

AGRICULTURE on **VANCOUVER ISLAND** and the **GULF ISLANDS**



Province of British Columbia Ministry of Agriculture

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Historical Background

Vancouver Island, object of the earliest explorations in British Columbia, also saw the first attempts at farming. In 1786, land was cleared at Nootka on the west coast of the island and European garden seeds were planted. Farms were started in earnest when Fort Victoria was founded in 1843.

The Fraser River gold rush in 1858 brought with it a major eco-

nomie stimulus as Victoria became a supply and transport centre for miners on the way to the gold fields, and by 1881 there were 779 farms on the island. Farming soon spread north along the east side of Vancouver Island. With road improvement and a rail-line between Victoria and Nanaimo, commercial and agricultural growth was continued to the present day.

Agriculture

Nearly all the Island's highly diversified agriculture is scattered along the eastern lowland from Campbell River to Victoria and Sooke. Small pockets of agriculture are also found in the Salmon River Valley, valleys north of Alberni,

and a few isolated areas on the north and west coast.

The Province's second largest urban population is in the Victoria area. It supplies a market for much of the farm produce, especially livestock, fruit, and vegetable prod-



Small pockets of agriculture are typical on Vancouver Island.
This one is between Victoria and Duncan.



Land in the Comox Valley is highly suitable to agriculture, which therefore commands a higher price because of its relative scarcity. This pasture and forage area is surrounded by forested hills and low mountains.

ucts. The main agricultural enterprises include dairy, poultry (eggs and meat), forage crops, vegetables, beef, potatoes, greenhouse crops (tomatoes and cucumbers), berry crops, swine, and sheep, in that order.

Since less than 10 per cent of the Island's 1,746 farms exceed 80 hectares (200 acres), small holdings dominate the farm scene. The small size of farms is partly due to the scattered nature of the farming areas. The pressures for non-agricultural development and the desire of people seeking additional income on retirement by farming a few hectares stimulates the trend toward small units. Since most of the farms are small holdings producing income inadequate to support a family, off-farm employment is often a necessity. Higher pay job oppor-

tunities in non-agricultural work compete with farming as a source of livelihood. Because the Island is climatically attractive, the population continues to expand.

Whether land is purchased for farming or other uses, prices are high. Depending on locality, prices of more than \$4,980 per hectare (\$2,000 per acre) are not uncommon. A dairy farm of 50 cows may be priced at well over \$350,000. A 5-hectare (12-acre) small fruit and vegetable farm, including buildings and equipment, can cost \$100,000 or more.

Available arable Crown land is now virtually non-existent. Persons seeking land for farming are advised to consult selling agencies. Farmers sometimes lease land in order to retain their limited capital for stock and equipment.

Dairying

Dairy farms are widely distributed on the Island with a total cash income of about \$13 million* from 127 licensed dairy cow operations. Milking cows two years and older number 8,050 head and the average number of cows is 51 per farm, with average production per cow about 5 770 litres (12,715 pounds).

Dairying is a capital intensive enterprise, with emphasis on high yields of fluid milk. Rather than plunge their capital into the purchase of costly dairy farms, prospective dairymen frequently start with rented land and buildings and use credit for the purchase of the herd, milk quota, and machinery as a means of establishing themselves as owners in the future.

* 1976 figures.

The five-year Dairy Income Assurance Program was established in 1973 and has helped to stabilize the industry by providing dairy farmers with greater income security as related to basic costs of production.

It is anticipated that income stabilization programs will continue. However, because dairy producers have a board regulating supply and market returns indexed to cost items, the new income stabilization program will not likely include dairy.

Production costs are higher on the Island than on the Mainland and farmers receive more for their milk. The bulk of the grain and large amounts of hay requirements are imported. Because of high land cost there is a trend to fewer farms and larger herds.



Dairying is the major agricultural enterprise on Vancouver Island. This operation, near Comox, is one of the largest dairy operations in British Columbia, producing much of its own feed requirements. Note the corn growing in the background.

Poultry

Production of eggs and poultry meat is generally adequate for the market. Annual egg production of some 4.8 million dozen eggs is about 10 per cent of the Provincial total and brings a return of \$3 million.* Poultry meat, including turkeys, also represents about 10 per cent of the Provincial total and returns about \$325,000. The raising of geese and ducks is minimal.

Although poultry farming requires a smaller outlay for land, feed costs are high. Poultrymen use commercially mixed grains grown mainly in Alberta or the Peace River district of British Columbia. The feed mixture may also contain corn from the United States.

