

PROVINCE OF BRITISH COLUMBIA

Department of Agriculture

SIXTY-SEVENTH

ANNUAL REPORT

1972



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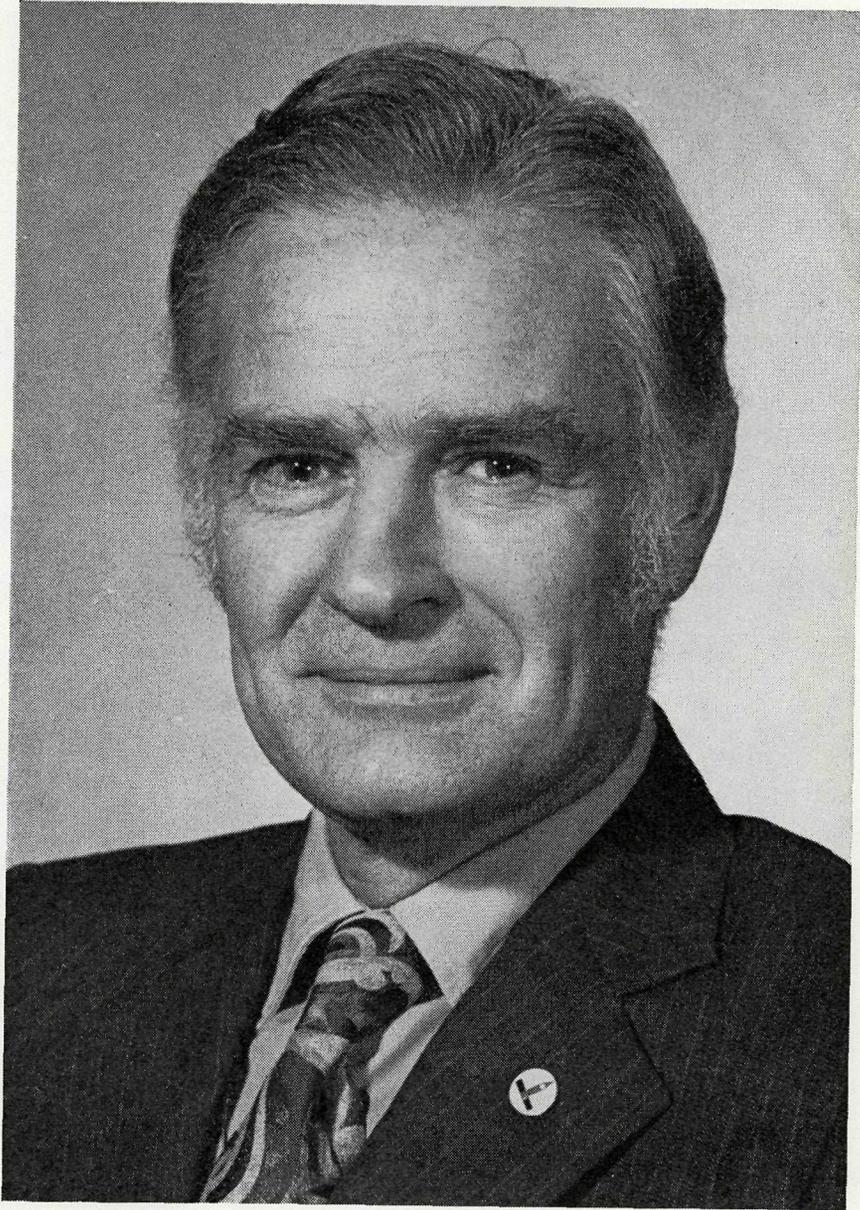
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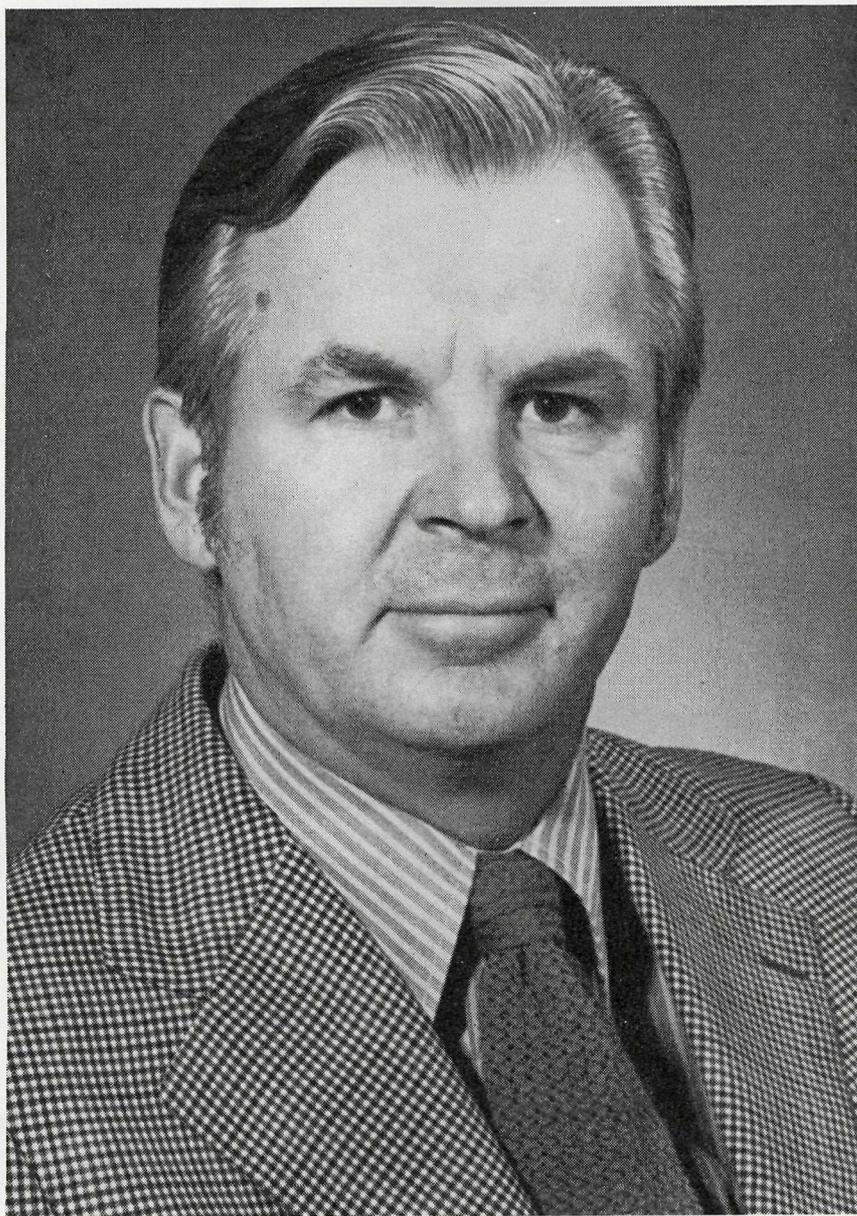
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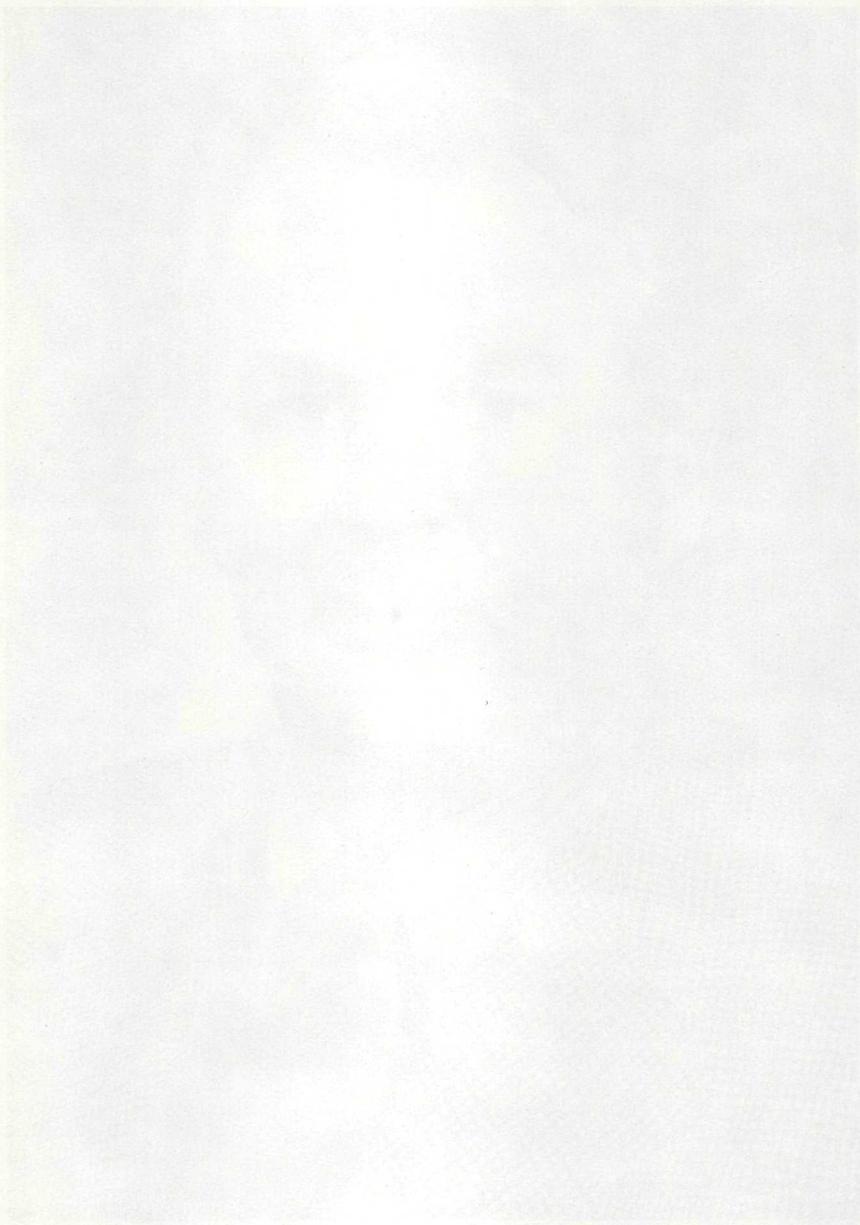
The Honourable David D. Stupich, B.S.A., C.A., Minister of Agriculture.



