FRUIT CULTURE
IN
CANADA

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ONTARIO CANADA

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FRUIT CULTURE

SHOWING THE

Progress of the Fruit Industry
in Canada

BY

ROBERT HAMILTON,

SUPERINTENDENT OF

DOMINION GOVERNMENT FRUIT EXHIBITS.

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SYDNEY A. FISHER.

SPECIMEN OF ALBERT, NATURAL SIZE.

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INTRODUCTORY.

Fifty years ago Canada had practically no fruit trade worthy the name, and for some years after, the business in fruit, that is home grown fruit, was done between the farmer and retailer or the consumer.

The dwellings of many city people of that date were surrounded by a garden which almost always contained a few apple and other fruit trees, which supplied sufficient for the wants of the family and a few over for the wants of the neighbourhood or for the market. The large cities only, had anything of a fruit trade, and that was carried on in connection with some other business during a part of the year. Bananas and pineapples at that date were a great rarity, and the wholesale grocers were the importers of lemons and oranges, and of the few Spanish grapes that may have reached this side of the world in kegs. If the smaller cities and towns had any fruit trade at all, it was done directly from the farmer's waggon with the consumer, who bought her peck of apples and asked the farmer to call the next time he was in town. The city gardens of that date are now covered with stores and offices or handsome dwellings. Wealth is better distributed now than it was then, wages are at least three times as high. Middle class people and mechanics had not then begun to regard fresh fruit as a necessity. Now all that is changed. Fruit is cheap and wages are high. The family income is high, and fruit may always be

obtained at a nominal figure. The natural result has taken place, a taste for fresh fruit has been acquired. It now forms a part of the daily bill of fare and is found on almost every table. Hence the enormous traffic in fruit. Where formerly the farmer's waggon supplied all that was demanded, now whole trains of home-grown fruit barely suffice, together with shiploads of bananas, pineapples, oranges, lemons, dates, etc., and while the home trade has secured such enormous proportions, the export trade has also gone forward with leaps and bounds.

Fifty years ago the export fruit trade of Canada was practically non-existent. It was so small as to pass entirely unnoticed by the newspapers of the time.

It is true that a few barrels of "Fameuse" and "Pomme Grise" were shipped, but they were sent chiefly as presents to friends in Great Britain, which was then familiarly spoken of as the "Old Country" and "Home," names that have disappeared from use, so self-sufficient have we become.

The great export trade in fruit of to-day is of comparatively recent growth, but great as it is, it is capable of immense extension, and it is to that end that many efforts are directed. Fruit Growers' Associations, Conventions, Experiment Stations, Agricultural Schools and Colleges, Expert Lecturers, Government Experimental Farms, and Fruit Inspectors, are all doing their best to help the grower to grow the best fruit in the best manner and to so handle, pack and ship it, that it shall reach the consumer in fine condition, so as to compensate the grower and shipper and be creditable to Canada and Canadians, so that the million or million and a half of barrels of apples exported now may grow into tens of millions in the near future.

Within the immense area covered by the Dominion of Canada are included many different climates, most of which are very favorable for fruit growing. The unusually fine quality of Canadian apples affords a strong proof of the contention that the finer qualities of apples are developed near the northern limit of their production.

ORCHARD ON COLDSTREAM RANCH, VERNON, B.C.

YELLOW TRANSPARENT APPLE TREE, VERNON, B.C.

In the east, on the Atlantic coast, the cool sheltered valleys of Nova Scotia have from the earliest settlement of that country afforded conditions that are congenial to a high degree of excellence of the apple. A growing appreciation of this fact, has led in late years, to the plantation of many extensive orchards, and consequently to the greatly increased export of apples, which have a world-wide reputation.

In Prince Edward Island the experience of late years has demonstrated the fact that many of the choicest kinds of apples may be successfully grown, and proximity to the seaboard and consequent cheap freights has stimulated extended plantation.

In portions of New Brunswick there are some successful orchards; this province has long been known to produce a fine quality of summer and fall apples, with some fine winter apples in sheltered situations, and later trials have proven that these fine winter kinds may be more widely planted with success. In consequence, fruit growing is rapidly extending, to the great advantage of the province.

In Quebec, throughout the St. Lawrence Valley, in the Eastern Townships, and especially in the neighbourhood of Montreal, large quantities of apples are grown. Chief amongst them is the "Fameuse," which is regarded as the most delicate of all apples.