Poultry products are sold through wholesalers, but the price the producer receives within the quota system is set by the producer marketing board for that community. Poultrymen may participate in the Income Assurance Program.

The general trend of poultry meat and egg supplies being produced on fewer larger establishments is expected to continue.

* 1976 figures.

Beef Cattle

The total beef cattle population is about 12,000 head, with a farm cash value of about \$2.5 million.* Beef from dairy stock, cull cows, and veal returns an additional \$1 million annually.

Most of the beef cattle are raised as a part-time occupation because of the high cost of land, land development, high feed costs, and a

shortage of natural grazing. Cattle are sold through local auction or shipped directly to processors.

At present, a Beef Income Assurance Program is available for producers having 20 or more beef breeding cows or who market more than 3 634 kilograms (8,075 pounds) of calf or yearling beef annually. Indemnities are paid when market returns fall below a negotiated cost of production.

The demand for beef exceeds production, and beef-raising on the Island is expected to increase slowly as more land areas are developed for agriculture.

* 1976 figures.

Sheep, Swine, and Other Stock

The present sheep population, about 7,000, is expected to remain at that level for the next few years. The annual return is about \$210,000.* Successful sheep-raising on the Island requires good pasture management with wild predator and dog control. Because sheep lend themselves to small holdings, the number of small flocks will likely increase.

Swine numbers tend to fluctuate. Marketings are about 10,000 annually and the farm cash income is approximately \$500,000. Hog-raising is limited by the high cost of feeds, chiefly barley grains imported from the Peace River district or Prairie Provinces.

In keeping with a general expansion of leisure hours, increasing interest in riding clubs and ownership of horses has raised the horse

* 1976 figures.

population to about 2,000 head. Imported alfalfa and timothy hay are the chief roughages used as horse feed.

Fur-farming is a specialized occupation which may be practised on small parcels of non-arable land. Mink is the main fur. A publication dealing with fur-farming in British Columbia is available by writing to the Publications Office, B.C. Ministry of Agriculture, Victoria, B.C. V8W 2Z7.

Vegetables

About 420 hectares (1,050 acres) are planted to field-grown vegetable crops. These vegetables, exclusive of potatoes, are mostly sold fresh with a small percentage, particularly of the cole crops, being processed.

All of the crops which grow in the north temperate zones can be grown on Vancouver Island. Originally, most of the vegetables were

produced on the Saanich Peninsula, but recently production has moved up-Island, particularly to areas around Courtenay.

Approximately 500 hectares (1,250 acres) are planted to potatoes, most of which are sold on the Island.

The sale of many of the vegetable crops is under the control of the B.C. Coast Vegetable Marketing Board. The controlled crops include potatoes, cabbage, carrots, cauliflower, rutabagas, beets, onions, greenhouse tomatoes, and greenhouse cucumbers.

Berries

Berry crops have a combined value of about \$600,000.* Strawberry plantings located on various parts of the Island have been reduced because of expanding urbanization and higher land prices. At present, about 25 hectares (62 acres) are planted to straw-



Potato harvesting on Vancouver Island usually is done around the beginning of September, depending on varieties and harvesting conditions. Many vegetable farms produce a number of vegetable types.

berries. Raspberries, loganberries, and other small-fruit crops occupy a total of about 20 hectares (50 acres). Strawberries and raspberries are mainly sold fresh through retail outlets, roadside stands and pick-your-own operations. Loganberries are sold locally for home consumption or shipped to Mainland wineries.

* 1976 figures.

Tree Fruits

The only tree fruits produced commercially on the Island are apples and cherries. Plantings of apples total about 122 hectares (305 acres). There have been a number of plantings in recent years on small acreages because of the introduction of dwarf and semi-dwarf trees which are ideally suited to these areas.

