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AGRICULTURAL INSTRUCTION IN CANADA

**DOMINION AID TO THE PROVINCES
UNDER THE
AGRICULTURAL INSTRUCTION ACT
1913-1917**

PUBLISHED BY DIRECTION OF
THE HON. T. A. CRERAR
MINISTER OF AGRICULTURE
OTTAWA

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DOMINION OF CANADA
DEPARTMENT OF AGRICULTURE
OFFICE OF THE AGRICULTURAL INSTRUCTION ACT.
W. J. BLACK, B.S.A., COMMISSIONER.

DOMINION AID

TO

AGRICULTURAL INSTRUCTION IN CANADA

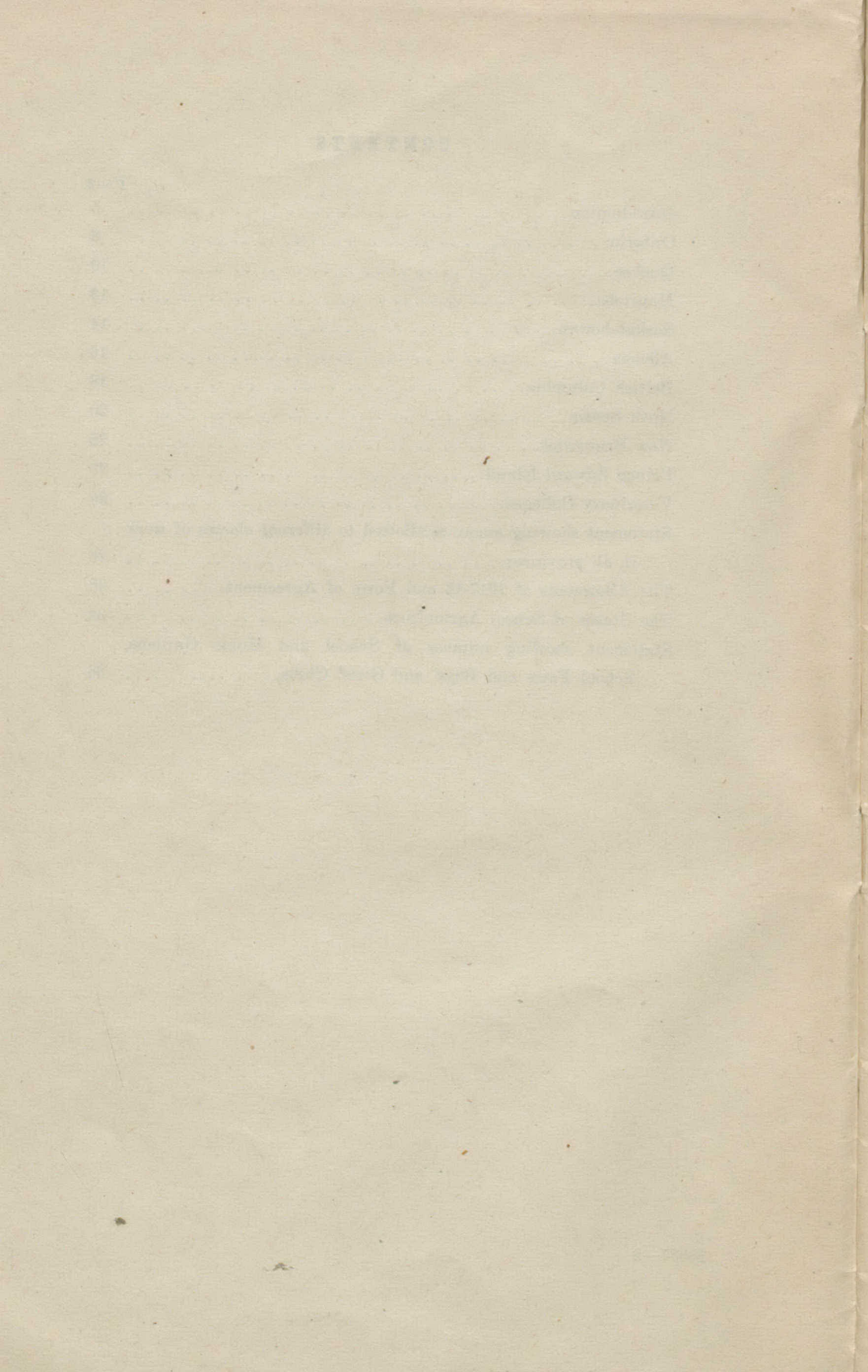
A REVIEW OF THE WORK PERFORMED BY THE PROVINCES
WITH THE MONEYS GRANTED UNDER THE AGRICUL-
TURAL INSTRUCTION ACT DURING THE FOUR
YEAR PERIOD, 1913-1917.

Published by Direction of the Hon. T. A. Crerar, Minister
of Agriculture, Ottawa.

OTTAWA
1917

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DOMINION AID TO AGRICULTURAL INSTRUCTION IN CANADA.

A REVIEW OF THE WORK PERFORMED BY THE PROVINCES WITH THE MONEYS GRANTED
UNDER THE AGRICULTURAL INSTRUCTION ACT DURING THE FOUR-YEAR PERIOD, 1913-1917:

Under *The Agricultural Instruction Act*, passed by the Parliament of Canada in 1913, the sum of ten million dollars was set apart for expenditure by the provinces on agricultural instruction and demonstration during the ten years ending March 31, 1923. Four years of the period have now elapsed, and \$3,400,000 has been distributed among the provinces for the benefit of agriculture. With the year 1917-18 the grants to the provinces (which have been made on a gradually ascending scale) reach their maximum, there to remain until the completion of the period. It would appear, therefore, that the time is opportune for the presentation of a summary of the work hitherto accomplished.

In the total grant for the four years the provinces have participated as follows:—

Ontario..	\$ 993,774 24
Quebec..	805,414 49
Manitoba..	244,994 02
Saskatchewan..	258,329 40
Alberta..	215,681 40
British Columbia..	222,132 58
Nova Scotia..	258,294 05
New Brunswick..	207,435 13
Prince Edward Island..	113,944 69
Veterinary Colleges..	80,000 00
Total..	\$3,400,000 00

The work performed under *The Agricultural Aid Act* has not been taken up in the ensuing pages. The progress made under *The Agricultural Instruction Act*, since it came into effect in 1913 until the conclusion of the past fiscal year, March 31, 1917, alone is dealt with. *The Agricultural Aid Act* was passed by the Parliament of Canada in 1912. Under its provisions, the sum of \$500,000 was distributed among the provinces of Canada on the basis of population. The purpose of the grant was to enable the provinces to enlarge the foundation upon which a future structure might be raised, and no special restrictions were placed upon the expenditure of the moneys thus provided. The manner in which this preliminary grant was made use of indicated the need of funds for educational or instructional purposes. These objects were regarded as forming not only the basis for successful agricultural production in its widest sense, but also the basis for rural social welfare and advancement.

The allotment to the provinces under *The Agricultural Aid Act* was as follows:—

Ontario..	\$175,733 32
Quebec..	139,482 40
Saskatchewan..	34,296 29
Nova Scotia..	34,288 45
Manitoba..	31,730 05
British Columbia..	27,334 76
Alberta..	26,094 95
New Brunswick..	24,509 93
Prince Edward Island..	6,529 85
	\$500,000 00

The purpose of *The Agricultural Instruction Act*, put briefly, is to assist the provinces by grants of money to carry on educational and instructional work for the benefit and encouragement of agriculture. It was the opinion that education and instruction for the farming community might best be classified under four divisions, and upon this classification the work was founded:—

(1) The teaching, in the public schools, of the first principles of the sciences related to agriculture;

(2) The teaching of more advanced agriculture in agricultural colleges and schools, devoting their attention, more particularly, to the training of teachers, investigators and community leaders;

(3) The carrying on of extension work, having for its object the instruction of farmers by acquainting them, through demonstrations and by other means, with the results of scientific investigation and research; and,

(4) The amelioration of the conditions of rural life, particularly in-so-far as women and children were concerned.

On this programme, the Commissioner, the late Dr. C. C. James, in his first report made the following comment:—

“Many persons will emphasize the importance of some one of these lines over the others. A complete and permanent system of agricultural instruction will provide for all and neglect none. We have tried in directing the operations of this Act to keep all in mind. Some will give more immediate results than others, and there may be the danger of favouring these. Some are more difficult than others and, therefore, there may be delay in putting them into operation. If, as a people, we are wise we shall consider all and give each its proper place and full attention.”

To assist the provinces in working out the programme proposed and for the guidance of those charged with the undertaking, a schedule was prepared at the inception of the work setting forth the objects that would be regarded as coming within the scope of the Act. The objects suggested were numerous and, while conforming to the spirit of the Act, they afforded each province an ample opportunity for selection, so as to meet individual needs and requirements.

While the provinces were free to choose any form of work of the kind contemplated by the Act as giving effect to its purpose, the final decision as to the suitability of proposed undertakings was left in the hands of the Dominion Minister of Agriculture. It was accordingly provided that an outline of work should each year be submitted to him. If the objects named in this outline are regarded as coming within the scope of the Act, and their efficiency and sufficiency are conceded, a formal agreement is entered into whereby the province undertakes to expend the grant in carrying on the lines of work decided upon.

It was apparent at the very beginning that, in order to give effect to the purposes of the Act, it would be necessary to add to the force of organizers and instructors and to the equipment at the disposal of the provinces. In some provinces building accommodation was either deficient or entirely lacking. In other provinces it was found impracticable, with the funds available, either to obtain or to retain men trained in the sciences related to agriculture. In all provinces, the developments contemplated by the Act made necessary the employment of an increased staff of instructors, demonstrators and superintendents. The deficiencies noted have to a great extent been remedied with the funds provided. No province can now claim, on financial grounds, to be handicapped by inability to secure the men and material equipment necessary to the successful carrying on of the work.

The following pages, which give an outline of the activities pursued to March 31, 1917, will indicate the extent to which the provinces have been assisted to overcome these obstacles, and the nature of the work performed by them in making effective the

intention of the Act. It will be observed that in Ontario the District Representative system has been greatly extended, that building equipment at the Ontario Agricultural College has been provided, and that the teaching of agriculture in the public schools has been facilitated.

In Quebec a large sum has been allotted to teaching approved methods of agriculture to the farming population; the colleges and schools of agriculture have received assistance for increased building accommodation and for the maintenance of their teaching staffs, while the teaching of agriculture and domestic science in schools and academies has been given considerable aid.

In Manitoba, the Extension Service of the Agricultural College, embodying boys' and girls' club work, home economics societies and agricultural short courses, has been greatly extended. In Saskatchewan, the teaching staff of the College of Agriculture has been strengthened in order to enable that institution to qualify men for agricultural leadership, to conduct research work and to promote college extension.

