

SEVENTH REPORT
OF THE
BRITISH COLUMBIA FRUIT GROWERS'
AND
HORTICULTURAL SOCIETY

FROM

MAY, 1895, TO AUGUST, 1897.



VICTORIA, B. C.:

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1897.

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F. L. Sere, "
A. Ohlson, "
M. Baker, "
R. M. Palmer, "

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T. R. Pearson,

FOR ASSISTIN

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A. Ohlson, "
R. Layritz, "
R. M. Palmer, "
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M. Baker, Victoria,
R. M. Palmer, "
T. A. Sharpe, Agassiz,
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OFFICERS FOR 1897.

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T. G. Earl, Lytton President.
 G. H. Hadwen, Duncans First Vice-President.
 W. J. Moggridge, Hazlemere Second Vice-President.
 T. R. Pearson, New Westminster Secretary-Treasurer.

DIRECTORS.

T. A. Sharpe, Agassiz,	J. R. Anderson, Victoria,
H. Kipp, Chilliwack,	J. Tod, "
A. C. Wells, "	C. E. Renouf, "
Thos. Cunningham, Dewdney,	D. R. Ker, "
T. McNeely, Ladners,	H. O. Welburn, Duncans,
T. Seward, Lytton,	A. Robinson, "
Thos. Kidd, M.P.P., Lulu Island,	A. Evans, Chilliwack,
A. L. Fortune, Enderby,	J. M. Browning, Vancouver,
G. W. Henry, Hatzic,	J. Mellis, Lulu Island,
W. Fortune, Kamloops,	M. J. Henry, Vancouver,
E. Hutcherson, Ladners,	A. W. Smith, M.P.P., Lillooet,
D. Stevens, Victoria,	Geo. Mead, New Westminster,
R. Layritz, "	J. Brethour, Saanich,
F. L. Sere, "	A. J. Palmer, Salmon Arm.
A. Ohlson, "	C. B. Harris, "
M. Baker, "	D. Graham, M.P.P., Spallumcheen.
R. M. Palmer, "	

COMMITTEES

ON ANNUAL REPORT.

G. W. Henry, Hatzic,	Thos. Cunningham, Dewdney,
G. H. Hadwen, Duncans,	R. M. Palmer, Victoria.
T. R. Pearson,	

FOR ASSISTING EXHIBITION ASSOCIATIONS IN THE FRUIT DEPARTMENTS.

M. Baker, Victoria,	E. Hutcherson, Ladners,
A. Ohlson, "	A. Postill, Vernon,
R. Layritz, "	T. G. Earl, Lytton,
R. M. Palmer, "	P. Latham, New Westminster,
G. W. Henry, Hatzic,	T. A. Sharpe, Agassiz,
G. H. Hadwen, Duncans,	T. R. Pearson, New Westminster.

ON RECOMMENDING VARIETIES OF FRUITS BEST SUITED TO B. C.

Donald Graham, Spallumcheen,	R. Layritz, Victoria,
G. W. Henry (Chairman), Hatzic,	Tom Wilson, Vancouver,
M. Baker, Victoria,	T. G. Earl, Lytton,
R. M. Palmer, "	E. Hutcherson, Ladners,
T. A. Sharpe, Agassiz,	A. Ohlson, Victoria.
T. R. Pearson, New Westminster,	

B. C. FRUIT GROWERS' REPORT.

TO MAKE EXPERIMENTS IN SPRAYING, AND BY SEPARATE PAPERS TO REPORT RESULTS
AT NEXT ANNUAL MEETING.

E. Hutcherson, Ladners,
G. W. Henry, Hatzic,
Tom Wilson, Vancouver,
Wm. Knight, Popcum,
M. J. Moggridge, Hazlemere,
P. Latham, New Westminster,
J. W. Tod, Victoria,

D. Stevens, Victoria,
R. Layritz, "
T. McNeely, Ladners,
Geo. Melhuish, Chilliwack,
S. Sherdahl, Vancouver,
Hy. Kipp, Chilliwack.

ON FINANCES.

T. Cunningham, Dewdney,
A. C. Wells, Chilliwack,

G. W. Henry, Hatzic.

This Society shall
be known as the B. C. FRUIT GROWERS' ASSOCIATION
"RURAL SOCIETY."

The object of the Association shall be to promote the interests of fruit growers in British Columbia, and to conduct experiments, and to hold exhibitions, and to collect and disseminate information for the benefit of the fruit industry, and to facilitate the transportation of fruit.

Its officers shall be a President, Secretary-Treasurer, and such other officers as may be deemed advisable.

The annual meeting shall be held on the first day of November, in each year, at such time and place as may be determined by the Association.

Election of officers shall be held at the annual meeting.

At the annual meeting the members shall elect a President, Secretary-Treasurer, and such other officers as may be deemed advisable.

Five members shall constitute a quorum for the transaction of business, and a majority of the members shall constitute a majority of the Directors. Thirty members shall constitute a majority of the members.

CONSTITUTION.

ARTICLE I.

Name.

This Society shall be called "THE BRITISH COLUMBIA FRUIT-GROWERS' AND HORTICULTURAL SOCIETY."

ARTICLE II.

Object.

The object of the Society shall be to encourage the cultivation of Flowers, Fruits, Vegetables, and pursuits pertaining to Horticulture, the promotion of Bee culture, holding of exhibitions, and collecting information regarding the different varieties of fruits best adapted for cultivation, the profitable marketing of fruit produced in the Province, and obtaining transportation facilities for the same.

ARTICLE III.

Officers.

Its officers shall consist of a President, a Vice-President, Second Vice-President, a Secretary-Treasurer, and such number of Directors as may from time to time be considered advisable.

BY-LAWS.

ARTICLE I.

Annual Meeting.

The annual meeting shall be held in the month of January in each year, notice of which meeting shall be advertised by the Secretary-Treasurer not less than thirty days before the time of meeting, in newspapers of general circulation in the Province.

ARTICLE II.

Elections.

Election of officers shall be by ballot.

ARTICLE III.

Election of Officers.

At the annual meeting the members shall elect a Board of Directors, who shall at their first meeting elect their President and Vice-President from their number. The Secretary-Treasurer shall be elected by the Board of Directors.

ARTICLE IV.

Quorum.

Five members shall constitute a quorum for the transaction of the business of the Board of Directors. Thirteen members shall form a quorum at all meetings of the Society.

ARTICLE XI.

Any person residing in the Province of British Columbia may become a member of this Society, upon paying an annual fee of one dollar, which shall entitle him to the privilege of competing for prizes at all exhibitions of the Society, and shall be eligible to any office or appointment of the Society.

ARTICLE XII.

Any person residing outside the limits of the Province shall, upon the payment of one dollar annually, be entitled to the privileges of membership, so far as admission to exhibition, together with copies of reports that may be published during the year by the Society. Such persons shall not, by this act, be entitled to any of the elective or controlling privileges of the Association.

ARTICLE XIII.

The financial year shall end on the 30th December, and no one shall be entitled to vote at the annual meeting who has not been a member the preceding year, and paid his subscription for the current year.

ARTICLE XIV.

Any person residing within the Province, on payment of twenty dollars, will be entitled to a life membership, which will entitle him to all the privileges of the Society.

ARTICLE XV.

All funds derived from life membership fees shall be permanently invested for the benefit of the Society, and the interest alone shall be used for the current expenses.

ARTICLE XVI.

All accounts of the Society shall be examined and audited by two persons appointed by the Society at the regular annual meeting.

ARTICLE XVII.

The only paid officer of the Society shall be the Secretary-Treasurer, whose remuneration shall be fixed by the Board of Directors.

ARTICLE XVIII.

Neither the Constitution nor By-laws shall be changed except by a two-thirds vote of all members present and voting at a regular meeting of the Society, due notice of the proposed change having been given at a previous meeting.

 ORDER OF BUSINESS.

1. Reading minutes of previous meeting.
2. Reports.
3. Election of Officers.
4. Unfinished Business.
5. New Business.
6. Discussions.

QUARTERLY MEETING AT MISSION.

BRITISH COLUMBIA FRUIT GROWERS' AND HORTICULTURAL SOCIETY.

MISSION CITY, May 7th, 1895.

The quarterly meeting of the Fruit Growers' Association was held at Mission City Tuesday afternoon. Mr. G. W. Henry, President of the Association, occupied the Chair. The attendance of members was not large, but all were bent on business.

After the minutes of last meeting were adopted, the Secretary, Mr. A. H. B. Macgowan, read a large number of communications, including the following:—

From the Secretary of the Royal Agricultural and Industrial Society, that the Directors suggested that this Association should give a special prize this year, and expressing thanks for valuable services rendered at the exhibition last year.

From L. Wolverton, Secretary of the Ontario Fruit Growers' Association, that his committee are petitioning the Federal Government for the appointment of a Commissioner in Great Britain to introduce Canadian fruits in the British markets, and think of sending a delegation to Ottawa to press their views; and asking that this Association co-operate with them in some way in the matter.

Mr. Henry, the President, said he was glad to see the Association again meet at Mission City, and gave them a cordial welcome. He hoped they would have a pleasant and useful meeting.

Mr. Hutcherson moved that the Secretary be authorised to frame a resolution to support the petition of the Ontario Fruit Growers' Association, and forward it as desired. Carried.

Regarding the suggestion of the Royal Agricultural and Industrial Society, some discussion arose.

Mr. Hutcherson said they could not well give a special prize to the one without giving to the other societies. Besides, he said, they were incurring considerable expenses otherwise in connection with the exhibition.

The President said he and others had been considering the idea of preparing exhibits of fruits to be sent to the Winnipeg and the North-West Exhibitions, as they looked to that district for their market, and this course would advertise them well there.

Mr. Wilson very highly approved of the suggestion as the very thing to assist them.

The President said the exhibitions in Winnipeg and Regina were held about the time the plum crops came in. He did not know the exact dates. He thought we would have exceptionally good exhibits this year of peaches, plums and cherries.

It was moved that the Secretary write to Regina and Winnipeg Exhibition Committees that we contemplate exhibiting, and that a committee, consisting of Messrs. Henry, Palmer, Hutcherson, Kipp, Earl and the Secretary, be empowered to make all necessary arrangements, the expenditure not to exceed \$150. The motion was carried.

It was resolved that the next quarterly meeting of the Association be held at Agassiz, in August, at the time of the meeting of the Central Farmers' Institute.

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Mr. Thomas Earl reported, on behalf of Committee on Transportation, to the effect that Mr. Brown had given them assurances that the C. P. R. would meet their views. He was disappointed that the revised rates had not come to hand. Meantime the rates are prohibitive, and the producers on the other side of the line were filling the market. Different committees were taking up the matter, as the people they depended on to buy could not pay the freights demanded. If we could supply even three-fourths of the demand it would be a great matter. At present the ores were shipped over the line, and the supplies came in by return car. The imperfect car service also has been considered, and they expected a special through car to be put on. This was an important step in the right direction, but till rates were reduced they could not take advantage of it as they might with lower freights. Those here had a great advantage over the interior, as they could net two cents per pound, and he did not see why they should need fruit from California or any other outside place. In the interior they could not get such good prices. They could not compete with the Americans with the present rates. They wanted them at least thirty per cent. cheaper. In this matter he thought a special vote of thanks was due to Mr. Hutcherson for sending out free a large number of trees to encourage fruit-growing in the interior.

Mr. Kipp seconded the motion and it was heartily given.

Mr. Hutcherson, in reply, said he had sent out about 600 trees to different persons in the interior, of 36 different varieties. These trees were to some extent intended for experimenting, and he thought this society, or some other medium, might take the matter up now and receive the reports from the different persons who had got the trees. Regarding transportation, he said he was pleased to learn that progress had been made. He thought, however, they should go right down to co-operation, that they might ship in carloads. When this was done they could get good rates.

Mr. Earl strongly supported the idea of co-operation.

The President said the matter of carloads was considered with Mr. Brown, of the C.P.R., and also that of co-operation, and Mr. Brown had indicated the facilities they would give as to handling freight by the way. He was disappointed, however, at not getting a definite reply as to rates. At present they could not sell in Regina at the prices at which fruit was brought in from the other side and sold there. If they got a 2-cent rate it would effect the purpose they had in view.

It was resolved that the Committee on Transportation be paid their actual expenses while attending to the business entrusted to them.

Mr. H. Kipp read a paper on "Spraying Observations." He said the results of spraying, to him, had been most satisfactory. He had used the **Spraying Observations.** Bordeaux mixture twice, as directed, and had saved 75 per cent of his apples. If the work had been a little more thorough, he could have saved the entire crop. This year he was experimenting with other sprays, and would report the result later on, after he had gathered in the harvest, which gave promise of being the largest ever seen in the district. The improvement noticeable on the bloom in orchards which have been kept clean by spraying is very great. He strongly advocated the use of the No. 1 spray in the autumn and winter months, as it disarms the insects and helps the fertilizing of the tree. He hoped for important developments of the fruit-growing industry here in the immediate future. He then referred to some of his experiences with different varieties of fruits. In 20 years he had tried 80 different varieties altogether, and found less than 20 enough to plant for profit, at least until further developments. The following

Varieties are some of the varieties he recommended: For summer fruit—Astrachan, of Apples. Gravenstein, Duchess, Red June, and Golden Harvest. Fall apples—Ribston

Pippin, Maiden Blush, Wealthy, Alexander, and Blenheim Orange. Winter apples—Spy, Greenings, Baldwins, Golden Russet, Stark, Gillyflower, Mann, and, last but not least, Ben Davis.