Along the Lower St. Lawrence and on the Island of Montreal large quantities of fine plums are produced, which find a ready sale in the local markets.

In Ontario, along the shores of the River St. Lawrence, Lake Ontario and Lake Huron, and the Georgian Bay locality; soil and climate seem to combine to produce a firm solid apple, that keeps and ships well, besides having every good quality looked for in a high-class apple.

In Western Ontario, especially in the Niagara Peninsula and along the shores of Lake Erie, the climate is favorable for the growth of the more tender fruits, peaches, pears, plums and grapes. Fruit growing is the chief occupation in these favored localities. The con-

stantly increasing acreage under grapes and the high quality of the fruit, bear testimony to the favorable conditions of climate which exist there for this luscious fruit.

On the great central plains of the Northwest Territories the larger fruits are not grown successfully, owing to unfavorable climatic conditions, but the small fruits are produced in sufficient quantities, equal in quality to any that are grown in more favored sections.

It is highly probable, however, that some of the new varieties of the apple which have been produced at the Central Experimental Farm at Ottawa by crossing the wild Siberian crab (*Pyrus Baccata*), with some of the hardiest fine apples will endure the Northwest climate without injury. Some of these crosses have already borne fruit of fair quality that is excellent for jams and preserves, and some of them are of fair size and pleasant to eat out of hand.

If these should prove sufficiently hardy, and it is confidently expected that they will, a new race has been created, capable of ever-advancing improvement, that will have far-reaching effects, not only for Canada, but for similar climates in other parts of the world.

In the central valleys of British Columbia lying between the Gold and Coast Ranges the dry atmosphere and bright, sunny, summer weather, together with irrigation, concur to produce clean, bright fruit that will finally render the apples of this section unapproachable.

The area under fruit in British Columbia is extending rapidly.

Canada has gained, during recent years, an enviable reputation for her fruit in the British markets. This is due to strict grading and careful packing, consequent upon the enforcement of the provisions of the "Fruit Marks Act." This Act demands that every closed package of fruit that is offered for sale shall be honestly branded, that the fruit shall be uniform in character and quality throughout, and shall correspond to the brand and face samples.

GRAVENSTEIN APPLE TREE IN BLOOM, GRIMSBY, ONT.

HISTORICAL.

The early French colonists were successful in their efforts to introduce apple trees into Canada as early as the beginning of the seventeenth century. In 1663 apple trees are mentioned as growing on the banks of the Dauphin, the L'Equille, and the L'Orignal Rivers, and in the neighbourhood of Bassin des Mines, alongside of the River des Canards and of the Gaspereaux, where they had been planted by the early colonists from France.

Pierre Boucher, writing in 1663, says of the district about Montreal: "Not many trees have been introduced from France, except some apple trees, which bear very fine fruit in large quantity, but there are not many of these trees yet."

Nearly a century later, in 1761, the Township of Cornwallis, in Nova Scotia, was settled by New England people. The new settlers found apple trees of many sorts thriving in that valley which had been introduced by the French colonists. Later this industry was gradually extended, the area occupied by fruit trees increased, and in the course of years new and promising sorts were introduced. From these small beginnings have sprung the famous modern orchards of the Annapolis and Cornwallis Valleys, which now occupy a large area in those districts. Among the varieties thus early introduced, and which still rank among the best productions of that part of the Dominion, were the Gravensteen, Nonpareil, Golden Russet, Yellow Bellefleur, and Baldwin apples.

Quebec, the oldest of the provinces, was undoubtedly the cradle of Canadian Horticulture. Char plain, in 1611, wrote: "While I waited for the Indians I had ground cleared for two gardens, one in the open country and the other in the woods. Here, on the second of June, I sowed seeds, which promptly came up, thus demonstrating the fertility of the soil."

But it is to the religious communities that we must look for the earliest cultivation of fruit trees and flowers.

Their gardens were enclosed by walls, which served not only to protect them from marauding Indians, but also to shelter the young trees and other plants.