The Honorable David D. Clark, U.S.A., Chief of Protocol



S. B. Peterson, B.S.A., Deputy Minister of Agriculture.



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*To Colonel the Honourable JOHN R. NICHOLSON, P.C., O.B.E., Q.C., LL.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
Department of Agriculture for the year 1972.

DAVID D. STUPICH
Minister of Agriculture

*Department of Agriculture,
Victoria, B.C.*

To Colonel the Honorable John R. Newcomb, F. C. S. A. F. O. I. I. B.
Assistant Governor of the Province of West Virginia

May I please ask you a favor?

Please, the honor to submit for your consideration the Annual Report of the
Department of Agriculture for the year 1912

FRANK B. STUBBS
Director of Agriculture

Department of Agriculture
Harrisburg, Pa.

A Message From the Minister of Agriculture

There are those among us who tend to assume that British Columbia is a land of boundless resources to be freely exploited under the guise of "progress." We can forgive those early settlers who subscribed to this view, but today we know that is patently untrue.

Nowhere is this more evident than in our agriculture. It has become firmly established that there are very definite limits to the extent of land area in this Province that can be profitably devoted to agricultural pursuits.

Because of this it is essential that every effort be made to ensure that such land be preserved, not only in the interests of our agricultural industry itself but for the common good as well.

History has shown that those civilizations that failed to husband their resources wisely themselves failed to survive. Thus falls to us the responsibility to foster and to maintain a sound agriculture as an integral part of a balanced economy.

