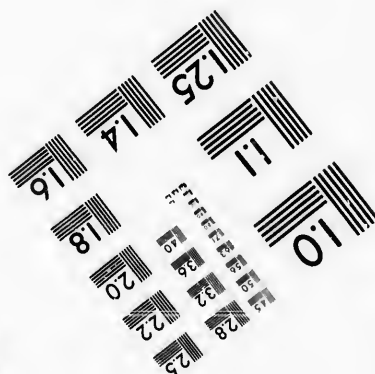
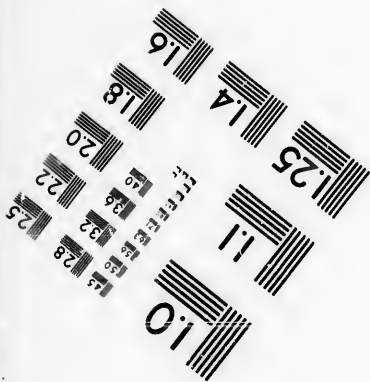
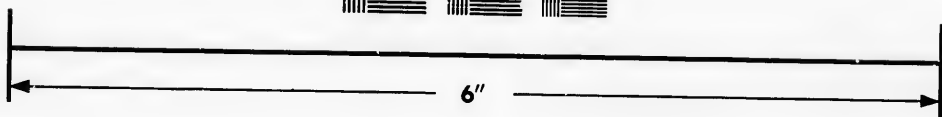
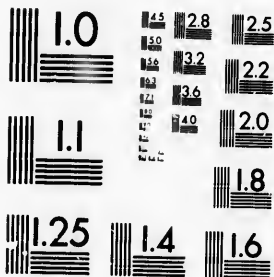


**IMAGE EVALUATION
TEST TARGET (MT-3)**



**Photographic
Sciences
Corporation**

23 WEST MAIN STREET
WEBSTER, N.Y. 14580
(716) 872-4503



**CIHM/ICMH
Microfiche
Series.**

**CIHM/ICMH
Collection de
microfiches.**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques



© 1986

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- | | |
|--|--|
| <input type="checkbox"/> Coloured covers/
Couverture de couleur | <input type="checkbox"/> Coloured pages/
Pages de couleur |
| <input type="checkbox"/> Covers damaged/
Couverture endommagée | <input checked="" type="checkbox"/> Pages damaged/
Pages endommagées |
| <input type="checkbox"/> Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée | <input type="checkbox"/> Pages restored and/or laminated/
Pages restaurées et/ou pelliculées |
| <input type="checkbox"/> Cover title missing/
Le titre de couverture manque | <input checked="" type="checkbox"/> Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées |
| <input type="checkbox"/> Coloured maps/
Cartes géographiques en couleur | <input type="checkbox"/> Pages detached/
Pages détachées |
| <input type="checkbox"/> Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire) | <input checked="" type="checkbox"/> Showthrough/
Transparence |
| <input checked="" type="checkbox"/> Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur | <input type="checkbox"/> Quality of print varies/
Qualité inégale de l'impression |
| <input checked="" type="checkbox"/> Bound with other material/
Relié avec d'autres documents | <input type="checkbox"/> Includes supplementary material/
Comprend du matériel supplémentaire |
| <input type="checkbox"/> Tight binding may cause shadows or distortion
along interior margin/
La reliure serrée peut causer de l'ombre ou de la
distorsion le long de la marge intérieure | <input type="checkbox"/> Only edition available/
Seule édition disponible |
| <input type="checkbox"/> Blank leaves added during restoration may
appear within the text. Whenever possible, these
have been omitted from filming/
Il se peut que certaines pages blanches ajoutées
lors d'une restauration apparaissent dans le texte,
mais, lorsque cela était possible, ces pages n'ont
pas été filmées. | <input type="checkbox"/> Pages wholly or partially obscured by errata
slips, tissues, etc., have been refilmed to
ensure the best possible image/
Les pages totalement ou partiellement
obscurcies par un feuillet d'errata, une pelure,
etc., ont été filmées à nouveau de façon à
obtenir la meilleure image possible. |
| <input type="checkbox"/> Additional comments:/
Commentaires supplémentaires: | |

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

The copy filmed here has been reproduced thanks to the generosity of:

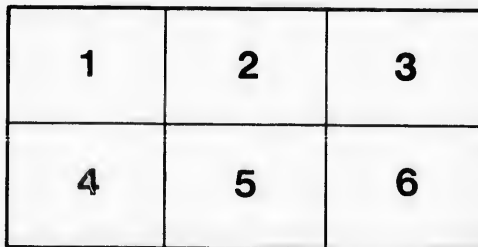
Library
Agriculture Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol \rightarrow (meaning "CONTINUED"), or the symbol ∇ (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

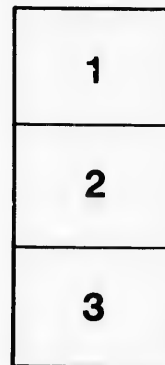
Bibliothèque
Agriculture Canada

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole \rightarrow signifie "A SUIVRE", le symbole ∇ signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.



ire
détails
es du
modifier
er une
filmage

es

errata
to

pelure,
on à



32X

F

DIREC

PRESID
OF

HON

PARIS INTERNATIONAL EXHIBITION, 1900.

FRUIT GROWING

IN

CANADA

BY

WM. SAUNDERS, LL.D.,

DIRECTOR EXPERIMENTAL FARMS, CANADIAN COMMISSIONER FOR PARIS EXHIBITION,

AND

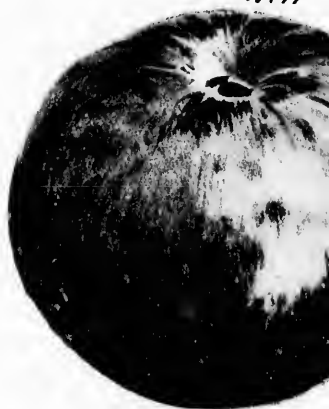
AUGUSTE DUPUIS,

PRESIDENT COUNCIL OF AGRICULTURE OF THE PROVINCE OF QUEBEC, SECRETARY CANADIAN COMMISSION FOR PARIS EXHIBITION.