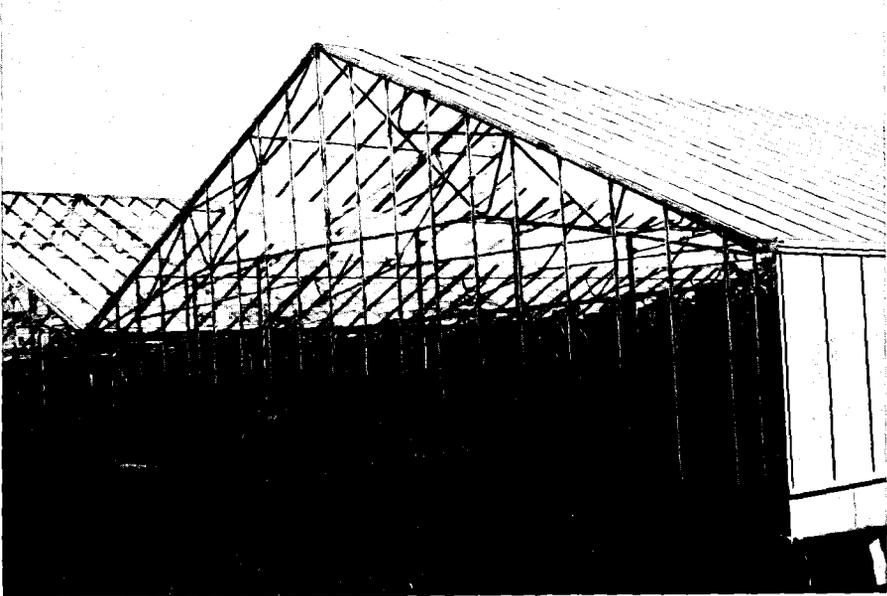
Less than 10 hectares (25 acres) of land are planted to sweet cherries. Pears, sour cherries, peaches, plums, and apricots are not planted commercially and are only found in favourable locations. The total value of tree fruits is around \$85,000* annually.

* 1976 figures.

Greenhouse Crops

Greenhouse crops are grown on a fairly large scale. Nearly 180 000 square metres (2 million square feet) of greenhouse area produce tomatoes, cucumbers, flowers, pot plants, and bedding plants with a combined annual value estimated at over \$3 million.*

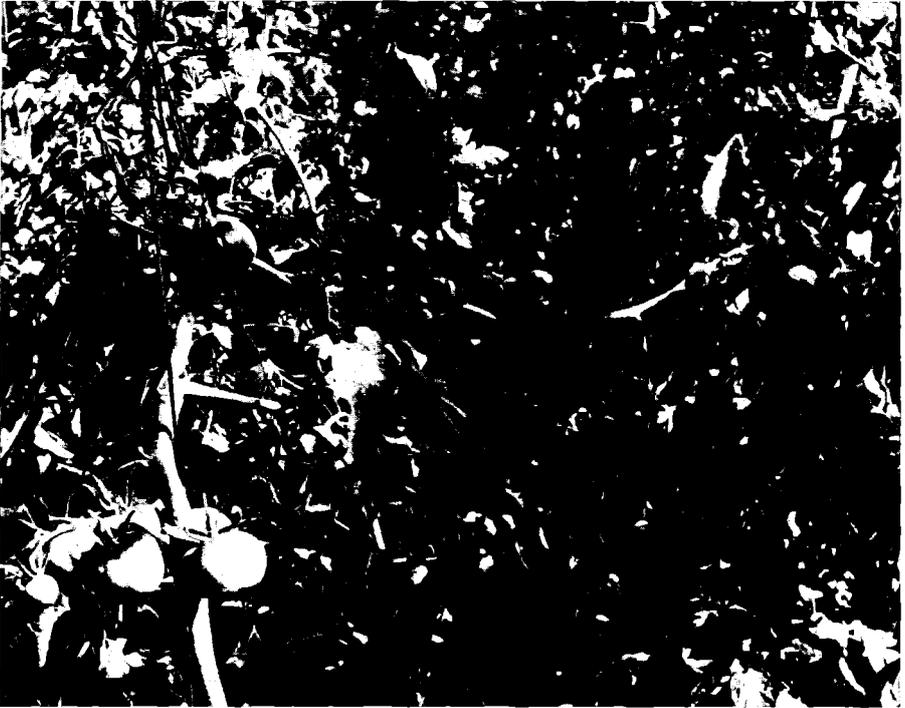
* 1976 figures.



Glass greenhouses are commonly used in the Saanich area just north of Victoria. Many growers produce only greenhouse tomatoes and cucumbers using hydroponic methods (soilless culture).



Vegetables are raised in the Courtenay area.



Greenhouse tomatoes and cucumbers are produced near Courtenay.

Specialty Crops

Specialty crops such as field-grown cut flowers, bulbs, seeds, hazel nuts, and holly grow well on the Island. Most of these crops are shipped to the Mainland or to Eastern Canada. Nursery stock is another specialty crop which is rapidly gaining in importance.