While the achievement of this objective requires that the wholesale alienation of farming lands to other usage be prevented, it also requires that conditions be so created as to make possible the development of such lands in the manner to which they are best suited. This in turn can only be realized successfully when the demands of economic feasibility have been met.

Accordingly, it will be my intention as a basic policy to pursue positive programmes designed to maximize net returns in all sectors of the industry, from the primary level through to the market place. This will involve measures to permit conversion of production units into other lines of endeavour wherever this is practical, and the provision of efficient facilities for the handling and processing of farm products where necessary.

All of these will be predicated upon the tenets of comparative advantage, in keeping with the best interests of the community at large.

This is the challenge that now faces us in agriculture. To meet it will require the fullest application of all of our present knowledge and skills. The degree to which we may succeed will depend on the co-operation and devotion of everyone concerned with the building of a better society through a stronger agricultural industry.

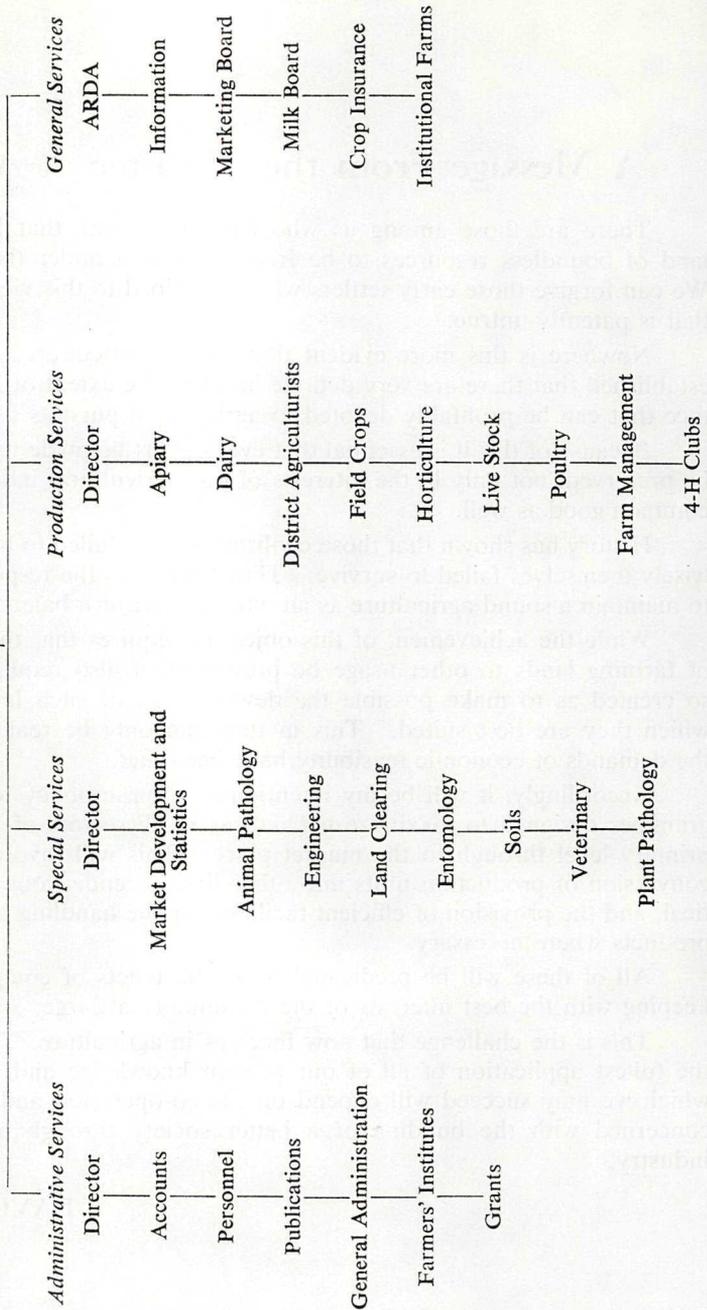
DAVID D. STUPICH

BRITISH COLUMBIA DEPARTMENT OF AGRICULTURE

MINISTER

DEPUTY MINISTER

ASSISTANT DEPUTY MINISTER



Report of the Department of Agriculture

REVIEW

A generally firm market tone and rising prices for farm products were the dominant features of British Columbia's agricultural industry during 1972. While there were some severe crop losses sustained during both the spring and autumn months as a result of unfavourable weather conditions, these were offset in the total picture by the upward pricing trend that prevailed over a wide front.

Reflecting these conditions, the index of farm prices of agricultural products (1961=100) rose sharply by nearly nine points above the average figure of 123.7 established in 1971. This represented a new higher-price plateau on the farm scene.

Total cash receipts from sales of farm products reached an all-time high estimated at \$245 million, a gain of 10 per cent over the record set in the preceding year.

Much of these developments, however, can be attributed to those pressures exerted by monetary inflation and not to any significant increase in total farm output. These same pressures were also evident in the rising costs of inputs—labour, supplies, and equipment all showing an upward tendency during the year. In the light of such developments the net income gain for the industry was of rather modest proportions.

A substantial percentage of the real income gains achieved this year stemmed from the live stock and live-stock products sector.

As market demand firmed, beef prices responded with an increase of close to \$3 per hundredweight over 1971 levels. Hog prices, which had been declining earlier, rebounded sharply in the latter six months, and by the year's end were up by more than 35 per cent for good butcher hogs.

Such increases had an immediate effect upon retail prices, reflected in the substantial rise of the consumer price index at Vancouver from the 1971 reading of 133.1 to a record 143.2.

Again, however, these higher returns to the primary producer did not represent net income gains of the same dimensions. During this same period, wholesale prices of feed grains also rose significantly. Feed wheat, for example, increased 44 per cent in price, feed oats 59 per cent.

The dairy industry, which accounts for one-quarter of the Province's total farm income, recorded moderate gains as sales of fluid milk rose by slightly more than 4 per cent this year. While the total dairy cow population declined fractionally, milk production increased to an all-time record of more than 979 million pounds.

Cash returns from sales of poultry meat were up about 10 per cent, highlighted by a sharp increase in broiler-chicken production. Returns from egg production increased by 6 per cent.