PRINTED BY ORDER OF THE
HON. S. A. FISHER, MINISTER OF AGRICULTURE
OTTAWA, CANADA.

PARIS INTERNATIONAL E

Baldwin



King

Baldwin



Fameuse



Greening



Two Thirds Natural Size.



King



Spitzenburgh



Spy

I

II

QU

NEW

NOV

F

M

S

PRINC

G

F

ONTAR

W

N

A

O

FR

EX

HO

G

LOC

MANITO

Fail

Succ

TABLE OF CONTENTS.

	PAGE.
INTRODUCTORY.	
Fruit Growing Capabilities of Different Parts of Canada.....	5
HISTORICAL.	
Early Introduction of Apple Trees in Quebec and Nova Scotia	7
QUEBEC.	
Progress of Fruit Growing.....	8
Formation of Associations in Aid of Fruit Culture	8
The Fameuse Apple.....	8
Experimental Orchards.....	9
NEW BRUNSWICK.	
Increased Interest in Fruit Growing.....	10
NOVA SCOTIA.	
Fruit in the Annapolis and Cornwallis Valleys.	11
Leading Varieties of Apples Grown.....	11
Nova Scotia Fruit Growers' Association.....	12
School of Agriculture.....	12
PRINCE EDWARD ISLAND.	
Good Progress in Fruit Growing.....	12
Fruit Growers' Association Organized.....	12
ONTARIO.	
Wonderful Fruit Growing Capabilities.....	13
Number of Bearing Apple Trees	13
Areas Planted with Peaches; area in Vineyards.	13
Ontario Fruit Growers' Association.....	14
Fruit Growers Instructed in Spraying.....	15
Experimental Fruit Stations.....	16
Horticulture Taught at Agricultural College, Guelph.....	16
Local Horticultural Societies.....	16
MANITOBA AND THE NORTH-WEST TERRITORIES.	
Failure with Large Fruits	17
Success with Small Fruits.....	17

	PAGE.
BRITISH COLUMBIA.	
Favourable Conditions for Fruit Growing :	17
In Coast Climate	18
In Interior Valleys.....	18
Provincial Fruit Growers' Association.....	18
NURSERIES IN CANADA.....	18
DISTANCES AT WHICH FRUIT TREES ARE PLANTED.....	18
PACKING AND SHIPPING OF FRUITS.....	19
EVAPORATED AND CANNED FRUITS AND JAMS	19
WINE AND CIDER	20
FRUIT GROWING ASSISTED BY FEDERAL GOVERNMENT.	20
Enquiries by Agents	20
Cold Storage Facilities.....	21
Fruit Testing at Experimental Farms	21
General Service Rendered by Experimental Farms.....	22
Number of Varieties of Fruit Under Test.	22
Sending Trained Men to Address Meetings.....	23
Canadian Fruits at the Paris Exhibition.....	23

Acknowledgments.

The authors desire to tender their thanks to the following gentlemen who have kindly furnished information on fruit topics, part of which has been incorporated in the following pages :

Mr. G. A. Gigault, Deputy Minister of Agriculture, Quebec.

“ Robt. Hamilton, Grenville, Que.

Sir James M. LeMoine, Quebec.

Mr. J. M. Fisk, Abbotsford, Que.

“ Geo. Johnson, Statistician, Dept. of Agriculture, Ottawa.

“ C. C. James, Deputy Minister of Agriculture, Toronto, Ont.

“ L. Woolverton, Sec. Ont. Fruit Growers' Association, Grimsby, Ont.

“ D. W. Beadle, Toronto, Ont.

“ A. McD. Allan, Goderich, Ont.

Simeoe Canning Co., Simeoe, Ont.

Mr. Geo. Lightbound, Toronto, Ont.

PAGE.
17
... 18
... 18
... 18
... 18
... 18
... 19
... 19
... 20
20
... 20
... 21
... 21
al 22
... 22
... 23
... 23

FRUIT GROWING IN CANADA.

BY

WM. SAUNDERS, LL.D.,
DIRECTOR OF EXPERIMENTAL FARMS; CANADIAN COM-
MISSIONER FOR PARIS EXHIBITION,

AND

AUGUSTE DUPUIS,
PRESIDENT COUNCIL OF AGRICULTURAL OF THE PROVINCE
OF QUEBEC, SECRETARY CANADIAN COMMISSION
FOR PARIS EXHIBITION.

INTRODUCTORY.

Within the large area covered by the Dominion of Canada there are included many different climates, some of which are very favourable for fruit growing,