Alberta has been assisted in the equipment and maintenance of three Schools of Agriculture and Household Science, designed to supply a form of education adapted to the needs of boys and girls from the farm. In British Columbia instructional work among the farmers has been greatly extended, while the movement to establish agricultural and domestic science teaching in the schools is due entirely to the assistance given by the grant.

In the Province of Nova Scotia, about 45 per cent of all the work done under the Department of Agriculture, including the Agricultural College, may be credited, in so far as it is represented by moneys expended, to the Federal grant. In New Brunswick and Prince Edward Island, there were practically no facilities for agricultural instruction at the time the Act went into effect. Schools of Agriculture and other necessary buildings and equipment have been provided; trained instructors have been secured; the interests of farm women have been promoted, while the teaching of agriculture in the public schools has been greatly advanced with the funds placed at the disposal of these provinces.

To confer with provincial officials, to advise with them, to inspect the work, to see that the moneys are expended in accordance with the intention of the Act, and to report to Parliament on the proceedings under the Act, are the duties pertaining to the office of commissioner. Visits are made from time to time to all the provinces. Not only is co-operation between departments, Dominion and provincial, promoted in this way, but unintentional departures from the spirit of the Act are avoided.

As to the efficiency with which the work has been carried out and as to the quality of the results, it is difficult, with so great a range of activities and so wide a field, to speak except in general terms. In a few cases, the organization of provincial departments had not been sufficiently complete to insure the best results. In other cases, changes of government and policy have been limiting factors, while in a number of instances work has suffered from the loss of trained agriculturists due to the war, and indirectly in other ways from the same cause. In the main, conclusions are distinctly favourable, and the results will, it is believed, be still more apparent as time goes on.

ONTARIO.

1913-17. \$993,774.24

One million dollars, in round numbers, is the amount to date of the Federal contribution to agricultural instruction in the province of Ontario under the Agricultural Instruction Act. In considering the nature of the work performed or in attempting to estimate its value, it is to be remembered that the work being carried on by the provincial department at the time the Act came into effect was for the most part educational in its character. Therefore, no change of policy in this respect was called for. The Agricultural College and Experimental Farm at Guelph, the district representatives, the agricultural societies, institutes and associations, the live stock and fruit branches, the distribution of reports and bulletins—all these agencies were working with a view to supplying education and information to the farming community. For this reason, the moneys made available by the Act were used to supplement the funds granted to agriculture by the province rather than to inaugurate new branches of work. A notable example will be found in the extension of the District Representative System. In 1912, the first year that Federal assistance was granted (Agricultural Aid Act), the number of counties served in this way was increased from twenty to thirty. At the end of 1914 there were forty representatives with thirty assistants. There are now forty-five local offices of the department, each in charge of a graduate of the Agricultural College, who devotes his whole time to the service of the farmers in his vicinity. This means that one trained man is at the disposal of the farmers in almost every county and district. The range of their work is a very wide one. It includes advice to farmers in solving agricultural problems, short courses and school fairs, the promotion of farmers' organizations, acre profit and other competitions for young farmers, variety tests, the organization of special institutes and demonstrations, and, in addition, the numerous duties pertaining to a local resident agent of the Provincial Department, which conducts a great portion of its outside work through this channel.

The Federal grant now contributes about three-fifths of the money expended on the District Representative System, and to date has supplied \$414,000 for this object, as the following statement will show:—

	1913-14.	1914-15.
Provincial Expenditure.	\$ 76,789 00	\$ 75,142 00
Agricultural Instruction Grant.	80,000 00	100,000 00
	\$156,789 00	\$175,142 00
	1915-16.	1916-17.
Provincial Expenditure.	\$ 82,300 00	\$ 80,600 00
Agricultural Instruction Grant.	114,000 00	120,000 00
	\$196,300 00	\$200,600 00

Several lines of work were inaugurated with funds supplied by the Federal grant. Among them may be mentioned educational propaganda in connection with co-operative marketing of farm products, and demonstrations in vegetable growing, the amount devoted to these two objects being \$29,500.

Ontario Agricultural College.

To meet the demand for accommodation at the Ontario Agricultural College, funds have been provided for the construction, furnishing and equipment of a Field Husbandry building, a Physics building, the reconstruction of the Dairy barns and a Bacteriological building. The amount allotted was \$264,913.64, which included partial provision for a new residence building. Until 1915-16 no specific grant was made to the College for additions to the staff. Since then, the sum of \$26,400 has been provided for the salaries and expenses of eleven lecturers and assistants, engaged in

Soil and Drainage, Horticulture, Farm-management, Animal Husbandry, etc. These men assist in demonstration work, and in the regular short courses.

Women's Work.

The grant provided the cost of special courses in Cooking, Sewing, Home Nursing, etc., conducted through the Women's Institutes, the sum of \$16,000 having been allotted to this purpose.

Other Forms of Instruction.

Other forms of demonstration and instruction carried on by the Provincial Department with the funds provided, were Demonstration Trains, Institute Short Courses and Lectures in Live Stock Judging and Seed Selection; courses for Judges at Fall Fairs; a Short Course at the O.A.C. for winners of Acre Profit and Live Stock Competitions, conducted by District Representatives; total, \$39,440.

The Fruit-Growing Industry.

The Fruit-growing industry receives assistance through the Fruit Branch of the Department, the work carried on including orchard demonstrations, instruction in spraying, pruning and packing, while, at the College, investigation and experimental work is performed. At the Horticultural Experiment Station at Vineland, investigations in canning and the disposal of the surplus products of orchard and garden are conducted with the funds provided by the grant. Demonstrations in Fruit Growing in Northern Ontario were begun in 1916. Total, \$24,000.

For Apiary inspection and instruction in Bee-keeping, the sum of \$5,360 has been allotted, while \$8,500 has been devoted to Live Stock and Poultry, and \$1,658.45 to provide for an official butter-grader in the interest of the dairy industry.

Drainage and Soil Demonstrations are carried on by the O.A.C., the grant contributing \$38,900 to these undertakings. The drainage work includes the making of drainage surveys for farmers, demonstrations in tile-drainage, and the conducting of demonstration plots. In the division of Soils, the work includes the mapping and charting of counties according to soils, and the conducting of demonstration plots on different types of soil.

Elementary Agricultural Education.

To encourage the teaching of elementary agriculture and household science, \$69,000 has been devoted. Grants are made both to schools and teachers where prescribed courses of instruction are carried out. In 1916, 21 schools of the higher grades and 752 public and separate schools were teaching agriculture as compared with 159 primary schools and two secondary schools in 1913. All schools teaching agriculture either manage home projects or conduct school gardens in connection therewith. Special summer courses are offered at the Ontario Agricultural College at which teachers may qualify for the work.

Plans have been made for the establishment of an Agricultural School at Kemptville, Ont., and the sum of \$50,000 was allotted to that purpose in 1916. Its object will be to provide a course in agriculture that will qualify country boys and girls for farm life. In several of the High Schools of the province agricultural departments have been inaugurated.

General Conclusions.

Taking into account the wide sphere of work performed by the district representatives and the many other activities of the provincial Agricultural Department to which assistance is given, including the Agricultural College at Guelph, it is apparent that there is hardly a division of work that has not been aided, either directly or indirectly, by the million dollars placed at the disposal of the province during the past four years.

REVIEW OF WORK PERFORMED UNDER

SUMMARY.

For District Representatives	\$414,000 00
For Building Equipment, Ontario Agricultural College	264,913 64
For Additions to College staff	26,400 00
For Educational Propaganda in connection with the co-operative marketing of farm products, and for demonstrations in Vegetable-Growing	29,500 00
For Demonstration trains, Institute short courses and lectures in Live Stock judging and seed selection, Courses for Fall Fair judges, Short Courses for winners of Acre Profit and Live Stock competitions	39,440 00
For Demonstration and Instruction in connection with Fruit-Growing	24,000 00
For Instruction in Bee-keeping, Poultry-keeping and Dairying	15,518 45
For Drainage and Soil Demonstrations	38,900 00
For Special Short Courses for Women in Household Science under the auspices of Women's Institutes	16,000 00
For Incidental Expenditures	6,102 15
For Elementary Agricultural Education	69,000 00
For proposed Agricultural School at Kemptville	50,000 00
	<hr/>
	\$993,774 24

QUEBEC.

1913-17 \$805,414.49

Almost one-third of the total grant to the province of Quebec has been allotted to the schools and colleges of agriculture, namely, \$244,850. The sum of \$69,000 has been devoted to the teaching of agriculture in academies, rural and normal schools, and to instruction in domestic science in convent schools. To assist the Provincial Department of Agriculture to carry on various forms of demonstration, and to give instruction to the farming population in approved methods of scientific agriculture, \$491,500 has been allotted. The subjects covered by this work are numerous, and the instruction given has been widely distributed over the province.

The following is a list of the various departments of instructional work and the total amount spent upon each in the four-year period:—

Fruit growing	\$101,919 24
Bacon Industry	39,000 00
Poultry Industry	63,000 00
District Representatives	63,000 00
Clover and Alfalfa Demonstrations	15,039 32
Seed Selection and Field Crop Demonstrations	14,190 54
Dairying	74,000 00
Bee-keeping	31,000 00
Underdrainage Demonstrations and Drainage Surveys	27,000 00
Tobacco Industry	9,500 00
Maple Industry	15,000 90
Experimental Union	8,000 00
Short Courses, Lectures and Demonstration Train	30,914 49
	<hr/>
	\$491,564 49

The immediate supervision of the work performed under the Agricultural Instruction Act in the province is in the hands of an Assistant Commissioner, Dr. J. C. Chapais, of St. Denis (En bas), whose intimate knowledge of conditions among the French population enables him to render valuable assistance in this capacity.

Colleges of Agriculture.

The province's three leading schools or colleges of agriculture are the Oka Agricultural Institute, the School of Agriculture at Ste. Anne de la Pocatière, and the Macdonald Agricultural College. The school at Ste. Anne de la Pocatière was established in 1859, and is said to be the oldest agricultural school of continuous existence on this continent. In both the French schools, insufficient building accommodation and equipment have been the chief handicaps in past years. Both institutions were turning away students when the grant came to their aid. The first provision made was for

a building at each of the two schools which would double existing accommodation. The cost of these structures is being met by an annual contribution from the grant of \$6,000 in one case and of \$5,000 in the other, extending over a period of ten years.

In addition to providing larger buildings and more complete equipment, these institutions were enabled to augment their teaching staffs. Several experts were brought in, some from Europe, to increase efficiency in this respect. The grant also contributes to the maintenance allowance made by the province to students from Quebec who attend the schools.