The orchard industry saw an average crop of apples and a higher-than-average yield of pears during the 1972 crop-year, but other items were below those realized in the preceding year. Prices for soft fruits and pears were the highest in the past three years. A feature of the apple-marketing sector was the movement of some 281,000 boxes to offshore markets by the year's end, more than double the volume recorded in the same period in 1971.

Berry crops were down in total this year, but prices were firmer, led by a sharp upswing to 39 cents per pound to the grower for raspberries. Vegetables and potatoes were also down in volume, but again this was largely offset by price increases. Potato prices at the end of the year exceeded \$100 per ton to the wholesale trade for the top grade, while onions reached \$140 and rutabagas \$160 per ton.

Although grain-growers in the Peace River District sustained losses through inclement weather, price returns to those who were able to salvage some of the crop displayed a firm upward trend. Unfortunately for the bulk of the producers, much of the harvested grain was of lower-than-average grade, which in turn brought correspondingly lower prices. Following a survey conducted by the Department, arrangements were made for financial aid to farmers in the area as a measure of compensation for crop losses.

Other sectors of the agricultural industry recorded generally satisfactory performance. The mushroom crop, for example, again exceeded 4 million pounds. Growers of greenhouse and nursery crops also achieved encouraging returns, the former in particular as prices for tomatoes and cucumbers increased significantly over 1971 levels.

The 1972 honey crop was down somewhat, but the producer price escalated by 40 per cent during the year to 33.5 cents per pound by late December. This was more than double the average producer price realized as recently as two years ago.

This brief summary once again confirms the basic soundness of the agricultural economy in this Province. Restricted by topographic conditions to a very small part of British Columbia's total land area, it nevertheless has a degree of diversity to overcome most of the vagaries of weather and a reputation for quality production that is a source of pride to those engaged in this field of endeavour.

It is a renewable basic resource, and continues to make a useful contribution to the welfare of the Provincial economy.

ADMINISTRATION

There were no major changes in the Department's administrative structure in 1972. In the latter months the office of Assistant Deputy Minister was created, and tentative plans were completed to transfer the office of the Poultry Commissioner from Victoria to Abbotsford.

By December 31 the total staff personnel stood at 360 (permanent) and 159 (temporary, including ARDA staff).

DAIRYING

Reflecting the continuing rate of change in the industry, the Dairy Branch issued licences to only 31 dairy plants this year, down three from the 1971 figure. This decline was accompanied by a drop in the number of licensed plant personnel to a total of 341. Dairy plant inspections were stepped up during the year, resulting in a marked improvement in both facilities and the quality of product handled. An information bulletin for tank-milk receivers was introduced for the first time this year as a means of further improving handling techniques.

Eighteen persons were enrolled in the annual dairy short course conducted by the Branch, and a further eight were enrolled in the associated correspondence course.

A total of 1,895 dairy farm inspections was completed during the year. Coupled with 345 dairy plant visits, these represented a thorough coverage of in-

dustry premises. In addition, 7,757 raw product and 3,953 finished product samples were picked up for testing.

The Branch's dairy laboratory carried out grading tests on 18,539 milk samples, which again revealed the high quality of production in the Province. To assist producers in identifying and controlling outbreaks of mastitis, a Milk Gel Index Programme was initiated this year. The analytical work volume resulting from this brought a sharp increase in the number of analyses, up 42 per cent to a total of 25,894.

While the number of composite samples handled by the infra-red milk-analyser (IRMA) declined as a result of the reduction in the number of dairy herds in the Province, sampling under the Dairy Herd Improvement Associations (DHIA) Programme showed a significant increase of 30 per cent over the preceding year.

EXTENSION

The Agricultural Development and Extension Branch continued its programming of increased specialization in specific fields of agriculture throughout the Province this year in keeping with technological advances in all areas. This was again particularly evident in the more remote areas where expanded and improved lines of communication are making possible a steady growth pattern in a number of fields.

Typical of this trend was the increasing interest shown by farm operators in the national CANFARM Programme, as well as those programmes designed to improve crop and live-stock husbandry. While the actual numbers of primary producers enrolling in these remain relatively small, there was ample evidence this year that interest is growing to the point where the Branch's personnel is having to devote increasing attention to demands for more information and advice on these and related subjects.

District Agriculturists again played an important role in fostering greater Provincial involvement in the CANFARM Programme and in soil and forage analysis projects, live-stock and crop improvement, and the development of expanded market opportunities for farm products. As more herds and flocks are entered in test programmes and demand for soil and forage analysis increases, the field staff has been altering its work schedules to accommodate the resulting requirements. To meet these needs, increased use of communication media was again made in 1972. Particular attention was given to the preparation of radio and video tapes as a means of reaching a broader audience than would otherwise be possible. These media have proved particularly effective in the more remote areas.

The expansion of the 4-H Club programme this year to include horses meant an increase in district staff work load, already heavy in some districts. Added to this was the increased emphasis on extended club membership, the success of which depends to a large extent upon the efforts of the District Agriculturist.

As new lands are opened and existing farming areas become subject to increasing urban pressures, the Branch is faced with broadened responsibilities, now extending beyond routine land-clearing assistance work into the field of technical planning in those areas where regional district administrations have been established.

Of particular interest this year were a number of specialized projects undertaken by field staff. Among these was a steer-feeding demonstration utilizing high-moisture content barley at Dawson Creek, in co-operation with the vocational school at that point. Another was an irrigation demonstration at Vanderhoof to illustrate the potential for increased forage yields on the soils of that area. The Branch co-operated with the Canada Department of Agriculture in this project.

Other projects included the completion of the knapweed control programme in the East Kootenay, the corn silage study to explore the potential for growing and feeding corn to cattle in the Kamloops area, and a series of irrigation field days in co-operation with B.C. Hydro and Power Authority.

SOILS

Reconnaissance soil surveys and associated capability ratings for both agriculture and forestry were once again the dominant features of the Soils Division's 1972 work schedule. Surveys were commenced in the Adams Lake-Revelstoke and the Kamloops-Ashcroft areas this year, while work was continued in the Okanagan, West Kootenay, and Prince George Districts. Soil-capability maps were completed in the first and second of these districts, as were forestry plots.