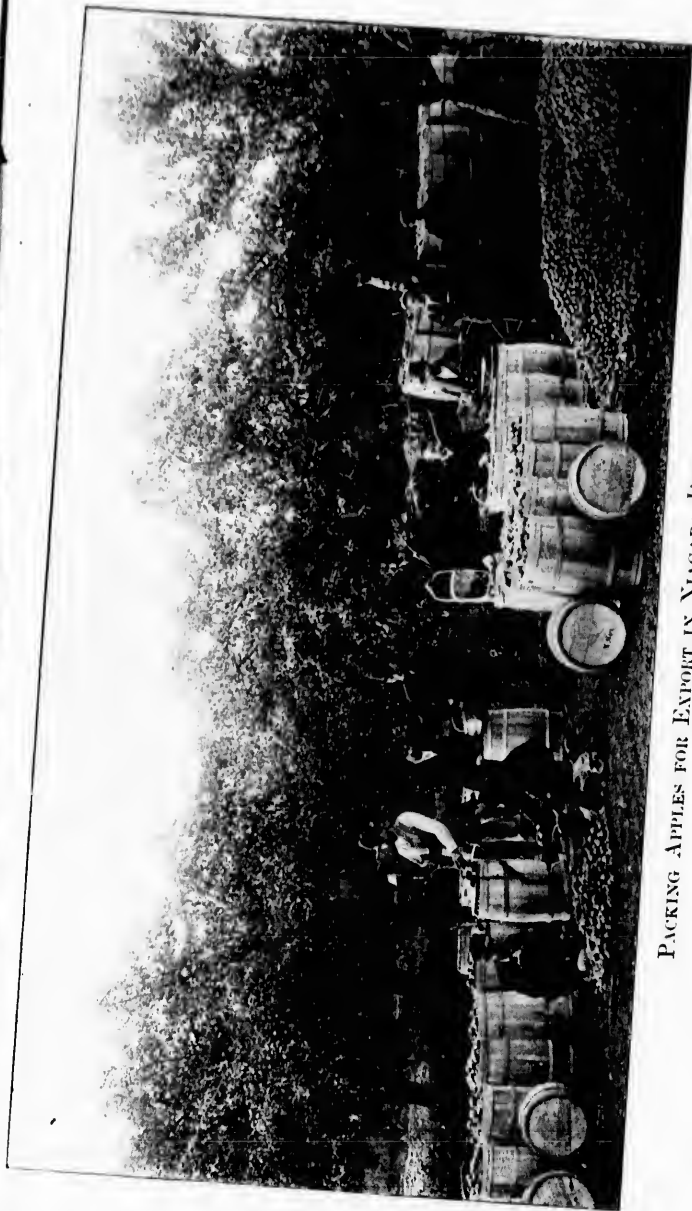
In the East, the cool sheltered valleys of Nova Scotia afford conditions congenial to the growth of the apple, to a wonderful degree of perfection and of the highest flavour. In Prince Edward Island and in portions of New Brunswick there are many successful orchards, and fruit growing in these provinces is rapidly extending. In the western parts of Quebec, particularly about the Island of Montreal, much highly flavoured fruit is grown, while throughout the larger part of Ontario most progressive farmers have an apple orchard as one of their sources of income.

In Western Ontario, particularly in the Niagara peninsula, also along the shores of Lake Erie, the climate is specially favourable for the growth of the more tender fruits in great perfection, and in these districts the choicest varieties of peaches, pears and plums are grown in large quantities. In these specially favoured spots, the growing of fruit is the chief occupation of a large

number of the inhabitants. A wide area in these districts is also devoted to the cultivation of small fruits, especially strawberries and raspberries, grown to meet the demand in the large centres of population. The acreage under grapes is also large, and the high quality of the well ripened fruit bears testimony to the favourable conditions of climate which exist there.

On the great plains in the central-western country, the larger fruits are not grown successfully owing to unfavourable conditions of climate. Some of the small fruits, however, are produced in considerable quantities. In the central valleys of British Columbia, lying between the two ranges of mountains known as the Gold and Coast Ranges, where the rainfall is scanty, fruit growing is carried on extensively, and where sufficient supplies of water are available for irrigation, apples, pears, plums and cherries are very successfully cultivated, and in some districts the peach also. West of the Coast Range, in what is known as the coast climate, the conditions are not very favourable for the peach; but the other large fruits mentioned are grown in great perfection and in abundance.

districts
specially
demand
under
well
tions
ntry,
g to
small
ities.
ween
Coast
g is
es of
lums
ome
e, in
s are
arge
d in



PACKING APPLES FOR EXPORT IN NIAGARA DISTRICT, ONTARIO.

The Fr
introduce a
century. I
on the ban
gnal Rivers
Mines, along
Gaspereaux
settlers from

Pierre L
about Mont
from France
fine fruit in
these trees y

Nearly
Cornwallis,
people. The
thriving in
French settle
ally extende
and in the co
were introd
sprung the m
Cornwallis v
in those dist
were the Nor
and Baldwin
ductions of t

In 1789,
first agricult
patronage of
and among o
meeting, the
authorized.

HISTORICAL.

The French settlers were successful in their efforts to introduce apple trees into Canada as early as the sixteenth century. In 1663, apple trees are mentioned as growing on the banks of the Dauphin, the L'Equille, and L'Original Rivers and in the neighbourhood of Bassin des Mines, alongside of the Rivière des Canards and of the Gaspereaux, where they had been planted by early settlers 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 settlers found apple trees of many sorts thriving in that valley which had been introduced by French settlers. Subsequently, this industry was gradually extended, the area occupied by fruit trees increased, and in the course of years many new and promising sorts were introduced. From these small beginnings have sprung the modern apple orchards of the Annapolis and Cornwallis valleys, which now occupy a very large area in those districts. Among the varieties early introduced were the Nonpareil, Golden Russet, Yellow Belleflower and Baldwin apples, which still rank among the best productions of that part of the Dominion.

In 1789, we have record of the establishment of the first agricultural society in Canada, in Quebec, under the patronage of Lord Dorchester, then Governor-General, and among other proceedings recorded at the first regular meeting, the importation of fruit trees from Europe was authorized.

QUEBEC.

In this province the greatest progress in fruit growing has been made in the Eastern Townships. Here, commercial plantations were early established which became the foundation of many valuable orchards. The first seedling orchard at Abbotsford came into bearing about 1812, and the first grafted trees were brought into that section in 1810.

In 1854, a committee of prominent fruit growers was appointed by the Montreal Horticultural Society for the purpose of preparing an exhibit of fruit for the Paris Exhibition of 1855, and a collection of 178 varieties of apples and 36 varieties of plums was made for this purpose, showing that fruit was then grown in Quebec to a very considerable extent.

The Fruit Growers' Association of Abbotsford was organized in 1874 and was the first local organization for the encouragement of fruit growing in this Province. To this society is due the credit of having published the first list of fruits best suited to the Province of Quebec. In 1884, this Association made importations of Russian apple trees for test in different parts of Quebec, and a few of these varieties have been found useful.