New housing, apartment buildings, and office buildings have increased the demand for nursery stock of all kinds.

The total area planted to specialty crops is about 150 hectares (375 acres)

Apiculture

On Vancouver Island, 193 beekeepers manage a total of approxi-

mately 9,500 colonies of bees and produce an average of 340 000 kilograms (749,571 pounds) of honey in a normal year. Farm gate prices are approximately \$1.75 per kilogram (80 cents per pound) for a total farm cash income of \$600,000* annually.

The use of honeybees for pollination of greenhouse and outdoor crops has been standard practice for many years. Despite the annual destruction of some colonies by bears, beekeeping continues to show moderate expansion, particularly in the fireweed areas which offer fully three times the yield of the coastal lowlands.

* 1976 figures.

Gulf Islands

The Gulf Islands have a climate more or less comparable with that of the Saanich Peninsula. The favourable climate and amenities have made the islands attractive for vacationers and have provided a retirement locale for a quarter of the population living on the Gulf Islands, the highest proportion in British Columbia.

The Gulf Islands consist of 15 larger populated islands and numerous smaller sparsely populated ones. Saltspring Island is the largest with an area of 182 square kilometres (70 square miles).

Similar to Vancouver Island, the Gulf Islands' valleys and ridges show a northwest-southeast trend with maximum elevations only a few hundred metres above sea-level.

Patches of native grasses blend into a cover of evergreen and deciduous trees. Soils are shallow and confined to pockets within rocky outcrops. Agricultural land development is therefore limited.

Sheep, beef cattle, dairy cattle, and poultry are the main agricultural commodities produced and are primarily consumed locally.

Sheep-raising has practical scope because of the grazing patches of native grass and the open winters which permit lambing as early as February. Predation by dogs is a problem on some islands. Beef cattle, dairy cattle and poultry are all part-time farming operations, often in combination with other kinds of mixed farming. Much of

the hay and other fodder is imported.

Small quantities of potatoes, fruit and vegetables are grown for local consumption. The climate permits a wide range of crops, but the limited amount of arable soil, the shortage of water for irrigation and

the extra transportation costs of incoming goods and outgoing products are serious shortcomings to greater farm development. Nevertheless, the expanding population warrants an increase in certain cash crops and livestock products.

Agricultural Services

The farming community on Vancouver Island and the Gulf Islands is served by a wide range of Provincial and Federal services. Production services of the Ministry of Agriculture has headquarters staff in Victoria and District Offices of the Ministry are located at Duncan and Courtenay. An Agriculture Canada research station is situated in the Saanich Peninsula near Sidney.

The University of British Columbia, Faculty of Agricultural Sciences, also operates a research farm at Oyster River between Courtenay and Campbell River.

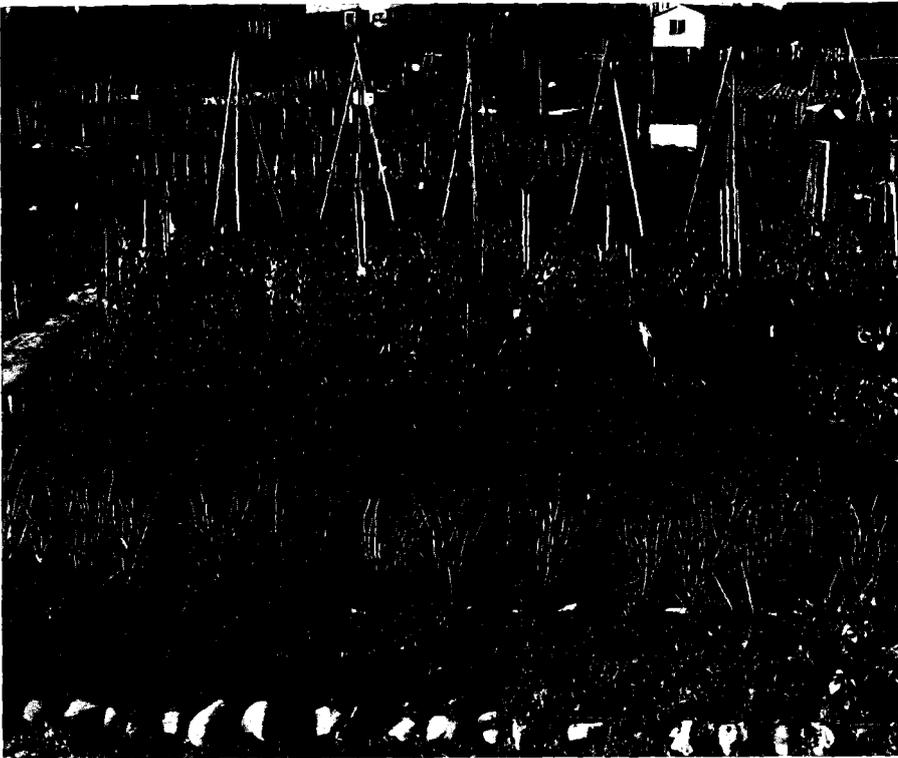
District Offices of the Ministry of Agriculture are staffed with professional agriculturists and technical personnel who serve in their particular advisory or technical capacities. The various Provincial services, administered through their respective branches, provide technical information on apiculture, dairying, engineering, entomology and plant pathology, farm economics, field crops, 4-H clubs, horticulture, livestock, poultry, soils and veterinary practices.