In the case of Macdonald College, the grant enabled that institution to greatly increase its College Extension Service. A number of additional instructors were appointed to the staff, both for teaching and for investigation work. Homemakers' clubs were assisted, and district representatives were located in the English-speaking communities.

In the four years under consideration, the institutions referred to received the following sums from the grant:—

Oka Agricultural Institute.	\$ 82,230 00
School of Agriculture, Ste. Anne de la Pocatière.	73,519 00
Macdonald College.	80,000 00
Orphanages teaching Agriculture.	4,100 00
	\$239,849 00

Instruction and Demonstration.

Many lines of instructional work have been inaugurated or extended by the provincial department with the funds supplied by the grant. This has necessitated a considerable increase in the department's staff of permanent instructors. Sixteen such officers are provided for by the grant at the present time, in addition to thirteen district representatives and seven assistants.

Fruit Growing.

Much attention has been given to the fruit-growing industry. The grant has provided for the establishment of a provincial fruit division. The work performed by this division includes: (a) instruction in the planting and management of orchards; (b) the establishing and maintenance of fruit experiment stations and demonstration orchards; (c) the organization of co-operative fruit-growers' societies, and (d) the making of fruit exhibits.

The number of demonstration orchards and stations has been increased, a nursery has been established, many demonstrations in orcharding have been held, bulletins have been prepared, fruit trees have been distributed in order to encourage the planting of domestic orchards, and the extension of the industry has been promoted generally.

District Representatives.

The inauguration of the District Representative movement is entirely due to the grant, which meets all expenses in connection therewith. The duties of these officers include the customary forms of instructional work among farmers, short course work and the promotion of school gardens, school fairs and children's clubs.

Bacon Curing, etc.

To stimulate the live-stock industry, particularly in connection with bacon production, the services of a Danish bacon expert were secured. This officer originally gave instruction to the students of the Schools of Agriculture, where small killing and curing plants were installed under his supervision. In 1915, the abattoir at St. Valier, established originally by the Provincial Department, was enlarged and more completely equipped from the funds contributed by the grant. A practical course is now given to students in bacon-curing and general abattoir work. Instruction is also provided for farmers in the various branches of the live-stock business, including killing and preparation for market. In the spring of 1916, the work of the abattoir

was placed under the direction of the Quebec Cheesemakers' Society, under whose management it is to continue to give a similar service to the community.

Other Departments of Work.

The maple products industry, which is of considerable importance to the province, has been assisted by the establishment of four stations or schools giving instruction in the manufacture of sugar and syrup. The work carried on in connection with bee-keeping is financed by the grant; demonstrations in poultry-raising are given at some twenty-five stations. In connection with dairying, the grant has helped to meet the cost of inspection and instruction carried on through cheese and butter factories. Demonstrations in under-drainage have been given through the operation of two ditching machines. Much has been done to arouse interest in the production of clover seed for the demonstration of two hulling outfits, and by clover demonstration plots at thirty-four points. Some 124 hullers are now in operation as a result, and the cultivation of clover for seed continues to expand rapidly. The production of pure seed-grain has been assisted by exhibits and competitions and by travelling instructors and lecturers. Tobacco culture has been given attention. A winter short course and lecture programme, extending over the province, is carried out annually. In this, the department's instructors, district representatives and the professors from the Schools of Agriculture take part. A number of valuable bulletins and publications have been prepared and printed for distribution.

Elementary Agricultural Education.

The teaching of agriculture and domestic science has been assisted to a considerable degree. The work takes the form of special lectures by officers assigned to those fields of instruction, and includes the promotion of school gardens and fairs and the distribution of bulletins. Special allowances are made to the two Schools of Agriculture and to Macdonald College to meet the cost of teachers' and inspectors' courses. In 1916, 37 school fairs were held in the French and 13 in the English counties.

Domestic science is taught in some 49 convent schools in Quebec, under the management of nuns of various orders. Each school receives a grant from Instruction Act funds, up to \$300, provided the course comes up to the required standard. An exhibit from the schools is made annually at the provincial exhibition at Quebec. To supervise the work and to lecture to students, a special inspector is provided. The domestic science department of Macdonald College and the Provincial Science School of Montreal also receive financial aid from the grant.

SUMMARY.

For assistance to Schools and Colleges of Agriculture. (Including buildings \$49,000)		\$244,850 00
For Demonstration and Instruction in Fruit-growing	\$101,919 24	
Bacon Industry (including abattoir construction \$13,969.30)	39,000 00	
Poultry Industry	63,000 00	
District Representatives	63,000 00	
Clover and Alfalfa Demonstrations	15,039 32	
Seed Selection and Field Crop Demonstrations	14,190 54	
Dairying	74,000 00	
Bee-keeping	31,000 00	
Underdrainage demonstrations and drainage surveys	27,000 00	
Tobacco Industry	15,000 00	
Experimental Union	8,000 00	
Short Courses, Lectures, Better-farming Train, etc.	30,914 49	
		491,564 49
For Agricultural Education in Academies, Rural and Normal Schools, and for Instruction in Household Science in Convent Schools	69,000 00	
		\$865,414 49

NOTE.—Charged in the above is the sum of \$39,934.49 for preparation and printing of bulletins and circulars.

MANITOBA.

1913-17 \$244,994.02

Agricultural instruction in the province of Manitoba is carried on chiefly through the Agricultural College Extension Service. Mainly for the purpose of enabling this division to extend and properly carry on the enlarged sphere of work devolving upon it through the working out of the Act, a number of additions have been made to the college teaching staff, while the staff of the Department of Agriculture has also been strengthened, particularly in the division of dairying.

The College Extension Service embraces in its activities district representative work, Boys' and Girls' Club movement, Agricultural Short Courses, Home Economics Society supervision and short courses, instruction trains and automobile lecture tours.

The District Representative movement was inaugurated two years ago, and twelve such officers were operating in 1916. These men visit farmers and advise on such subjects as drainage, weed and insect control, and the cultivation and rotation of crops. They also organize local short courses, assist in the Children's Club movement, judge at fairs, and address meetings. They may be said to have superseded the travelling instructors in field and animal husbandry previously sent out by the department under the grant.

Two demonstration trains or "Better Farming Specials" were operated in the summer of 1913, and continued in 1914, covering practically every line of railway in the province. Farm mechanical equipment, poultry and live stock, canning and preserving and home economics were featured and demonstrated by members of the College staff, who also operated motion pictures and conducted an information bureau. In 1915, motor car tours were substituted, in order that points remote from the railways might be reached. Each year the attendance was in the neighbourhood of thirty thousand persons.

Short course work, as originally instituted, took the form of sending out special cars, each accompanied by three or four lecturers, to hold meetings along the lines of railway. In 1915, however, regular district short courses of several weeks' duration were begun, and have since been continued. Special short courses have also been held from time to time, such as those designed to qualify weed inspectors to perform their duties under the Weed Control Act.

The Boys' and Girls' Club and School Fair movement began in 1913 with eight clubs. In 1915-16 there were 65 clubs with a membership of 5,500, embracing 400 schools, mostly rural. Seeds and eggs are supplied free and competitions held in the growing of field crops, the rearing of chickens and hogs, and in wood working, sewing, baking, etc. The extension of the work in 1916-17 is indicated by the following competition entry list:—

Manual training (woodworking, etc.) 700; seed growing, 770; pig, calf or colt raising, 800; vegetable gardening, 2,300; potato growing, 2,170; poultry rearing, 1,960; cookery, 850; garment making, 1,370; vegetable canning, 790; weed studies, 910; buttermaking, 260; flower growing, 1,280; essay writing, 975. All expenses are met by the grant, including fifty per cent of the Childrens' Fair prize money. The amount appropriated to date for this branch of the work amounts to \$22,950.18.

The grant has been largely drawn upon to assist both the poultry and bee-keeping industries, and to promote the development of co-operative marketing of poultry, eggs, butter and wool. In connection with the dairy industry an inspector and grader of dairy products has been provided, while the work of the travelling dairy instructor among the Ruthenian and other foreign settlers has resulted in greatly improving the quality of the output. Formerly, the produce of these settlements was so inferior that it could hardly be disposed of; now, good cream is being regularly shipped.

But little attention had been given to under-drainage in Manitoba, and both experiment and demonstration were desirable. A series of experiments was conducted,

and the under-drainage of a portion of the College farm was undertaken to serve as a basis for instruction.

To enable the Home Economics Department at the College to successfully carry on extension work, an instructor in household arts was appointed, and three lecturers were added to the staff. By the activities of this division, women's clubs and home economic societies have been organized throughout the province to the number of 68. Short courses are held in dressmaking, cooking, home-nursing, etc. Travelling libraries have been organized, and a small annual grant is made to each society. To women's work the sum of \$32,634.78 has been devoted.

A number of bulletins and leaflets have been prepared and issued, dealing with the various forms of work carried on under the Act. In addition, an editor of publications has been added to the departmental staff who sends out press notices and supervises the publication and distribution of reports and advertising. To these objects the grant has contributed the sum of \$18,549.82.

With a view to demonstrating the advantages of a well-defined system of crop rotation, fourteen demonstration plots, each consisting of about forty acres of leased land were established in 1913 and 1914. Fencing and special equipment were provided. Plots of alfalfa were planted in order to encourage farmers to grow this valuable crop and to serve as a source of home-grown seed. In 1916, these farms were discontinued.

A permanent farm for the demonstration of general agriculture and the culture of hardy fruits has been established at Killarney and equipped with buildings, fencing, live stock and fruit trees. This farm was purchased in 1914, and consists of 75 acres, 62 of which are either under crop or in plantation. The total expenditure under the Agricultural Instruction Act for the demonstration plots and the Killarney farm is in the neighbourhood of \$36,800. (Agricultural Aid Act, 1912, \$5,426 additional.)

SUMMARY.

For District Representatives, Short Courses in Agriculture, Better-farming Trains, Automobile Lecture Tours; for instruction and demonstration in connection with under-drainage, poultry-keeping, bee-keeping and the marketing of products; for instruction in dairying among foreign settlers, and other educational work in connection with dairying.	\$125,365 22
For Home Economics Societies and Special Courses in Household Science.	32,634 78
For Boys' and Girls' Clubs.	22,950 18
For the establishment and carrying on of plots to demonstrate crop rotation and alfalfa, and for the establishment and maintenance of the Killarney Farm to demonstrate general agriculture and the culture of hardy fruits.	36,800 00
For bulletins and the supervision of publications.	18,549 82
For incidentals relating to the above.	8,694 02
	\$244,994 02

SASKATCHEWAN.

1913-17 \$258,329.40

In Saskatchewan the grant is divided between the College of Agriculture of the University of Saskatchewan, and the Departments of Agriculture and Education.