Quebec occupies a more northerly position than Ontario and hence the range of its horticultural products is more restricted. Peaches, quinces and the more tender sorts of pears and plums cannot be successfully grown there. The hardier forms of improved American plums are, however, grown in some districts quite abundantly. This is especially the case in parts of the Lower St. Lawrence, whence the fruit is shipped to the Quebec and Montreal markets. In the western part of the Province, in the neighbourhood of Montreal, and in the Eastern Townships, large apple orchards abound, where apples of the finest flavour and colour are produced. On the Island of Montreal there are now about 2,400 acres in orchard, chiefly apples, the product of which is estimated at 250,000 to 275,000 barrels annually. The Fameuse, a noted Canadian apple, is grown here in unsurpassed

ow-
ere,
ich
The
ing
nto

was
the
Ex-
oles
ose,
ery

was
for
To
rst
In
ple
of

an
cts
ler
wn
ns
y-
w-
nd
ee,
rn
of
he
in
ed
a
ed



CROSS-BRED GOOSEBERRY, RUTH.

beat
orch
trea
fruit
forei
some
In th
ably
some
other
sever
produ
fruits
goose
Provi

F
encou
provin
severa
meetin
bearing
of mon
them l
district
associa
Society
the ma
sent the
holds t
fruit su
Provinc
and are

In 1
different
orchards
suit each
cultivati
Fruit
"Journa

beauty and of the highest flavour. There are many orchards of this variety in the neighbourhood of Montreal, where thousands of barrels of this highly esteemed fruit are grown and forwarded in season to Canadian and foreign markets.

In these more favoured fruit sections of Quebec, some of the early ripening varieties of grape mature well. In the immediate vicinity of Montreal, influenced probably by the shelter and higher temperature of the city, some varieties of pears are successfully grown, among others, the Bartlett, Flemish Beauty, Oswego Beurre, and several of the Bergamot family. Cherries, also, are freely produced in most parts of Quebec, while all the small fruits, such as strawberries, raspberries, currants and gooseberries, are grown with success in all parts of the Province.

Fruit growing in Quebec receives considerable encouragement from the Provincial Government. This province has a Provincial Fruit Growers' Association and several local or district associations, all of which hold meetings from time to time for the discussion of subjects bearing on fruit culture. They all receive annual grants of money from the Provincial Government and some of them hold yearly exhibitions, where the fruits of the district are displayed in competition. The provincial association, known as the Pomological and Fruit-Growing Society of Quebec, was organized in January, 1894, under the management of nine directors, so chosen as to represent the different parts of the Province. This Society holds two meetings during the year for the discussion of fruit subjects. The proceedings are published by the Provincial Government, both in French and English, and are widely distributed.

In 1898, experimental orchards were established in different parts of the province. The object of these orchards is to illustrate which fruit trees and small fruits suit each locality and the best methods to be pursued in cultivating these fruits and in destroying insect enemies.

Fruit growers also receive information through the "Journal d'Agriculture et d'Horticulture," which is

subsidized by the Government. This is published twice a month and has a very large circulation among the fruit growers and farmers of Quebec. Furthermore, Horticulture is taught at the Government Agricultural Schools of Compton, l'Assomption, and Ste-Anne de la Pocatiere.

NEW BRUNSWICK.

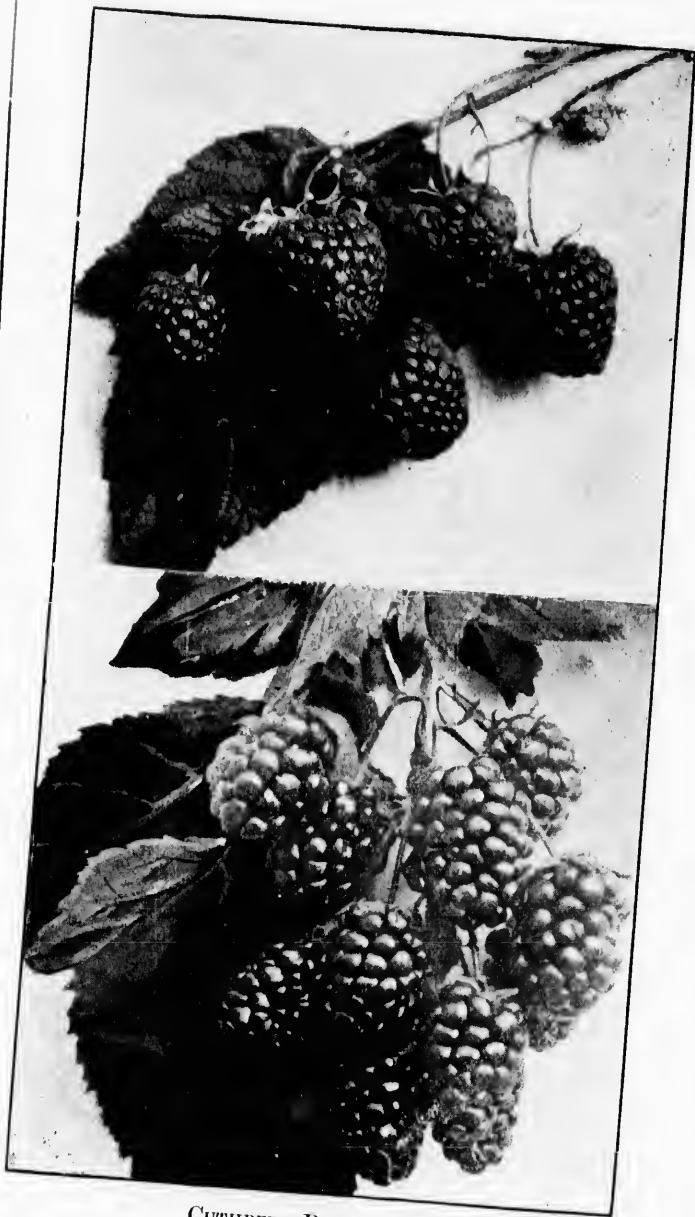
The Province of New Brunswick, lying to the southeast of Quebec, produces in many parts apples of excellent colour and flavour. Orchards have been successfully cultivated for many years past in the valley of the St. John River, and fruit is also grown to advantage in many other parts of the province. Of the large fruits, apples are chiefly grown and in the more southern counties of the province, pears and plums are cultivated with success. From Carleton County, some excellent apples have been exported to England and sold at good prices. The Northern Spy, Bishop Pippin and Ben Davis are among the fruits which have been shipped. Pears have been grown profitably in Westmoreland County, also in some localities on the Kennebecasis River. In New Brunswick there is no special organization for the promotion of fruit growing ; but this subject is taken up by the Farmers' and Dairymen's Association of the province as part of its work. Fruit growing in this province has not, in the past, made such rapid progress as in some of the others provinces of the Dominion ; but the success which has attended the efforts of those who have given proper care and attention to their orchards in New Brunswick show that both climate and soil, in many sections of the province, are well adapted for the production of many excellent sorts of fruit, and this industry is now receiving much more attention than formerly.