Boucher, who wrote in 1663, tells of the abundant crops of melons and onions grown in the fertile soil of Montreal, and, after telling of the incredible quantities of strawberries and raspberries found growing wild, and which he declared were larger and better flavored than the same fruits grown in France, goes on to say—“Between Montreal and the Lake of the Iroquois (Lake Ontario) there is a large number of fruit trees.” Again, he says, “We have not many trees from France yet, except apple trees, which produce abundant crops of beautiful apples, but these trees are not very numerous,” and “There is abundance of apples at Quebec, but peaches and grapes do not succeed there; at Montreal, on the contrary, these fruits ripen perfectly.” These grapes and peaches must have been grown on the walls of some of the convent gardens in Montreal, as they were still grown until a few years ago.

In 1798, we have a record of the establishment in Quebec, of the first Agricultural Society in Canada, under the patronage of Lord Dorchester, then Governor-General. Among other proceedings recorded at the first regular meeting, the importation of fruit trees from Europe was authorized.

THE EARLIEST ESTABLISHMENT OF NURSERIES IN CANADA.

In the first decade of the 19th century, Louis Charles established a nursery for the propagation and sale of fruit trees and plants in Montreal, on the property of Simon McTavish, at the foot of the mountain, and advertised his trees for sale in the Montreal newspapers of that date.

A few years later, in 1810, Robert Cleghorn, of the Blinkbonny Gardens, offered fruit trees and seeds for sale.

John Hogg, who was probably the originator of the

STRAWBERRY AND RASPBERRY PLANTATION, GRIMSBY, ONT.

St. Lawrence apple, long known as "Hogg's Seedling," started his nurseries at Montreal about the same time.

About 1830, L. Guilbault opened his nursery, which he called "The Montreal Botanic Gardens." He was succeeded by J. E. Guilbault, probably a son, whose place was still in existence about 1870.

By this time several nurseries had been established both in Ontario and Quebec, at that time called Upper Canada and Lower Canada, so that thenceforward there was no lack of them.

PRINCE EDWARD ISLAND.

In this the smallest and most easterly province of the Dominion, the value of fruit growing as an industry has only just begun to be appreciated. Although only recently entered on the list of fruit growing provinces, Prince Edward Island is rapidly coming to the front. A progressive fruit growing association has done much work in that direction, and has demonstrated the fact that many fine shipping apples can be successfully grown there, and the experience of those who have taken up the industry tentatively, confirms this. Planting is being rapidly extended, and hundreds of young orchards are being planted. Already trial shipments made to England have fetched good prices, a strong proof of the good quality of the apples. Being on the seaboard, Prince Edward Island has the advantage of cheap rates to Great Britain.

There are between four and five thousand acres in orchard, mostly young trees, with a steadily increasing area. In 1901 the quantity of apples produced was 160,000 bushels.

There are also 100,000 other fruit trees, chiefly plum, pear and cherry, several varieties of grape vines also are under trial, many of which have already borne fruit.

All the small fruits succeed admirably. Prince Edward Island strawberries help to keep this luscious fruit on the tables of American cities longer than could otherwise be possible.

NOVA SCOTIA.

In the Province of Nova Scotia between 3% and 4% of the cultivated land is in fruit, and the proportional value of fruit, vegetables and nursery stock is over 8% of the whole agricultural product.

There were 34,000 acres in orchard at the last census in 1901. The proportional increase since that date is probably 20%. The number of apple trees planted in orchard is about 2,000,000, (a large proportion of these have not come into bearing,) with a total production of over 2,000,000 bushels. There are about 175,000 plum trees, 56,000 pear trees, 10,000 peach trees, 62,000 cherry trees, all in a high state of production. Grapes are also successfully grown, and immense quantities of small fruits, strawberries, raspberries, etc., are grown.

No more favored spot for the fruit industry is to be found in Canada than Nova Scotia. It possesses a congenial climate where most of the fruits of the temperate zone are grown, without unusual labor, in great abundance, and, lying on the Atlantic seaboard, the expense of shipment to Great Britain, the chief fruit market of the world, is reduced to a minimum, so that everything seems to favor the Nova Scotia fruit grower.

The following are among the most highly esteemed apples of Nova Scotia: Chief is the Gravenstein, the Ribston Pippin, Northern Spy, Cox's Orange, Baldwin, King, Nonpareil, Fallawater, Golden Russet and Bishop Pippin.

Nova Scotia has the advantage of a long established Fruit Growers' Association, which has done much for the fruit growing interests of that province, and also to establish a reputation for Nova Scotia fruit in foreign markets.

There is also a School of Horticulture associated with the Acadia University. Both of these institutions are supported by Government grants.

NEW BRUNSWICK.