The detailed survey of the Okanagan Valley and the resurvey of the lowlands in the vicinity of Chilliwack were carried forward, and will provide useful information related to the many aspects of land-use planning in these areas.

Of immediate interest in the Okanagan was the Spartan Apple Study to determine whether soil nutrients might be the causal agent in storage breakdown of this variety.

With the completion of capability analyses, drafting of capability maps for the West Kootenay analyses area was also accomplished, as was a preliminary draft report on the soil resources of the Smithers-Hazelton sector.

Advisory assistance on irrigation and soils problems was increased this year, but there was a modest decline in demand for drainage surveys. Laboratory analyses carried out by the Division totalled 16,338 during the year. In addition, there were 679 physical analyses completed.

The installation of a data-acquisition system in the laboratory, along with an increase in personnel, made possible the sharp increase in analytical output.

VETERINARY

The Veterinary Branch reported no serious outbreaks of disease among the Province's live-stock population during 1972, apart from a total of 17 cases of western equine encephalomyelitis (WEE) identified among horses in the Okanagan area. Calfhood diseases, notably those associated with scours and pneumonia, continued to pose a problem in a number of herds.

Also causing concern was infectious bovine rhinotracheitis (IBR) and bovine virus diarrhoea (BVD).

On the other hand, the Province continued as a tuberculosis accredited and a brucellosis-free area. The Branch reported only three cases of tuberculosis and brucellosis in cattle this year. Regulations requiring the vaccination of all chickens sold in the Lower Mainland against infectious laryngotracheitis went into effect on January 1, and, in the ensuing six months, 2,635,000 doses of vaccine were administered in that area.

Field veterinarians again provided such routine services as inspection of sheep for foot-rot, swine herds on ROP, bulls and steers at the Beef Cattle Test Station at Kamloops, and participated in the usual round of field days, seminars, and workshops, etc., provided for the education of live-stock producers.

Licences were issued to 61 live-stock auctioneers, 17 public sale yards, and 14 public sale yard operators this year, and 30 feed lots were approved. In all, 229,697 head of stock were inspected.

Ninety-one licences were issued for the distribution and sale of medicated feeds and 95 for veterinary drugs.

Under the Branch's meat inspection service, 17,978 head of cattle and 28,221 hogs were inspected in the six abattoirs covered by provisions of the *Meat Inspection Act*.

A total of 5,158 submissions was made to the Veterinary Laboratory during the year, including 1,249 chicken, 825 cattle, and 612 horse for diagnostic services. The laboratory findings amounted in all to 8,758, of which 3,475 were established through histopathology procedures, 2,735 bacteriology, and 1,345 toxicology. Actual specimens submitted amounted to 19,125.

A number of investigational projects were initiated by the microbiology section, and included evaluation of current disease-preventive techniques in both live-stock and poultry husbandry.

The Brands Division reported the issuance of 2,134 brands in the Province during the year and the licensing of 217 stock-dealers. Stock shipments totalled 214,211 head of cattle from the area prescribed under the *Stock Brands Act*, plus an additional 20,594 head from the Lower Mainland and Vancouver Island.

Exports of cattle to United States points amounted to 8,001 head, while shipments eastward accounted for 100,718.

Slaughter-house records revealed a total of 11,805 head of cattle handled during the year, as well as 10,652 head of swine and 1,078 sheep and lambs. Slaughtered for animal food only were 6,127 head of cattle, 1,874 hogs, 160 sheep and lambs, and 394 horses.

LIVE STOCK

The Live Stock Branch reported 156 herds enrolled in the Record of Performance Programme for beef cattle, representing a total of 5,582 animals on test during the year. Complementing this was the sixth test period for bulls conducted at the Department's Test Station at Tranquille. In the latter, those animals having a 365-day yearling weight index of 100 or better by breed, and which also passed visual inspection, qualified for the sale of bulls after completing test. Eighteen of these were sold at prices ranging as high as \$1,800 per head, with an average price of \$820.

An amendment to the station's entry requirements for bulls on test in 1972 permitted producers to nominate five bulls from the same number of sires instead of from a single sire as had been required earlier. This was done in recognition of the performance rather than the progeny-testing role of such tests.

However, the steer progeny test was continued, with 90 steers from eight different sires, representing four breeds entered.

Under the ROP Programme for swine, 35 boars and 47 gilts were probed, the majority being of the Yorkshire breed. The over-all index attained was 108 and the average back fat was 0.8. The ROP Programme for sheep saw 323 purebred ewes producing 520 lambs for a figure of 161 per cent.

The Branch's Feed Analysis Service handled samples totalling in excess of 1,110, more than double the number received in 1971. In co-operation with Field Crops and Extension staff, a demonstration to illustrate the effects of regular feeding of a salt-mineral feed mix to cattle produced an increase of 16 per cent in the calf crop.

The Dairy Herd Improvement Services reported a total of 30,270 cows in 626 herds on test by the end of the year, representing a gain of nearly 2,000 head and 30 herds over the 12-month period. The average herd size on test now stands at 48.2 cows.

Average milk production per cow has continued to show an increase, reaching 13,440 pounds of milk and 505 pounds of fat, based upon milking periods of 184 to 305 days. These totalled 20,617.

HORTICULTURE

In common with horticultural enterprises elsewhere, the British Columbia industry is constantly confronted with problems associated with either the threat or the actual presence of pests and diseases. Because of this, much of the Horticultural Branch activities were again focused on both preventive and control measures over virtually all sectors. Many were carried out in co-operation with the Entomology and Plant Pathology Branches, as well as branches of the Canada Department of Agriculture and the University of British Columbia.

Among the many projects conducted this year was a pH survey of orchard soils in the Okanagan. Since occasional checks in past years had revealed pH readings as low as 4.5, this survey was launched to determine whether there might be a general trend toward increased acidity generally. Of the samples analysed, 11 per cent registered readings of 5.5 or lower, but as the bulk were obtained from the drip-line area of the trees, it was concluded that the acidity factor is primarily due to the application of chemical fertilizers.