Plums and prunes—Peach, Yellow Egg, Pond's Seedling.

Pears—Bartlett, Winter Nelis, Beurre d'Anjou, Howell, Kipp's Seedling.

A cordial vote of thanks was accorded to Mr. Kipp for his paper.

Mr. McRae asked for some information regarding black spot on apple trees.

Mr. Kipp thought a good deal was due to the origin of the trees and constitutional weakness.

Mr. Wilson said he had seen it on the wild crab apple, and in some cases there it had healed up.

Mr. Palmer thought there were different causes possible. It might arise from constitutional weakness or lack of drainage, or from other causes. It was a disease. The department at Washington had sent an expert to specially investigate the question. This expert found a fungus in it, and that it could be killed by Bordeaux mixture. It was no new disease; it was known in Germany long ago. Experiments in Illinois disclosed the presence of a certain kind of bacteria at work as a cause. It is well known that bacteria depend on certain specific conditions for existence and propagation. These conditions must now exist here. Till recently, the disease was not widely known here. Looking for these conditions, then, we find that, recently, we have had very moist seasons for one thing, there also has been a large area of new land brought in, and there was more or less sourness in new land.

Mr. Sharpe, from experiments, was of opinion that some of the soils lacked lime, and that would cause disease; so, also, would a deficiency of potash in the soil, as that was a necessary element of plant food. It was possible, also, to have too liberal a growth of wood, without quality. Trees had constitutions, like men, and certain varieties are more delicate in constitution than others. They are all produced under artificial conditions. He did not favour stunted growth, but quality of growth. He urged careful underdraining, and the supply of lime and potash to the soil. If they had hardwood ashes in abundance, that would do instead of potash or lime.

Mr. McRae did not believe in drainage in the open, porous land. He thought sudden climatic changes and severe frosts had something to do with the disease, and said he had tried manure at the roots of his trees.

Mr. Palmer did not approve of stable manure for young trees, except as a mulch in certain conditions. It was impossible, however, to lay down rules for universal guidance where there is such a variety of soil conditions, and each grower must exercise a large amount of common sense in applying general rules. He did not think climatic changes were the cause of black spot, and instanced orchards subject to similar changes that were untouched by it.

Mr. Hutcherson said he had not been troubled with black spot in his orchard, but he had studied it carefully. He thought the high land was favourable to it, and that it was in some way due to the early flow of the sap of the tree, and its check by climatic conditions. The question of the flow of the tree sap was one on which they had yet to learn a great deal. He did not think that the disease was caused by bacteria at all.

The president said he did not think the flow of the sap had anything to do with it. He thought the influence was not a winter one. It was never found on new wood nor on the tender bark. In a row of Duchess of Oldenburg trees, he had one killed outright by this disease, and none of the others were in the least affected. All were under exactly the same conditions, and he was led to think it was constitutional weakness in the tree. This last year

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the disease did not appear below high water mark, which was another peculiar circumstance. He did not think it was owing to want of drainage, as the disease was found to be worst on dry land.

Regarding varieties most affected, Mr. McRae said the Duchess of Oldenburg and Northern Spy were the varieties that suffered most with him.

Mr. Cade said that the Wealthy was most affected with him.

Mr. Hutcherson called attention to an attack that had been made in the **Selection of Varieties** press on the selection by their committee of the Maiden Blush and Ben Davis as good apples to grow, and read the correspondence in which he had defended the choice of the committee.

Mr. Kipp said this was a subject they might discuss till doomsday, and be no further forward. He had both apples in his orchard, and he meant to stay right with them. They could strike them off the list if they pleased.

Mr. Earl was with his friends in supporting the selection of these varieties. He thought there were one or two other varieties that might, with advantage, have been included, also.

The president spoke strongly in favour of the Ben Davis apple. It was a good grower and a good keeper, and was giving good satisfaction where grown. The Maiden Blush was also doing splendidly, and he would take it any day in preference to the Duchess of Oldenburg.

The correspondence on the subject was referred to the committee, to be dealt with.

Meeting adjourned.

ANNUAL MEETING AT AGASSIZ.

AGASSIZ, August 2nd, 1895.

The annual meeting of the Fruit-Growers' Association, the Dairymen's Association, and the Farmers' Institute was opened at Agassiz, in the large barn at the Experimental Farm. There were present His Honour Lieutenant-Governor Dewdney, Hon. Colonel Baker, Provincial Secretary; J. R. Anderson, Deputy Minister of Agriculture; Professor Saunders and Professor Fletcher, of the Experimental Farm at Ottawa; T. A. Sharpe, Manager of the B. C. Experimental Farm; A. H. B. Macgowan, Major Mutter, M. P. P.; Major Hornby, Dr. G. L. Milne, Hewitt Bostock, J. H. Falconer, R. M. Palmer, E. Hutcherson, G. W. Henry, M. J. Henry, Thomas Cunningham, W. H. Ladner, Henry Kipp, T. G. Earl, T. R. Pearson, T. J. Trapp, Alexander Philip, S. A. Cawley, A. Cruickshanks, E. A. Wells, Joseph Arnold, John Lambertson, J. E. Breeze, R. Layritz, Horatio Webb, G. H. Hadwen, A. St. G. Hamersley, Reeve of Kent; T. J. Sich, John McRae, John Wilson, John Burkett, J. C. Harris, J. H. Whitman, and others, including a number of ladies.

On the motion of Mr. E. Hutcherson, President of the Farmers' Institute, Hon. Edgar Dewdney, the Lieutenant-Governor, was called to the chair.

Mr. Sharpe, Manager of the Experimental Farm, briefly welcomed the visitors.

Hon. Mr. Dewdney said he had great pleasure in being present at the meeting, and particularly a meeting of this kind, which took into practical consideration fruit-growing, agriculture, and kindred subjects. He was satisfied of the great value of our agricultural resources. This

was the time of year when farmers were most busy, and for that reason, doubtless, many had not been able to attend the meeting. After briefly referring to the disasters of last year, he said he was satisfied of the recuperative power of the farmers of this district, and that the losses of last year had not seriously discouraged them. There was much in this Province to encourage them, and to hold out prospects of abounding prosperity. He would not venture to touch on the practical work of the meeting, as they had with them eminent men, such as Professor Saunders and Professor Fletcher, from Ottawa, and a number of others, who, as experts, would handle the topics to be brought before them. He gave his own experience of the value of the attention to his orchard, which had been given as directed by Mr. Palmer. Regarding fruit-raising, he pointed to the large population that was gathering into the North-West, who must all be purchasers of our fruit products.

Hon. Col. Baker, referring to the work of the Board of Horticulture, **Colonel the Hon. James Baker.** said it was of the utmost importance that the discoveries of science should be brought before them in a practical form. The wonders revealed by scientific investigation were marvellous, both as to the great objects of the universe and the atoms—the infinitesimally small things of earth. He briefly indicated some of the results of these investigations in the matter of organisms affecting the health of men, animals, and plants, and thereby showed the immense importance of a scientific training for the fruit-grower, and the value of the free education being given them. In connection with the work of the Board, he could not refrain, he said, from alluding to the splendid services of the Deputy Minister of Agriculture, Mr. J. R. Anderson, who was unsparing in his labours in his department.

Professor Saunders spoke more particularly as to the soil and its **Prof. Saunders' Address.** management. The farmer was a manufacturer who made the most use possible of the properties at his disposal in the soil. The soil was a storehouse of native fertility, which the farmer operated on. In great prairies they had some lands which grew many crops without manure. They had even richer soil in the alluvial lands of British Columbia. In a recent analysis of Pitt Meadows land, it was found to be richer in nitrogen by ten times than the average arable soils of Europe. Contrasts had been made between the soil on the Experimental Farm and the alluvial lands. The lands here on this high land farm were found to be even richer than the average soils of Europe. They had also analyzed a very fine quality of soil from Chilliwack, and from Squamish. It is a happy arrangement of nature that the stores of plant food are not all immediately available.

The soil needed to be actively cultivated to expose it to the action **Plants and Plant Food.** of the atmosphere, and, hence, nature gives a reward to the industrious farmer and frowns on the lazy and indolent. Plants take a large part of their substance from the air, but there must first be in the soil the necessary proportions of other elements that go to make up plant food. [The quantities and value of different elements in the different kinds of crops were set forth in an elaborate table which was displayed on the wall.] These elements were now in abundance in many soils, but the time would come when additions would be a necessity, and Prof. Saunders urged that a supply should annually be made, to maintain its richness. He urged strongly the adoption of rotation of cropping the land. As to the value of the different kinds of manures, he gave the results of experiments at the Ottawa Experimental Farm, where it was proved, in particular, that there was a great loss to the barnyard manure by keeping it to rot, amounting often to as much as 40%. He pointed out the value of leguminous crops as a direct and cheap means of supplying the soil with nitrogen, which was otherwise very costly to furnish. The professor then briefly recounted some of the chief sources of supply, of the different elements

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in the form of manures. These elements were: Nitrogen, phosphoric acid, and potash. The object in these observations, he said, had been to point out the value of using the means at command, in every case, of enriching the soil.

Mr. Hewitt Bostock. Mr. Hewitt Bostock had listened with great pleasure to Professor Saunders' address. He had been surprised at the way in which farming had been conducted, in some cases, in the interior, where attention was devoted to cattle-raising only. He was glad to say that times were

changing, and much more attention was being given to practical agriculture. They had a good field for fruit-growing in the upper country, and, being irrigated land, they could regulate the supply of moisture. He expected that the markets would develop with the supply, as the miners were coming in. He thought the Government should do something to secure a regular system of irrigation. One owner had spent \$10,000 on a large ditch, but it was useless because he was not able to complete it. He (the speaker) hoped to see canneries for the fine fruit and vegetables they could grow up there, so that they could compete with Ontario and the east for the markets of Manitoba. He urged the great advantage of co-operation among the farmers, to save the necessity of trading off to merchants and middlemen.

Major Mutter. Major Mutter, M.P.P., cordially supported the Board of Horticulture. As one result of their labours it was now found possible to get decent fruit. They had to deal with men who did not like to be bothered with cleaning their trees and getting rid of pests, and were not always received as friends.

They needed to have their hands strengthened, and also to have their numbers increased. He did not think they had so many indolent farmers as farmers who were ill-informed, and he thought they should have in connection with their agricultural societies many such useful and practical addresses as that given them at this meeting by Prof. Saunders.

Apologies for absence were read from Hon. G. B. Martin and Mr. C. E. Renouf, Victoria.

On the motion of Hon. Col. Baker a cordial vote of thanks was accorded to the Lieut.-Governor for presiding, and the meeting adjourned.

The second day's meeting of the Farmers' Convention assembled at 10 o'clock Friday morning at Agassiz. Lieut.-Governor Dewdney presided.

President's Address. Mr. G. W. Henry, President of the Fruit Growers' Association, said that they had all met with disappointments, and it was well to consider, were their expectations not too great at the outset? Many started out with the idea that they had too sure a thing, but found that much care

and labour was necessary. It was well it should be so, as it made it possible for all to earn a livelihood who were willing to work and to work intelligently. For every trouble that arises there will be a remedy found by those who keep abreast of the times. With no struggles there could be no real success. In other countries they had to contend with climatic conditions and insect pests as well as we, and taking one thing with another he (the speaker) was of opinion there was no place better adapted for fruit-growing than our own. He strongly urged for co-operation in marketing fruits, which was the more necessary as they had now different local associations organized, and these associations, by competing, might do more harm in the market than individual farmers shipping separately.

Professor Fletcher. Professor Fletcher said he had been greatly pleased to see the upper country so free of pests as he found it was. He was going to visit the lower coast districts and the Island to get information as to the pests complained of there. Referring to the severe frosts they had in the east, he was glad to say that the damage was not so bad as was feared. He had heard alarming accounts of the pests existent here. A specimen of San Jose scale had been sent him from

here, but he had not been able to find where it came from, as he found no trace of the pest in any of the orchards of the district. He was anxious to make it known that he was willing to assist the farmers any way in his power. His position was that of entomologist at the Ottawa experimental farm, but he was popularly known as "The Bug and Weed Man" among the farmers in the east. There had been a sufficient amount of study given now to insect pests to enable practical remedies to be provided in most cases. The remedy must be both cheap and simple to be of any use. There was a very large number of different kinds of pests. There was here the pest of the green aphid, and for that they were wont to apply kerosene emulsion, but it had been found here that the effect was injurious to foliage, though it could safely be used in the east. Similar experiences had the same results in other countries. Experiments, therefore, had to be made to suit the remedy to every district. In experimenting he endeavoured always to find out the best remedy in every instance, and to give it without alternatives.