A survey of the problems confronting the province made it clear at the outset that a demand must speedily arise for well trained men to act as district representatives, travelling instructors and demonstrators, as well as for teachers in agriculture in the secondary schools. In order to train such men, it was necessary that the College should be provided with a thoroughly efficient staff. In the interests of the College Extension movement such a staff was also necessary, while to solve agricultural problems and to act as a basis for instruction, there was need for vigorous effort in the

field of investigation and research. By strengthening the staff, the Instruction Act has enabled the institution to meet these demands. Ten professors, assistants, directors and lecturers have been added to the faculty, whose efforts are devoted in a greater or less degree to teaching, extension and research. Of the total grant, the College has received \$95,748.15.

The work of the Extension Service, in which all members of the staff assist, includes short courses, dairy meetings, demonstration trains, and many other activities. In research work, investigations are being carried on, covering a number of projects. In animal husbandry a dairy herd is being built up and a poultry plant operated as a basis for instruction.

The Homemakers' Club enterprise is carried on as part of the extension movement. It is under the supervision of a director and a lecturer and costs about \$4,500 annually. Over 160 clubs have been formed.

The Short Courses at the College consist of a five-day winter course for farmers in general agriculture, a three weeks' course in household science for young women from the farm, and additional courses in special subjects, such as internal combustion engines and building construction. A series of lectures is also given in connection with various annual conventions held at the institution.

Co-operation and Marketing.

This division of the department was established in 1914, and is financed by the grant. The work is in charge of a director and an assistant. One of the most successful enterprises conducted has been in the co-operative marketing of wool for the sheep rearers of the province. The following is a statement of results during the three years of operation.

	1914.	1915.	1916.
Pounds of wool handled.	69,404	150,358	179,890
Price realized.	17½ cents.	23 cents.	32½ cents.
Number of contributors.	179	310	478

To encourage poultry production, a co-operative poultry marketing project was undertaken jointly by the branch and the College of Agriculture. A special car was fitted up as a poultry receiving and killing station and operated for six weeks over certain lines of railway. Demonstrations were given in the proper methods of killing, plucking, packing and grading. A large quantity of literature in the form of bulletins and leaflets has been distributed, and upwards of 300 co-operative organizations have been registered.

Demonstration Trains.

"Better Farming Specials" were operated in 1914 and in subsequent years. The lecture staffs were made up from the College faculty and department specialists. Live stock and poultry were demonstrated, and instruction was given in field husbandry, farm mechanics, building construction, household science, etc. The trains were provided free of cost by the railway companies, and the expenses incidental to the work were borne by the grant.

BETTER FARMING TRAINS.

Year.	No. of places visited.	Mileage travelled.	Attendance.	Cost.
1914.	88	1,344	36,000	\$7,000
1915.	135	1,946	37,109	6,742
1916.	56	810	22,673	4,787

As the trains took a different route each year, 279 places were visited and information was conveyed to 95,782 persons,—men, women and children.

Other forms of instructional work conducted by the department in connection with Animal Husbandry, Field Husbandry and Dairying were financed partly by the grant and partly by provincial funds.

In order to build up and encourage the live-stock industry, the provincial department purchases live stock of all kinds and re-sells to farmers on long terms of payment. Under the grant, the salaries and expenses of several travelling instructors, employed in this connection, are provided. These men also assist in administering the Horse Inspection Act.

In dairying, the salaries and expenses of two inspectors and the expenses of a third are met. Creamery companies are organized and cream stations inspected. In 1916, a series of three-day meetings, which partook of the nature of short courses, was substituted for the dairy instruction cars.

To give instruction in Field Husbandry and Weed Control problems, from three to five Field Representatives are provided. These men act chiefly as supervisors and advisors to the municipal inspectors.

To provide a post-graduate course for veterinary surgeons, a grant of \$500 is made annually to the Saskatchewan Veterinary Association.

Elementary Agriculture.

Nature study is taught in all the lower public school grades, and agriculture in the higher grades, as well as in high schools, collegiate institutes, and normal schools.

The supervision of the work is in the hands of two directors of school agriculture, A director of household science has charge of that branch of instruction. A summer school for teachers provides special courses in both these departments. Teachers in training are instructed at the provincial normal schools.

School or home gardens were conducted by 10 per cent of the schools in 1914, by 50 per cent in 1915, and by 75 per cent in 1916.

SUMMARY.

To enable the College of Agriculture of the University of Saskatchewan to add to its staff and, in addition to teaching and research, to organize and carry on an Extension Service, including the supervision of Homemakers' Clubs..	\$ 95,748 15
For Educational Work in co-operation and marketing in animal husbandry, field husbandry and dairying, for short courses and demonstration trains, and to provide a post-graduate short course for veterinary surgeons..	137,594 41
For the printing and publication of bulletins and for incidentals.	11,886 84
For Elementary Agricultural Education..	13,100 00
	\$258,329 40

ALBERTA.

1913-17 \$215,681.40

Schools of Agriculture and Demonstration Farms.

Of the total grant made to the province of Alberta from the funds provided by the Agricultural Instruction Act, the sum of \$124,000 has been expended on the operation and maintenance of the three Schools of Agriculture, \$23,700 on equipment and buildings, and \$17,700 in connection with the demonstration farms. It will be seen, therefore, that with the exception of some fifty thousand dollars, the whole grant has been devoted to the schools and farms—chiefly to the former.

There are seven demonstration farms in the provinces. These are situated at Medicine Hat, Claresholm, Olds, Sedgewick, Vermilion, Stony Plain and Athabaska. At three of them—Olds, Claresholm and Vermilion—Agricultural Schools have been

established. The cost of the principal buildings has been met by the province; the cost of equipment and maintenance, including staff-salaries, and of some minor building extensions, has been met for the most part by the federal grant.

The work of the schools is divided into two divisions—agriculture and household science. The main object is to equip farm boys and girls for farm life. About five hundred students have passed through the schools since their establishment three years ago.

A course in farming for returned soldiers is now being offered at the Olds school. As in the regular course, special emphasis is placed on practical rather than on theoretical and scientific work.

The expenditure of federal money in connection with the demonstration farms has been chiefly for the purchase of breeding stock. A small sum has also been provided to help meet the cost of certain buildings. These farms are centres from which considerable supplies of good live-stock and seed grain have been made available to farmers.

Instruction in Dairying.

The grant has been drawn upon to the extent of \$21,000 to assist the provincial Department of Agriculture in its efforts to foster dairying. The butter making industry has received special attention. From the sum named, the salary and expenses of an instructor in dairying were provided,* together with the cost of dairy-herd tests and competitions carried on under his supervision. For these tests and competitions the schools of agriculture were made the centres of operation. The competitions were open to all students and also to farmers living within a certain radius. Pure bred live-stock prizes were awarded.

Demonstration Trains and School Fairs.

For instructors, directors and district agents, and for demonstration trains, the sum of \$17,500 has been expended. Latterly the department, through its agents, has undertaken to encourage home-gardening and school fairs for boys and girls. Two thousand children took part in 1916, the first year of this work.

In the district agent work, merely a beginning has been made. In addition to the work with boys and girls, the representatives are advising farmers as to soil and crop management, weed eradication, the care of live-stock, the sale of products, and are promoting cow-testing work. It is expected that their work will by degrees be greatly extended.

Women's Work.

Women's Institutes are being systematically organized throughout the province. In 1914, 1915 and 1916 the grant contributed \$6,500 to the cost of household science instruction, given through the Institutes, and to the salaries and expenses of supervisors and demonstrators. The organization represented a membership of 1,400 in 1914 and 3,000 in 1915.

For the printing of bulletins and leaflets and for miscellaneous disbursements, the sum of \$5,281.40 has been expended to date.

SUMMARY.

For the operation and maintenance of three Schools of Agriculture and Household Science.	\$124,000 00
Towards equipment and buildings.	23,700 00
For Demonstration Farms.	17,700 00
For Educational Work in connection with dairying.	21,000 00
For Instructors and District Agents, and for demonstration trains and school fairs.	17,500 00
For Women's Institutes.	6,500 00
For Printing and Incidentals.	5,281 40
	<hr/>
	\$215,681 40

BRITISH COLUMBIA.

1913-17 \$222,132.58

Federal assistance to agriculture in British Columbia has enabled the provincial Agricultural Department to greatly extend instructional work among farmers. Demonstrations in field crops and horticulture, dairying, poultry-keeping, silo construction and vegetable growing and storing have been carried out; co-operative variety tests and competitions in production for boys and girls, as well as for their seniors, have been organized. The grant has greatly assisted the work of Women's Institutes, while the organization of marketing and the extension of publicity have been made practicable. The movement to establish agricultural and domestic science teaching in the schools owed its inception, in 1914, entirely to the influence of the federal grant, which has since defrayed a large part of the cost of the undertaking.

The grant has made possible the appointment of the superintendents and instructors necessary to the carrying on of the various projects. Fourteen officers whose salaries are met entirely from the grant have been added to the staffs of the Departments of Agriculture and Education. These include a Director of Elementary Agricultural Education and three district supervisors; two district agriculturists or representatives, a markets commissioner, an editor of publications, a plant pathologist, two horticulturists, a soil and crop instructor, a silo demonstrator, and a superintendent of poultry work.

Demonstration Plots.

The field husbandry demonstration plots or stations are designed to afford a practical illustration of the value of correct and scientific methods of farming. The soil and crop instructors supervise the work, assisted by local Farmers' Institute committees. Incidentally, the plots have proved useful in demonstrating the best varieties for each district. Twelve such plots of varying size, worked under agreement with the owner, have been established. Six have been placed in Northern British Columbia, where there is great need for instructional and experimental work, and six in the southern portion of the province. To demonstrate alfalfa-growing, nine plots of one acre each are being operated. From these, valuable results are reported. Demonstration and experimental plots devoted principally to fruits and vegetables have been located at three points, while in Northern Okanagan a fruit and vegetable station has been established under the direction of an experienced horticulturist, who devotes his time to advising growers. To deal with plant diseases and insect pests, an assistant plant pathologist has been appointed, and two laboratories have been equipped with the necessary appliances for carrying on investigation and research.

Various Forms of Instructional Work.

In many departments of work the Farmers' Institute is the medium through which operations are carried on. Of these organizations there are 146 with a membership of eight thousand. Through their instrumentality there have been conducted short courses for farmers, fruit-packing schools, demonstrations in orchard practice, field crop competitions and co-operative variety tests. Through these organizations the distribution has been made of high-grade seed-oats and other seed grains, with the object of demonstrating the value of superior seed, the proceeds of sale being refunded. Under Institute auspices, Boys' and Girls' Club competitions in crop-growing and livestock rearing are operated.