Other Services

In addition to regular production advisory services, other programs of assistance are offered through Provincial and Federal agencies. The main programs are as follows:

- *Farm Income Assurance Program*—has a stabilizing effect intended to assure consumers of adequate supplies of certain agricultural commodities and to provide producers with a portion of the deficit between cost of production and the market returns when market prices drop or production costs become suddenly high. All programs operate on a five-year term and are subject to renegotiation.
- *Agricultural Credit Program*—provides farmers with improved terms and access to agricultural credit for farm development. Application is made through chartered banks or credit unions.
- *Agricultural Land Development Act (ALDA)*—provides low-interest financing for primary land development such as land-clearing, drainage and irrigation to a maximum of \$15,000.

- *Allotment Garden Program*—garden-plot holders grow their own vegetables, develop an appreciation of what is involved in horticultural production and derive satisfaction from growing their own food.
- *Crop Insurance Program*—covers the growers of blueberries, raspberries, strawberries and cranberries. It offers insurance protection against the hazards of weather and uncontrollable pestilence.
- *Farm Credit Corporation*—a Federal program providing agricultural loans of up to \$150,000. It has its headquarters at Kelowna and a district office at Abbotsford.
- *Farm Management Program*—assists farmers in making sound investment decisions based on economic principles and an analysis of the economic resources of the farm operation.
- *Federal-Provincial Small Farm Development Program*—provides opportunity for the expansion of smaller farms through a land transfer plan, coupled with farm management and counselling services.



The B.C. Ministry of Agriculture administers allotment gardens in the Victoria area which gives urban dwellers an opportunity to grow their own vegetables as well as gain an appreciation of the complexities in producing food stuffs.

Soils and Farm Land

The formation of soils on Vancouver Island dates back to pre-glacial times. Most of the soil materials are mixtures of sand-size particles, products of granitic rocks and sandstones. The volcanic rocks, shales and sandstones produced most of the finer soils of silt and clay.

Glacial till, the hard "un-weathered" material of varying soil textures and stones, is the most widespread of the parent materials, producing soils which are mainly fair to poor for crop production.

First-class soils, those with few if any limitations for agriculture, are scattered in pockets surrounded by lower grade soils. The Saanich Peninsula and the Cowichan, Chemainus, Nanaimo,

Comox, and Alberni Valleys contain first-class soils.

The Canada Land Inventory (CLI) is an inventory of agricultural soil resources and a guide to better land use. Classification is largely based on climate and soil characteristics. Classes 1, 2 and 3 offer sustained production of common cultivated crops, but the remaining classes, 4 to 7, have marked limitations for agriculture.

According to CLI capability ratings for Vancouver Island, 74 581 hectares (184,294 acres) of land of classes 1, 2 and 3 have potential for farming, without need of major irrigation or drainage development. Land-clearing and other related improvements may be necessary, however. This



Land with agricultural capability must be cleared to gain maximum production.

figure of 74 581 hectares includes 46 902 hectares (115,897 acres) of farm land presently under crops, pasture or other farm use. It also includes 27 679 hectares (68,396 acres) of woodland, native pasture or otherwise undeveloped farm land.

There is sufficient farm land of classes 1 to 3 capability to triple the present cultivated area; however, most of this land is at present in other uses and may not be readily available. On most farm land on Vancouver Island and the Gulf Islands, irrigation is essential to attain maximum crop production. At present, 3 200 hectares (8,000 acres) are under irrigation.