Tobacco was a remedy he found most useful here, and it could easily be used at very little expense. Paris green was one of the most effective remedies that could be used for all mandibulate or biting insects. One pound of Paris green to 200 gallons of water was a standard mixture, with, in some cases, one pound of lime. It was very necessary for farmers to pay close attention to the specific quantities prescribed. They must not go at the work by rule of thumb, nor by other than adopting reliable measures. The Department proposed no remedy that had not been thoroughly tested in every possible way. They must, therefore, place some reliance on what was recommended, and spend a little money in carrying out the practical remedies in their own experience. There was now much capital involved in this business, and they should have the best possible handling of it. Professor Fletcher showed some of the nozzles in use, and explained their operation, showing the advantages of having proper appliances. Drenching a tree was not spraying. The spray must break up the liquid to as near the form of dew as possible.

Professor Saunders read a letter which he had received from Professor Craig, Dominion Horticulturist, on the subject of spraying, and the best form of pumps and nozzles to use.

Mr. T. G. Earl, of Lytton, a member of the Horticultural Board, said that he and Mr. Palmer had visited the upper country, and found immense crops of fruit in prospect. The marketing of that crop must now be their care. They required lower freight rates to enable them to reach the mining camps and the North-West. The upper country need not interfere with the coast country markets. He thought they should, at Kamloops and Vernon, and other places, have canneries to pack a lot of their fruits. There was required in the interior irrigation works and a proper subdivision of their valuable lands. The lands there as yet unsettled were in the hands of the Dominion Government, and he hoped they would wisely dispose of it. With our immense fruit resources he did not see that we had any need to import from Oregon or any other place.

Mr. T. A. Sharpe, Manager of the Experimental Farm, Agassiz, gave the Convention some of the results of his experience. Among the most useful fruits to grow were, in apples, the Yellow Transparent and Wealthy, for early use, and later, the Ribston Pippin. The latter was an excellent bearer, and should be planted 20 feet apart. For winter use he recommended the Baldwin and the Salome. He showed an apple he was much pleased with, but had not yet got a name for it. The pear crop was not yet so far advanced that he could speak of it at the present time. They all knew the Bartlett pear; he thought a great deal of the Hardy pear. He could not as yet give much encouragement in peaches as a commercial venture. One of the best plums he had found, so far, was the Gueii. The Victoria was a very superior plum of good

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flavour, and the Niagara was a large plum of good quality and of the type of the Bradshaw. The Yellow Egg, they all knew, and the Imperial Gage and the Washington were both good varieties. Mr. Sharpe also mentioned other fruits which had been tested on the farm. Returning to apples, he said he had overlooked the Duchess of Oldenburg. For cooking he recommended the Jersey Sweet. The farm was now raising filberts in great variety, and they were doing very well, except that the chipmunks showed their appreciation of them too freely, and there was difficulty in saving good specimens of the crop.

Professor Saunders said Mr. Sharpe was a modest man, and did not tell them much of the work he had done. Six years ago the farm was practically uncleared. They had now a large acreage and a vast variety of every kind of fruits adapted to the Province, to ascertain what kinds were best suited to the requirements here. Besides having the opportunity of preparing for this district, they had also to consider the requirements of the upper county. These experiments were necessary to save the farmers from the imposition of the tree agents. They could, at the farm, get reliable information at all times. He himself was greatly pleased with the work done by Mr. Sharpe, and he unhesitatingly complimented him in their presence for what he had done. Mr. Sharpe's reports were most valuable to them. There was on this farm the largest collection of fruits in the world, and he (the speaker) thought those in charge of the exhibitions would have to afford Mr. Sharpe an entire wing of their buildings for his exhibits. At the farm there were four benches of elevated lands, rising to a height of over 1,000 feet, and they hoped to show that the uplands were really very valuable for fruit producing purposes.

Mr. R. M. Palmer, Inspector of Fruit Pests, next addressed the meeting. His work last year had been much in evidence before them, in connection with pest inspection. Regarding his trip to the interior, he paid much attention to the bench lands. These are bound to be most valuable to the country for fruit-growing. In the Spallumcheen Valley he found the Bartlett pear and other useful fruits growing very successfully. The water supply there was deficient, and there was some hogginess apparent in the use of what they had. Some expensive irrigation works were needed. Fruits were growing very freely around Kamloops, where there is great freedom from fungus diseases, which was worth a great deal to fruit-growers. The question of co-operation at Kamloops in marketing was very important. They seemed to be all looking to Calgary for a market, and the result, if it is not checked, will be to seriously glut the market there.

Mr. M. Hulbert, of Sardis, Secretary of the Hop-Growers' Association, said they had yesterday formed this association. He asked the co-operation of the farmers to consider how they could devise a means of removing the hop aphid, which was doing great damage to plums and hops. They had resolved to invite, also, the co-operation of the Board of Horticulture in this important matter. He mentioned that the Indian grounds were proving, through neglect, nurseries for pests of different kinds.

Mr. Anderson said the Indians were subject to the directions of the Board of Horticulture in the matter of pests, and he thought there should be no difficulty in getting the hop aphid entirely rooted out.

Mr. Hulbert replied that he had been able to clean his own place by going to the surrounding plum trees and having them sprayed. He moved that a committee of the Fruit-Growers' Association be appointed to confer with the committee of the Hop-Growers' Association on this subject and report.

Mr. Henry said he thought this matter should be left in the hands of the Board of Horticulture, whose business it was to look after it.

Mr. Cunningham said the members of the Board would gladly meet the committee of the Hop-Growers' Association on the subject.



Professor Fletcher said the best remedies for hop aphid were well stated in the published reports, and it only needed the practical application of the remedy.

The meeting then adjourned till 8 p.m.

In the interim the directors of the Fruit-Growers' Association resolved that the next quarterly meeting of the association should be held in New Westminster, on a date to be afterwards fixed.

At 8 p.m. the farmers again assembled as a Dairymen's Association.

Mr. Thos. Cunningham moved that, in the absence of the Lieutenant-Governor, Mr. Anderson should preside. This was agreed to. Mr. Anderson said he was sorry that Professor Robertson was not present, as he was the proper authority on the subject of dairying.

A very hearty vote of thanks was passed to Professors Saunders and Fletcher for the valuable addresses they delivered on dairying and fodder crops.

After a vote of thanks to the chairman, to the representatives of the press, and to Mr. Sharpe, the meeting separated.

NOTE.—For full reports of Professors Saunders' and Fletcher's addresses see Bulletin No. 3, printed by the Board of Agriculture, which may be had of the Secretary, upon application, or from Mr. Anderson, Deputy Minister of Agriculture.

QUARTERLY MEETING, NEW WESTMINSTER.

NEW WESTMINSTER, November 22nd, 1895.

The quarterly meeting of the Fruit Growers' Association and Horticultural Society was held in the City Hall yesterday afternoon, Mr. Thos. G. Earl, of Lytton, presiding. Before the meeting a number of spraying pumps were exhibited, in operation, in the City Hall grounds. Unfortunately, the pumps had not previously been put in thorough working order, and a lot of time was lost getting them into shape. When, finally, the spray began to fly in earnest, it was seen that all would do good work when in proper order.

Moved by Thos. Cunningham, seconded by T. A. Sharpe,—

Resolved, That the annual meeting be held at New Westminster on Thursday, January 30th, and that the spraying convention be held on the following day, due and full notice of both to be given, and that the New Westminster Directors of the Fruit Growers' Association prepare the sprays.

Spraying Committee—Hy. Kipp, T. A. Sharpe, R. M. Palmer, N. Butchart.

Mr. Palmer suggested the idea of devoting more time to the first principles of fruit-growing.

Mr. Sharpe thought the question drawer should have more attention.

Mr. Cunningham asked the opinion of Mr. Sharpe on the question of destroying, by burning, the foliage of fruit trees, instead of turning the fallen leaves into manure. He believed that, in future, he would burn all prunings and fallen leaves.

Messrs. Sharpe and Palmer agreed with this, where feasible.

Mr. Kipp exhibited some pruning of Swaar apple trees covered with woolly aphid. This tree, Mr. Palmer had stated, was a favourite of the woolly aphid, while, on the other hand, the insect will not touch the Northern Spy. Mr. Kipp also exhibited some apples and pears from old

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trees which had been benefited by spraying, and apples and pears from the same tree which had not been touched by the spray. It could hardly be believed that the various samples came from the same trees.

Mr. W. J. Armstrong asked what was the best mixture for spraying.

Mr. Hutcherson and Mr. Kipp replied that different diseases required different treatment. The report prepared by the Fruit Growers' Society was a good guide to go by.

Mr. Butchart asked what was the best mixture for green and woolly aphids.

Mr. Sharpe replied that a solution of lime, sulphur and salt had proved the best in his experiments.

After discussion of various other matters, Mr. Hutcherson said he wanted to bring up the question of co-operation in fruit shipping, and moved an adjournment until 7:20 p. m.

EVENING SESSION.

After recess, Mr. Earl called the meeting to order at 8 o'clock. In doing so, he drew attention to the fact that parties in Eastern Canada were shipping apples to Australia, and if the eastern people were able to do this, why could not the British Columbia fruit-growers do the same, being, as they are, 3,000 miles nearer? He was satisfied the quality of our fruit could not be beaten, and if there was a market in Australia the British Columbians should reach out for it.

It was suggested that we did not grow enough apples to meet this trade, and Mr. Palmer remarked that 2,000 boxes of apples had been imported into Victoria during the past two weeks.

Mr. Cunningham suggested sending a sample of our apples to Australia.

Mr. Henry Kipp, who is a member both of the Fruit Growers' Association of British Columbia and the Provincial Board of Horticulture, made a report of the fruit shipped from Chilliwack District between July 6th and November 15th. This report astonished the meeting, as few, if any, had any idea of the immense quantity shipped from this one district, and few believed so much had been shipped from the whole Province. Mr. Kipp said: "The fruit shipped this season from Chilliwack by the Chilliwack Valley Fruit Growing and Shipping Association (Ltd.), and by independent shippers, reached a total of 250 tons. Of this quantity, the Association shipped 124 tons 416 lbs. The market value of these shipments combined reached the sum of \$12,000. Of apples shipped by the Association, there were 86 tons, and by independent shippers 69½ tons; pears, 2 tons; plums, 45 tons. The remainder of the shipments was made up of small fruits, peaches, &c."

Continuing, Mr. Kipp said he was well within the mark in his figures, and he believed that the quantity would be trebled in the course of three years. A great number of young orchards were coming in soon, and these would largely increase the output. The work of the Fruit Growers' Association, he said, was largely to be credited with this wonderful expansion in the fruit exports. In order, however, that the fruit exporting business should become and continue a permanent success, co-operation, as suggested by Mr. Hutcherson, must be general. Without co-operation among all the shippers and associations, the export business would never be a success. Before concluding, Mr. Kipp said a word in favour of tobacco water spraying. He considered it highly effective in some cases against aphids.

Mr. Earl brought up the matter of transportation. Lower rates were required if the business was to be developed. Third-class rates were now given by the railway company, but these rates had to be lowered again by a half before the fruit-growers of British Columbia could work to advantage.

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A general discussion on the question followed, and it was decided that the transportation committee should go into the matter further.

Mr. Hutcherson opened up the question of co-operation in selling and shipping. The competition during the past season, he said, had had the effect of interfering with the profits. Co-operation on a small scale was carried on by the Mission City Society, but in some ways it did not work exactly right. Co-operation must be general throughout the Province, and a union of all the shippers was necessary. During the past season the British Columbia shippers had two men in the North-West selling the fruit, and these men were continually cutting each other's throats, destroying prices and reducing profits. Unless there was a union of the associations, he (Mr. Hutcherson) would ship independently next year. He did not want to do this, but preferred that all fruit should be shipped by one central association, with one central shipping point, and that point should be Westminster, which was the most convenient in every way. But he would not insist upon this point if the central organization could be satisfactorily arranged. Last summer, arrangements had been made on one occasion to send out a car, taking fruit at Westminster, Mission, Hammond, and Agassiz, but at the last moment word came that the car would load at Mission only. This was very inconvenient, and if a central co-operative organization existed, handling all the fruit, such inconveniences could be overcome. He suggested, in conclusion, that the organization take the form of a joint stock company.

Mr. Thos. Cunningham endorsed Mr. Hutcherson's arguments, and urged the appointment of a committee to secure the assistance of fruit-growers and shippers generally to the co-operative plan.

After thoroughly discussing the question, a special committee, consisting of Messrs. Cunningham, Henry, Hutcherson, Kipp, and Palmer, was appointed to draw up a plan of co-operation, and report the same at the annual meeting to be held on January 30th.

The meeting then adjourned.

COMMITTEE ON CO-OPERATION.

The Fruit-Growers' Committee on Co-operation met on December 13th and 14th, 1895, in the office of Secretary Macgowan, Vancouver. Present: G. W. Henry, president, in the chair; T. Cunningham, E. Hutcherson, R. M. Palmer, A. H. B. Macgowan, Secretary. A letter was read from Henry Kipp, the only absent member of the committee, regretting his inability to attend, and noting the interest he felt in the work. A lot of correspondence was presented, and a lengthy discussion was participated in by those present. It was moved by

Mr. Cunningham, seconded by Mr. Palmer, and unanimously resolved, that **B. C. Fruit Exchange.** this committee recommend the establishment of a general co-operative organization of the fruit-growers of this Province, to be known as the "British Columbia Fruit Exchange Society, Limited Liability," having for its objects:

The marketing of the fruits of the Province and such other products of the farm and garden as may be deemed advisable;

- To collect and distribute information;
- To establish uniform methods of producing and disposing of fruit, etc.;
- To open and develop new markets;
- To act as financial agents for local associations and growers;
- To secure better, quicker, and cheaper transportation facilities;

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To purchase supplies for local associations and growers ;
 To operate fruit and vegetable canneries, cider mills, evaporating and preserving plants ;
 To buy, sell, and generally deal in (either on commission or on its own account) supplies used in the raising, preparing, and marketing of fruit and food products ;

To buy, receive, store, sell, and generally deal in (either on commission or on its own account) all kinds of fruit and such other merchandise as it may be deemed in the interests of the corporation ;

To buy, sell, and generally deal in real estate, and personal property necessary to its transactions.