Tissue analysis of fruit-trees, introduced in the early 1960's, was extended this year to include blueberries and cranberries. The analyses involved close to 2,000 determinations. Also continued was the pear mite counting project, commenced in 1971. This was expanded into a mite and pear psylla monitoring service to complement the established service covering apples.

The nematode diagnostic service again provided a valuable source of information to growers, particularly in strawberries and raspberries. Root lesion and dagger nematodes were found to be the principal factors affecting crop yields of both fruits.

A campyloomma bug monitoring programme was organized this year after a number of orchards had sustained losses from depredations of the insect in 1971. In those instances where sample counts exceeded an arbitrarily established level, sprays of Diazinon or Guthion were recommended. As matters turned out, however, there was a significant decrease in the bug population and a consequent reduction in crop damage from this source in 1972.

To help reduce escalating labour costs involved in thinning for Bartlett pears, a trial recommendation for the use of naphthalene acetamide as a postbloom thinner in dilute sprays was made for the first time in 1972. This treatment appears to reduce cullage and may improve sizing.

In the field of general extension, the Branch took part in more than 200 radio broadcasts to growers during the year and again organized the popular "Sunrise Chautauqua" on television. Active participation in the staging of the 1972 Horticultural Forum was another feature of the year's programming.

FIELD CROPS

An increase in staff permitted the Field Crops Branch to undertake an increased work programme in 1972. This included a broadened approach to weed-control measures throughout the Province as well as the introduction of a number of testing projects involving soil and field husbandry.

Twelve fertilizer plots were established on seeded range in the southern Interior of the Province, and forage production was measured on a number of dry-range fertilized plots. Observations were made on range seedings and a 40-acre range

rehabilitation plot was fertilized in the latter part of the year. A weed-control plot was established on cinquefoil on range in the North Okanagan.

Trials were continued to determine the adaptability of the Adzuki bean to British Columbia conditions, and types of white navy and red kidney beans were also tested. Thus far, results with the Adzuki bean have been disappointing, but the others are showing some promise for seed-growing.

The Branch reported increasing interest in the Elite Seed Programme for potatoes as field results have indicated that the use of Elite III seed produces significant gains in crop yields.

The Branch's Soil Testing Laboratory processed a record 10,300 samples this year, from which a total of 61,650 determinations was made. A preliminary survey of alfalfa fields was commenced in which 60 soil and 30 plant samples were obtained. In addition, analytical work was carried out on the pH survey of Okanagan orchards, involving 4,000 soil samples.

Sponsored jointly by the Department, cattlemen, and horticultural organizations, the Feed and Tissue Testing Laboratory expanded its operations this year to the point where 18 different chemical determinations can be obtained.

Eleven permits for the removal of feed screenings were issued in 1972 in addition to four feeders' permits. The total dockage exceeded 641 million pounds, of which some 96 million pounds were moved under permit for devitalizing. Over 4 million pounds were moved to feed lots.

The Branch reported a total of 2,580 tons of grain shipped from the Creston area under provisions of the Feed Grain Assistance Policy, while subsidies were also paid on 27,324 tons of lime for agricultural purposes.

ENGINEERING

This year saw a further expansion of the Engineering Branch's work load in the field of pollution control, ranging from an advisory role on sewage disposal to the reduction of odour problems in commercial poultry operations. The former involved the sewage-effluent system at Vernon and the sewage-utilization trials projected for the treatment plant on Iona Island near Vancouver.

In co-operation with the Poultry Branch, preliminary plans were drawn up for a hot-water floor-heating system for broiler houses, aimed at the elimination of bedding while significantly reducing undesirable odours by drying the droppings.

Additional work was carried out to develop improvements in ventilation systems for deep-pit cage laying-houses, the basic plan for which was developed by the Branch.

Publications arising from the findings of the Canada and the British Columbia Animal Waste Management Guide Committees, in which the Branch took an active part, are now available.

Planning assistance for farmers building or remodelling barns was continued this year following revision of the Farm Building Plan Service. In all there were over 100 inquiries processed during the year, all involving substantial expenditures.

A complaint programme covering all types of farm equipment was introduced this year, under which complaints by farmers are directed to the Branch, which in turn contacts the manufacturer's distributor. Eight manufacturing firms are co-operating in the programme.

The first trickle irrigation system for raspberries, installed in 1971, proved its worth this year as yields of berries were sharply increased over those realized under

conventional systems. Gross returns were estimated at about \$1,000 more per acre. Trickle systems have also been introduced on sloped orchard lands in the North Okanagan.

A strong demand for detailed farm drainage systems continued in 1972, resulting in an estimated total installation cost well in excess of \$100,000.

As a result of numerous tests which revealed that farmers operating equipment are at times exposed to noise well above accepted exposure levels, several trials were carried out in the Peace River District. It is anticipated that further investigations will permit the development of a sound-hazard classification.

Also in the Peace, a major grain-drying project was initiated following the severe harvest losses resulting from inclement weather conditions.

POULTRY

As the trend toward fewer but larger commercial poultry enterprises continues, the staff of the Poultry Branch has been called upon to direct increased attention to the development of improved husbandry techniques. Thus in 1972 greater emphasis was placed upon such subjects as tests of commercial feeds and problems related to housing of birds.

Continued from 1971 was a feeding trial to determine whether satisfactory results could be achieved with starter and grower rations having a lower protein content than has been commonly recommended for pullet chicks. Results indicated that rations of 13 per cent protein or 12 per cent protein, with added lysine, produced birds showing lighter body weight but equally good or better laying performance than those fed 17 to 20 per cent starter and 13 to 18 per cent grower rations, all containing a wheat base.

A similar test on broiler breeding stock showed that birds fed a starter ration of 15 per cent protein for six weeks, followed by a 13-per-cent grower ration, performed satisfactorily. However, there were indications that higher protein feeds may be necessary in the early growth stages.

