analysis capability to a project to determine the economic benefits and costs associated with the fertilization of native rangeland in British Columbia.

Several other projects were carried out, including an analysis of the feasibility of part-time sheep production in the Fraser Valley and the analysis of a report on corn silage production in British Columbia.

Resource Economics

In 1980, the branch continued to respond to requests to carry out feasibility studies on proposed drainage and irrigation projects in the Fraser Valley. Benefit cost analysis was completed or is ongoing on the following projects:

1. a proposed drainage project in the East Chilliwack area.
2. a proposed drainage and irrigation project in the East Richmond area.
3. a proposed drainage project in the Pitt Meadows area.

Agricultural Statistics

The statistics unit supplies the British Columbia agriculture and food industry with relevant, timely and accurate data on the size and nature of the industry. This information is used as an aid in decision-making and planning.

During 1980, the statistics unit was transferred to the economics branch from the policy development and planning division. Close liaison was maintained with Statistics Canada and a federal/provincial agreement on agricultural statistics was

negotiated and signed. This agreement improved the coordination with Statistics Canada and increased the ministry's involvement in survey processing and data analysis, thereby improving the quality and timeliness of data.

Statistics are provided to users by telephone, mail, office visit and in published reports. During 1980, the following reports and factsheets were produced:

1. Agricultural statistics factsheet
2. B.C. agri-facts indicators
3. Production and Consumption of Red Meats in British Columbia
4. Crop Report
5. Agri-Stats Factsheet

During 1980, the B.C. food systems project was initiated to analyze levels of production, consumption and processing of foods produced in British Columbia. This ARDSA-funded project is supervised by the statistics unit and Agriculture Canada and will be finalized by August, 1981.

Data Processing

The branch continued to liaise with the B.C. Systems Corporation and coordinate the development and use of computer systems within the B.C. ministry of agriculture and food. During 1980, a number of data processing projects were transferred to the B.C. Systems Corporation. In addition, several project feasibility studies were conducted.

The major projects that involved computer data processing included:

1. dairy herd improvement analysis program (livestock branch)
2. interest reimbursement program (agricultural credit branch)
3. feed analysis program (livestock branch)
4. 4-H statistics program (youth development branch)
5. British Columbia farm business analysis project (economics branch)
6. green zone project (engineering branch and field services)
7. animal pathology project (veterinary branch)
8. consensus data studies (economics branch)
9. agricultural input cost survey (economics branch)
10. egg production forecasting project (poultry branch)
11. soils statistics projects (soils branch)
12. brands registration project (veterinary branch)
13. market information project (marketing branch)
14. lease survey project (economics branch)
15. crop insurance data base (crop insurance branch)
16. intercensus statistics project (economics branch)
17. soils laboratory equipment upgrading (soils branch)
18. land status project (economics branch)

Farm management training courses developed by economics branch staff were popular among B.C. farmers.

Special Projects

The economics branch was involved in the administration of the federal/provincial Feed Freight Assistance Adjustment Fund Agreement. The branch also was involved in a number of special projects including the following:

1. ARDA Part I technical sub committee
2. technical committee on the allocation of over-base chicken quota
3. evaluation committee for licensed science officer position classification
4. management committee for the ARDSA sheep production technology transfer project
5. management committee for the Feed Freight Assistance Adjustment Fund Agreement project on forage improvement
6. task forces involved in economic analysis or review of methodology such as the Prince George special sales area project and the compensation package regarding the B.C. Hydro site C project

Coordination and Liaison Activities

During 1980, the branch represented the ministry on several regional and national committees relating to agricultural economics. The branch participated in meetings of the expert committee on farm management services, British Columbia farm business management advisory committee, social sciences lead committee, the western farm management extension committee, regional extension planning committees and as a liaison with the B.C. Assessment Authority.

Assistant Deputy Minister Financial Assistance Programs

Agriculture and Rural Development Act (ARDA)

Administration

The ARDA branch is responsible for administering the federal/provincial Agriculture and Rural Development Subsidiary Agreement (ARDSA). The five-year $60 million program began on August 1, 1977, with joint funding from the federal department of regional economic expansion (DREE) and the B.C. ministry of agriculture and food. ARDSA's overall objective is to increase the quality and quantity of British Columbia's food production while creating new jobs in the agriculture and food industry.