To buy, sell, erect, lease, or sub-let buildings or lands for the purposes of its requirements.

The matters needing discussion, and suggestions of the committee, will be submitted to the different associations in the Province, and they will be asked to appoint delegates to meet and join the Fruit-Growers' Association in the discussion of the subject of co-operation, and the final formation of the exchange at the annual meeting to be held in New Westminster on January 30th.

The meeting then adjourned to meet at Chilliwack on or about the 15th of January, and at Mission City the following day, at which place they hoped to meet the local associations which have so successfully handled the past season's fruit crop.

COMMITTEE MEETING AT CHILLIWHACK.

At the meeting of the committee of the fruit-growers on co-operation at Chilliwack on January 15th, there were present J. H. Bent, G. W. Chadsey, M. DeWolf, W. Peers, G. R. Ashwell, R. M. Palmer, H. Kipp, E. Hutcherson, and A. H. B. Macgowan. On motion, Mr. Bent was called to the chair. Mr. Hutcherson called upon the secretary to explain the reason for calling the meeting. This Mr. Macgowan did by reading the minutes of the meeting of the committee held December 14th, and explaining the general objects of proposed union. Mr. Hutcherson strongly supported a general co-operation. He considered the association would have to have a man in the North-West.

Mr. Palmer considered the meeting of the morning was called to draft resolutions that would be acceptable, which would be presented to a larger meeting in the afternoon.

Re central shipping point, Mr. Hutcherson explained that at the meeting in Vancouver this matter was fully discussed. The most suitable point will develop itself. The C. P. R. had agreed to build ten suitable fruit cars.

The chairman considered that Westminister was the most desirable shipping point for the present.

Mr. Kipp supported Mr. Hutcherson in the central shipping point matter.

The chairman thought it well to prepare a resolution favouring general co-operation.

Mr. Palmer suggested the appointment of a committee from Chilliwack Fruit Union to attend the annual meeting at Westminister on the 30th and 31st. Considerable discussion followed.

Mr. Hutcherson submitted a draft resolution.

Moved by Mr. Peers, seconded by Mr. DeWolf:—

Resolved—"That the resolution as suggested by Mr. Hutcherson be adopted for presentation to the general meeting this afternoon."

The meeting resumed in the afternoon. There were present Messrs.

In the Afternoon. Vedder, H. Kipp, G. R. Ashwell, E. Hutcherson, R. M. Palmer, Peers, DeWolf, Gillanders, J. H. Bent, N. Peers, G. Melkulish, Jas. Ogle, A. H. B. Macgowan and a number of others. On motion Mr. Vedder was called

to the chair. Secretary Macgowan, of the Fruit-Growers' Association, by request, explained the objects of the meeting and read what it was proposed to adopt as the articles of a general union to be formed for producing and shipping fruit, etc.

Mr. Kipp supported the idea of co-operation; G. R. Ashwell did likewise.

Moved by E. Hutcherson, seconded by J. H. Bent, and unanimously resolved:—

“That the meeting recommend the organization of co-operative fruit unions in every municipality or school section in the Province where there are any fruit interests, the purposes of these unions being to consider the subject of co-operation and to undertake such plans of co-operation as are made possible by the local conditions, availing themselves of such advice and assistance as can be obtained from the proposed British Columbia Fruit Exchange, with the purpose of securing Provincial unity through district, municipality and Provincial delegate conventions; that to forward the movement a committee of five be appointed to prepare such explanatory literature as may be necessary to the beginning of the work, and also that the British Columbia Fruit-Growers' Association and the Provincial Board of Horticulture be requested to distribute such literature to such persons in the Province as they may think likely to aid in the movement; that this meeting pledge themselves to do all in their power to secure such organizations in their respective localities, feeling, as we do, that the interests of the British Columbia fruit-growers rested entirely upon their mastery under co-operative effort of the problems of business, and the present local effort in that line would be better limited to the processing, grading and massing of the products at definite places.”

Mr. Bent, in seconding the resolution, said that doing so simply committed the resolution to discussion. He was fully persuaded that we have to co-operate to avoid clashing with others in the same line. He had seen markets destroyed by lack of co-operation. We have to find a distant market. The local market will not anything like consume our product. If we had not shipped to the North-West the supply would have created a glut.

Mr. Ogle asked where packing and grading would be done.

Mr. Hutcherson considered that grading would have to be done by local institutions. Every man's name should be on each package.

Mr. Gillanders thought that local organization ought to pack and be responsible for the quality, and not the owner of the fruit.

Mr. Ogle asked if it would be expected that the local society should forward to the central, so that the central might preserve uniformity in prices.

Mr. Palmer said that the central will be the managers of the whole system. They will accept from local societies all properly inspected fruit and find markets for same. They should have power to reinspect where necessary.

Mr. Peers thought that a man whose name is on the fruit should get what it brings. A second inspection ought not to be necessary.

Mr. Palmer read some extracts from California reports. He said the main line of C. P. R. does not touch some of the most important markets for fruit. The branch line markets could be developed by a central association.

Mr. Peers asked if the central would handle for local trade as well as for shipping trade.

Mr. Palmer thought that the central should handle both.

Mr. Bent said that he would like to see the rules of the central sufficiently elastic to admit of members finding a market for themselves.

Mr. Hutcherson supported this idea.

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It was moved by Mr. Kipp, seconded by Mr. Ogle, and resolved: **Committee to be appointed.** "That the Chilliwack Fruit-Growing and Shipping Association be requested to appoint a committee of five to meet the Fruit-Growers' Association committee on co-operation at the New Westminster City Hall, at 2 o'clock p.m., on January 29th, such committee of five to have power to act."

The chairman introduced the idea of having standard packages governed by Act.

Mr. Bent said he thought it would be well to have this subject discussed, and, if desirable, representations made to the House of Assembly.

Several gentlemen present supported the idea of adopting a set of standard packages. Secretary Macgowan said he hoped shortly to have special quotations from the British Columbia Cooperage Co. on barrels and half barrels.

It was decided by the members of the Chilliwack Association to call a special meeting for Saturday, the 25th, at 2 o'clock p.m., to appoint delegates.

Moved by Mr. Palmer, seconded by Mr. Bent, and resolved: "That the thanks of the meeting be presented to the chairman for the able manner of his presiding."

Moved by Mr. Peers, seconded by Mr. DeWolf, and resolved: "That the thanks of the meeting be presented to the committee of the Fruit-Growers' Association for their attendance, and for the information given by them."

COMMITTEE MEETING AT MISSION CITY.

The meeting at Mission City, called at the request of the Fruit-Growers' Association of British Columbia, was held on January 18th. Present: J. B. Cade, J. Wren, G. Gibbard, L. Trommer, R. Trommer, H. B. French, E. Abbott, M. DesBrisay, F. Verchere, F. Sollerway, J. A. Catherwood, J. Abbott, J. Murray, H. Kipp, Chilliwack; E. Hutcherson, Ladners; R. M. Palmer, Victoria; and A. H. B. Macgowan, Vancouver.

J. B. Cade was called to the chair, and J. A. Catherwood acted as **Co-operation secretary.** The chairman partly explained the objects of the meeting, and **discussed.** called upon secretary Macgowan, who at length laid before those present the idea of the proposed Co-operative Fruit Exchange, and the benefits that must arise from united efforts toward the producing and marketing of fruit.

Mr. Hutcherson presented the resolution passed at Chilliwack, and gave some valuable information on the question under consideration. He urged the appointment of a stray committee to attend the annual meeting. Mr. Kipp gave the meeting the benefit of his many years' experience in the Province. He also urged the Mission City people to send a strong delegation to New Westminster on the 29th inst.

R. M. Palmer clearly laid before the meeting the benefits attained by co-operative work in California. He impressed upon them the necessity for general co-operation in British Columbia, and closed by urging the necessity of a strong committee to go to Westminster.

J. A. Catherwood, as secretary of Mission City Association, explained much of what had been done by this association in the past. He strongly supported general co-operation, particularly in so far as controlling shipments is concerned, so that the same may not clash.

J. Wren promised loyal support to a general organization that would advance the interests of fruit-producing and marketing.

The Chairman considered that the past experience of Mission City **A Successful Association.** had been a complete success. Greater care should be taken in packing, all fruit should be similarly packed and graded. He believed the C. P. R. would come down and meet their shippers half way. The neighbourhood distributed between \$400 and \$500 for fruit last season. We are going to increase the fruit production of the district. There is also a large lot of rhubarb being

planted. It will be necessary to have a cannery or preserve factory, as the markets of the North-West will take preserved fruit as well as the raw material.

Mr. French opposed co-operation, as Mission City had opened up the market and should jealously guard advantages gained. Why should they act as philanthropists in giving up their experience, correspondence, etc., for the benefit of other producing and shipping associations? He would like to know what other societies were going to be represented at Westminster.

The Chairman still strongly supported general co-operation, and further set out the benefits of a cannery.

Secretary Macgowan regretted the opposition advised by Mr. French.

Opposition to Union.

If any association had the fruit-growing capabilities of British Columbia in one pocket, and the markets of the North-West in another, it would be unnecessary for such an association to co-operate with any one. The suggested union will probably be formed even if the Mission City Association acts on advice of Mr. French. A strong union would benefit the producer by improving qualities, regulating, grading and generally controlling the market, and to a great extent general prices. Mission would be fully, and no doubt ably, represented on the board of management of the general union, and it would be as much to their interest as to that of any other section to do all possible to control the producing, grading and marketing of the fruits of the Province, and to assist in securing cheaper, better and quicker transportation.

Mr. Kipp said Chilliwack shipped 250 tons of fruit last year; in five years they hoped to ship 1,000 tons. They were jealous of no one, and strongly supported united action.

Mr. Gibbard said that Mr. Kipp had stated that if we did not join Chilliwack we would be sorry for it, or words of this meaning.

Mr. Kipp—There must have been some misunderstanding of what I said.

Mr. Wren related experiences in Nova Scotia, and the increase in the fruit trade.

Mr. DesBrisay said it was not the quantity so much as the manner of putting it up that created or interfered with the markets.

Mr. French did not advise further associations while those formed have unsolved problems before them. He repeated what he had before said, and would stick to it notwithstanding the somewhat sharp remarks of Secretary Macgowan.

Mr. Hutcherson explained that the matter had been fully discussed at Chilliwack. The shipping point will develop itself; he claimed something for the lower Fraser, as a fruit producing section.

Secretary Macgowan said so far as local jealousies were concerned they were all foreign to him. He had often had pleasure in supporting the natural advantages of Mission City as a fruit shipping point. There was an advantage in freight rates in favour of Mission City of 12½ per 100 lbs.

Mr. Catherwood further supported general co-operation.

Mr. Palmer said if we work together we practically have the North-West markets to ourselves, and we ought to sink local differences and pull together.

It was moved by Mr. Palmer, seconded by Mr. Kipp, and Resolved: "That this meeting request the Fraser Valley Fruit Union to appoint delegates to meet with the committee of the Fruit-Growers' Association of British Columbia on co-operation on the 29th inst., at 2 o'clock p.m., at New Westminster City Hall."

The thanks of the meeting were, on motion, presented to the Chairman for his able and impartial conduct, and to the visiting committee for their attendance.

The meeting then adjourned.

The annual o'clock, the Representative one evening. Letters of regret by the President

President's Address.

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ANNUAL MEETING.

NEW WESTMINSTER, January, 30th.

The annual meeting of the Fruit-Growers' Association was opened this morning at 10 o'clock, the President, Mr. G. W. Henry, in the Chair. The gathering was the most representative one ever held by the Society, nearly every point of the Province being represented. Letters of regret were read from the few who could not attend. The proceedings were opened by the President's address, as follows:—

President's Address.

"GENTLEMEN,—During the past year, which I believe is the seventh since the foundation of this Association, there have been greater advances made in systematic methods of orcharding, and in the profitable management of the fruit industry, than in any previous year since the organization of our Society. It is very pleasing to us, who have been connected with and have devoted ourselves to the cause ever since its commencement, to see the practical benefits which are now beginning to be realized from the results of our efforts, for only those who have worked with it from the beginning can understand all the labour and difficulties with which it has been attended. Although the Association made such a favourable start, and the Government came so readily to our aid with financial assistance, it required much thought and perseverance on the part of the few who kept up the Society to make an impression upon the fruit industry. The days of experiment and uncertainty are now over, for we see such good, practical results from our efforts that the future, I feel assured, will find our Association prosperous and our meetings well attended.

Some of the benefits.