As the fruit growing capabilities of New Brunswick become better appreciated the area under fruit is steadily

RASPBERRIES, AT EXPERIMENTAL FARM, INDIAN HEAD

STANDARD APPLE BOXES AS PACKED FOR SHIPMENT

increasing. Experience has shown that many fine varieties of the apple may be grown there, that were, up to a few years ago, believed to be too tender for that province. The area in fruit is about 1% of the cultivated area, and the estimated value of the garden and orchard product is 3% of the total agricultural product. The number of apple trees in the province is nearly a million; less than half of these are in bearing, and the production of apples is over half a million bushels.

In favored situations a few pears are grown, sufficient to attest the capabilities of the province and the suitability of the climate. Plums are most extensively cultivated and are of fine quality. The annual production of plums is about 5,000 bushels, but is increasing rapidly.

Cherries of fine quality are successfully grown and are being extensively planted. The production from bearing trees is about 5,000 bushels. The total number of trees in orchard is 34,000.

Grapes are grown to a limited extent and are very productive; the production from bearing vines is 3,000 bushels.

In the absence of a Fruit Growers' Association, fruit growing interests are attended to by the Farmer's and Dairymen's Association of the Province. The Dominion Experimental Farm for the Maritime Provinces is available for illustrative work on all branches of orchard management, and sends out experts and specialists, who, at stated times, give practical addresses, which supply every need of the several fruit growing districts in that locality.

QUEBEC.

Of the cultivated area nearly 1% is in orchard, garden, nursery, and vineyard, and the yield from this is about 3% of the total agricultural product. There are nearly 3,000,000 apple trees in orchard, 1,500,000 of them in bearing, producing about 1,500,000 barrels annually.

Pear trees are cultivated with some degree of success. Only a few varieties, however, are sufficiently hardy to

endure the severe winters. The "Flemish Beauty" is the principal variety grown. There are about 8,000 trees in orchard; about one-half of these are in bearing and produce about 4,000 bushels of fruit.

Plum trees are cultivated with fair success, especially on the Lower St. Lawrence and on the Island of Montreal. There are nearly 500,000 trees, only a small portion of them in bearing, producing about 124,000 bushels. The last census shows a rapid increase in the cultivation of plums.

Cherries. There are nearly 400,000 trees planted, a small portion of them in bearing, producing 150,000 bushels.

Other fruit trees of several kinds, number about 25,000, with a production of 21,000 bushels of fruit.

Grapes extend to 119 acres, with 150,000 vines, producing about 995,849 pounds of grapes.

The Province of Quebec is the home of the far famed "Fameuse" apple. This delicious fruit reaches its highest excellence in this province, especially on the limestone of the Island of Montreal. Its production probably equals the combined product of all the other varieties grown in the province. Its popularity, wherever it has been introduced, is due to its beauty, its delightful but indescribable flavor and its crisp, tender flesh.

While many of the fine Ontario apples succeed fairly well in Quebec, its specialties are the St. Lawrence, the Fameuse, McIntosh Red, Winter St. Lawrence, Pomme Grise, Wealthy, Canadian Baldwin, etc. These varieties are produced of higher flavor and crisper flesh in Quebec than anywhere else.

ONTARIO.

This is the banner fruit province of Canada, and is noted for the extent of its orchards and the variety and excellence of its fruits. It is only within recent years that its wonderful resources as a fruit growing province began to be fully appreciated and developed. Before that time there was no fruit for export, even the home

SHELL-BARK HICKORY AND JAPANESE WALNUT TREES, AGASSIZ, B.C.

market was very insufficiently supplied. Now fruit growing is one of the chief industries of the province. Nearly half a million acres of the best soil is given up to the production of fruit, and the area is steadily and rapidly extending. Each section of the province is being gradually devoted to that kind of fruit which it is best fitted to produce to advantage. South Ontario and the Niagara Peninsula produce grapes, peaches, pears, plums, quinces, etc., besides small fruits, while orchards of the finest shipping apples are scattered over the whole of the province. In this way the great capabilities of the province are being more fully utilized.

The area under orchard and garden is 365,851 acres.

The number of apple trees in orchard in 1903 was 7,095,554, and the yield of apples was fourteen and a half million barrels. The increase in extent of orchard ground in two years was over 9,000 acres, with an additional half million of young trees planted.