To encourage the growth of alfalfa a large quantity of selected seed of suitable varieties has been distributed for test and report. In 1916, a clover and alfalfa hulling outfit was purchased and demonstrated. In the suppression of noxious weeds through approved methods of field husbandry, valuable assistance has been rendered

by the field agents of the department. The veterinary inspection of dairy herds has been assisted, and instruction given throughout the province in the management of bees. To promote the dairying industry dairy farm competitions have been held annually. Competent testers are supplied to cow-testing associations in districts where dairying is prominent. Average production per cow has shown a marked increase. Poultry breeding stations have been placed in various localities. The system followed is to supply pens of breeding stock to reliable poultry keepers, who dispose of settings of eggs to farmers in the locality. An annual international egg-laying contest has been participated in for several years for educational purposes.

Silo Demonstrations.

With the object of promoting the use of the silo, the department undertakes to supervise the erection of the first silo in any district, and to distribute plans and specifications. At the same time an active fodder-corn campaign is carried on. At the present time there are some three hundred silos in the province compared with not more than twelve in 1913. In the latter year there was practically no corn grown, whereas in 1915 the value of the crop was placed at \$118,000. The satisfactory increase in the dairy output, in spite of war conditions, is stated to be due largely to this work.

Women's Institutes.

The work of these organizations, embracing instructional work in household arts and domestic science, has been assisted in a considerable measure by the federal grant, supplementing provincial appropriations. There are 59 institutes with a membership of 3,000.

A markets commissioner has been established at Vancouver to assist producers in marketing and to furnish information as to organization and market requirements.

In addition to the cost of printing sundry bulletins and leaflets, the cost of publishing *The Agricultural Gazette*, which is the official organ of the provincial department, is met by the grant, together with the salary of the Editor of Publications.

Elementary Agricultural Education.

This work was inaugurated by the appointment of a provincial director in 1914, and the setting apart by the provincial authorities of the funds necessary (in addition to the moneys provided by the grant) for the promotion of agricultural and domestic science teaching in the schools. The plans included the training of teachers in rural science, special grants to teachers and boards where rural science was taught, grants in aid of school grounds improvement, agricultural instruction in high schools and the direct supervision of nature study and school-gardening in the public schools. The first summer school for teachers was held in 1914. A more advanced course leading to a diploma was offered in 1915, and the preliminary course was continued. In 1916, there were 359 teachers in the province who had received special training in rural science. In addition to nature study and school garden instruction in the public schools, a two-year course in agriculture is now being given in five high schools by the district supervisors of agricultural instruction.

SUMMARY.

For Instructors and Demonstrators and for various forms of instruction and demonstration	\$123,319 00
For Horticultural Work	26,500 00
For Boys' and Girls' Clubs	3,115 00
For Bulletins and Publications	9,681 00
For Women's Institutes	4,681 00
For incidentals, including certain investigations into farming conditions	8,836 58
For Elementary Agricultural Education and Instruction in Domestic Science	46,000 00
	\$222,132 58

NOVA SCOTIA.

1913-17 \$258,294.05

In Nova Scotia, which is one of the smaller provinces, where the importance of Agriculture as an industry is equalled by several other industries, the provincial appropriations for Agriculture are not as high relatively as in some other provinces. Consequently the federal grant, contributed under the provisions of the Agricultural Instruction Act, bulks larger than it does where Agriculture is paramount and receives a larger share of provincial funds. The statement is sufficiently exact that about forty-five per cent of all the work done in the province under the Department of Agriculture, including the work of the Agricultural College, may be credited, in-so-far as it is represented by moneys expended, to the federal appropriation.

A considerable portion of the grant has been expended to strengthen and maintain the staff and provide additional buildings at the Agricultural College at Truro. This institution serves not only Nova Scotia, but also in some degree the provinces of New Brunswick and Prince Edward Island. As the Provincial Department of Agriculture is also located at Truro, there is a very close relationship between the two. Therefore, the buildings, equipment and staff provided, serve the purpose of increasing the efficiency of the College besides enabling the departmental staff to do more and better work. The funds provided by the grant have made it possible not only to add to the staff, but to secure and hold the services of the best men obtainable, besides supplying laboratory equipment for investigational and teaching work. For this purpose \$75,000, has been allotted in the four years.

Prior to 1915, horticulture, although a leading industry, was very inadequately presented at the College. In that year the province secured thirty acres of land for horticultural demonstrations, and the Dominion grant was drawn upon at the same time for the construction of a horticultural building and greenhouses. The college was, in this way, enabled to offer students a full course in Horticulture.

In the following year, a science building was provided for the study and investigation of plant and insect life, chemistry and the teaching of household science. This building cost in the neighbourhood of \$115,000, a portion of the grant being devoted each year to paying off the indebtedness. The total amount allotted to building construction in the four years was \$30,500. It should be mentioned that in addition to the above, the Agricultural Aid Act of 1912 provided \$31,288.45 for the extension of the main college building to meet the requirements of an increasing number of students. This extension included an assembly hall seating 750 persons. It is perhaps not claiming too much to say that the major part of the institution's development since 1912 is attributable to the grant.

At six points in the province buildings have been constructed in which to hold short courses, give demonstrations, and hold meetings. These are situated at Bridgewater, Lawrencetown, Shubenacadie, Musquodoboit, Yarmouth and Antigonish. For these the local community contributed the land or part of the money, while the grant provided the balance of the cost, amounting on March 31, 1917, to \$9,183.11.

Instruction and Demonstration.

Short courses are held each year at the College, and at several of the points where demonstration buildings have been provided. The work has been most successful, and is limited only by the capacity of the college faculty to undertake it.

An agricultural representative and three assistants are employed in the four Cape Breton counties during the summer, and give special attention to crop-growing demonstrations. A permanent representative has been established in Antigonish county, and the French-speaking community in Richmond county has not been overlooked. In 1915, a clover-huller was purchased, and has since been operated as a means of stimulating the production of clover seed. A concrete tile-making outfit

was purchased and demonstrated, and drainage surveys were made for farmers. A soil survey is in progress. Co-operative experiments with various field crops have been carried out, and demonstrations given in orchard practice, and in the use of fertilizers and ground limestone.

To educational work in dairying, poultry raising, bee-keeping and fruit-growing the grant has largely contributed, both for salaries and expenses. In districts where orcharding is not specialized, demonstrations in orchard renovation have been given. In poultry, the formation of egg-circles has been stimulated, model poultry houses have been located at a number of points, and instruction has been given. An investigational survey is being carried on as regards disease in bees.

Much educational work has been done in regard to injurious insects and plant diseases. The San José scale and Browntail moth constituted a serious menace to the fruit industry of the province. With the grant assisting provincial funds, trained entomologists and inspectors—college graduates—were employed to go from farm to farm giving instruction in how to identify and combat these and other pests. Three or more field laboratories have been equipped, and serve as centres for distributing information as to insect pests and plant diseases, such as potato scab, and a beginning has been made in the work of eliminating degenerate potato stock. As a result, the scale has been almost eradicated and the moth kept well within bounds, thus saving great loss to the province.

Women's Work.

The Women's Institutes of the province, 44 in number, are financed entirely by the grant. A short course in Domestic Science and an Institute Convention are held each year at Truro. Total grant, \$11,000.

School Agriculture.

To qualify teachers for elementary work in Agriculture, a Rural Science School is held each summer at Truro. Instruction in Domestic Science is included in the course. Those attending receive travelling and living expenses. In 1915-16, 95 teachers received bonuses for conducting garden projects. A director has charge of this branch of instruction, and under his supervision School Fair Work is carried on, including seed, egg and plant distribution. The whole is financed from the grant, which has contributed \$36,700 to date for the purpose.

Bulletins and Publications.

To the printing and publishing of reports and bulletins the sum of \$1,800, has been devoted, together with \$3,294.05 for expenses incidental to the various undertakings.

SUMMARY.

To strengthen and maintain the staff and to provide additional teaching equipment at the Maritime Agricultural College at Truro	\$ 75,000 00
For Horticultural Buildings and for a Science Building	30,500 00
For contributions towards the cost of Agricultural Halls at six points	9,183 11
For District Representatives, Short Courses, underdrainage demonstrations and surveys co-operative experiments with field crops, demonstrations in orcharding, demonstration in the use of fertilizers; for instruction in dairying, poultry raising, bee-keeping, injurious insects and plant diseases	90,816 89
For Women's Institutes and Short Courses in Household Science	11,000 00
For Elementary Agricultural Education	36,700 00
For the printing and publication of reports and bulletins and for incidental expenditures	5,094 05
	\$258,294 05

NEW BRUNSWICK.

1913-17. \$207,435.13

At the time the Agricultural Instruction Act went into effect, there were no facilities in New Brunswick for teaching Agriculture. The need was felt for agricultural schools where short courses could be held, and where the preliminary work of an agricultural college could be carried on. When, therefore, the Fisher Estate volunteered to erect a building at Woodstock to serve as a School for Agricultural and Technical Training, it was agreed that the Dominion grant should be utilized to supply furnishings and equipment. In order to meet still further the need for such instruction, the grant provided for a second school to be erected at Sussex, at a cost of \$36,500.

The Fisher Vocational School was completed during the winter of 1913-14, and presented to the Provincial Department of Agriculture, while the school at Sussex was ready for occupation early in 1916. Each school was placed in charge of a director, and it was the intention to present a regular course of instruction at both, with a teaching staff composed of the members of the department whose services were paid for by the grant. The war has, however, delayed the carrying of this programme into full effect. At the present time the schools are being utilized for farmers' short courses, household science courses, and for courses to qualify teachers to instruct in school agriculture.

In order to provide facilities for instruction in dairying, a dairy building was erected at Sussex at a cost of \$28,500 and equipped with modern apparatus. A dairy building was also provided at St. Hilaire in the northern French-speaking section by the Madewaska Dairy Company. This building has been equipped by the grant, and is being operated for five years by the Dominion Dairy Branch. Dairy instruction is furnished at both these schools.

To date, the grant has provided \$61,451.69 for buildings, equipment and maintenance. The capital cost of the Agricultural school and Dairy school at Sussex will, however, be spread over a number of years.

Instruction and Demonstration.

Eighteen officers, for the most part specialists in Agriculture, have been added to the instructional and administrative staffs of the department by virtue of the grant. Some of these, to facilitate their work, have had offices assigned to them in the Sussex and Woodstock buildings. The instructors carry on various projects associated with their particular fields of endeavour, attend farmers' meetings, give practical demonstrations on farms, and assist at short courses. Three dairy superintendents undertake the supervision of cheese factories and creameries; animal husbandry is promoted, illustration poultry plants are established, and modern bee-keeping methods are taught. To demonstrate under-drainage, a ditching machine has been operated for several years. In view of the deficiency of lime in New Brunswick soils, a lime-stone pulverizer has been demonstrated, the work being carried on in conjunction with agricultural societies or groups of farmers. At such demonstrations, meetings are held dealing with the subject of soil fertility and the employment of fertilizers.