"Among the benefits which have been brought about by this Association is the existence of the Horticultural Board, whose work has been of so much value in exterminating insect pests and disease among our fruit trees, and in keeping this country free from the importation of such pests from other countries. The appointment of the Pest Inspector, whose work has been among the farmers and fruit-growers, teaching them and informing them of the best and most proper means of caring for their orchards. Then the improvement in the manner of packing and grading, which is now beginning to show itself, the greater correctness in naming the varieties, the extended information and knowledge fruit-growers generally have gained throughout the country regarding the adaptability of different varieties to this country, and to certain localities in particular, may nearly all be traced directly to the working and the instrumentality of the Fruit-Growers' Association.

"The great importance of our work I feel has only just begun, and we have now in contemplation a plan which may prove of more value to the fruit-growers' of British Columbia than anything before gone into, namely, the formation of a co-operative shipping and marketing association of the fruit-growers of the whole Province. I think, too, we can flatter ourselves that we have been abreast of the times in bringing this matter before you, for I believe now, and not until now, has the country been ready for such a scheme. It needed the experience which has been gained by individuals and small associations in this line to show the necessity for co-operation of the whole in shipping, especially to distant markets.

North-West Market.

"The great country lying to the east of us, and beyond the Rocky Mountains, with their vast fields of wealth, capable of sustaining millions of people from the production of cereals, stock and other farm products, open up to us an almost unlimited market for those fruits which we can

so abundantly produce, but for which they must ever look to a milder climate to obtain their supply. Their requirements for fruit there is far beyond what we might imagine from their population, from the fact that it is not only the people in the towns and cities who will be forced to buy what fruit they consume, but farmers as well must look elsewhere than on their own land for these dainties, for from their fields, so broad and fair to look upon, they can produce only the coarser articles of consumption. To find those richest and sweetest of viands at their perfection you need to look in the little gardens and cleared corners of land cut from out the huge forests of British Columbia, where, though the work of clearing ten acres may cost as much as a whole farm in the North-West, yet from which the enlightened fruit-grower can bring forth such treasures as may only be dreamed of there. But we need not be selfish in our treasures. We would prefer to produce them in greater abundance, and let our brethren of the Prairie Province and elsewhere taste of our sweets, exchanging them for some of their shekels, which can be used to very good advantage by the farmers and fruit-growers of the Mountain Province of the Pacific coast.

**Great Oaks
from little
Acorns.**

"I have, with others, been sending fruit across the mountains and plains ever since the C. P. R. has been in operation. In fact the first summer the road was open my strawberries found their way to Calgary and Winnipeg. and these fruits, with others, each succeeding year in a small way, I had been shipping with profit to myself and satisfaction to the purchasers. Three years ago the idea of a co-operative fruit association for our own little district dawned upon me as being one worthy of being put into practice, so I brought the matter before others in the vicinity, who took hold of the work with me, and the result was the formation of our Mission City association. Although our first year was one of no great results in shipping, yet we made our name known, and the following year our operations increased considerably. But it was not until the last season that we shipped in car load lots. Last year also the Chilliwack Fruit-Growers' Association came into existence, and shipped in car loads across the mountains. A car load went, too, from Port Hammond, and although this quantity was so far in excess of anything ever before shipped into that country from here, it was but 'a drop in the bucket,' as it were, and opened to our notice, in some degree, the extent of the market which could be had there for our fruit, plums especially. Considering the heavy expenses on our fruits in getting there, the returns for most varieties were very satisfactory. Our experience, too, as I mentioned before, has taught us the value of co-operation in dealing with that market.

"Our fruits are too perishable, freight and expenses too great, for us to run risks of shipping promiscuously to such distant points. Now I wish to point out that even as our local association has succeeded so much better than individuals could have done, so also will a Provincial association—such as we now contemplate forming—worked upon the same principles, and by good management extend still further in promoting our fruit industry and benefiting our markets. The competition of separate associations in the North-West if not carried out on peaceful and liberal terms, and with a knowledge of each other's operations, would be likely to prove most destructive and disastrous to our fruit industry in those markets, from the fact that they would be more powerful for either good or harm.

"I, unfortunately, failed to be able to attend either of the meetings at Chilliwack or Mission City, with our committee, as I intended doing. However, delegates from these places in company with representatives from other localities held a meeting in this hall yesterday, which was a very successful beginning to our proposed association, and which I am satisfied will lead to the desired results. This meeting will, I believe, be fully reported upon by your committee, to formulate the scheme and rules governing the same, when making their report to this body.

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**A Permanent
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"I have, perhaps, given more time to this subject of co-operation than I should now, for it will be fully discussed later on, when the report of the committee is given. But it is a question of great importance for us at this meeting, I believe, so perhaps I may be excused.

"I would like to make mention of the good work accomplished by the association in sending out expert judges on fruit to the different agricultural exhibitions held in the Province, as I mentioned to our members last year. I believe we are benefiting the farmers and fruit-growers very materially in this way, and helping them to make their exhibitions in that department a very valuable object lesson to all in attendance. The committee at these exhibitions will make reports to you later, and which will speak for themselves.

Medium of Information. "There is another great benefit being derived from the association, and which is wide-spread, reaching not only its own members and the fruit-growers generally throughout the country, but which extends far across the seas to our mother country. That is the valuable literature we have been

sending out in hundreds of copies in the shape of our annual report, going to Great Britain every year, and showing the people there that the fruit-growers of British Columbia are alive to the situation, and through these mediums people from other countries, learning of our capabilities, possibilities and almost unlimited resources, are coming over and adding to the population, wealth and prosperity of our country. There are without doubt many other ways in which our association has been productive of good. Besides these I have especially pointed out, the future will open up other channels through which we can work as the necessities of the times present themselves. The year opening upon us will, I believe, be marked by still greater improvements than those of the past one, and I hope and trust we may all work together for the good of our noble calling, putting aside all selfish feeling or spirit of jealousy, which may crop out in trifling matters, proving ourselves superior to such weaknesses. Consider what one man may accomplish if he devotes his mind and body to a good cause. Then, what may we not accomplish by uniting all our energies as a single man in the great co-operative work. The condition of our industry at the present time is such that I believe only by united effort can we hope to bring about a prosperous state of affairs. 'United we stand, divided we fall.'

A Permanent Exhibition. "An idea occurred to some of us last year at our annual gathering, though it was not, I believe, brought up at the meeting, and that was the question of again having an annual fruit exhibition. Our agricultural associations all hold their exhibitions so late in the season that it is almost impossible for us to make a display of our finest fruits, those which we can most pride ourselves on the production of, namely, plums, early apples, and other summer fruits. A permanent exhibition, held in one of the cities not later than the end of August, could now, I believe, be made a great and valuable event for fruit-growers, and if taken up by one of our cities at that time of the year, and by giving good subscriptions, could be made a profitable occasion for them. I should like, if we have time at this meeting, to hear this matter discussed.

"And now, gentlemen, in retiring from the office in which you saw fit to place me a year ago, I must again thank you for the honour conferred on me, and regret that I cannot at this time point out to you more good than we really have accomplished, and that I could not have devoted more time and energy to the good cause. You will understand that we all have our private business and affairs to look after, which cannot be entirely neglected. I hope and trust that your newly appointed president will be better enabled to carry out the objects of this organization than I have been during the past year."

List of Delegates.

At 2:30 p. m. to-day the delegates sent in from the various parts of the district for the purpose of forming a Central Fruit Shipping Association met. The following delegates were present:—G. W. Henry, in the chair; A. H. B. Macgowan, secretary; from Mission City Association—H. A. Thompson, H. B. French, J. B. Cade, J. R. Wren, J. A. Catherwood; from Chilliwack—J. H. Bent, A. S. Vedder, F. C. Higginson, T. Ogle, A. H. Gillanders, G. W. Henry, H. Kipp; from Ladners—E. Hutcherson. The members of the Fruit-Growers' Association present were: T. A. Sharpe, Agassiz; W. J. Moggridge, Hall's Prairie; Thos. G. Earl, Lytton; E. Hutcherson, Ladners; R. M. Palmer, Victoria; A. H. B. Macgowan, Vancouver; Wm. Knight, Popcum. Thos. Cunningham, of New Westminster, came in late, but in time for much of the discussion, and still later W. H. Lewis, of Burnaby, arrived.

Settling the Preliminaries.

When the original clauses of the prospectus were read there was considerable discussion on the question as to whether any other than a member of the local Fruit-Growers' Association should be held eligible as members of the Central Fruit Exchange, and a lively tilt between Messrs. French and Knight on the subject was a feature of the debate before the matter was settled by a show of hands, as appears in the amended prospectus. The question as to whether fruit-canning at the present stage of development of fruit-growing in the Province could be made to pay, or not, was also debated somewhat warmly. E. Hutcherson, Mr. Ogle and Mr. Palmer spoke in the negative, while the affirmative was still more strongly supported by the Mission City delegates, and it was decided as the result that power to test the question be obtained among other privileges in the Act of Incorporation. T. C. Higginson, J. B. Cade, Thos. G. Earl, G. W. Henry and A. H. B. Macgowan were appointed a committee to make investigation as to which, the Industrial Societies Act or the Joint Stock Companies Act, would be best under which to incorporate the proposed fruit exporting exchange, with a request to report as soon as possible. Messrs. Vedder, French, Palmer and Macgowan were appointed a committee on constitution and by-laws, with power to add to their number. At 5:30 p. m. the meeting adjourned till 7:30 p. m., having thoroughly discussed the prospectus of the proposed co-operative association by clauses, which as adopted stands as follows:—

(1.) This co-operative association of fruit-growers shall be known as **Objects defined.** the "British Columbia Fruit-growers' Exchange," having for its objects the marketing of the fruits of the Province, and such other products of the farm and garden as may be deemed advisable:

(2.) To collect and distribute information; to establish uniform methods of production and disposing of fruits:

(3.) To open and develop new markets:

(4.) To act as financial agents for local associations and growers:

(5.) To secure better, quicker, and cheaper transportation facilities:

(6.) To purchase supplies for local associations and growers:

(7.) To operate vegetable and fruit canneries, cider mills, evaporating and preserving plants:

(8.) To buy, sell, and generally deal in, on commission or on its own account, supplies used in the raising, producing, and marketing of fruit and fruit products:

(9.) To buy, receive, store, sell, or generally deal in, on commission or its own account, all kinds of fruit, produce, and such other merchandise as it may be deemed to the interest of the corporation:

(10.) To buy shall be considered
(11.) To buy, ments.

At the evening to those above mentioned on incorporation a to the work assigned intended to have

Committees' Reports.

and by-laws, which discussion on the subject appeared to be to rights and interests result of a successful local association. Central Exchange, societies. After I

Fruit-growers' Exchange.

Potter, T. A. Sharpe in the Province has the most convenient locations.

Mr. Kipp, of "To the Fruit-Gro

On Fruit Packing.

be packed right for apple with paper in stand up perhaps in paper, as it is calculated should be graded at home. For this work can be best done will be required. This does very well will hope to fall in cherries and plums

(10.) To buy, sell, and generally deal in real estate, personal and such other property as shall be considered advantageous to its interests:

(11.) To buy, sell, erect, lease, or sub-let buildings or lands for the purposes of its requirements.

At the evening session of the convention, R. Balfour, of Langley, was present in addition to those above mentioned, and several residents dropped in for a short time. The committee on incorporation and committee on constitution and by-laws devoted nearly the whole evening to the work assigned them, and as the consideration of their reports was the principal business intended to have been accomplished at the night session, the delegates devoted most of the time to informal conversation. At 9 p.m. the chairman of the committee on incorporation, G. W. Henry, reported in favour of incorporation under the Industrial Societies Act. The report was adopted. The committee on constitution submitted their report, accompanied by a draft of constitution and by-laws, which were read clause by clause. There was a good deal of very intelligent discussion on the clauses, and some changes made in the original draft. The greatest difficulty appeared to be to frame the constitution of the Central Exchange without conflicting with the rights and interests of the local associations. It seemed to some of the delegates that the result of a successful working of the exchange would mean the ultimate doing away with the local association. This, however, the majority did not believe, who argued forcibly that the Central Exchange, being a strong Provincial organization, would assist and encourage the local societies. After passing a code of by-laws, the meeting adjourned at 11 p.m.

The Provincial Board of Trustees, or first officers of the newly organized Fruit Exchange, are:—President, G. W. Henry; Vice-President, J. H. Bent; Secretary and Treasurer, A. H. B. Macgowan;

Provisional Directors, the above and Thos. G. Earl, J. R. Wren, A. F. Potter, T. A. Sharpe, W. J. Moggridge, and E. Hutcherson. The naming of the headquarters in the Province has been left in the hands of the provisional directors, and will no doubt be at the most convenient shipping centre, decided, of course, by Provincial and general considerations.