Repeated again were tests of commercial broiler chicken and turkey rations, using samples from five feed manufacturers. The feeds were found to be of uniformly good quality.

For the second year a trial comparison of broiler production efficiency under conditions of continuous and intermittent lighting indicated that the latter gave generally better results in both body weight and feed efficiency. A somewhat similar experiment to determine the performance efficiency in caged layers under limited watering-time showed that some savings may be realized by this means. Further investigation is scheduled for the coming year.

A trial to determine the value of recycling air in a deep-pit cage house to hasten the drying of manure revealed that while there was some increase in dust deposits on walkways, there was a significant increase in the drying process and a consequent reduction in obnoxious odours, as well as a possible reduction in the fly population.

With the elimination of pollorum testing, except upon request, there has been a marked reduction in the numbers of birds approved for egg and meat production.

This year there were 34,335 for the former and 226,400 for meat, and only 3,800 heavy turkeys.

PLANT PATHOLOGY

While some considerable progress was made during 1972 in controlling and containing the numerous plant diseases occurring in British Columbia, it also became increasingly evident that the rate of incidence in respect of a number of these is

associated with the rapid growth rate in the Province's population. As a result, the percentage of diseased plant specimens submitted by home-owners continues to outrank those from farmers.

Typical of these are pear trellis (juniper) rust and cypress root rot in Lawson cypress and other ornamentals. The former is a source of concern to commercial pear-growers, and a vigorous effort is being made to prevent its movement into the Okanagan area.

The Branch reported that for the first time since 1969 no new little cherry disease infections were found in the Okanagan, and a primary source was eliminated there with the removal of several dozen flowering cherry-trees, either known to be or suspected of being symptomless carriers of the little cherry virus.

A continuous problem in 1972 was the incidence of Godronia canker in susceptible varieties of young blueberry plantings. Mummy berry also contributed again to a reduction in blueberry crop yields. No new methods have as yet been devised to control the former, but tests conducted in co-operation with the Canada Department of Agriculture indicated that applications of Cela W524 and Benlate are effective in the prevention of primary and secondary mummy berry infections respectively.

Benlate and Dithane M-45 both appeared effective as a treatment for needle cast in Scots Pine Christmas trees, while Terrazole showed promise in increasing yields in plantings of carrots affected by lateral root dieback.

The Branch this year commenced publication of a monthly newsletter *Plant Pathology Notes*, which has met with favourable reception by those concerned with plant disease problems.

ENTOMOLOGY

No unusual insect outbreaks were reported by the Entomology Branch this year, but the mosquito population in some areas was higher than normal as a result of the extended period of high-water levels arising from the heavy snowfall of the 1971/72 winter.

In the Okanagan area the incidence of cherry fruit-fly continued to increase and is now general throughout all districts with the exception of the immediate area around Oliver and Osoyoos. The Branch again carried out a survey, using sticky-board traps and reporting emergence dates.

In co-operation with the Canada Department of Agriculture, insect sex pheromones were used as both a survey tool and as a control factor for codling moth this year, and gave promise of effective results. Initial results indicated that first brood sprays may be unnecessary when this method is applied.

Results from the third year of the cranberry pollination project again showed that caging of plants reduces crop yield substantially, but this year two-thirds of the caged berries had seeds, whereas the 1971 crop showed only a few. Since no pollen grains were found on glass slides within the cages, the presence of seeds remains unexplained.

A survey to determine the insects and diseases creating problems for berry-growers was begun this year in the Fraser Valley, where some losses have been sustained. It appeared that those due to root weevil infestation occurred on untreated acreages, due in part to restrictions on the use of certain insecticides.

After several years of testing, the alfalfa seed project at Kamloops was abandoned. It appeared that the principal cause of failure was not in the handling of leaf cutter bees but the inability to produce alfalfa in this area.

The Pesticide Laboratory tested fewer samples for insecticide and herbicide residues this year. All samples of fruit and vegetables were found to have either

no detectable residues or to have slight traces within established tolerances. Tank-truck milk samples revealed an insignificant amount of DDT analogue and no traces of Dieldrin or other chlorinated hydrocarbons.

A total of 476 pesticide dealers was licensed in 1972, while certified dispensers numbered 1,050. There were 288 firms licensed as pesticide applicators, and applicator certificates were issued to 1,772 persons.

Under the rodent-control programme this year, 6,450 acres were treated for pocket gopher and 4,751 acres for ground-squirrel control. Total acreage treated, not including that handled by the BCFGA, amounted to 22,605. Because the supply of 1080 treatment wheat was shut off, there were no mouse-control measures undertaken during 1972, apart from an experimental use of zinc phosphide for orchard-mice control.

MARKETS AND STATISTICS

Problems arising from attempts by commodity marketing boards to stabilize the Provincial market for a number of farm products occupied much of the time and attention of the Markets and Statistics Branch during 1972. Coupled with these were difficulties associated with steadily rising costs throughout the entire marketing system, most of which were related to the general inflationary trend affecting all sectors of the economy.

In an effort to strengthen the position of a number of the producer groups concerned, several amendments were made to marketing schemes. In the main these were only partially effective, since many of the contributory factors stemmed from external forces.

A move by the British Columbia Egg Marketing Board toward joint action with similar boards elsewhere in the formation of a national egg marketing plan was made this year, but with some distinct reservations as to the possible unfavourable pressures that might ensue on the industry. In this the Board was fully supported by the Branch. Similar preliminary moves by other commodity marketing boards were also fostered in the hope of achieving some degree of protection against measures which might not coincide with British Columbia's best interests.

Interest in the formation of a marketing board for greenhouse tomatoes and cucumbers was revived this year, and the swine industry moved to a close investigation of the possible benefits that might be obtained from such a course of action. In neither case was a firm decision reached by the year's end, but the Branch continued to be consulted by both groups.

The Branch was involved in an advertising and promotional campaign for British Columbia farm products during the major part of the growing season for most crops, and continued to produce and place advertising material in a number of publications. As usual, the farm press was used most extensively.