Under a horticulturist and two assistants, three demonstration orchards are conducted, and some twenty-eight illustration orchards are supervised. Meetings are held for those interested, and, on request, agents of the department are sent to individuals to advise as to planting, care and management.

Under the Dominion and Provincial entomologists, a campaign of instruction has been carried on in regard to the Gypsy moth and Browntail moth, a work of vital importance to the province. Through their efforts school children have been taught to identify these pests.

Short courses in general agriculture, designed for farmers and farmers' sons, are held each year at the Sussex and Woodstock schools and at certain outside points, while short courses in dairying are conducted at the Dairy schools. A demonstration train was operated during two seasons, and covered all railway points in the province.

In view of the prominence of potato culture in New Brunswick farming, a systematic effort was made by a staff of inspectors to inform growers as to correct methods of handling, and particularly as to potato diseases.

Under the general classification of Instruction and Demonstration, the sum of \$88,100 has been appropriated. For printing bulletins and circulars connected with the work, the sum of \$3,000 has been allotted, while incidentals and contingencies amounted to \$4,235.13.

Women's Work.

The promotion of Women's Institutes was begun in 1911, and these organizations have since been extended throughout the province. The work is in charge of a supervisor and an assistant, and is financed by the subsidy, including a small grant to each of the eighty institutes. The amount allowed to date for this work is \$11,500.

Agriculture in Schools.

The Instruction Act opened the way for a marked advance in this connection. Funds having been made available, a director was placed in charge of the movement and courses for teachers in rural and household science were instituted both at Sussex and at Woodstock. Those attending receive railway fare and a bonus for living expenses. A course in nature study and agriculture is now prescribed in the elementary schools, and grants are made to teachers and schools, thus relieving the province of all financial obligations. In connection with the school garden movement, the school fair idea is being developed. The allotments for school agriculture and domestic science total \$39,148.31 in the four years.

SUMMARY.

For Agricultural Schools and Dairy School buildings, equipment and maintenance.	\$ 61,451 69
For instructors and directors and for instruction and demonstration in various lines of agriculture and horticulture.	88,100 00
For the preparation and printing of bulletins and for incidental expenditures.	7,235 13
For the promotion of Women's Institutes and for instruction in women's work.	11,500 00
For Elementary Agricultural Education and Household Science Teaching.	39,148 31
	\$207,435 13

PRINCE EDWARD ISLAND.

1913-17 \$113,944.69

Prior to the passing of the Agricultural Instruction Act, but little instructional or educational work had been undertaken in Prince Edward Island, nor had the province any agricultural specialists outside of the Secretary of Agriculture. The agricultural staff provided for by the grant includes a director of agricultural instruction, a district representative for each county (3), a soil and seed specialist and a supervisor of Women's Institutes, with two assistants.

At the inception of the work, no building accommodation was available. This necessitated the purchase and reconstruction of the Agricultural Halls at Charlottetown and Summerside. These buildings were enlarged, repaired and equipped to meet the requirements of Agricultural and Domestic Science Short Courses, farmers'

meetings and conventions, and to provide offices and laboratories for the directors, specialists, and district representatives. The appropriations under the head of buildings total \$12,514.96 in the four years.

Instruction and Demonstration.

In 1913 and 1914 a four months' course in Agriculture was offered by Prince of Wales College, Charlottetown. Short courses in Agriculture and Domestic Science were also inaugurated in 1913. In 1915 the college course in Agriculture was superseded by short courses and by the rural science course for teachers. Previous to the inauguration of the short courses, farmers and farmers' sons were compelled to go to Truro, N.S., to obtain this class of instruction.

The short course work at Charlottetown, carried on in the Agricultural Hall, included such subjects as stock judging, animal husbandry, field husbandry, dairying, poultry-raising and apple packing. The railway fares of those attending were paid. Latterly, the work has been extended to points outside Charlottetown. Nine such courses were held in 1916-17.

Throughout the island the work of instruction is being carried on by all the directors and specialists appointed under the Act, assisted by Dominion officials. Classes in live-stock, stock-judging, dairying, etc., have been held, and demonstrations given in sheep-dipping and in poultry keeping. The formation of co-operative organizations for the marketing of wool and poultry products has been promoted. Attention is being given to the fruit industry and particularly to the growing of small fruits. The benefits of under-drainage have been made prominent, and, as a result, the provincial legislature passed a drainage Act, making provisions for loans to finance such undertakings. In the interest of dairying, an instructor was appointed in 1916 to work among the factories and patrons, and to assist in the courses in butter and cheese making provided at Truro for the benefit of the Maritime Provinces. Demonstrations have been held with a view to introducing oats, peas and vetches in place of corn as an ensilage crop. Appropriations totalling \$48,981.55 covered the cost of the work above referred to, including allotments to Prince of Wales College in 1913 and 1914.

Women's Work.

The organization of Women's Institutes in the province is due entirely to the assistance given by the grant. At the present time, there are 43 institutes in the province. A movement for the improvement of the country school-house and its surroundings has brought good results, and patriotic work has been stimulated. Short courses in domestic science for women and girls from the rural sections are held each year at Charlottetown. Those attending receive railway fare and a small maintenance allowance. The grant has provided the sum of \$10,768.49 for this work.

School Agriculture.

Much has been done with a view to bringing education into closer touch with Agriculture. The first summer school for teachers was held in 1913, and has since been held annually. In 1914, a nature study course for the use of schools was prepared, and in order to secure adequate supervision, the number of inspectors was increased from five to ten.

In 1915, 289 teachers received bonuses, amounting to \$2,737 for school garden work. School gardens to the number of 167, and 2,506 home projects were carried out. The fares of teachers attending the summer course are paid. Four school fairs were held in 1916, and plans are under way for their further introduction.

In 1915 a department of rural science in charge of a director was organized at Prince of Wales College to train teachers for giving instruction in elementary agri-

culture. The equipment provided includes a special laboratory, furniture, books and appliances. At the 1916 session, 272 teachers attended. A rural life conference is held in connection with the summer school. The Rural Science Department also carries on propaganda among school supporters and teachers. A total of \$36,653.80 has been provided for educational work. The sum devoted to miscellaneous expenditure and office assistance amounted to \$5,025.89.

SUMMARY.

To provide building accommodation (Agricultural Halls, Charlottetown and Summerside)	\$ 12,514 96
For Instructors, Superintendents and District Representatives and for Instruction and Demonstration work, including Short Courses for farmers, Short courses in Household Science, demonstrations in underdrainage, sheep-dipping, orcharding, co-operative wool-marketing	48,981 55
To promote Women's Institutes	10,768 49
For Elementary Agricultural Education	36,653 80
For incidentals	5,025 89
	\$113,944 96

VETERINARY COLLEGES.

\$80,000.

On account of the great importance of the live-stock interests of Canada, it was considered desirable that the institutions giving instruction in Veterinary Science, and authorized to grant degrees, should be maintained in a high state of efficiency.

Under the Agricultural Instruction Act, the sum of twenty thousand dollars is allotted annually to such institutions. Two colleges have participated in the grant, namely, the Ontario Veterinary College, Toronto, and the School of Comparative Medicine and Veterinary Science, Montreal. The apportionment under the Agricultural Instruction Act, based on the number of students enrolled who are British subjects, has been as follows:—

	Ontario Veterinary College.	School of Veterinary Science.
1913-14	\$15,371 91	\$ 4,628 09
1914-15	15,607 85	4,392 15
1915-16	14,869 56	5,130 44
1916-17	14,285 72	5,714 28
	\$60,135 04	\$19,864 96

Two payments to date have been made to the Ontario Veterinary College, namely that of 1913-14 and that of 1914-15. The grants contributed to the salaries of additional instructors, and to equipment and maintenance.

To the School of Veterinary Science, four payments have been made. The moneys provided have contributed to the cost of a new building and to salaries, equipment and maintenance.

STATEMENT showing by provinces the amounts allotted to the different classes of work performed under the Agricultural Instruction Act during the four year period 1913-17. Total grant \$3,400,000.

	Ontario.	Quebec.	Manitoba.	Saskatche- wan.	Alberta.	British Columbia.	Nova Scotia.	New- Brunswick.	Prince Edward Island.
Agricultural Colleges and Schools— (1) Buildings and Equipment. (Total \$515,232.70).....	\$314,913.64	\$ 62,969.30			\$ 23,700.00		\$39,683.11	\$61,451.69	\$12,514.96
(2) Instruction, College Extension, Research— Salaries, Expenses, Maintenance. (Total \$499,998.15).....	26,400.00	195,850.00		\$ 78,748.15	124,000.00		75,000.00		
Instruction and Demonstration— (Total \$1,766,761.40).									
Including salaries of Instructors, and Inspectors and Superintendents and all or part expenses connected with one or more of the following, i. e. District Representatives, (\$547,272) Short Courses, Demonstration Fairs, Demonstration Trains, Demonstrations in Soil and Drainage, Horticulture, including Fruit and Vegetable growing; Instruction in Co-operation and Marketing, Live-Stock, Dairying, Poultry and Beekeeping, Field Crops; Seed Improvement, Boys' and Girls' Work, Institute Lectures, Meat Curing and Abattoir Work, Maple Products, Fruit Canning, Investigations, Competitions.....	561,358.45	445,660.70	\$ 185,115.40	137,594.41	56,200.00	\$ 152,934.00	90,816.89	88,100.00	48,981.55
Elementary Agricultural Education— (Total \$309,602.11).									
Training of Teachers, Household Science, School Gardens.....	69,000.00	69,000.00		13,100.00		46,000.00	36,700.00	39,148.31	36,653.80
Women's Work—(Total \$110,084.27).									
Institute Organization, Domestic Science Courses, Supervision.....	15,000.00		32,634.78	17,000.00	6,500.00	4,681.00	11,000.00	11,500.00	10,768.49

THE ALLOTMENTS OF 1917-18 AND FORM OF AGREEMENT.

The following is the form of agreement entered into by and between the Honourable the Minister of Agriculture for Canada, and each of the nine provinces of the Dominion, under the provisions of the Agricultural Instruction Act of 1913, the appropriation to each province and the work to be undertaken by each during the fiscal year ending March 31, 1918:—

FORM OF AGREEMENT.