Mr. Kipp, of Chilliwack, read the following paper:—

"To the Fruit-Growers of British Columbia:

On Fruit Packing. "GENTLEMEN,—As I am put down for a paper on packing fruit, I feel like Mark Twain said he felt, when called upon for a speech, that he could have done better if he had two weeks' notice. I have had very little experience in shipping to distant markets. I have a box here such as I believe to

be packed right for markets close by. In packing for distant markets I would wrap every apple with paper prepared for the purpose for market. Apples at this time of the year will stand up perhaps as long as required, but with early fruit I intend to wrap every apple in paper, as it is calculated to absorb the dampness in transit. I believe apples, pears and plums should be graded carefully as to size, viz.: Grade 1 and 2 in separate boxes, and grade 3 kept at home. For distant markets, No. 2 will scarcely pay freight, wrapping and boxes. This work can be best done by hand, but for gooseberries, currants and like-sized fruits, a grader will be required. I have seen cherry graders made with small slats fitted into a box to suit. This does very well to start with. Prune graders are successfully used in California, and we will hope to fall into line or fall out altogether in time. I have noticed in the past that cherries and plums shipped in baskets made for the purpose with handles seem to suit the

consumers best. It is something like lard in cans—we buy the lard at a good figure to get the can because it has a wire bale attached, so it is that the basket makes a handy thing about the house. One mistake is very generally made, that is in boxing fruit to put over ripe fruit mixed with properly matured fruit into the same box.

A general mistake. Most any grower or picker of fruit, if he stops for one moment to think, knows that the fruit on a tree does not all ripen at once. I have noticed that myself, what a hard job it was to eat all the over ripe fruit I came to in a day's picking, and so it is gentlemen, the over-ripe fruit had better be thrown away if you have no other place for it, than put it into a separate box, for if it is put with properly ripened fruit it is sure to take more fruit with it and spoil the flavour of all it touches. Fruit has to be boxed somewhat on the green side, that is a lesson hard to learn. It has taken years to learn it elsewhere. The custom had been to place the first layer in the box carefully and regularly and then tumble them in any way to fill the box, nail it down, turn the box the other side up and stamp "this side up." Now apples will carry better if they are all placed into a box one square on top of another, thus the air will circulate through the box better."

The following is the report of the committee on transportation:—

"To the Officers and Members of the Fruit-Growers' Association of British Columbia:

Transportation Facilities. "Your committee on transportation have carefully considered matters and have fully discussed same, both in committee and with Canadian Pacific Railroad officials, and with shippers at various points and it is firmly believed that these actions and discussions have already resulted in very considerable benefits, and if the active work is continued much permanent good to the Province in general must be the result. Committee met first at New Westminster on 8th of April last with the following members present: G. W. Henry, President; Thomas Cunningham, Chairman of the Board of Horticulture; Thomas Earl, Chairman of the Committee, who represents the Board of Horticulture in the Upper Country; and A. H. Macgowan, Secretary. After discussing freight rates and other matters the meeting adjourned until the following day. On April 9th, the committee met Wm. Brown, Freight Agent of the Canadian Pacific Railway, when the whole position of freight accommodations and rates was discussed. It was arranged that less than car lots should go by express, while at stated times carloads would be forwarded by passenger trains in charge of a competent member of the Association or some other reliable party, who would attend to the delivery at different points to be arranged, say as far East as Winnipeg. As the business development for freight from the upper country to the coast a car once a week—and oftener if found necessary—will leave Vernon for the coast. Much of the fruit and other produce heretofore shipped as first-class will in future be considered third-class, such as apples, pears, melons and tomatoes. Times of departure of such cars will be fully announced, and full information can be had of all station agents along the line. This will offer splendid facilities for the fruit producers of the inland portion of the Province, and it is hoped that they will avail themselves of its benefits and thus assist the railway and the committee toward doing even better things than the present outlook would seem to demand. The committee are of the unanimous opinion that the Okanagan and Shuswap valleys are the natural feeders of the Kootenays, and made strong representation to Mr. Brown, urging a consideration of the desirability of making lowest possible rates of freight, and offering the best possible facilities for moving the products of that sparsely farming section to the wealthy mineral producing part of our country, thereby securing to the Province much of the business and profit that now goes into the neighbouring republic. There is little doubt that in the near future the fertile sections referred to will be producing almost

unlimited quantities near and profitable and at the earliest possible carrying out their views.

Up Country Produce. They consider that it should be cultivated extensively in inland portions of the Province which now goes out to the coast. We have intended that the lines, it is to be hoped, will be for the producer to the benefit of the consumer.

Rates into Kootenay. branch for grain, milk, stoke, plus the following: Pilot Bay and Kaslo steamer Aberdeen with 20,000 lbs., and vegetable stoke, plus the arbitrated maximum rates, agent's rate after deducting commission. Nakusp, Robson, Nelson, Hendryx, Balakrishnan, Kelowna and steamer class, is 24c., and ten per cent. Mr. Brown for courteous representation of the fruit growers.

Better Rates wanted. I have a feeling that the rates are rather high. We know that when we have to go to consider the risk it certainly has no risk in making it at reasonable

B. C. FRUIT GROWERS' REPORT.

unlimited quantities of high class fruits, vegetables and grain, and it is most desirable that a near and profitable market should be found. Mr. Brown promised to go fully into the subject, and at the earliest possible date advise the committee the very best that can be done toward carrying out their wishes.

Up Country Produce.

They consider that in the good hay and root-producing sections the dairying industry should be cultivated extensively. Pork-raising might also be carried on to advantage in many of the inland portions of the Province. A large amount of money might be kept in the country which now goes out for fruit, butter, cheese, meats and other provisions. Nature seeming to have intended that this should have been an exporting instead of importing country in those lines, it is to be hoped that at an early date the present state of things will be reversed. It is for the producer to say how soon this will be.

Rates into Kootenay.

branch for grain, millstuffs and vegetables will be eighth class, and on hay tenth class to Revelstoke, plus the following arbitraries: To Nakusp, 10c.; Rosebery, 25c.; Three Forks, 25c.; Robson, 10c.; Nelson, 10c.; Trail Creek, 10c.; Waneta, 10c.; Ainsworth, Hendryx, Balfour, Pilot Bay and Kaslo, 30c. per 100 lbs., with 5c. per 100 lbs. additional from Kelowna and steamer Aberdeen way landings. These are through rates on car-load lots; minimum for hay, 20,000 lbs., and vegetables 36,000 lbs. In case the local eighth and tenth class rates to Revelstoke, plus the arbitraries to the Kootenay mining points mentioned, exceed the following maximum rates, agents are instructed to bill on Revelstoke at the balance of the maximum rate after deducting arbitraries south of Revelstoke. The following are the maximums set: Nakusp, Robson, Nelson, Trail Creek, Waneta, 45c.; Rosebery and Three Forks, 50c.; Ainsworth, Hendryx, Balfour, Pilot Bay and Kaslo, 47½c. per 100 lbs., with 5c. additional from Kelowna and steamer Aberdeen landings. The local rate from Kamloops to Revelstoke, eighth class, is 24c., and tenth class, 18½c. These are material reductions, and should stimulate to a considerable degree shipments of farm produce to Kootenay. The committee feel indebted to Mr. Brown for courtesies received and the interest manifested by him, and they are fully convinced that a continuance of negotiations with him will be of lasting benefit to the Province. A representative of the Canadian Pacific Railroad Company will, by request of your committee, be present at this meeting, and will discuss with your members the idea of placing at the disposal of fruit-growers a complete system of ventilated cars."

Better Rates wanted.

Mr. Earl:—I want to make a few remarks on this report. There is plenty of room for a great reduction in rates. We are progressing in the fruit-growing business and will soon have vast quantities to ship. Then there are vegetables. The upper country is the natural feeder of the Kootenay. I have a letter in my pocket from parties up there, and they say that the C. P. R. rates are rather high. When potatoes are \$16 a ton in the market, the C. P. R. takes \$8. We know that when people raise vegetables, or hay, or anything else, for the market, they have to go to considerable expense both to raise and to ship their products. The C. P. R. certainly has no risk to run. It is the poor farmer that has the risk, because if they don't make it at reasonable terms he can't ship it, and therefore very likely loses it. I think this

year the committee ought to do all they can to get the rates reduced. I must say that the C. P. R. has treated us with great kindness so far, and I am satisfied that they will lower the rates a good deal yet in their own interests.

There is another matter I wish to speak of. I consider the people here should help themselves to better passenger rates on the C. P. R. I don't consider it is out of the way to ask for a reduction. I suppose you all know that the Government spent over \$9,000,000 building 120 miles of road from Savonas to below Yale. Then they gave the road to the company for building the balance. After running it four or five years the C. P. R. sued the Government, and, under arbitration, they got \$750,000 for taking that piece of road over its then unfinished condition. I consider those were pretty good terms for the C. P. R. I don't see why we should pay five cents a mile on this end of the road when that was built for them, and I consider it is hurting the country very much. People can't travel; they can't afford it at that price. People are going into the Kootenay mines over the American road. Only the other day a particular friend of mine told me he was going to Victoria and around by Spokane to get to the mines in Fairview, and I think there is something wrong. I think the C. P. R. are standing in their own light, and if this matter was called their attention, in all probability they would see the utility of reducing these rates. The rates were put on when they thought we were made of gold; but I am sorry to say the bottle of that part has fallen out. The rates are keeping men out of this country. The farmers have to take what is bought in the east and put down to them here without saying a word about the price, no matter what is charged them. Now we have nobody here to take

All have Passes.

parts. In the first place, every member of our Provincial Legislature, with the exception of one, I believe, has a pass in his pocket. The men that are our representatives to Ottawa have another pass in their pockets. If it comes to the press. We all know that if they had to pay five cents a mile they wouldn't be able to publish newspapers. And I suppose if they would give me a pass I wouldn't be here to say anything about it either. Unfortunately, I haven't got it. But if we could make this point plain to the C. P. R., I believe they would see that it is in their own interests to reduce the rates. I would like to hear somebody else speak on this subject.

Mr. Hutcherson:—I would like to ask the chairman of that committee if, in their conversation with Mr. Brown on transportation, it was not conceded to the people at this end of the line that they should have three or four shipping points; and if so, why was that changed? We found that, last fall, when we wanted to use that concession it would not be allowed.

Mr. Earl:—I do not know why it was changed. Probably Mr. Henry could give me some information on that subject.

Negotiations with the C.P.R.

Mr. Henry:—I do not know that I can give you a great deal of information. I know that the committee waited on Mr. Brown, and, as was understood, he gave it to us verbally, that we should be able to ship at two or three different points, and Westminster among the others. After we got on with the shipping, we wanted to load a car partly here and partly at Moose City, so I ordered a car to be started here and partially loaded and brought up to Moose City, according to the arrangements with Mr. Brown, and they refused to do it. They gave no reason, only that they couldn't do it. We have never gone into it and asked them their reasons. It should be taken up again this year and found out for certain if they can do it, and, if they can, to give it to us in writing. Again, they promised us ventilated cars. I said they had cars in the East, and if we would give them a week's notice they would have one of these cars ready for us. We gave them the week's notice, and they sent back word that it wouldn't be time enough, but they would fix up an ordinary box car for us. We found

Fruit Packing.

man if I read a paper I will start with the smallest size is called tacker will hold twenty ever pick your berries an knows the more will keep about eight all cartoons, because they will sell much berries commence to load rain from striking Next we come to packages, as they are ry nicely. The black could advise you to p

Shipping Plums.

Photomount Pamphlet

reduced. I must say that the didn't do as well, but we had to make the best of it. However, I don't think the C. P. R. did
 isfied that they will lower the it with any intention of injuring us, but they found it out of the way to get these cars here.

In bringing this matter before them as we did they promised to take the matter up; in
 er the people here should help fact Mr. Brown had a letter from Mr. Van Horne at the time, and Mr. Brown agreed through
 consider it is out of the way to this letter to build us eight cars especially for our trade and according to our requirements,
 nent spent over \$9,000,000 and he asked us to give them a description of what would suit us. Now it is necessary to see
 Then they gave the road to the that they keep that promise.

re years the C. P. R. sued the I did not take the matter up at the time with regard to why they did not stop at the
 king that piece of road over in different places. Of course they said the car would have to go through on the tea train, and
 ood terms for the C. P. R. they would be going through on very quick time and would not be able to stop long enough.

ie road when that was built for All we wanted was for them to take the car up to Mission and start it from there on the tea
 People can't travel; they can't rain. We expected to have loaded on some tomatoes at Duck's, but we found at the last
 mines over the American road minute we couldn't stop to have these on either, and I believe Mr. Bostock lost his tomatoes.

s going to Victoria and going Mr. Hutcherson:—I think it is a very important point, and I would move that this
 nk there is something radical matter be pressed upon the Transportation Committee to bring this before the C.P.R. It is a
 and if this matter was called concession we must have, that we be allowed to load at different points.

of reducing these rates. The Motion seconded by Mr. Sharpe and carried.
 but I am sorry to say the botte On motion the report of the Transportation Committee was then adopted.

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Paper by Mr. M. Baker, Victoria.

Fruit Packing.

I am sorry to have to tell you that I have had a sad loss in my
 family, which has taken all my attention during this last month and
 prevented me preparing a report, but I will give you a little talk on
 fruit-packing. I think it may be more beneficial to the fruit-growers

than if I read a paper.