ARDSA funds are directed into four key areas:

Part I - Research, planning, training and market promotion help identify and develop new opportunities for the province's agricultural and food industries.

Part II - Co-ordinated resource management develops — with the cooperation of other resource users — the grazing potential of Crown rangelands which are best suited for livestock.

Part III - Primary resource development funds irrigation and drainage projects which increase the agricultural productivity of British Columbia's land resources.

Part IV - Support services and community development assists secondary food processors and the agricultural support services needed to improve rural economic stability and create jobs.

Three-Year Evaluation

ARDSA is now in its fourth year of activity British Columbia - August 1, 1980, mark ARDSA's third anniversary. In keeping with agreement's guidelines, ARDSA's performan during its first three years is being evaluated. T evaluation is required before negotiations can be on a new agreement or an extension to the exist program. It will also help establish a measure of benefits resulting from the work being done a which types of projects are returning the m benefits. This information will help determ which projects should be funded in the futu given the large number of ARDSA applicati that may be eligible for funding and that the maining funds in the ARDSA agreement may insufficient.

New Developments, New Jobs, New Approaches

During 1980, ARDSA assistance of $10,749,6 was committed to 66 new projects. This brings total number of approved ARDSA projects to 2 with an ARDSA commitment of $36,562,4 These projects represent new developme throughout rural British Columbia, new jobs a many new approaches to the problems fac British Columbia's food industry.

August 1, 1977 to December 31, 1980		Number of Projects	Total Project Cost	ARDSA Contribution
Part I	Research, planning, training and market promotion	52	5,045,698	4,332,695
Part II	Primary Resource Development Management (Range Improvement)	84	13,528,077	12,172,004
Part III	Primary Resource Development (Drainage and and Irrigation)	22	7,544,038	5,617,364
Part IV	Support Services and Community Development (processing, rural hydro, etc.)	123	57,921,592	14,440,342
	Total	281	$84,039,405	$36,562,405

:t I - Research, Planning, aining and Market Promotion

.even Part I projects were approved in 1980, ging the total Part I ARDSA commitment to 32,695 for 52 projects.

nder a new area of Part I called Technology nsfer, it is possible for ARDSA to assist on-farm ects related to the commercial testing and de- stration of new technologies. Two projects approved during the past year under Technol- Transfer. In Pitt Meadows, a greenhouse ator will demonstrate the European Nutrient Technique (NFT) for the winter production of nhouse lettuce and on the Saanich Inlet, near oria, a laboratory plans to demonstrate the mercial viability of abalone mariculture.

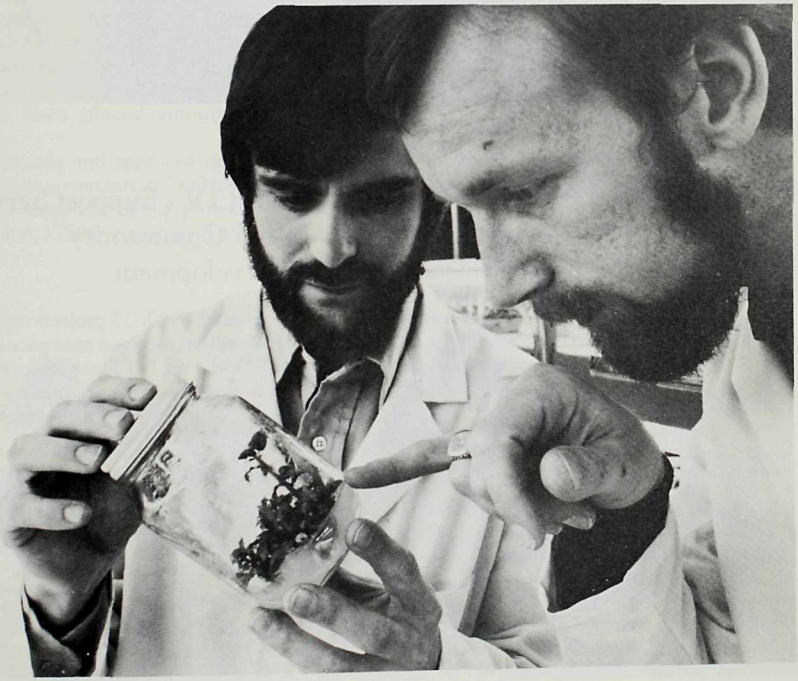
me of the other projects assisted in 1980 were Vancouver Island facility producing predator ts as an alternative to chemical sprays for nhouse pest control, a four-year demonstration ro-tillage techniques in the Peace River area, the establishment of a commercial tree fruit ty testing orchard near Oliver.