The vineyard area is 15,269 acres, with over 3,000,000 grape vines, yielding 25,000,000 pounds of grapes. The produce of these vineyards reaches every town and village in Canada, and several million pounds are made into wine.

Pears are very largely grown. The bearing trees number about half a million and produce about 600,000 bushels. The pear trees not in bearing number 250,000.

The bearing plum trees number 815,000, with an annual yield of over half a million bushels. The non-bearing plum trees number 250,000.

The bearing peach trees number 775,000, with an annual product of 600,000 bushels. The non-bearing peach trees number 441,163.

The other non-enumerated fruit trees, quinces, etc., number 48,000, with a yearly product of 40,000 bushels.

Small fruits, up to 25,000,000 pounds, are annually produced. These comprise strawberries, raspberries, blackberries, currants, gooseberries, etc.

Ontario's already large fruit product is multiplying rapidly. From the decennial census of 1891 to that of

1901 her fruit product tripled, and the ratio of increase is even greater at present.

With its highly fertile soil and delightful climate, there seems to be no limit to the possibilities of the fruit industry in Ontario. The range and variety of the fruit is very large, and the yield and quality of it is all that can be desired.

Under the enlightened system now pursued by the chief fruit growers of the province, and which is becoming almost universally prevalent, of spraying to prevent and overcome the ravages of injurious insects of various kinds, as well as the fungus and other forms of disease, which attack and seriously injure the apples, pears and other fruits, the quantity of high grade fruit has greatly increased, thus augmenting the wealth and resources of fruit growers and of the province.

BRITISH COLUMBIA.

This province, one of the most thinly settled, promises to become one of the most important in point of fruit growing. Already some of its orchards exceed in size those to be found in any of the other provinces. All of the fruits of the other provinces, even the most tender, thrive and reach a high degree of perfection there. In the brilliancy of coloring, clearness of skin, beauty of form, fine size and high flavor, its apples are unrivalled, and similar claims may be made for its other fruits.

The dry atmosphere and bright, sunny weather that prevails in the mountain valleys, produce these fine effects. In some parts the dryness make irrigation necessary. Mountain streams, however, that may be utilized are numerous, so that there is no difficulty in procuring a sufficient supply of water for this purpose.

In 1891 only 2% of the cultivated area of British Columbia was in orchard and fruit, but since that time the area has greatly increased, having advanced from 1,800 acres of 1891 to nearly 4,000 acres in 1901. The increase in the fruit was from 100% to 300% in the decade, is very much greater at present, and this increase

NORTHERN SPY APPLE TREE, GRIMSBY, ONT.

FERTILITY PEAR TREE, AGASSIZ, B.C.

will continue as markets are made for the fruit, which has already gained a high reputation abroad.

The total number of apple trees in 1901, was:—436,644, with a yield from bearing trees of 241,000 bushels of apples; peach trees numbered 8,827, with a yield from bearing trees of 2,840 bushels; pear trees 47,243, with a yield from bearing trees of 26,000 bushels; plum trees 88,943, with a yield from bearing trees of 59,000 bushels, an increase of 300% in the decade. Cherry trees numbered 28,212, with a yield of 14,400 bushels; other fruit trees numbered 39,822, with a yield of 7,612 bushels. Grape vines numbered 8,875, with a yield of 30,182 bushels. Small fruits yielded 648,628 pounds of fruit.

Many of the nut trees also have proved to be capable of successful cultivation, so that a great extension of nut culture may be confidently expected.

The shipment of fruit from British Columbia in 1903 by railway was 250 carloads. This quantity was estimated to be equal to 40% of the total crop, so that the entire season's crop was about 625 carloads.

Recognizing the probability of a great future for British Columbia, in fruit growing, plans were early laid for large trial orchards at the Experimental Farm at Agassiz, B.C., where a great number of varieties of fruit trees have been collected during the past few years, from all parts of the world. This is believed to be the largest collection of hardy fruits in existence. It consists of the following named varieties:—Apples 1,215, crab apples 28, pears 559, plums 311, cherries 154, peaches 215, apricots 50, nectarines 25, quinces 8, medlars 7, mulberries 6,—a total of 2,576 different varieties of large fruits, which is being constantly augmented.

The collections of small fruits under trial are also very extensive and valuable.

MANITOBA AND THE NORTH-WEST TERRITORIES.