All the small fruits thrive well in nearly every part of this province, and in some localities the growing of strawberries is carried on extensively, and the fruit is sent to the large towns and cities in Canada and the New England States.



BUDACH STRAWBERRY.





CUTHBERT RASPBERRY.
ANCIENT BRITON BLACKBERRY

The
the Down
south of
climate is
not so hi
winter is,
successful
produced
degree of
The large
districts
These form
miles in
miles, lyin
height of
valley from
exposed si
ideal condi
of the adva
ing of appl
the first ap
here. It is
fruit growin
importance
of a consic
fruit trees i
unrivalled i
in Nova Sco
esteemed :
Spy, Baldwi
and Golden
from 400,000
increasing.
grown in thi
cient to sup
tities of cran
Nova Scotia.

NOVA SCOTIA.

The Province of Nova Scotia lies at the east end of the Dominion, forming a peninsula on the Atlantic coast, south of the entrance to the Gulf of St. Lawrence. The climate is mild and rather humid. The summer heat is not so high as in Quebec and Ontario, and the cold in winter is, in most parts, less severe. While fruit can be successfully grown in many parts of this province, it is produced to the greatest advantage and in the highest degree of perfection in the shelter of the river valleys. The largest and most important of the fruit-producing districts are the Cornwallis and Annapolis valleys. These form one continuous valley of about one hundred miles in length, varying in width from six to eleven miles, lying between two parallel ranges of hills with a height of from 500 to 600 feet. These hills shelter the valley from the strong, cold winds which prevail in more exposed situations along the coast, and thus produce ideal conditions for fruit growing. The early discovery of the advantages which this district offers for the growing of apples has already been referred to, and some of the first apple orchards in the Dominion were established here. It is, however, only within recent times that fruit growing in this district has become of paramount importance. Now it occupies almost the entire attention of a considerable proportion of the population. The fruit trees in this valley bear abundantly and the fruit is unrivalled in quality. Of the varieties of apples grown in Nova Scotia, the following are among the most highly esteemed: Gravenstein, King, Ribston Pippin, Northern Spy, Baldwin, Blenheim Orange, Fallawater, Nonpareil, and Golden Russet. The annual production of apples is from 400,000 to 500,000 barrels, and the output is rapidly increasing. Very fine plums, pears and cherries are also grown in this province, but, as yet, not more than sufficient to supply the home market. Considerable quantities of cranberries are also grown in different parts of Nova Scotia.

Nova Scotia has the advantage of a long-established and very efficient Fruit Growers' Association, which has done much during the past thirty-five years to build up the fruit interests of that province and to establish a high reputation for Nova Scotia fruits in foreign markets. This association receives an annual grant from the Provincial Government, meetings are held twice a year for the discussion of questions pertaining to the cultivation and marketing of fruit, and the proceedings are printed and have a wide distribution among the fruit growers of the province.

A school of horticulture has also been established at Wolfville, in the Annapolis valley, where it is associated with the Acadia University. This school is also supported by the Provincial Government, and is controlled by a board of directors, who are members of the Nova Scotia Fruit Growers' Association. This school is provided with a laboratory and a green-house, and the teaching includes the theory and practice of horticulture.

PRINCE EDWARD ISLAND.

This beautiful island is the smallest of the provinces, but is blessed with a fertile soil and has a cool and rather moist climate. It is only within the past few years that much attention has been given to fruit growing, but the industry is rapidly increasing in importance. A Fruit Growers' Association for the Province has been organized and is actively at work spreading information among the people as to the most profitable varieties to plant and the best methods of procedure. Apples and plums succeed well in this province; pears, also, have been successfully grown. Within the past few years many new orchards have been planted and trial shipments of fruit from the older plantations have been sent to Great Britain with satisfactory results. Small fruits, such as strawberries, raspberries, and gooseberries, are grown to much advantage and the area devoted to their cultivation is steadily increasing. A bright future in fruit growing may be looked for in Prince Edward Island.

hed
has
d up
h a
ets.
Pro-
for
ion
ted
s of

l at
ted
up-
led
ova
ro-
the
re.

es,
ner
nat
he
nit
n-
ng
nd
ed
ly
ds
he
th
es,
n-
ly
be



PICKING APPLES IN NIAGARA DISTRICT, ONTARIO.

plan
of gi
ful a
a few

O
count
these
system
inate in
for exp
ciently
proport
abunda
fruit is
orchard
than six
four mil
are plan
to viney
western
Erie, fru
orchards,
acres in e
fifty or e
orchard.
extensivel
and Oakv
plum ore
Huron an
quantities
counties o
are noted f

ONTARIO.