Part II - Co-ordinated Resource Management

In 1980, ARDSA committed over $3.4 million to enhance the grazing potential of Crown rangelands for livestock through the development of 14 new Co-ordinated Resource Management Plans (CRMPs). The plans encompassed over 800,000 hectares (2 million acres) and involved nearly 100 ranchers.

ARDSA-funded CRMPs include such developments as fencing, cattleguards, water developments, corrals, stock trails, land clearing, tree thinning, prescribed burning and land discing and seeding.

The number of CRMPs funded under ARDSA is now 84, and the combined total under ARDSA and the past ARDA program is 101. The total cost of the 101 CRMPs is over $20 million, of which the federal and provincial governments are contributing 90 per cent and the local users 10 per cent. They involve over 600 ranchers and cover approximately 3.2 million hectares (8 million acres) or over one-third of British Columbia's Crown range grazing reserve.



lture propagation is an ARDSA-funded project being undertaken in Kelowna.

An ARDSA-assisted plant tissue analysis lab at Langley offers quick service to growers.

Part III - Primary Resource Development

Due to the amount of analysis and engineering necessary, relatively few Part III projects were approved early in the agreement. However, Part III is now proving to be one of the most active sections of ARDSA with funding approved for irrigation and drainage projects estimated to cost over $7.5 million. In addition, a large number of feasibility studies are being completed regarding future projects.

During the past year, ARDSA funded eight Part III projects estimated to cost $1.1 million. These included a project to pump irrigation water from the Thompson River near Ashcroft, allowing five farms to plant grapes, tree fruits and ground crops; drainage works near Fort Langley to help control the flooding of farmland from spring run-off; and the construction of several dams to supply groups of ranchers in the Kamloops area with irrigation water.

Part IV - Support Services and Community Development

During 1980, 33 projects estimated to cost ove $30 million received assistance of $5 million unde ARDSA Part IV. These included 13 rural electrifi cation projects which received $258,642 fro ARDSA towards a total cost of $733,290.

Due to the increasing complexity of propose rural electrification projects, a five-member federa provincial committee was established to evaluat applications. Since the agreement began, 43 hydr extensions have been funded throughout rur British Columbia under ARDSA Part IV.

Other Part IV projects assisted during the ye included feedlots at Cache Creek and Dawso Creek, a cottage winery at Oliver, large anim veterinary clincs at Vernon and 100 Mile Hou and a chick hatchery expansion at Abbotsford.

gricultural Credit

inancial assistance to eligible farm operators is vided through the agricultural credit branch unprovisions of the Agricultural Credit Act and Agricultural Land Development Act. This asince may take the form of:

- provincial government guarantee to chartered anks or credit unions as supplemental support ecurity on loans to farmers
- partial reimbursement of interest paid by armers on loans from approved lenders to effecively reduce the cost of farm loans
- ncentives to farmers to participate in programs s proclaimed and encouraged by the province n specified areas of B.C. These incentives to armers may take the form of additional reimursement of interest paid and/or reimbursenent of loan principal payments
- irect loans for primary and secondary land evelopment

aranteed Loan Program

hartered banks and credit unions of the proe received support security in the form of a rnment guarantee on 39 loan portfolios in . These guarantees totalled $4,675,850. Since , when the program was implemented, 302 antees have been placed amounting to 941,321.

he claim was made and approved under the anding guarantee covenants in 1980 for a total 6,668. Since inception of the program, 10 s totalling $406,355 have been paid to banks redit unions.

Partial Interest Reimbursement Program

1980 was a record year for this program from the standpoints of both the number of applications processed and the total dollars distributed to farm operators. Seven thousand two hundred and eighty-six applications were processed resulting in benefits of $23,299,583. This activity represented partial reimbursement of interest costs paid by eligible applicants to approved lenders in 1979. Interest costs for this period were reimbursed to reduce the effective interest rate to approximately 9 per cent at a time when such interest costs soared to an average chartered bank prime rate of 12.77 per cent. The approved lenders in this program are the chartered banks, credit unions, Farm Credit Corporation, Federal Business Development Bank and the Director of the Veterans' Land Act.