At each of the experimental Farms on the western plains, that for Manitoba, at Brandon, and that for the

Northwest Territories, at Indian Head, tests are made of the hardiness of the fruits that have been raised by cross-breeding and selection at the Central Experimental Farm, where many valuable crosses in fruits have been made, with the view especially, of overcoming the climatic difficulties of that section of the Dominion.

It is highly probable that some of the new varieties of apple which have been originated at Ottawa by crossing the wild Siberian crab (*Pyrus Baccata*) with some of the hardiest kinds of apples, will endure the Northwest climate without injury. Should these prove sufficiently hardy, they will be a great boon to the settlers in that part of the Dominion. Many of these crosses have already borne fruit, and some of them are of fair quality. They are of good size and appearance, pleasant to eat out of hand and excellent for jams and preserves.

Should these crosses prove sufficiently hardy, and it is confidently expected that they will, a new race will have been created, capable of ever increasing improvement, fraught with good, not only for Canada, but for similar climates all over the world.

ONTARIO EXPERIMENT FRUIT STATIONS.

The Ontario Provincial Government has established a series of Experiment Fruit Stations in different parts of the province. These stations are designed to determine the suitability of certain sections of the country for the various kinds of fruit. They are under the charge of a committee of practical fruit growers, who annually select some of the most promising of the new varieties of fruits for test, and issue annual reports giving the results of this work.

The Agricultural College at Guelph has a Horticultural Department, where lectures on the theory and practice of horticulture are regularly given and experiments made, with the view of giving the students a thorough insight into the best modes of dealing with everything pertaining to fruits and fruit growing, also to the treatment of diseases and pests of every description

STANDARD APPLE BOXES AS PACKED FOR SHIPMENT

FAMEUSE APPLE TREE

to which the various kinds of fruit trees, vines and plants are subject.

A large farm also gives ample scope for experiment, where practical illustrative work in every department of horticulture is carried on.

QUEBEC EXPERIMENT STATIONS.

The Quebec Provincial Government has established a number of Fruit Experiment Stations, with the object of testing the hardiness of fruit trees and to awaken an interest in fruit growing, especially in the back districts. New varieties that are deemed sufficiently hardy are added from time to time for trial. Reports, published in French and English, are distributed to all who ask for them.

There are three Agricultural Schools in Quebec which have, as a part of the course, a class in horticulture. In two of these schools, that at St. Anne de Pocatiere and that at L'Assomption, the course is in French; that at Compton is in English.

Besides a number of local associations, there is a Provincial Fruit Growers' Association and a very important Horticultural Association, with headquarters at Montreal.

These all receive grants of money from the Provincial Government.

The Provincial Association, called "The Pomological and Fruit Growing Association of Quebec," meets twice a year for discussion and business.

The Montreal Horticultural Association holds one grand exhibition and several minor ones during the year.

The local fruit growers' associations, which are located chiefly in the Eastern Townships, meet at stated times for discussion on subjects pertaining to fruit growing and other business.

The Provincial Government also publishes a weekly journal of agriculture and horticulture, which is supplied to all the members of the agricultural and horticultural societies. It is published in English and in French.

FRUIT GROWERS' ASSOCIATION OF ONTARIO.

This Association is now one of the finest organizations of its kind in the world, and has a list of 5,000 active members, drawn from all the provinces.

It was organized in 1859, with a membership of eighteen. In 1863 it published its first report, compiled from returns sent in from thirty counties in Ontario. In 1867, when the membership had increased to eighty, the society was incorporated, and from that time forward received an annual grant from the Provincial Government, which greatly stimulated the activity of its members. The work of the Association has been found so useful that this grant has been several times increased.

In 1877, "The Canadian Horticulturist," a monthly publication was begun. This magazine, while covering the broad field of horticulture, is mainly devoted to the dissemination of information relating to fruit growing and kindred subjects. By its means, much information on fruit has been collected and distributed among farmers and fruit growers. Lists of varieties which have been found most useful in the several districts of the province have been published, and the fruit yielding capabilities of each of them reported on. The growing of long-keeping varieties of apples of high quality for shipment to foreign markets has been encouraged and new varieties introduced. Early in the winter the annual convention of this Association is held in some important fruit centre. Experts and specialists are invited to be present to address the members and assist in the discussion of questions calculated to promote the fruit-growing industry. Practical papers are presented by some of the more active members, who assemble from all parts of the Dominion. A carefully prepared digest of the more important matters submitted is published by the Provincial Government, and a copy is sent to each member of the Association. These reports are widely distributed among farmers throughout the province.