I will start with the strawberries. I have three sizes of packers here, and the first or
 smallest size is called a "cartoon." These are supposed to hold nearly one pound, and a large
 tacker will hold twenty-four of these boxes, which sell on the market readily. You should
 ever pick your berries until the dew is off. Then they only require handling once, and every
 an knows the more you handle them the softer they get. By putting them in this way they
 ill keep about eight days. I would advise the farmers to pack their strawberries in these

small cartoons, because every person cannot afford to buy twenty-five pounds at once, and
 ey will sell much more readily in this shape. I should advise the farmers as soon as their
 rries commence to blossom to mulch the ground with clean white straw. This will prevent
 e rain from striking on the sand or clay, and therefore keeps the berries clean.

Next we come to currants of the different varieties. These should be put in small
 ckages, as they are easily bruised, and if packed properly they will stand five or six days
 ry nicely. The black currants will stand much more than the white or red varieties. I
 ould advise you to put these up for the local trade in baskets or cartoons.

Shipping Plums.

The most important fruit in this country is plums. Unfortunately
 for us here we have a very large quantity of early varieties that come in all
 at once. The farmers send these to market, and they wonder why they
 can't get a good price, and very often they have to lose nearly the whole

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lot. The demand is not sufficient on this side to get away with them. But if they would pick these plums in the right time, and be careful in packing them that they are perfectly dry and price there, and it d put them in cartoons, you will have no trouble in disposing of them. They will stand is a pretty high price altogether about ten days without perishing if they are picked on the green side and packed boxes—150 lbs. At carefully. When people plant trees now I should advise them to plant the prune varieties, the average weight. they are much hardier and better shippers. I would advise you to pack them in these boxes I am very glad that hold about eight and one-half pounds—two in a packer. There is no difficulty, if their fruits. I thin are packed properly, in them going to Winnipeg, and coming back for that matter. The deal better price. The proper way to do it is to place a piece of paper in the bottom of the box. The bottom of the up in good shape. box should be perfectly tight on the edge, so that it cannot spring in any particular. It would will only be happy to be better if you bored small holes on the top of the box, so as to let in sufficient air to keep the fruit. The paper in the box should be large enough to come up and fold neatly across the top. Then after the cover is on you should nail a little piece of wood on the ends so you Mr. Vedder:—Kipp. Chilliwack.) be able to pile the boxes one on top of the other without bruising the fruit, and it also enables Mr. Baker:—I to remove the covers without any trouble, as otherwise the wood is so brittle when in the middle of the lift the cover it breaks and you have a bad job in replacing the cover. here isn't any trouble at the edge of the cover.

Now then the apples. The apples that came from Chilliwack year were very neatly done, but there is a great deal of room for improvement yet. The apples that came to Victoria in the early part of the year were in rather small boxes, smaller than the Oregon and California boxes. The first apples that come from California are in 50-pound boxes—one foot by one foot. The next size that comes along is a smaller one, what we call a three-quarter size. The apples are neatly packed, mostly on their edge. They are all nicely sized. You don't fit big one and then a little one. If you try to pack apples in that way you will never see success of it. You must grade your fruit. The round apples pack best on the edge. The box is perfectly tight on the bottom, and the top boards are about half an inch apart, makes the box sufficiently strong. In the British Columbia boxes there is too much cleat left on the top of the box, and when you pile the boxes one on top of the other the apples are bruised. Then the cleat was lacking on the top. If you do not put this on you will find apples on the top edge all bruised. The Oregon apples have these cleats on the top of the boxes, and they are free from bruises. I don't see why our people in British Columbia have not as much sense as the people on the American side. In the former days we did not have a market and were careless, but we find now it is one of the greatest industries of the Province. We should first grade our apples, say extra choice, choice, and a lower grade. I handle an average about 300 boxes a month of the inferior apples for the Indian trade. The your piece of paper around the inside of the box to keep them free from the dust of the boat or train. Looks are everything in the fruit business. It does not make so much difference about the quality of the apple as long as it looks well. Whatever you do this opinion of Canada whether you are packing your apples for the North-West trade or Vancouver Island, in 1 as nice as possible and you will find it makes at least ten cents a box difference in the price you will get.

Next is pears. They are the most delicate kind of fruit to handle. When they are they are gone. Great care must be taken in packing. Be careful that they are not broken. Then every pear must be wrapped, and you will find that they will bring all the way to 50 cents a box more money than if they are put loosely in the box.

About packing apples in barrels. My opinion is that, for the trade, the boxes are better. When you send these apples to market Mr. Kipp:—W to 50 cents a box more money than if they are put loosely in the box. Mr. Baker:—A

Apples in barrels. will always find a man who will buy a box of apples, but he hasn't the money enough to buy a barrel. In shipping apples to Winnipeg, I am you to do?

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them. But if they would pick of the barrel system, although, from what I understand, the apples in boxes bring the largest price there, and it doesn't cost quite so much to pack in boxes. I think 40 cents for a barrel is a pretty high price. A barrel is supposed to hold three bushels of apples, or three California boxes—150 lbs. As a rule, it takes four of our boxes to hold 150 lbs.; 35 to 40 lbs. is about the average weight. Of course, the heavier apples will weigh 50 lbs.

I am very glad the fruit-growers are forming themselves into a society for disposing of their fruits. I think it is a step in the right direction. They then will be able to get a good deal better price. The men that pack the fruit will be experts, and will be able to put them up in good shape. Anything at all that I can do to further the interests of this association I will only be happy to do.

Mr. Vedder:—Is this box of apples packed to suit the market? (Box packed by H. Kipp, Chilliwack.)

Mr. Baker:—This is very neatly packed. It should have a half-inch cleat on the ends, to keep them from bruising. Then it wants a paper around it. There shouldn't be a space in the middle of the cover. Steamboats are troubled with mice, and if the cover is closer there isn't any trouble. My experience is that the apples carry better if there is a little space at the edge of the cover.

Mr. Kipp:—I want to ask your opinion as to the paper. I was the only one that packed plums with paper, and the agent that sold them in the North-West told me he thought it was not advisable, but Mr. Winch always required the paper. I want to be thoroughly satisfied as to whether the paper is a benefit.

Mr. Baker:—If there should be one or two soft plums in the box the paper prevents them from spoiling the rest. You take a 20-lb. box of plums, and if you have a ripe plum in the middle of that box it will make a lot of decay. Peaches are the same way. Then you don't require nearly

so many in the box, so you see you get paid for your paper. The most of the apples that come from Oregon lately are wrapped. Of course it is a little costly, but you get repaid ten times over for the paper from the extra price you get for your fruit.

Mr. Vedder:—You were speaking about the size of boxes. The boxes that came from Chilliwack with the Association's stamp are the largest boxes in the Province. Wouldn't you advise a standard box?

Mr. Baker:—45 lbs. of apples is a good box.

Mr. Vedder:—Wouldn't it be better to have the boxes all the same size?

Mr. Baker:—Yes; they would take much better if they were a uniform size.

Mr. Moggridge:—Did I understand you to recommend barrels in shipping to the North-West?

Mr. Baker:—You can ship them much cheaper in the barrels. As a rule, in the Dominion of Canada, apples for the foreign market are put up in barrels. But apples packed in barrels soon get flat if they are not used right away after the barrel is opened. The sweating process makes the apple lose its flavour. Another thing—never put your apples into cedar boxes. If you do, you will spoil them. Wherever the cedar board comes against an apple it leaves a black mark.

Wood for boxes. Boxes are the best.

Mr. Kipp:—What variety of apples do you consider the best?

Mr. Baker:—All kinds of red varieties, whatever variety you can grow the most abundantly.

Mr. Kipp:—You recommend grading apples as to size. Supposing you are filling a box with apples of a large size, and at the top of the box there isn't room for another row, what do you do?

Mr. Baker:—If you fill the box on its edge you won't have so much trouble in that way as if you filled it on the flat, because when you get to the top you won't have nearly so much space to fill in.

Mr. Wells:—Why is it that Oregon apples sell from 15 to 25 cents a box higher than British Columbia apples?

Mr. Baker:—I consider the apples grown in Chilliwack are a great deal better than the Oregon apples in flavour, but the trouble is in the colour and size. Our apples keep a great deal better than the Oregon apples. If you put up your apples in as good shape as the Oregon apples, they won't be able to beat you.

Mr. Wells:—Which do you prefer—plums packed in baskets or boxes?

Mr. Baker:—It depends on the distance they have to go. Baskets are all right for the local trade. Mr. Hutcherson ships nearly all his fruit in baskets. I handle mine in boxes.

Packing.—H. Kipp, Chilliwack.

It strikes me that Mr. Baker must be a Yankee, because he seems to have all the tricks of the trade. I am very glad that I was present to hear his discourse. I used to think it was for want of sunshine that we couldn't get red apples. I think that is a great deal of the fault yet, but I am of the opinion that when we get to understand more about fruit culture, keep our trees clean and looking after the roots, that will assist us in getting red fruit. I brought this box along more for an object lesson than anything else, and I think if we persevere in carrying out instructions we will be able to do even better than that.

I am convinced that this cleat on each end of this box is a necessity. It is not fair to the apples to expect them to come out right unless put in this way. I see we have to line the boxes with paper, in order to enable us to compete with the opposition which we have to contend with. We have the North-West in the soil and the climate, and as good a place to live in as there is anywhere. We want to go in Vancouver, next year as we have been. We are making marked improvements in fruit, both in quantity and quality. There were upwards of 250 tons shipped from Chilliwack last year. I have not the exact amount shipped from other places, but it is quite evident they, too, are progressing. The committee met last year and hundreds of thousands of young fruit trees planted in the country these last few years are coming into bearing. There is a vast section south of the city here, in Langley and Clover Valley, yet heard from, but I understand the largest prune orchard is owned by the Messrs. Moggie and they will be competing with us in the near future.

Mr. Townsend:—I heard Mr. Wells ask the question why British Columbia fruit is quoted at a lower price than the Oregon apples. I think it is very easily explained. Oregon apples are true to their name. When they are put in the market you may depend on getting a box that is up to what it pretends to be. British Columbia apples have never been properly graded, a great deal of it comes into the market that is not saleable. Plenty of our farmers send apples to market and think they should bring the market quotations, when they really are worth I find that the great secret is in the packing.

Mayor Shiles then addressed the meeting, welcoming the fruit-growers to the city, at which the meeting adjourned till 2 p.m.

On resuming at 2:45 p.m. Mr. Macgowan submitted his report as Treasurer as follows:

Receipts.—Balance from 1894, \$240.36; Government grant, \$1,000; membership \$80 Total, \$1,320.36.

Disbursements,
advertising, \$157.75;
\$32.50; co-operation
on hand, \$400.76.

Messrs. Sharpe

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Disbursements.—Canadian Horticulturist, \$24; annual meeting, \$8.40; printing and advertising, \$157.75; transportation committee, \$55.50; exhibition, \$207.95; postage, cards, etc., \$32.50; co-operation committee, \$73.50; Secretary's salary, \$360. Total, \$919.60. Balance on hand, \$400.76.

Messrs. Sharpe and Palmer were appointed to audit the Treasurer's statement.

Membership. Mr. Moggridge:—I notice that the Directors' list is a good deal larger than forty, which is our total membership. I think it would be well to have the names of all members not paid up struck off the list.

Moved by Mr. Hadwen, seconded by Mr. Bostock:—

“That the names on the list of members not paid up be notified that if not paid within a month after being notified their names will be struck off from the list.” Carried.

Mr. Hutcherson then gave notice that at the next annual meeting he would move that Article XI of the Constitution be changed to read:—

“Any person residing in the Province of British Columbia may become a member of this society upon the payment of an annual fee of \$1, etc.”

Mr. Thos. Lewis, Market Clerk, read his report to the City Market Commissioners on the subject of Westminster as a centre for fruit marketing. There was a good deal of discussion upon this paper, particularly as to the best points for shipping fruit from.

Mr. Macgowan submitted the report of Committee on Co-operation, as follows:—

Report on Co-operation. “MR. PRESIDENT AND GENTLEMEN,—The report of the committee is not in writing to be presented, because the results of their work could not be arrived at until about 12 o'clock last night, so we thought a verbal statement of the matter would come in just about here. At one of the

meetings of the Directors of the Fruit-Growers' Association, a committee of the President, Mr. Hutcherson, Mr. Cunningham, Mr. Kipp, and Mr. Palmer, were appointed to take up

the subject of co-operation with the different local associations that were already formed.

It was found last year that there was some little clash in so far as meeting the requirements of the North-West market was concerned, hence this committee was appointed. It met first

in Vancouver, next in Chilliwack, and then in Mission City. The result of their meetings in these two outlying sections at least, was the sending of representative committees from these

places to meet this committee of the Fruit-Growers' Association here yesterday. The joint committee met last night and they arranged to form one co-operative society or association for

the Province. They prepared articles and by-laws, and elected provisional officers, who now have charge, to a great extent, of this matter. I think that covers the business that the

committee was appointed to perform. If a written report is desired I have no doubt the members of the committee will find pleasure in preparing it.”

Moved by Mr. Hadwen, seconded by Mr. Moggridge, and carried, that this report be accepted.

Mr. French:—I want to say as a member of the Union at Mission City that I think Secretary Macgowan has made rather a modest report for himself, Mr. Hutcherson and Mr.

Palmer. At the meeting at Mission City they went into the matter very exhaustively. They travelled over a great deal of ground and did a great deal of work, and their meeting there

made a good impression upon that Union.