A total of $50,201,545 in benefits representing a reduction in interest costs has been paid to farm operators of British Columbia since the inception of this program in 1974.

Special Programs

Grapevine Assistance Program - 1978-79

There are 12 participants in this program who are eligible to receive benefits in the form of a reduction of loan interest costs to 4 per cent for the calendar years 1980-82. Loan interest costs on eligible loans on the basis of $1,000 per acre per year will be reduced to assist such farm operators in

A.L.D.A. loan program helped farmers finance the cost of primary and secondary land development.

re-establishing 216 acres of grapevines destroyed or severely damaged as a result of frost damage in the winter of 1978-79. Projected reimbursement benefits are $15-18,000 to be paid in 1981 representing reduction in 1980 interest costs.

Asparagus Production Incentive Program

This is a new program launched in 1980 to stimulate an increase in the production of asparagus in British Columbia. Financial assistance takes the form of reimbursement of all or a portion of the interest costs paid by the farmer over a four-year crop establishment period on those loans contracted through banks or credit unions. Two applications had been approved for the planting of 130 acres to asparagus production, and additional applications were being reviewed by the B.C. Asparagus Growers' Association and staff of this ministry.

Agricultural Land Development Act (A.L.D.A.)

There were 643 loan contracts issued through this program in 1980 for a total value of $4,255,680. This popular program to assist farmers in financing costs of primary and secondary land development was fully committed to budget limitations through expenditures to date and outstanding contracts by August 1980, after which no further applications were accepted.

Crop Insurance

The function of the crop insurance branch is to administer the B.C. Crop Insurance Act and the Crop Insurance Stabilization Fund Act.

The objectives of the branch are:

1. To reduce the fluctuations in net income of individual producers who suffer crop losses due to weather and other uncontrollable factors.
2. To maintain an effective system for administration of crop insurance programs for selected commodities.
3. To reduce the need for ad hoc assistance programs in crop loss situations.

The crop insurance program involves the participation of the farmer and the provincial and federal governments.

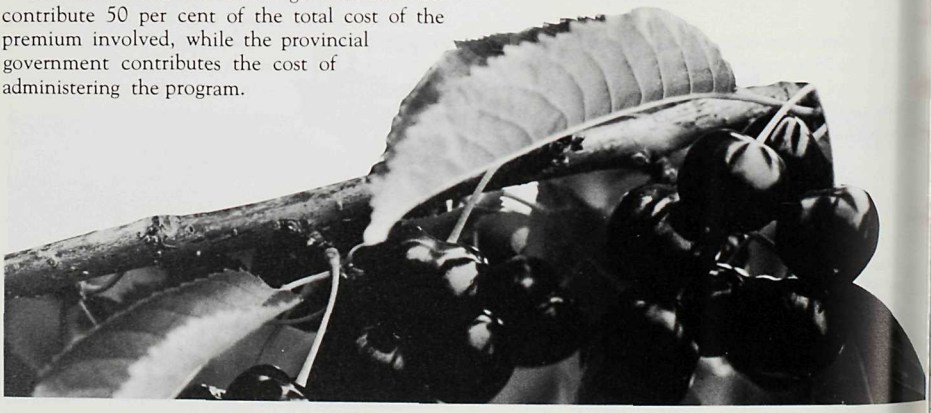
The farmer and the federal government each contribute 50 per cent of the total cost of the premium involved, while the provincial government contributes the cost of administering the program.

The exceptionally wet spring in the Fraser Valley and Okanagan caused extensive outbreaks of various fungal diseases on blueberries and other crops. Rainsplitting of cherries was aggravated by brown rot, resulting in the largest indemnity payments for this crop. Apples cropped heavily.

The dry spring in the Cariboo and Peace caused poor initial forage growth. Harvesting was hampered by persistent rains.

Cereal crops in the Peace did well, but the conditions caused extensive rapeseed losses for the second year in succession.

Scattered hail storms caused damage to crops in the Peace and in the Okanagan.