In Ontario, as in the other provinces, the early planting of fruit was undertaken mainly for the purpose of giving the farmers an additional luxury, and a healthful addition to their diet. Hence, most farmers planted a few trees to produce fruit for home consumption.

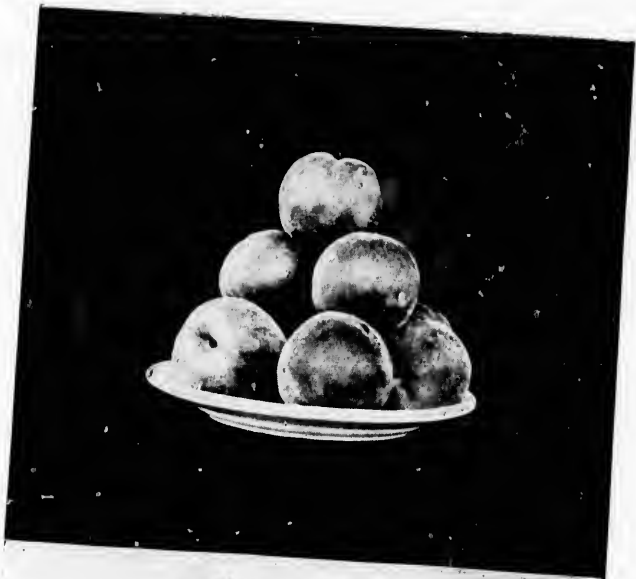
Progress in Fruit Growing.

Ontario has wonderful resources as a fruit growing country; but it is only within the past forty years that these have begun to be developed. Before that time, no systematic efforts had been made to collect and disseminate information on this subject. There were no fruits for export and even the home market was very insufficiently supplied. Now the industry has attained gigantic proportions. In no other country are the people so abundantly supplied the year round, and everywhere fruit is a common article of diet. In this province orchards occupy over 388,000 acres, and there are now more than six million apple trees of full bearing age, with about four million of younger trees. Some thousands of acres are planted with peach trees and 11,000 acres are devoted to vineyards. In the Niagara district, also in the southwestern part of the province, along the shores of Lake Erie, fruit growing is made a special industry, and orchards, gardens and vineyards of from five to fifteen acres in extent are very common, while in some instances fifty or even one hundred acres are embraced in one orchard. Pears, peaches, plums, grapes and cherries are extensively grown in these localities. The Burlington and Oakville districts are famous for apple, pear and plum orchards and also for small fruits. The Lake Huron and Georgian Bay sections produce immense quantities of apples and plums, while the east-central counties of Ontario, including Prince Edward County, are noted for apples and other fruits of the finest quality.

Fruit Growers' Association of Ontario.

Prominent among the agencies which have been instrumental in bringing about this wonderful change, is the Fruit Growers' Association of Ontario, one of the most efficient and active organizations in the Dominion. This Association 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, describing the fruits adapted to the different localities. In 1867, when the membership had increased to eighty, the society was incorporated, and from that time forward received an annual government grant, which greatly stimulated the activity of the members. The work of the association in promoting fruit growing has been found so useful that the grant has been several times increased. It is now one of the finest organizations in the world and has a membership of over 4,000, a large proportion of whom are active, working members.

In 1877, a monthly publication was begun, entitled the Canadian Horticulturist, a magazine mainly devoted to the dissemination of information relating to fruit growing in Canada. By this means much knowledge on fruit subjects has been gathered and distributed everywhere among farmers and fruit growers. Lists of varieties which have been found best and most profitable in every district in Ontario have been published and the fruit growing capabilities of the different sections inquired into and reported on. The growing of long-keeping varieties of fruit of high quality for foreign shipment has been encouraged and new varieties introduced. A distribution is made annually to the members, of promising new sorts for trial. Early in the winter the annual convention of the members of this Association is held in some prominent fruit centre. Experts and specialists are invited to be present to address the meetings and assist in the discussion of questions calculated to promote the fruit growing industry. Many practical papers are presented by the more active members who are gathered from all parts of the Province. These meetings are



HALE'S EARLY PEACH.
RUSSIAN CHERRY (*Lithauer Weichsel*.)

continues
proceed
prepared
mitted is
copy is s
reports a
througho
public by
impetus to
fruit grow
market, w
centres of
dreds of ca
number of
season dur
attention is
sorts of app
Among the
Northern Sp
Orange, Gol
late years th
Britain for O
are Bartlett,
Superfin and
and command
As settlers
of Ontario new
tested, their q
as to their prof

Fruit Gr

The Provin
fruit growing ce
in the use of spr
use of spraying
those insect ene
fruits and fruit
the efficacy of the
of the trees in eac

continued for two or three days and reports of the proceedings are published by the press; a carefully prepared digest of all 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 also widely distributed among farmers throughout the Province. The information given to the public by this useful organization has given a great impetus to fruit growing all over the Province and the fruit growers now produce ample supplies for the home market, while large quantities are forwarded to all the centres of population in the Dominion and many hundreds of carloads are sent every year to Europe. A large number of varieties are grown so as to supply fruit in season during the larger part of the year; but greater attention is paid to the production of such long-keeping sorts of apples as are best adapted for European markets. Among the favourite varieties for this purpose are the Northern Spy, Ontario, King, Ribston Pippin, Blenheim Orange, Golden Russet, Baldwin and Fallawater. Of late years there has been a growing demand in Great Britain for Ontario pears. The varieties most sought for are Bartlett, Bosc, Anjou, Clairgeau, Duchess, Drouard, Superfin and Sheldon. These are all pears of high quality and command good prices.

As settlement progresses in the more northern parts of Ontario new hardy varieties are being introduced and tested, their quality ascertained, and information given as to their probable usefulness.

Fruit Growers Instructed in Spraying.

The Provincial Government 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, so necessary to subdue those insect enemies and fungous diseases which injure fruits and fruit trees. Demonstrations are made as to the efficacy of the measures adopted by leaving a portion of the trees in each case untreated.