Memorandum of Agreement made and entered into by and between the Honourable
 Minister of Agriculture for Canada, hereunto authorized by Order of his
 the _____ day of _____ 19 _____, bearing date
 Party of the First Part;

AND

The Government of the province of _____ herein represented by the
 Honourable _____ for said Province, hereunto authorized
 by Order of His Honour the Lieutenant-Governor of said Province in Council, bearing date the _____ day of _____ 19 _____,
 Party of the Second Part,

Whereas, under the terms of the Agricultural Instruction Act, for the purpose of aiding and advancing the farming industry by instruction in agriculture, there shall be paid out of the Consolidated Revenue Fund of Canada to said province, during the Fiscal Year ending the 31st day of March, 19 _____, the sum of

AND

Whereas, it is provided in said Act that the payment of said moneys shall be conditional upon agreement between the Minister of Agriculture and the Government of said Province as to the terms, conditions and purposes within the meaning of said Act, upon and for which the payment of said moneys is to be made and applied.

Now, Therefore, the said parties have mutually agreed that the said moneys shall be paid upon the terms and conditions and shall be applied to the purposes hereinafter set forth, to wit:—

1. One-half of said moneys shall be paid to said party of the Second Part by said Party of the First Part on the execution of these presents.

2. The balance of said moneys shall be paid to said Party of the Second Part by said Party of the First Part, from time to time, upon the latter being satisfied that said moneys have been and are being properly expended for the purposes for which said moneys were paid, as hereinafter provided.

3. The said Party of the First Part shall have at all times the right through such officers of his department or other persons as he may designate or appoint for the purpose, to inspect any work carried on through the assistance of said moneys and may withhold any further payment on account of the same if, in his opinion, the conditions of this agreement are not being fulfilled.

4. The said moneys shall be expended for and applied to the following purposes, the amount to be expended for each purpose being that set opposite the same, to wit:—

5. Should it hereafter at any time be determined that any of the amounts as aforesaid for any of the foregoing purposes can with advantage be varied, then by mutual consent of the parties hereto the same shall be varied accordingly.

6. The Party of the Second Part shall render to the Party of the First Part such statement of the expenditure of said moneys as may be required from time to time by the said Party of the First Part.

7. It is understood that the moneys granted by this agreement are intended to supplement the amounts devoted to agriculture by the province itself, and are in no wise to be used for the purpose of curtailing the customary provincial expenditure in aid of agriculture.

In Witness whereof, the said Party of the First Part has hereunto set his hand and the Seal of said Department of Agriculture, at the City of Ottawa, this day of 19 .

And in Witness whereof, the said Party of the Second Part has hereunto set his hand and the Seal of the said Province, at the City of in said Province, this day of 19 .

ONTARIO.

A. AGRICULTURAL COLLEGES AND SCHOOLS.

1. Ontario Agricultural College—		
(a)* Buildings, Equipment and Furnishings..	\$75,000 00	
(b) Salaries and Expenses, Additions to Staff, Maintenance..	15,000 00	
		\$ 90,000 00
2. Agricultural School: Capital Expenditure including Land Purchase, Buildings and Equipment, and the services and expenses pertaining thereto..		50,000 00

B. INSTRUCTION AND DEMONSTRATION.

3. District Representatives: including Clerical and other Assis- tance in connection with the Administration..		120,000 00
4. Co-operation and Markets: Educational Work in connection with the Marketing of Farm Products, including Organi- zation of Co-operative Societies..		4,500 00
5. Demonstration and Instruction in Vegetable Growing..		6,000 00
6. Stock and Seed-Judging, Short Courses and Institute Lectures.		2,500 00
7. Women's Institute Work, including Courses in Cooking, Sew- ing, etc..		7,500 00
8. Short Courses for Fall Fair, Field Crop and Poultry Judges, including travelling and living expenses..		4,703 26
9. O.A.C. Short Courses for Winners of Acre Profit and Live Stock Competitions, including travelling and living expenses.		3,000 00
10. Lectures on Horticulture..		800 00
11. Demonstrations with Vegetables and Hardy Fruits in New Ontario..		1,000 00
12. Vineland Horticultural Experiment Station: Experimental Work..		2,500 00
13. Drainage Work..		6,500 00
14. Demonstration Work on Soils..		4,500 00
15. Bee-keeping..		800 00
16. Instruction and Special Educational Work in Growing and Handling Corn..		2,000 00

C. ELEMENTARY AGRICULTURAL EDUCATION.

17. To provide for and to encourage the teaching of Agriculture, Manual Training as applied to work on the farm, and Domestic Science in High, Public, Separate and Continuation Schools and in Universities, to be available for grants, services, expenses and equipment, and travelling and living expenses of teachers, inspectors and others in attend- ance at short courses or other educational gatherings, and to be paid out on the recommendation of the Department of Education..		30,000 00
		<u>\$336,303 26</u>

* To complete programme of building decided on in 1912.

REVIEW OF WORK PERFORMED UNDER

QUEBEC.

A. COLLEGES AND SCHOOLS OF AGRICULTURE.

1. Grants and Allowances: Macdonald College, Ste. Anne de la Pocatière, School of Agriculture, Oka Institute.	\$ 75,000 00
2. School of Veterinary Science, Building Extension	5,000 00

B. DEMONSTRATION AND INSTRUCTION.

3. Breeding: Educational Work in Horse-breeding, Cattle and Sheep Raising	7,000 00
4. Poultry: Instruction and Demonstration	18,000 00
5. Bacon: Instruction	5,000 00
6. Horticultural and Entomological Work	30,000 00
7. Experimental and Demonstration Orchards	5,000 00
8. Dairying, Educational Work in Cheese and Butter	25,000 00
9. District Representatives	40,000 00
10. Seed Selection, Clover Plots and Demonstrations	9,000 00
11. Bee-keeping, Instruction	7,000 00
12. Drainage, Instruction and Demonstration	8,000 00
13. Maple Industry: Maintenance of Schools and Allowances to Students	4,000 00
14. Short Courses, Lectures	9,113 76
15. Experimental Union, Investigation Work, Field Crops	2,000 00

C. ELEMENTARY AGRICULTURAL EDUCATION.

16. To promote the Teaching of Agriculture in Academies, Rural and Normal Schools, Training of Teachers, School Gardens	10,000 00
17. To promote the Teaching of Domestic Science in Academies and Normal Schools, Grants and Special Lectures	10,000 00
18. School Children's Exhibits and Competitions	2,000 00
	<hr/>
	\$271,113 76

MANITOBA.

INSTRUCTION AND DEMONSTRATION.

1. Killarney Demonstration Farm (maintenance)	\$ 3,000 00
2. Dairy Work: Instruction in outlying districts; grading of products for instructional purposes	8,000 00
3. Poultry Work	4,000 00
4. District Representatives	17,000 00
5. Boys' and Girls' Clubs	17,000 00
6. Short Courses in Agriculture	19,113 11
7. Home Economics: Instruction in Domestic Science including Short Courses	17,000 00
8. Soil Analysis and Survey	1,000 00
9. Bee-keeping	2,000 00
10. Miscellaneous	1,000 00
	<hr/>
	\$89,113 11
Allotment for 1917-18	77,113 11
Unappropriated balance from 1916-17	12,000 00
	<hr/>
	\$89,113 11

SASKATCHEWAN.

A. COLLEGE OF AGRICULTURE.

1. Staff: Salaries, Research and Extension Service	\$22,076 16
2. Women's Work: Homemakers' Clubs	5,500 00

B. INSTRUCTION AND DEMONSTRATION.

3. Co-operation and Marketing	4,500 00
4. Animal Husbandry: including Veterinary Instruction	4,500 00
5. Dairying	4,800 00
6. Field Husbandry and Weed Control	5,000 00
7. Demonstration Trains	4,776 16
8. District Representatives	2,500 00
9. Veterinary Short Courses	500 00

SASKATCHEWAN —*Concluded.*

C. ELEMENTARY AGRICULTURAL EDUCATION.

10. Agricultural Instruction in Public, High and Normal Schools; Household Science; Training of Teachers; Nature Study; School Gardens..	25,000 00
11. School Fairs..	2,576 16
	<u>\$81,728 48</u>

ALBERTA.

A. SCHOOLS OF AGRICULTURE.

1. Maintenance, Salaries, Expenses..	\$35,000 00
2. Equipment..	2,000 00

B. INSTRUCTION AND DEMONSTRATION.

1. Demonstration Farms: Buildings, Purchase of Stock..	8,000 00
2. Demonstration Trains..	5,000 00
3. Dairying: Dairy Competitions and Prizes..	1,500 00
4. Publicity: Printing and Publication of Bulletins	2,400 00
5. Women's Work..	4,500 00
6. District Agents..	8,500 00
7. Miscellaneous..	65 62
	<u>\$66,965 62</u>

BRITISH COLUMBIA.

A. INSTRUCTION AND DEMONSTRATION.

1. Agricultural and Horticultural Instructors and District Representatives..	\$3,500 00
2. Field Crop Demonstration Stations..	8,000 00
3. Horticultural Demonstration Stations..	3,000 00
4. Poultry Demonstration Stations and Egg-laying Contests..	1,500 00
5. Alfalfa Plots..	500 00
6. Silo Demonstrations..	3,000 00
7. Drainage Demonstrations..	1,000 00
8. Seed Distribution and Co-operative Variety Tests, Seed Production, Seed Fairs..	5,500 00
9. Dairying, Cow-testing Associations..	300 00
10. Bee-keeping..	2,500 00
11. Field Crop Competitions..	2,000 00
12. Boys' and Girls' Clubs..	1,000 00
13. Fruit-packing Schools and Demonstrations..	1,000 00
14. Market Work..	4,500 00
15. Agricultural Journal; Publications Branch..	5,000 00

B. INVESTIGATION AND RESEARCH.

16. Pathological and Entomological Investigation and Research..	2,000 00
17. Weed Investigation and Survey..	1,500 00

C. ELEMENTARY AGRICULTURAL EDUCATION.

18. Agricultural Instruction in Public, High, and Normal Schools, Household Science, Training of Teachers, Grants..	20,000 00
19. Contingencies and Miscellaneous..	699 06
	<u>\$69,199 06</u>

NOVA SCOTIA.