Cherry producers who participated in the crop insurance program received insurance indemnities as a result of rainsplit and brown rot damage to their cherry crop.

tus of Crop Insurance Fund at March 31, 1980

	March 31/79 (Cr)	March 31/80 (Cr)
Due from Government of Canada	$	$ 190,668.75
Grain program	284,686.25	784,774.05
Tree fruit program	1,877,963.13	2,182,064.56
Berry program	344,799.96	416,864.41
Grape program	454,125.07	330,972.20
Forage program	6,553.83	20,406.44
Vegetable program	59,319.73	131,329.72
Crop Insurance Fund Balance	$3,014,340.31	$2,972,985.35

d: This statement shows the actual status of the Crop Insurance Fund as of March 31, 1980 by fiscal year on a cumulative basis. The above figures will not necessarily agree with those of the individual program which are by crop year, as the time periods do not correspond.

nmary of Loss Experience

	% Loss to Premium 1979	Cumulative
Loss experience for all programs	100.62	93.79
Grain program	33.35	108.54
Tree fruit program	90.34	82.35
Berry program	70.04	103.34
Grape program	486.01	138.64
Forage program	125.66	117.00
Vegetable program	9.36	7.40

ninistration

	April 1/78 to March 31/79	April 1/79 to March 31/80
Provincial administrative costs	$ 541,844	$ 515,239
Federal government premium contributions	$1,577,781	$1,652,464
Administration cost to federal contributions	34.34%	31.18%
Administration costs to total coverage	1.78%	1.30%
Administraton costs to total claims	22.95%	15.03%

Farm Income Insurance

The branch administers the income insurance program comprised of a number of commodity plans which protect producers against income loss due to low market returns or rapid fluctuation in farm cost input prices. Plans for 12 commodities were implemented in the period 1973 to 1977, mostly for a term of five years. Eleven of the 12 original plans have expired and the raspberry plan was to terminate following settlement of producer claims for the 1980 crop year.

The total cost to government for all plans in the 1980 calendar year was $5,554,180.55.

Two new plans were established in 1980 under the terms and policy of the new farm income insurance agreements for a second generation of plans. The addition of the broiler hatching egg and the beef plans brings the total number of new plans to six; the others are tree fruit, swine, strawberries for processing, and vegetables for processing (peas, beans and corn).

The broiler hatching egg plan provided cover effective January 1, 1979 for 39 producers. The l plan provided expanded coverage for cow-c yearling and finishing operators effective Januar 1980. Beef producers registered in the plan are r required to pay an advance premium on a per h basis.

Work continued on the development of plans for the blueberry, sheep, potato and gr house vegetable commodity groups.

At the end of the year, there were 3,372 par pants registered in the six new ongoing farm come plans.

The farm income insurance plan continued t a major agricultural policy of the provincial gov ment, providing a significant level of protec from low returns or increasing costs beyond individual participant's control.

The new income insurance plan for beef producers was implemented in 1980 and provides expanded coverage for cow-calf, yearling and finishing operators.

rm Products Finance

he branch is responsible for the implementa- and administration of a varied program of ncial assistance under the Farm Product In- y Act to assist in the development and con- ution of a financially viable secondary proces- industry for agricultural production within the nce. The program can provide financial assist- in the form of grants, loans or loan guarantees gricultural and food processing firms or or- ations.

nce the start of the program in November , financial assistance totalling approximately million has been approved for 55 agricultural prises as follows:

arantees	$28,621,250
ans	8,535,226
ares	5,511,655
erest Reimbursement Grants	1,230,714
ecial Assistance Grants	1,904,622
mmodity Assistance Grants	634,112
entive Grants	501,400
rket Promotion Grants	87,040
sibility Studies, Etc.	56,687
al	$47,082,706

ring 1980, requests for financial assistance considered for 45 agricultural or food proces- organizations. Financial examinations were d out on 28 of the requests and assistance of ximately $2 million approved for 17 of the izations which had submitted proposals.

ancial assistance was provided in three cat- s:

an aid to a processing firm or oganization in ancial difficulty which had been unable to ain assistance from other sources on reason- e terms and conditions;

an incentive to encourage firms or organiza- ns to develop, modernize or expand proces- g facilities when assistance was not available m any other program;

ncouragement for food processors to develop l test market new products or develop new kets.