Experimental Fruit Stations.

The Ontario Government has also established a series of 13 Experimental Fruit Stations in different parts of the province. Ten of these were begun in 1893, and the other three have been more recently organized. These stations are devoted to the cultivation of certain classes of fruit for which the climate of the locality is particularly suited. They are under the charge of a committee composed mainly of practical fruit growers, who select and send from year to year some of the most promising of the new varieties of fruit for test. Annual reports are published giving the results of this work.

Ontario has also a well appointed Agricultural College located at Guelph. This College has a Horticultural Department, where lectures on the theory and practice of horticulture are regularly given. Grafting, budding and other methods of propagating are taught and experiments made with the view of giving to the students a thorough insight into the best modes of dealing with everything pertaining to the growing of fruits, also to the treatment of diseases and pests of every description to which the various kinds of fruit trees and vines are subject.

In this Province there are also many local horticultural societies in the cities and towns, which receive annual grants from the provincial treasury. While the efforts of these societies are largely devoted to the cultivation, among the people, of a love for ornamental trees, shrubs and flowers, for the beautifying of homes and the adornment of towns and villages, the cultivation of fruits is also advocated and encouraged.

MANITOBA AND THE NORTH-WEST TERRITORIES.

In the western prairie sections of the Dominion, fruit-growing is much restricted owing to unfavourable conditions of climate and the absence of sufficient shelter.

In the shelter of forest plantations where the altitude is not great, some varieties of crabs have been grown with success, and in several instances hardy varieties of the apple have borne fruit. These cases must, however, be regarded as quite exceptional, and nearly all the efforts which have been made to grow the larger fruits have been attended by failure. For the past five years the Director of the Dominion Experimental Farms has been endeavouring to produce, by cross-fertilizing the hardiest wild crabs of Siberia with some of the hardier forms of apples, seedlings which will endure the conditions of climate existing on these great western plains. Already a considerable degree of success has attended the efforts which have been made, and the outlook is most encouraging. Similar efforts are in progress, using the native fruit as a basis, looking to improvement in quality and increased hardiness in the plum.

Small fruits, such as black, red, and white currants, gooseberries and raspberries, are grown quite successfully in all the settled parts of the North-West country.

BRITISH COLUMBIA.

This Province, which lies between the Rocky Mountains and the Pacific Ocean, has a variety of climatic conditions, most of which are favourable for the production of fruits of excellent quality. In no part of the Dominion does the apple, pear, plum and cherry grow to better advantage, or yield more excellent crops. Peaches, apricots and nectarines have not been generally successful, although they have given good returns in some specially favoured localities. Mulberries, medlars and many of the nut trees do well. The greater part of the coast climate is cool in summer, much like that of many parts of England and the sun total of heat during the season is not usually sufficient to ripen grapes. The earlier maturing sorts, however, generally ripen in favourable locations. Small fruits of all sorts grow remarkably well and produce large crops.

In the interior parts of the Province, east of the Coast Range of mountains, very favourable conditions are found in some sections for the growing of fruit. The climate is dry, and bright sunny weather prevails during most of the summer season, and where water is available for irrigating, fine crops of fruit can be grown, which are brighter in colour and freer from spot than those produced on the coast. Some good locations have been found for peach growing in this part of the Province, and as the summer season is warmer there than on the coast, early maturing varieties of out-door grapes usually ripen well.

British Columbia has a Provincial Fruit Growers' Association which is liberally assisted in its work by an annual grant from the provincial treasury, and under its auspices investigations are made in reference to the varieties of fruit most profitable, the best methods of cultivation, and the most successful measures to be adopted to subdue those insect pests and fungous diseases which lessen the profits of the fruit grower in this country.

Nurseries in Canada.

Establishments for the propagation of fruit trees and vines have sprung up rapidly in Ontario, Quebec, and many other parts of the Dominion, very large quantities of such trees and plants as are required to meet the needs of the country are thus annually produced and now most of the fruit trees planted in this country are home grown.

Distances at which Fruit Trees are Planted.

Apple trees are usually planted from 33 to 40 feet apart each way, plums and pears from 20 to 25 feet apart, peaches 15 to 20 feet, and grapes in rows 12 feet apart, with the vines from 8 to 10 feet apart in the rows.

Packing and Shipping of Fruit.

Great improvements have lately been effected in the form of the packages used for marketing fruit, which are now made as convenient and attractive as possible. For home market flat handled baskets are mostly used, holding 6, 8 or 12 quarts, while for specially handsome fruit for export, boxes are used, one foot wide and two feet long and from $4\frac{1}{2}$ to 6 inches deep, according to the size of the fruit, which is packed two deep, wrapped in tissue paper.

Cherries, strawberries, raspberries, currants and gooseberries are sent forward in packages of from one to five pounds each; grapes from five to ten pounds; fancy apples, also plums, peaches and pears, from five pounds to twenty pounds. Experience has shown that such packages are most convenient and acceptable to the public.

The cold storage service for transporting tender fruits is a great saving, permitting of the sending of fruit by freight, which would otherwise have to be forwarded by the more expensive express routes.

All the large cities of the Dominion are centres to which the fruits of various kinds are sent, and from these they are distributed to every town, village and hamlet, so that they can be procured at low rates and in convenient sized packages, by all classes of consumers.

Evaporated and Canned Fruits and Jams.

In a country where fruits are so extensively grown, it is necessary to have some means of disposing of the surplus, of which there is always a considerable quantity, particularly of the more perishable sorts. To make the best use of such products, factories have been established for the evaporation and canning of fruits, and also for the making of jams. The business of evaporating fruits, especially apples, has developed into large proportions, and establishments for this purpose are now found in

most of the larger apple growing districts. In 1899 eight millions pounds of evaporated apples were exported, much of it to tropical countries, where it would be impracticable to send the fruit in a fresh condition.