A. COLLEGES AND SCHOOLS OF AGRICULTURE.

1. Capital—Science Building, Construction and Furnishings, Interest and Sinking Fund..	\$ 8,000 00
2. Salaries and Maintenance..	23,000 00

B. DEMONSTRATION AND INSTRUCTION.

3. District Representatives..	7,500 00
4. Short Courses: Demonstration Buildings, Maintenance, Allowances to Students..	3,000 00
5. Dairying..	3,500 00

REVIEW OF WORK PERFORMED UNDER

NOVA SCOTIA—*Concluded.*

6. Poultry..	1,500 00
7. Bee-keeping: Educational Work..	1,500 00
8. Drainage: Demonstration and Soil Survey..	2,500 00
9. Soils and Fertilizer Demonstration..	500 00
10. Field Crop Demonstration..	2,000 00
11. Fruit Growing..	2,000 00
12. Women's Work Institutes and Clubs, Domestic Science Short Courses and Allowances..	3,000 00
13. Entomological Work: Horticultural and Entomological Investigation and Education re Insect Pests..	10,000 00

C. ELEMENTARY AGRICULTURAL EDUCATION.

14. Agricultural Instruction in Public, High and Normal Schools, Training of Teachers, Allowances and Grants..	10,000 00
15. School Children's Exhibits and Competitions..	2,000 00
16. Contingencies and Miscellaneous..	1,716 69
Total..	<u>\$81,716 69</u>

NEW BRUNSWICK.

A. AGRICULTURAL SCHOOLS.

1. Capital Account: Construction, Equipment, Furnishings, Agricultural and Dairy Schools..	\$1,000 00
2. Salaries and Maintenance..	3,000 00

B. INSTRUCTION AND DEMONSTRATION.

3. District Representatives..	8,000 00
4. Bee-keeping..	500 00
5. Soils and Drainage..	4,000 00
6. Horticulture..	5,500 00
7. Short Courses..	3,500 00
8. Live Stock..	7,000 00
9. Dairying..	4,000 00
10. Poultry..	1,600 00
11. Fertilizers..	3,000 00
12. Entomology..	1,000 00
13. Young People's Clubs..	2,000 00
14. Agricultural Societies..	4,000 00
15. Women's Institutes..	4,500 00

C. ELEMENTARY AGRICULTURAL EDUCATION.

16. Agricultural Instruction in Public, High and Normal Schools, Household Science, Training of Teachers, Allowances, Grants..	9,785 80
17. School Fairs..	1,725 00
Total..	<u>\$64,110 80</u>

PRINCE EDWARD ISLAND.

A. BUILDINGS ACCOUNT.

1. Agricultural Buildings—Equipment and Maintenance..	\$ 2,950 00
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B. INSTRUCTION AND DEMONSTRATION.

2. Director and District Representatives..	7,900 00
3. Short Courses..	250 00
4. Drainage and Soils..	500 00
5. Dairying..	2,600 00
6. Bee-keeping and Fruit Growing..	1,300 00
7. Women's Institutes, Household Science, Short Courses, Grants and Allowances..	3,500 00

C. ELEMENTARY AGRICULTURAL EDUCATION.

8. Agricultural Instruction in Public and High Schools, Training Teachers, Allowances, Grants, Maintenance of Rural Science Department, Prince of Wales College..	10,500 00
9. Miscellaneous and Contingencies, including clerical assistance..	2,249 22
Total..	<u>\$31,749 22</u>

RECAPITULATION OF APPROPRIATIONS.

	1913-14.	1914-15.	1915-16.	1916-17.	1917-18.
Prince Edward Island.	\$ 26,529 85	\$ 27,832 81	\$ 29,138 28	\$ 30,443 75	\$ 31,749 22
Nova Scotia	54,288 45	61,144 45	68,001 87	74,859 28	81,716 69
New Brunswick	44,509 93	49,407 20	54,308 40	59,209 60	64,110 80
Quebec.	159,482 40	187,409 16	215,310 70	243,212 23	271,113 76
Ontario.	195,733 32	230,868 83	266,013 64	301,158 45	336,303 26
Manitoba.	51,730 05	58,075 45	64,421 31	70,767 21	77,113 11
Saskatchewan	54,296 29	61,152 31	68,011 04	74,869 76	81,728 48
Alberta.	46,094 95	51,310 41	56,528 82	61,747 22	66,965 62
British Columbia	47,334 76	52,799 38	58,265 94	63,732 50	69,199 06
Veterinary Colleges	20,000 00	20,000 00	20,000 00	20,000 00	20,000 00
Total.	<u>\$700,000 00</u>	<u>\$800,000 00</u>	<u>\$900,000 00</u>	<u>\$1,000,000 00</u>	<u>\$1,100,000 00</u>

THE STATUS OF SCHOOL AGRICULTURE.

In four provinces of the Dominion, namely in Saskatchewan, Alberta, New Brunswick and Prince Edward Island, instruction in Elementary Agriculture is prescribed in all primary schools, and its teaching is compulsory. In Quebec it is compulsory in all rural schools, and is prescribed in all other schools, both Protestant and Roman Catholic. In Ontario, it is optional in the Public and Separate schools. It is being taught in 950 (1917) such schools, as well as in 22 High and Continuation schools. In Manitoba, instruction in Nature Study is given in practically all elementary schools, and elementary agriculture is taught in the senior grades. In Nova Scotia it is prescribed as an optional subject in all the schools. In British Columbia, it is prescribed in the elementary schools, and is being taught in all of them. In that province, a two year optional course in Agriculture is now being given in five high schools by special teachers. In Saskatchewan provision has recently been made for grants to High schools and Collegiate Institutes offering a special course in agriculture.

In Ontario, all schools teaching Agriculture do so in connection with garden projects. In other provinces, garden projects are, as a rule, used as a basis for teaching wherever such projects are conducted.

Provision is made in all the provinces to qualify teachers to teach agriculture. This consists, as a general rule, of a Summer School for active teachers and of Normal School instruction for teachers in training. In Ontario, all teachers must qualify, before teaching agriculture, either through the Normal course, or by taking a course of two consecutive summer sessions of five weeks each at the Ontario Agricultural College. Two classes of certificates are awarded at the Summer School—Elementary and Intermediate. Only high school science teachers are eligible for intermediate certificates. The numbers qualifying in the years given were as follows:—

	Elementary Certificates.		Intermediate Certificates.	
	Men.	Women.	Men.	Women.
1914..	5	45	12	..
1915..	4	14	9	1
1916..	8	30	14	1

In Quebec, both Normal and Summer school courses are provided. No figures are available as to the number of teachers qualifying.

Nova Scotia provides a Summer School for Teachers at Truro. In 1914, 80 teachers qualified; in 1915, 114, and in 1916, 140. At present, 18 men and 250 women are qualified to give such instruction, or between eight and nine per cent. of the teachers of the province.

In New Brunswick, two Rural Science Schools have been established, where teachers in training receive Normal instruction. The numbers qualifying at the Summer Schools were as follows:—

1914..	64		
1915..	140	(partially).	27 (fully).
1916..	79	"	38 "

Of the total number qualifying, 59 were males.

Prince Edward Island carries on a Summer School of Rural Science in connection with Prince of Wales College, and gives Normal School training. In 1914,

159 teachers qualified; in 1915, 162, and in 1916, 167. Of the above, 138 were males and 457 females. Practically all the teachers in the schools are qualified in some measure to give instruction in Agriculture.

In Manitoba, teachers in training are given a month's course in elementary agriculture by members of the Agricultural College staff. Active teachers are given a month's course at the Summer School of Science. The following numbers qualified in the years stated: 1914, 163; 1915, 205; 1916, 245. Arrangements are being made for a special summer course for male teachers holding first- and second-class professional certificates. This course will admit to the fourth year of the degree course at the Agricultural College.

In Saskatchewan, all teachers in training receive instruction in Agriculture and Elementary Science. A short course in Agriculture is conducted at the College of Agriculture of the University of Saskatchewan for those desiring to qualify for a special diploma. The satisfactory completion of the course for two summers is called for. The following numbers took the summer course in the years stated, 1914, 57; 1915, 93; 1916, 98. Eighteen male and 12 female teachers have been awarded diplomas.

Alberta gives instruction in gardening to all teachers in training. A summer course for teachers is provided at the Provincial University. The number of teachers receiving the prescribed instruction at the summer school in each of the three years was:

	First Year.	Second Year.
1914..	100	31
1915..	125	40
1916..	99	20

Specialists' certificates are granted to those completing the full course. Fifty-nine male and fifty-six female teachers have qualified.

British Columbia has not as yet made provision for giving instruction in agriculture to teachers in training. Active teachers are given instruction at the Summer School, and a diploma is granted to those who complete satisfactorily a two years' course. In 1914, 171 completed the Rural Science course. In 1915, 183 took the first year and 77 the second year course. In all, there are 359 teachers who have had special training in rural science. Of this number 138 are male teachers and 221 female teachers.

DOMINION AID.

In the provinces of Manitoba and Alberta, the Agricultural Instruction grant contributes nothing to the cost of school agriculture. In British Columbia \$35,000 of provincial funds is allotted for agricultural and household science teaching, while the Dominion grant contributes \$15,000 annually. In Ontario, the cost of the work is provided by the grant, with the exception of about eight thousand dollars. In Quebec the grant contributes \$12,000 annually to current expenditure. In New Brunswick, the grant meets the major portion of the expenditure. In Prince Edward Island it contributes about half the cost. In Saskatchewan and Nova Scotia the whole of the special expenditure for this purpose is met from Instruction Act moneys.

REVIEW OF WORK PERFORMED UNDER

NUMBER OF SCHOOL AND HOME GARDENS, SCHOOL FAIRS AND BOYS' AND GIRLS' CLUBS.

	1914.	1915.	1916.	1917.
	No.	No.	No.	No.
Ontario—				
School gardens..	208	222	327	550
Home plots..		51,234	55,947	59,329
School fairs..	148	234	275	302
Quebec—				
School gardens..	284	710	759	846
Home plots..			19,803	22,600
School fairs, French..			37	62
School fairs, English..			13	13
Boys' and girls' clubs..			24	86
Manitoba—				
School gardens..		350	400	400
Home plots..	815	4,500	9,350	12,560
School fairs..	28	53	105	146
Boys' and girls' clubs..	252	542	900	1,110
Saskatchewan—				
School gardens..	370	650	950	1,750
Home plots..				*400
School fairs..	12	42	84	150
Boys' and girls' clubs..			40	60
Alberta—				
Boys' and girls clubs..				25
School gardens..				200
Home gardens..				1,500
School fairs..				21
British Columbia—				
School gardens..		80	255	283
Home plots..			376	211
School fairs..			10	15
Boys' and girls' clubs..	20	21	16	30
New Brunswick—				
School gardens..	32	48	78	87
Home plots..	59	378	727	1,502
School fairs..	1	3	11	14
Nova Scotia—				
School gardens..	77	98	172	200
Home plots..	700	2,000	3,400	4,176
School fairs..	71	153	167	160
Prince Edward Island—				
School gardens..		156	113	93
Home projects..		2,688	1,604	2,250
School fairs..			4	14
Canada, 1917—				Total.
School gardens..				4,409
Home plots and projects..				104,528
Boys' and girls' clubs..				1,311
School fairs..				897

* Number of school districts organizing home plots.