Financial assistance of particular interest during 1980 included the following:

British Columbia Turkey Marketing Board, Cloverdale

A loan guarantee was made available to enable the board to re-open and operate the Clearbrook poultry processing plant formerly operated by Maplewood Poultry. The company's continuing financial difficulties had forced the closure of the plant, and the plant's processing capacity was urgently needed by the turkey industry while efforts were underway to find a new owner. The operating of the plant prevented serious losses for the turkey growers. The plant was subsequently purchased by Scott Poultry Co-operative Association and, at the end of the year, was again in full operation under the name of Pan Ready Poultry 1980 Ltd. This company was provided with a loan guarantee to enable it to raise necessary operating capital following the purchase.

Royal City Foods Ltd., Burnaby

An incentive grant was provided toward the costs of acquiring and installing automated corn husking machinery. The machinery, not in use in any other plant in the province, will ensure the company's competitive position in the marketplace against corn products coming from outside the province where such automated machinery is in use.

Sun Dew Foods Ltd., Okanagan Falls

Sun Dew Foods received product development and market testing assistance for the development and marketing of fruit nectars of the "European" type not presently being produced anywhere else in North America according to the company. The product is now being successfully marketed and will provide an important use for the Okanagan's cull peaches, pears and apricots for which there was previously no market.

During 1980, the branch discontinued providing financial analysis services to the agriculture and rural development branch (ARDA) on proposals submitted under Part IV of the federal/provincial Agriculture and Rural Development Subsidiary Agreement (ARDSA) program. The requirement is now provided by the staff of that branch.

Property Management

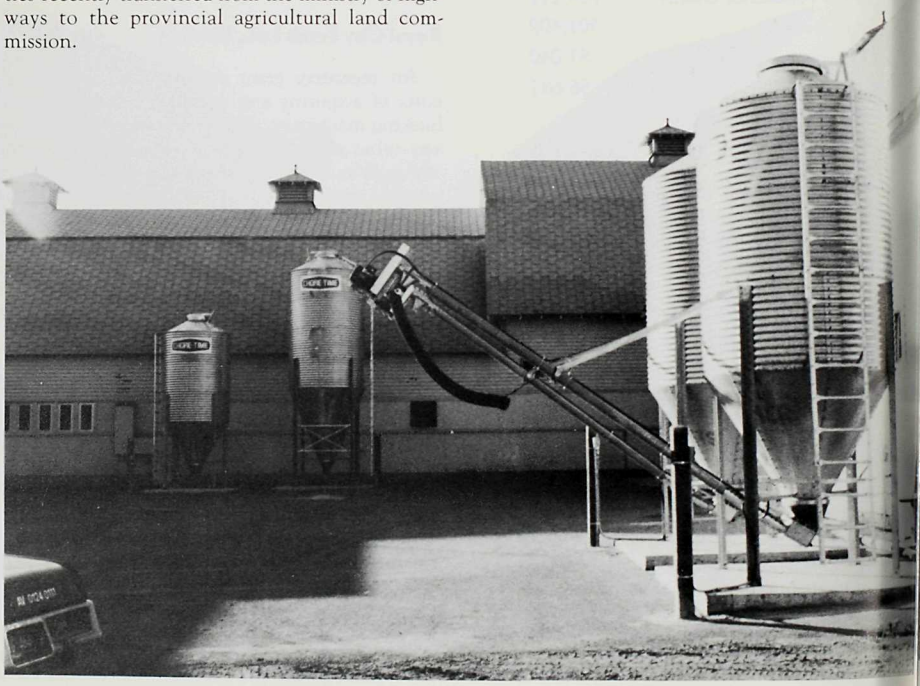
The programs administered by this branch did not undergo any major changes during 1980; however, some minor adjustments were necessary to allow for the maturing of the relatively new lease program and the initiation of some new minor projects associated with the farm operations program.

Lease Program

Because of difficulties which arose when negotiating compensation payable to lessees upon the termination of a lease, a new and more detailed policy was developed in cooperation with the provincial agricultural land commission.

During the year, 33 lease rental reviews were conducted and, in most cases, good progress in the development of the individual tentant programs was evident, making it possible to increase the rental rates and bring them much closer to those existing in the market place. New leases negotiated numbered 17, of which 11 concerned new properties recently transferred from the ministry of highways to the provincial agricultural land commission.