Canning factories and jam factories have been established in many parts of Canada during the past twenty years, which are conducted with advantage and profit. The principal fruits canned are apples, pears, plums, cherries, peaches, strawberries, raspberries, blackberries and gooseberries. Jams are also made in considerable quantities. There is a large home demand for both these classes of goods, and they also form an important item in the export trade of Canada.

Wine and Cider.

Wine is made in considerable quantities in the principal vine-growing districts, and in several localities large vine-yards have been planted for this special purpose. The industry is a growing one; as yet, however, the product is chiefly consumed in the Dominion.

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

FRUIT GROWING INDUSTRY ASSISTED BY FEDERAL GOVERNMENT.

Assistance has also been given by the Federal Government to the fruit growing industry in many ways.

Inquiries by 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 growers and shippers to adopt to increase the volume of trade in these products.

Gov
prov
carr
ship
vesse
on th
A
cold
fruit
treatm
in refr
withou

Fr

The
the Fed
industry
Dominio
in 1887.
located a
climates.
work hav
growing.
introduce
different
sorts have
hope of fin
in which th
ducted to as
for grafting
life of the tr
of caring for
including pr
economical
venting the
determined b

Cold Storage Facilities.

Through the Department of Agriculture, the Federal Government has made arrangements with railways to provide refrigerator cars to run at stated periods for the carriage of fruits to their destination, also with steamship companies to provide cold storage chambers in their vessels, so that fruit may not become heated and spoiled on the voyage when carried to distant countries.

Assistance has also been given to provide suitable cold storage warehouses in large fruit centres where fruit can be placed and cooled after packing. With such treatment perishable fruits can be subsequently forwarded in refrigerator cars with much better results than if sent without chilling.

Fruit Testing at Experimental Farms.

The most important and far reaching service which the Federal Government has rendered to the fruit growing industry in Canada has been in connection with the Dominion Experimental Farms, which were established in 1887. These Farms, which are five in number, are located at widely distant points and in very different climates. At each of them many lines of experimental work have been carried on in connection with fruit growing. A large number of varieties has been introduced and tested, and their usefulness for the different climates of Canada determined. Many new sorts have also been originated at these farms with the hope of finding some specially adapted to the climates in which the farms are located. Experiments are conducted to ascertain which are the best varieties of stock for grafting on, looking to the hardiness and length of life of the tree. The best and most economical methods of caring for an orchard or fruit plantation are studied, including pruning, thinning, &c. The most effective and economical measures for subduing insect pests and preventing the spread of fungous diseases are carefully determined by practical demonstration. Full information

regarding these and many other points of interest are given in the Annual Reports of the Experimental Farms, or in special bulletins on the subject. The publications of the Experimental Farms are sent free to every farmer in the Dominion who applies for them, and thus the information gained on all points is spread throughout the length and breadth of the land.

Some idea may be formed of the extent of this work from the number of varieties of fruit under trial. At the Experimental Farm for the Maritime Provinces, at Nappan, N.S., the following 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 Central Experimental Farm at Ottawa, established for the purpose of assisting the farmers and fruit growers of Ontario and Quebec, there are now being tested the following sorts: Apples 700, crab apples 22, pears 69, plums 130, cherries 50. A total of 971 varieties.

At each of the Experimental Farms on the western plains—that for Manitoba, at Brandon, and that for the North-West Territories, at Indian Head—more than 200 varieties of the hardiest sorts of apples obtainable have been tried without success. Many varieties of pears, plums and cherries, have also been tested with similar results. It is highly probable that the new varieties of fruit which have been produced at Ottawa by crossing the wild Siberian crab *Pyrus baccata*, with some of the hardy forms of apples will endure this climate without injury. Should these hybrids prove sufficiently hardy, they will be a great boon to the settlers in that part of the Dominion. Many varieties of small fruits have been tried at each of these Farms and most of them have proven hardy and productive.

Recognizing the probability of a great future for British Columbia in fruit growing, plans were early laid for very large experimental orchards at the Experimental Farm for this Province, at Agassiz, where a great number of varieties has been accumulated during the past twelve years, brought from all parts of the world. The collection at this Farm is believed to be the largest in existence.



EXHIBIT OF FRUITS GROWN AT EXP. FARM, AGASSIZ, B.C.

s
t
a
er
la
vi

ing
con
sub
resu
reac

won
in th
and i
This
fruit
There
fresh
pears,
ing dis
Ocean

It consists of the following named varieties: Apples, 1,215; crab apples, 28; pears, 559; plums, 311; cherries, 154; peaches, 213; apricots, 50; nectarines, 25; quinces, 8; medlars, 7; mulberries, 6. A total of 2,576 different sorts of large fruits.

The varieties of small fruits under trial at these different Farms are also very numerous and very valuable.

Notes are taken at all the Farms on the varieties which bear fruit from year to year, giving particulars as to the quality of the fruit and the relative hardiness and productiveness of the trees. In this way a vast amount of information is annually gathered, and reliable data of the most valuable character rapidly accumulated. Already some of the varieties of pears and plums brought to Agassiz, B.C., from foreign countries have been sufficiently tested to establish their superiority as to productiveness and firmness of texture for shipping, and the more general cultivation of these superior sorts will no doubt add largely to the profits of future fruit growing in this province.

Assistance is also rendered to fruit growers by sending trained men from the Experimental Farms to attend conventions of fruit growers and farmers to discuss various subjects pertaining to fruit culture. By these means the results of successful experiments are placed within the reach of every enquirer.

Evidence of the fine appearance, high character, and wonderful variety of the fruits grown in Canada is offered in the extensive display made in the Horticultural Hall and in the Canadian Building at the Paris Exhibition. This exhibit consists of about 1,700 glass jars containing fruit in its natural state preserved in antiseptic fluids. There have also been forwarded more than 400 boxes of fresh fruit, chiefly choice sorts of long-keeping apples and pears, gathered from all the more important fruit growing districts in Canada from the borders of the Atlantic Ocean to the Pacific.