The information given to the public through this useful organization has given a great impetus to fruit

FLOWER GARDEN, EXP. FARM, INDIAN HEAD

growing all over the Dominion. Through it the attention of fruit growers has been called to the necessity of producing such long-keeping sorts of apples as are best adapted for shipment to European markets.

GRAPES AND WINE.

There are about 16,141 acres planted with grape vines in the Dominion of Canada, of these 15,000 acres are in Ontario, planted with over 3,000,000 vines, yielding 25,000,000 pounds of grapes, 90% are sold as fresh, ripe fruit, and the remainder is made into wine.

The quantity of grapes made into wine in 1902 was about 3,000,000 pounds which was made into 500,000 gallons of wine.

The principal wine districts are in South-Western Ontario. In several localities in this section large vineyards have been planted for the special purpose of making wine. The industry is a growing one and is extending rapidly. Hitherto the product of the Ontario vineyards has been consumed chiefly at home.

Some of the principal vineyards are along the Detroit River and on Pelee Island. In a recent season over 500 tons of grapes were pressed by the Pelee Island Company.

As a grape and wine producing country the capabilities of Ontario are almost incalculable.

British wine merchants who visited the Pelee Island Wine Co's. establishment some years ago, expressed the opinion that, with a proper system of manufacture, Ontario might become one of the principal wine producing countries of the world.

In 1901 there were fourteen wine factories, each employing at least five men and upward. The value of the wine made was \$289,350.

CIDER AND CIDER VINEGAR.

An abundance of sweet cider is also made in many of the large apple growing districts, which finds a ready sale in the home markets.

Almost every orchard produces more or less cull apples, and many of these culls are made into cider and cider vinegar. Probably several thousand bushels are utilized in this way, as almost every orchard owner makes these for his own family and also for sale. This manufacture might be indefinitely extended if it were not for the manufacture of large quantities of cider that has not a drop of apple juice in it, which sadly interferes with the manufacture and sale of the genuine article.

EVAPORATED AND CANNED FRUITS AND JAMS.

Where fruit is so extensively grown, it is necessary to have some means of disposing of the surplus, particularly of the perishable sorts. To make the best use of these, factories have been established for evaporating and canning and also for making jams. The business of evaporating fruit, especially apples, has developed into large proportions. Establishments for this purpose are now found in most of the larger apple growing districts. In 1902, about two million pounds of evaporated apples were exported, most of it to tropical countries, where it would have been impracticable to send the fruit in a fresh condition.

Many canning factories have been established during the past twenty years. The principal fruits canned are apples, pears, plums, cherries, strawberries, peaches, raspberries, blackberries and gooseberries. Jams are also made in large quantities. There is a large home demand for both these classes of goods ; they also form an important item in the export trade of Canada.

AID TO FRUIT GROWERS.

The interests of fruit growers in all the provinces are assiduously fostered by both the Federal and Provincial Governments. Every practicable means employed to convey information that will enable fruit growers to overcome the various obstacles that would

BRANCH OF A CROSS-BRED ALBERT.

hinder them from producing a fine quality of fruit, and from placing it on distant markets in fine condition.

The Federal Government and the several Provincial Governments employ experts and specialists to lecture on subjects of general importance to the country.

To fruit growers these lectures treat of methods of overcoming insect pests and the various forms of disease which attack fruit and fruit trees; of pruning and fertilizing; of winter cover crops, and, in general, assist fruit growers to secure vigorous healthy trees and, consequently, a high grade of fruit, besides endeavoring to induce them to plant such varieties of fruit as are best fitted to satisfy the demands of the trade; of methods of packing and style of packages, etc. There are also discussed at these meetings what is necessary to comply with the provisions of the Fruit Marks Act, etc.

FRUIT GROWERS INSTRUCTED IN SPRAYING.

The Department of Agriculture also sends experts to the fruit growing centres to instruct orchardists and farmers in the use of spraying apparatus, and the preparation and use of spraying mixtures, to enable them to subdue insect enemies and fungous diseases, and to demonstrate the efficacy of the measures adopted, by leaving a number of trees in each case untreated.

COLD STORAGE FACILITIES.