The sharp increase in land and improvement values necessitated constant attention; this occupied much of the appraiser's time in assigning current evaluation figures for the purpose of establishing new rental rates, property sales, tenant compensation and insurance coverage. During 1980, six options to purchase were exercised, with two sales completed and the remaining four sales agreements still under negotiation. Revenue collected for all property sales completed to date totalled $1,394,000 with further sales under negotiation amounting to $888,000. With one exception, all sales made to date were to the tenant involved except the Reahil Property #31 at Kelowna which was sold on the open market. The DeClarke Property #28 was offered on the open market, but was returned to the lease program when no acceptable tenders were received.



New grain storage bins were constructed at the branch's institutional farm at Tranquille.

he number of on-site inspection requests di-
ished considerably; the inspection service has
ome more involved with in-depth analysis of
or applications. The resulting reports have as-
ed a greater degree of importance and an in-
sed effort is being made to ensure the quality of
submissions. The major on-site inspections
pleted during 1980 included the Columbia
ey Land Use Study; the Terra Nova Area; Lulu
d; the Annacis Island Crossing; and the Mun-
ility of Delta (Spetifore) Application.

m Operations Program

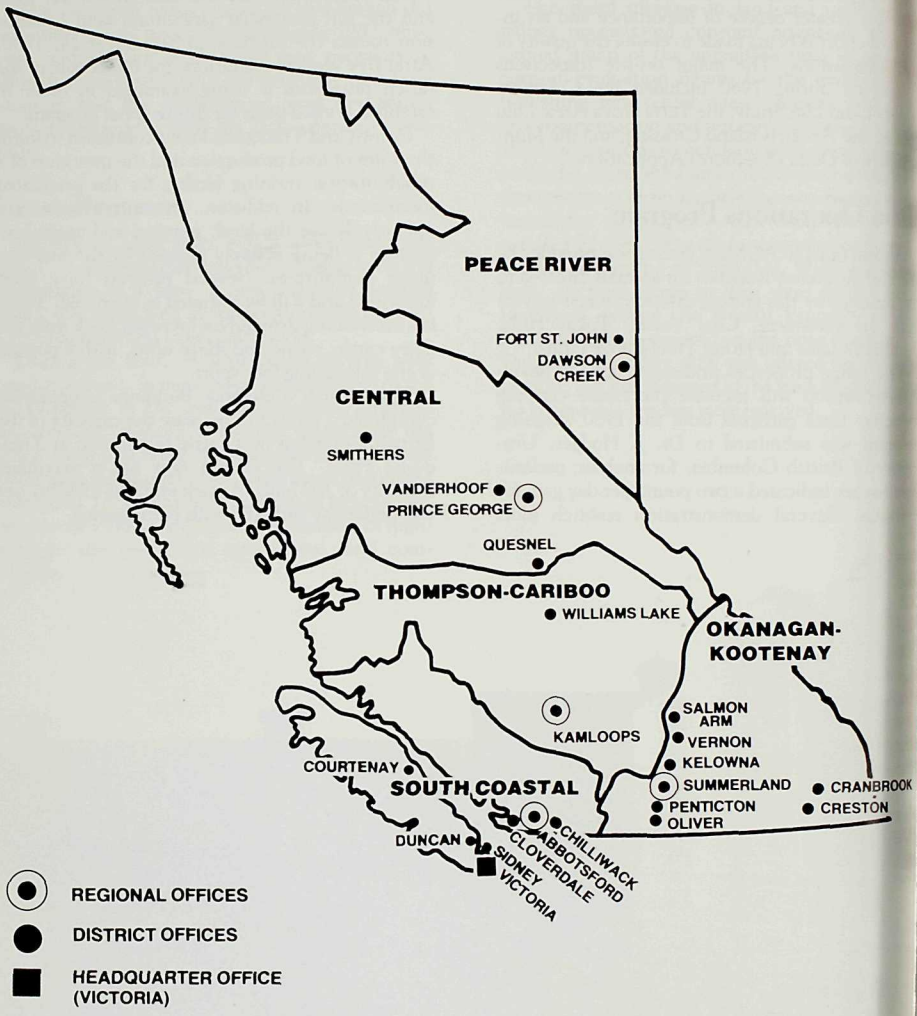
total of 2470 AUMs of grazing was provided by
East Kootenay Ranches for animals directed to
anches by the grazing division, forest service
the Grasmere, Coal Valley, Tokay Hills,
ham's Lake and Horse Thief Range Units.
e range properties underwent further devel-
ent which will increase the future carrying
city. Data gathered from the 1980 weighing
am was submitted to Dr. J. Hodges, Uni-
ty of British Columbia, for analysis; prelimi-
figures indicated a two pound per day gain for
ings. Several demonstration research plots have been set up at the Steeples Ranch by the ministry's forage specialist at Creston to test grass species and seeding rates for irrigated pastures.