Following publication of the 1971 Census of Canada and the resulting adjustments in basic statistical information this year, there was an increased demand for such data from such agencies as banks, agri-business firms, and educational institutions.

On a broader plane the Branch was actively involved in an examination of the export market potential for all Canadian agricultural products. This was approached both from a national and a regional basis, and brought forth a number of useful analyses and subsequent recommendations. Following upon this was the preparation of a position paper on behalf of the vegetable industry for submission as a part of a national industry brief to be presented at the international trade and tariff negotiations scheduled for 1973.

At the close of the year the Branch's weekly publication, the *Markets Bulletin*, was withdrawn from circulation.

The Food Consultant service developed a new set of 102 recipes to conform to a standard style this year, and in co-operation with the Canadian Restaurant Association produced a "B.C. Breakfast-Brunch Menu." A further highlight was the preparation of food items and appropriate props for 14 colour photographs featuring British Columbia products.

Nine producer groups participated in the "Acres of Food" display area at the 1972 Pacific National Exhibition, where the consultant supervised the redesigned show and installation and removal of display materials.

A total of 530 home economics students took part in the British Columbia Honey Producer Cooking Contest this year, and a honey leaflet and teacher kit were produced and distributed to home economics teachers.

INSTITUTIONAL FARMS

Productivity was maintained at satisfactory levels at both Colony Farm and Tranquille during 1972. Dairy herds on the two farms produced a combined total of close to 400,000 gallons of milk, while the output of red meats totalled some 433,000 pounds. Potato and vegetable production amounted to more than 426 tons, and 3,818 cases of fruit and vegetables were canned.

The Colony dairy herd continued to perform well with the five-year rolling herd average on 224 completed records being 138 and 130 per cent of breed-class average. With the achievement of another Gold Ribbon record this year, the herd has now obtained nine of these, a record unmatched anywhere in Canada.

Show-ring honours included the Premier Breeder and Exhibition award at the Pacific National Exhibition and a third placing for Breeders Herd at the Royal Winter Fair in Toronto. The latter also achieved the Honourable Mention category in the All-Canadian competition.

Exhibits of swine were entered at the Royal Winter Fair and the PNE, while the usual exhibit of sheep at the latter show won champion awards in the market lamb section.

At Tranquille, the dairy herd increased its production to the five-year rolling herd average of 143 and 144 per cent of BCA on 62 records. The commercial beef herd was maintained with 150 breeding cows.

In spite of minor losses resulting from a heavy spring run-off, crop production was generally satisfactory this year.

4-H CLUBS

This year the number of 4-H Clubs established in the Province reached 277, involving 783 leaders and a total membership of 4,552. As in other years, members participated in a full programme of judging rallies, field days, fairs, and exhibitions. Over 1,000 members attended the Pacific National Exhibition, where the highlights of the 4-H Show included educational displays, judging demonstrations, and food and dress displays.

The annual public-speaking competitions were completed at the finals, held this year at Vanderhoof, with Kathy Beaton, of Surrey, the winner. As usual there were a number of interprovincial and international exchange visits, which have proved highly popular with members.

Forty senior 4-H members from various parts of Western Canada attended the Western Provinces 4-H Seminar at Vancouver during July. Fourteen 4-H members from British Columbia travelled to the national conference in Ottawa and Toronto

in November. The Province was also represented by one member each at the 4-H Club Congress in Chicago and the U.S. national gathering at Washington, D.C.

Leadership certificates were awarded to six leaders completing 15 years' service and to a larger number in recognition of 10 and 5-year leadership tenures.

Seventy delegates took part in the Provincial 4-H Club Week exercises at Naramata. This week-long event was deemed a complete success by staff personnel.

OTHER SERVICES

The Farmer's Institutes Branch reported that a number of institutes failed to file reports this year, and two district institutes did not hold annual meetings. Eight of the latter were represented at the BCFI Advisory Board meetings at Victoria and New Westminster. The Board did not meet with the Provincial Cabinet this year.

Branch records revealed a total of 55 exhibitions and fall fairs recognized in 1972, for which grants for prize money and judges amounted to \$73,755.

An increased amount of the Branch's activities this year was centred on general information services, which now cover a mailing-list of 600 across the Province. Sixty-two press releases were prepared in addition to 22 issues of *In-service News* and four research abstracts.

A total premium income of \$593,452 and an estimated \$1,046,320 in claims paid were recorded by the Crop Insurance Branch. Altogether there were 1,772 insured units, a decline of 206 from the preceding year. Of the claims paid under the four insurance programmes, the grain sector accounted for \$474,000, tree fruits \$350,000, and berry crops the remainder. There were no claims payable on grapes.

Premium rates were increased by 5 per cent on cherries and 10 per cent on other tree fruits.

Increased interest in honey production was reflected in the Apiary Branch's report of more than 2,000 beekeepers operating close to 33,000 colonies this year. An increase in the incidence of disease was noted, American foulbrood in particular.

The Branch conducted short courses on beekeeping at three centres, and seven field days in various areas during the year.

Nineteen projects involving expenditures of \$3,900,000 were approved under the *Agricultural and Rural Development Act* in 1972. More than one-half of this sum was appropriated for the rehabilitation of irrigation storage and distribution systems. Since the inception of this programme in 1963, expenditures have amounted to a cumulative total of close to \$42 million.

The Communications Unit's television programming was extended in 1972 to cablevision outlets in Vancouver and Victoria, and to a station in Lethbridge. Thrice-weekly radio broadcasts were heard over 12 stations and nine satellite units, giving coverage to most agricultural areas except the Lower Mainland and Vancouver Island.

The Publications Branch turned out mimeographed material in excess of one million sheets this year, along with a total of 133,229 individual publications.

A total of 335 farm managers was registered in the Farm Business Management programmes administered by the Farm Economics Branch. Of this number, 110 were in the CANFARM Programme and the remainder in the Provincial Ajohn Programme.

The Branch published economic guidelines based upon averages of specific enterprises at varying investment levels. Training workshops for staff personnel were held at eight centres throughout the Province, and Manpower courses included Branch participation at four locations.

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