The Department of Agriculture has made arrangements with railway companies to provide refrigerator cars for the safe carriage of fruits to their destination, also with steamship companies to provide cold storage chambers in their vessels, so that fruit may be safely carried to distant markets.

Assistance has also been given to provide suitable cold storage warehouses in large fruit centres, where fruit can be placed and cooled preparatory to being shipped to its destination in refrigerator cars; by this

means better results are obtained than if it were forwarded without chilling.

DOMINION TRADE AGENTS.

Agents have been sent to Great Britain and other countries to study the requirements of the fruit markets there, and ascertain the best course for Canadian fruit growers and shippers to pursue to increase the volume of trade in these products.

FRUIT TESTING AT EXPERIMENTAL FARMS.

Most important and far-reaching services have been rendered to the fruit growing industry by the Dominion Experimental Farms. These farms, five in number, are located at widely different points in very different climates. At each of them, valuable experimental work has been carried on in connection with fruit growing. A large number of varieties of fruit trees and plants have been introduced and tested, and their suitability for the different sections of Canada determined. Many new sorts have also been originated by cross-breeding with the hope of finding some specially adapted to the colder climates of the Northwest in which the old well known sorts have failed. Experiments are conducted to ascertain the best and most economical methods of caring for an orchard, including pruning and thinning, and the most effective and economical measures for subduing insect pests and preventing the spread of disease are carefully ascertained by practical demonstration.

Full information on points of interest to fruit growers is given in the annual reports of the Experimental Farms, and in special bulletins.

The publications of the Experimental Farms are sent free to every farmer who applies for them, and thus the information gained on all points is spread throughout the length and breadth of the Dominion.

RHODE ISLAND GREENING APPLE TREE, FRUITLAND, ONT.

Some idea may be formed of the extent of the experimental work now in progress from the number of varieties of fruit trees under trial.

At the Experimental Farm for the Maritime Provinces at Nappan, N.S., the following numbers of sorts of the larger fruits are being tested : Apples, 149; Crab Apples, 10; Pears, 30 ; Plums, 51 ; Cherries, 36 ; Peaches, 2 ; Apricots, 4 ; a total of 282 varieties.

At the Agassiz farm for British Columbia, there are 2576 varieties, and this number is receiving annual additions.

At the Central Experimental Farm at Ottawa, there are now being tested the following number of varieties : Apples, 700 ; Crab Apples, 22 ; Pears, 69; Plums, 160 ; Cherries, 50 ; a total of 971 varieties. This number is being constantly increased.

At each of the Experimental Farms on the Western plains, that for Manitoba, at Brandon, and that for the Northwest Territories, at Indian Head, tests are made of the hardiness of the fruits that have been raised by cross-breeding and selection at the Central Experimental Farm.

ST. LOUIS EXPOSITION.

CANADIAN FRUIT EXHIBIT

List of Apples

Alexander	Maiden's Blush
Ashmead	Mann
Bailey Sweet	McIntosh
Baldwin	McMahon
Baxter	Nodhead
Bellefleur	Nonpareil
Ben Davis	Northern Spy
Bethel	Ohio Nonpareil
Blenheim Pippin	Ontario
Blue Pearmain	Patten's Greening
Bottle Greening	Pewaukee
Bourassa	Pomme de fer
Cabashea	Pomme Grise
Calville White	Redcheek Pippin
Canada Baldwin	Red Pearmain
Canada Red	Red St. Lawrence
Cayuga Redstreak	Red Sweet
Cellini	Ribston Pippin
Cooper's Market	Rome Beauty
Cooper's Russet	Rox. Russet.
Coxe's Orange	Salome
Cranberry Pippin	Scarlet Pippin
Dodd, P. E. I.	Scott's Red Winter
Dominion Winter	Seek No Further
Fallawater	Spitzenberg
Fameuse	Stark
Gano	Schwartz
Gilliflower	Sunset Russet
Gloria Mundi	Swazie Pomme Grise
Gold Russet	Talman Sweet
Gravenstein	Twenty Ounce
Greening, R. I.	Vandervere
Hubbardson	Wagner
Inkerman	Waxen
Kentish Fillbasket	Wealthy
Kings	Weldon
Kirke's	Wellington
La Salle	Windsor Chief
Lawver	Wine Apple ☐
Longevity	Winter Arabka
Long Stem Russet	Winter St. Lawrence
Lord's Apple	Wolf River

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