The annual field day was held on July 26, 1980 and the full provincial agricultural land commission toured the ranches on September 24, 1980. After five years of operation, the future role of the ranch properties is being examined in order to establish revised goals for this regional program.

Colony and Tranquille Farms continued to fulfill the roles of food production and the provision of a rehabilitation training facility for the associated institutions. In addition, the initiative to co-operatively use the land, physical and animal resources is being actively pursued by the management committees. Several projects have been identified and will be initiated as approved. There is a continuing demand for breeding stock from the dairy cattle, swine and sheep units, with a portion of the sales going for export.

The British Columbia Buildings Corporation completed a project to increase the capacity of the British Columbia beef cattle test station at Tranquille Farm. The station now has a maximum capacity of 200 bulls. At year end, the 1980/81 test was underway with 166 bulls participating.

erty near Vernon is the site of a sewage effluent irrigation project in which field crop variety trails are conducted.


PEACE RIVER
FORT ST. JOHN
DAWSON CREEK
CENTRAL
SMITHERS
VANDERHOOF
PRINCE GEORGE
QUESNEL
THOMPSON-CARIBOO
WILLIAMS LAKE
OKANAGAN-KOOTENAY
KAMLOOPS
SALMON ARM
VERNON
KELOWNA
SUMMERLAND
PENTICTON
OLIVER
CRANBROOK
CRESTON
COURTENAY
SOUTH COASTAL
DUNCAN
SIDNEY
VICTORIA
CLOVERDALE
ABBOTSFORD
CHILLIWACK
REGIONAL OFFICES
DISTRICT OFFICES
HEADQUARTER OFFICE (VICTORIA)

Offices of British Columbia Ministry of Agriculture and Food

HEAD OFFICE: Victoria — 808 Douglas Street, Nootka Court, (Mailing address: Parliament Buildings, Victoria, V8W 2Z7, Phone: 387-5121)

District Offices

Abbotsford:	205-33780 Laurel Street, V2S 1X4, 859-5281
	Engineering Branch, 33832 South Fraser Way, V2S 2C5, 853-6451
	Poultry Test Station, 32916 Marshall Road, V2S 1K2, 853-3671
	Veterinary Lab, Box 100, V2S 4N8, 853-1161
Chilliwack:	5-8635 Young Road South, V2P 4P3, 795-9471
Cloverdale:	17720-57th Avenue, Surrey, V3S 4P9, 576-2911
Courtenay:	209-420 Cumberland Road, V9N 5M6, 338-7465
Cranbrook:	202-135 10th Avenue South, V1C 2N1, 489-3521
Creston:	456 Northwest Boulevard, V0B 1G0, 428-5371
Dawson Creek:	1201-103rd Avenue, V1G 4J2, 782-5931
Duncan:	238 Government St., V9L 1A5, 746-6183
Fort St. John:	201-9711 100th Avenue, V1J 1Y2, 787-1111
Kamloops:	162 Oriole Road, V2C 4N7, 374-3614
Kelowna:	1873 Spall Road, V1Y 4R2, 860-3588
Kimberley:	Court House, Box 940, V0H 1T0, 498-2420
Kingston:	477 Martin Street, V2A 5L2, 493-2749
Prince George:	Experimental Farm, R.R. #1, V2N 2H8, 963-9685
Nanaimo:	208-350 Barlow Avenue, V2J 2C1, 992-5591
Salmon Arm:	Samara Building, Box 639, V0E 2T0, 832-2088
Summerland:	Government Building, Box 518, V0J 2N0, 847-4411
Summerland:	Research Station, Box 198, V0H 1Z0, 494-7011
Surrey:	Food Information Services, Marketing Branch, 10344 East Whalley Ring Road, V3T 4H4, 584-7691
Vanderhoof:	Church Avenue, Box 987, V0J 3A0, 567-2563
Vernon:	4607-23rd Street, V1T 4K7, 545-1387
Williams Lake:	540 Borland Street, V2G 1R8, 392-6261