Because of favourable climate and other amenities, people are attracted to Vancouver Island and the Gulf Islands. As a result there has been rapid non-agricultural development of good farm land. This encroachment of

residential and industrial development and the subdivision of larger parcels into small non-economic farm units has been largely arrested with the passing of the British Columbia *Land Commission Act* of 1973.

The *Land Commission Act* established agricultural land reserves (ALR's) in all regions of British Columbia. These reserves protect land from encroachment of non-agricultural development and limit land to farming or other uses which do not diminish the capability of the land for crop production. There are 114 834 hectares (283,760 acres) within ALR's in the bulletin area.

Agricultural land reserve maps showing the boundaries of reserve lands are available from British Columbia Ministry of Agriculture district offices, the B.C. Land Commission offices in Burnaby, or local municipal offices.

Climate

The Pacific Ocean exerts a strong influence on the climate of Vancouver Island. In the more populated areas near sea-level it is neither very cold nor very warm, though it may be dry in mid-summer and wet in mid-winter. Victoria is the only Canadian city having recorded a winter without frost.

In winter, ocean temperatures are transferred to the air, making the Island and Gulf Islands the mildest part of Canada. Summer temperatures, on the other

hand, seldom rise beyond a comfortable 20°C because of the cooling influence of the ocean. A lag effect may delay winter minimums and summer maximums. During the winter, snow is uncommon at lower levels although it is abundant at higher elevations.

Annual precipitation is generally heavier than that of other parts of Canada, and it always reaches a peak in winter and drops to a minimum in summer. About 80 per cent of the rains fall between October and March. The

western slope of the Island receives the direct impact of moisture-laden air, often drenching it in excess of 2 500 millimetres annually. In contrast, the eastern and particularly southeastern portion of the Island has the lowest precipitation, with as little as 657 mm as a yearly average. The lower precipitation is due to the sheltering effect of the Vancouver Island Mountains and the Olympic Mountains of Washington State. From south to north, precipitation increases. Port Hardy, for example, has 1 730 mm annually. Victoria has 667 mm.

Sunny skies are a feature of the Victoria area where the average is 2,183 hours of bright sunshine per year, slightly higher than any other part of the Province.

South of Campbell River and on the west coast, the long mild season allows plant growth to continue well into mid-November. In keeping with the moderate climate, extremes are unusual. The worst element is the gale-force winds which average eight per year at Victoria and Port Hardy. Damage, however, is rare. Fog is an occasional nuisance during the fall and winter.

Mean Precipitation (Long-term Average)

Station	December		July		Annual		Winter Snowfall		Elevation	
	mm	in.	mm	in.	mm	in.	cm	in.	m	ft.
Victoria.....	106	4.5	12	0.5	667	25.8	33	12.9	69	228
Saanich.....	148	5.9	17	0.7	839	33.5	58	22.8	223	730
Duncan.....	189	7.6	19	0.7	1 025	41.0	74	29.3	15	50
Nanaimo.....	178	7.1	23	0.9	1 031	41.2	87	34.4	7	25
Courtenay.....	249	9.9	28	1.1	1 376	55.0	122	48.2	81	265
Estevan Point.....	429	17.2	86	3.4	2 980	119.2	34	13.5	6	20
Port Alberni.....	335	13.4	26	1.0	2 026	81.0	149	58.6	70	230
Salt Spring Island.....	176	7.0	21	0.8	1 010	40.4	69	27.2	73	240
Galiano Island.....	142	5.7	22	0.9	859	34.3	34	13.6	18	60

DISTRICT OFFICES OF THE B.C. MINISTRY OF AGRICULTURE

Victoria	808 Douglas Street, V8W 2Z7 (phone 387-5121)
Abbotsford	33780 Laurel Street, V2S 1X4
Chilliwack	5, 8635 Young Road South, V2P 4P3
Cloverdale (Surrey)	17720—57th Avenue, V3S 4P9
Courtenay	209, 420 Cumberland Road, V9N 5M6
Cranbrook	202, 135—10th Avenue South, V1C 2N1
Creston	Agriculture Canada Building, 456 Northwest Boulevard, V0B 1G0
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Quesnel	208, 350 Barlow Street, V2J 2C1
Salmon Arm	Samara Building, Box 639, V0E 2T0
Smithers	Government Building, Box 518, V0J 2N0
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Williams Lake	540 Borland Street, V2G 1R8
Food Information Services, Marketing Branch, Surrey	
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