A shipping point. Mr. Thrift:—There is certainly a difference between the fruit-growers and the parties that are interested in this central shipping place. It seems

to me from the manner in which these gentlemen have been talking that the leading idea is the central place that the supply is going to be shipped

from. That is not my idea. In the neighbourhood where I live, unless there are some facilities, we cannot even reach Westminster or Mission City if the fruit is all advanced.

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A simple system wanted.

worked system of co-operation that would have the confidence of both producer and consumer. There need be no violent attempt to put it into immediate practice so far as the whole Province is concerned. The machinery might be provided and the system set in operation, and as its value became apparent it would become general, and its usefulness be increased. The Governments of civilized countries go to considerable expense and trouble to get a statement each year of the amount of produce for home consumption and for export. This information is of great value to stock-brokers and speculators who use it to manipulate prices and corner markets, while the producer is left in the dark so far as any system is concerned that would enlighten him as to where and how he can sell his produce to the best advantage. Following out this idea it seems to the writer that a general system of information should be introduced, whereby the producer should be kept informed as to the amount and kinds of produce required.

Bureau of intelligence.

This information might be obtained through agents stationed at the different points where produce could be sold, whose business it would be to inform one central office of the amount of produce used in the place, and the kinds and quality wanted for that particular section, and who would not only furnish the producer with information as to quantity required and best time for selling, but would also furnish the consumer with information as to where he could supply his wants, and at what cost. These agencies reporting to a central office would indicate the aggregate amount of produce required in all the territory over which the general distributing bureau would operate, and each district or community could be informed from the general office of the amount and kinds of produce it would be expected to contribute of the commodities wanted. This matter of marketing produce should be assisted and supervised by the Government. This idea has been carried out by the Dominion Government who have by successfully putting Canadian butter and cheese on the English market developed those industries to an extent that could not otherwise have been done, and it is now the intention, through the suggestion of Prof. Robertson, to take up the dressed beef business and export to

Government assistance and supervision.

England for sale. If we are to have uniformity in packing and quality of fruit, packages must be authorised and inspection done by the Government. It would not be necessary to make such inspection and boxing compulsory. The very fact that the inspection and selection of packages was under Government supervision would give shippers who availed themselves of it so great an advantage that Government boxing and inspection would become general, for purchasers would quickly discover the reliability of an article of guaranteed quality with the Government stamp upon it. Our Government has taken a step in the right direction in establishing a Department of Agriculture and appointing fruit and fruit-tree inspectors for the improvement and protection of the fruit industry of the Province, and a very little extension of this principle would give us the inspection of fruit and vegetables for sale, and the authorisation of boxes or crates for shipping of fruit.

Cold storage facilities.

The good of the people is the object of good government, and as production is the foundation of all material wealth, it follows that whatever helps the people to turn their productions into money is the legitimate work of the Government. In this connection I might mention storage facilities. At present there is no general and scientific way of keeping produce. Each farmer stores his produce as his inclination or compulsion dictates, and as in everything else done without system or practical knowledge there is waste and loss. If some general system were devised so that storage accommodation could be had for a whole community at a point handy for shipping, the goods could be inspected before being stored, and besides being ready for

market could be handled at much less trouble and expense by the producer. This is a subject of great importance, and one that could be dwelt upon at considerable length, but want of time and the present length of this article is my reason for not enlarging upon it in this paper. There is one thing certain, that the consolidation of individual effort into one united system for the sale of produce of all kinds is greatly to be desired, and as an armed force working with precision under one central government is more effective than bands of individuals with no governing centre or organization, so would organized and united produce working under some well defined and simple system of co-operation accomplish more than possible under the present unorganized, unremunerative, and unsatisfactory system of selling our produce.

Experimental Work at Coldstream—By Mr. T. Wilson.

I see by the programme that I have been asked to speak on experimental work in the Vernon District. As I have been but a short time up there I can hardly presume to give more than guesses at what will or will not be successful, and that only from the few observations I have been able to make.

Apples. From what I have seen, and noticing the amounts that have gathered, the Yellow Transparent Apple fruits well up there, better than down in this lower country, and the reason for this, in my opinion, is because the weather during the flowering season is dryer; consequently the flowers are on the process of fertilization with more facility. This, I think, will apply to all the apples. The Red Astrachan up there, as well as here, is subject to spot. Of the fall varieties, the favorite seems to be the Wealthy, and the specimens I have seen are indeed very good. Northern Spy has also been largely planted, but, as every one knows, it is a late bearer, and very few have yet fruited. The climate, however, is an ideal one for ripening this variety, owing to the large amount of sunshine to develop the sugar.

Pears. Pears have also been tried with varying success. The Bartlett has almost invariably died off about a foot from the ground from sun scald. Strange to say the new wood sent out above that is strong and healthy, and seems likely to make healthy, if not well-shaped, trees. Still as a commercial venture I should not be inclined to plant too many of that variety. Clapp Favourite is another variety that is also doing fairly well. The sort, however, that appears to me to be doing best of all and which bids fair to be a magnificent success, is the Flemish Beauty. As is well known, this variety is very much subject to cracking. Precautions will have to be taken in time to spray with the Bordeaux mixture to prevent this. Of the winter pears, the best that I have seen there is the Lawrence. I saw some of them which fruited last season, and some of the fruit kept well on till after New Year.

Plums. All the plums do well and fruit readily. But the size of the fruit does not equal that grown in this lower country, though I believe it will keep better. To let you know the keeping qualities of some of the plums I may tell you that on the 22nd of November I was going through the prune orchard and noticed several trees that had not been picked, and that quite a few prunes were still hanging. Those on examination I found to be quite fresh and plump, not at all shriveled. In fact, I would have been quite good enough to ship. The variety in question was the German prune. Italian prunes have also been planted up there with good success. French, even up in this dry climate, is apt to split, but it keeps up its reputation as a bearer. On the same day

I examined those of the trees, and they were at that time.

Peaches up there's nothing in it.

A Rodent Pest.

hillocks of fine soil roots. It is nocturnal, the roots, and it is every root about 4 inches behind the side. The whole of the trap is the best to

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Mr. Bent:—I saw our friend Mr. Wilson stated that he thought in pears. I would not cracking in pears

Bordeaux Mixture for Pears.

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Mr. John Kipp in certain garden in

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Mr. Kipp:—I packing our fruit in

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By Mr. T. Wilson.

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I examined those German prunes I also noticed some English Damsons which were hanging to the trees, and they also were in good shape, and mind you there had been quite a little frost at that time.

Peaches up there don't appear to me to do better than they do here, and I think there's nothing in them, that is so far as Vernon is concerned.

A Rodent Pest.

I may as well mention while talking of the upper country that we have a little pest up there which, unless it is fought and fought well, is going to play havoc with the orchards. This is the Mulo or Canada pouched rat. It works under ground like the mole, and like the mole it also throws up hillocks of fine soil. Unlike the mole, however, it is exclusively a vegetarian, and lives on roots. It is nocturnal in its habits. It will run its tunnel along a line of trees, gnawing off the roots, and it is not usually content with part of the roots of the trees, but will eat off every root about 4 or 5 inches from the base of the tree. It carries the wood in its enormous pouches behind the ears. Those pouches will sometimes be distended 1½ to 2 inches at each side. The whole animal seldom exceeds 12 inches in length. We find that the spring slipper trap is the best to catch them.

I hope that next year I may be in a position to give you more information, both as to what we are doing up there and also the needs of the country.

Mr. Bent:—I would like to ask one question in reference to the very practical paper of our friend Mr. Wilson, whose remarks were all too short. I think if I understood him he stated that he thought that the Bordeaux mixture would have to be used to prevent cracking in pears. I would like to ask if there are any gentlemen present who can state whether the cracking in pears can in this way be prevented.

Bordeaux Mixture for Pears.

Mr. Kipp:—I experimented with this myself and have been very successful. I tried it on the early pears that ripen in July. I used to have them clean and nice, but they have since begun to crack, and they would get black and insipid and woody. So I went at them with the mixture, and I think I can bring them back to their original state. I think in about two more years I will have them all right again.

Mr. Hutcherson:—I have experimented a good deal with the Bordeaux mixture. Like Mr. Kipp, I have seen that pears were better some years than others. One season I sprayed, and I thought the pears were much better, but the difference might have been in the season. The next year I left one tree that I didn't spray at all. Another tree I gave one spraying, another tree two sprayings, and the balance three, and I may say the difference was quite noticeable.

Mr. Wilson:—I can pretty well corroborate what Mr. Hutcherson has just said. I have tried it, and the difference was very well marked indeed.

Mr. John King:—I would like to say one word about what I witnessed last year. In one certain garden in this city there are some Keifer pear trees. One tree is planted in very deep soil and dry subsoil. I took 300 weight from that tree, and I don't think there was a crack on them. On the other side of the garden there are eight of the same kind of pear trees with a poor, gravelly, wet subsoil, and you couldn't find a pear on either of these trees that was not black and cracked. You might spray these trees from year to year, and you wouldn't cure that crack unless you drained the land and gave the trees a good subsoil.

Mr. Kipp:—I think now is a good time to bring up the subject of a standard box for packing our fruit in. I have had fruit-growers tell me that they get as much for a small box of fruit as for a big one. Perhaps somebody can solve that problem and let me know. I think we should decide on some standard box.

The consensus of opinion seemed to be that it was impracticable to establish a uniform size of box at the present time.

Moved by Mr. Vedder, seconded by Mr. Hutcherson —

“That a committee be appointed to take this matter up, and that they be requested to endeavour to have the Dominion Government enforce regulations making legal a standard box for the Dominion of Canada.” Carried.

Moved, seconded and carried:—

“That Mr. Hutcherson, Mr. Sharpe, Mr. Palmer and Mr. Hadwen be this committee.”

Experimental Work.—By T. A. Sharpe.

The question that I have to bring before you is with regard to the black spot on apple and pear trees. It is a question that I have been studying, and I can only give you the results of my investigation.

I believe that part of the reason why our orchards in this lower country are so much affected with this, is owing to the absence of lime and potash in sufficient quantities in the soil to make a first-class growth in timber, and to prove that I will give you the result of my own experiment and investigation.

In the spring of 1890 I planted on the Experimental Farm an orchard **Black Spot.** of over 40 varieties each of apples and pears. Owing to the lack of time, as the farm was then a wilderness, I did not take out quite a number of big fir trees that were scattered through the orchard. These I took out in the fall of 1890, but as we grubbed them, and they were liable to fall in any direction, we had to remove almost all the trees we had planted. We took them up as carefully as we could, and in order to compensate the trees for being removed in putting them back we put in three or four or five shovels full of burned sand and ashes from the fir trees in the bottom of the hole, and put some earth on top of it and covered the roots with clean earth, and then put some of this burned sand and ashes on top. The subject of black spot did not immediately interest me, but I noticed in succeeding years that these trees were not affected with it except to a very limited extent, while the trees that were in the old orchard suffered in the summer of 1890 and again in the summer of 1891. Just here I might say that this is sometimes confused with sun scald. To show you that I do not consider this is sun scald I have several trees that last season were not affected until the latter part of the season, say August or September, so it could not have been sun scald. There were no extremes of temperature to affect them. I noted this, but I did not altogether ascribe it to the ashes and lime. I was very particular in pruning to disinfect my pruning shears every time I made a cut or removed any of the bark.

In the fall of 1890 we received about 40 or 50 varieties of apples from **A preventive.** different nurseries in the East, and I planted them in the old orchard. In the summer of 1891 some of them were affected quite seriously. Some of them were so bad I didn't plant them out in the orchard until 1893; but all these years I was investigating, and in 1893 I treated all these trees that I planted out with from two to three pounds of slaked lime. Some of these trees I had planted in the orchard in 1892, and these were affected with this canker, and I treated them all. Again, in 1894 I planted another orchard of trees that were received from different nurseries. Some of these were affected in the same way. I treated them all, and up to the present time I have only noticed two trees so treated with lime, or lime and ashes, that have been affected with this canker. I do not

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Mr. Mead:-- troubled very mu I went to work t cutting and cutti several now just Mr. Sharpe's turri stopped. It is a I would like to a used?

say that this is a remedy, but I believe it is a preventative to a certain extent. I believe it gives the tree additional vigour.

A year ago I was talking to a gentleman who had suffered a very great deal with his pears and apples. I mentioned this treatment that I had given, and he said he would try it, and I have heard that he is very hopeful that it would at least have a good effect in his case.

Twenty-five years ago I was talking to a gentleman who was sent out by the Board of Admiralty to buy timber for the Admiralty in England. He condemned and would not buy a lot of timber which was very fine looking, apparently, and the reason he gave to me was that it had been grown on land that lacked lime, and it would not have the resisting power; it had not the density he was seeking. I do not mean to say that this lime or ashes would give any more vigorous growth, because we have enough of that already, but what we want is a healthy growth. We want vitality, and I believe it is necessary for the best results to distribute a little of this lime and ashes every year. I have noticed that our land is very responsive to a dressing of ashes. I have noticed that if the application was succeeded by a rain-storm, that in from ten to twenty days the foliage would assume a darker and healthier hue, showing that it had got the benefit at once; and I am satisfied that in a year from now I shall have it to report to you that the application of the lime in my case has helped to protect my trees from that disease. It does not cure, but all I wanted was a preventive, and, as far as my experience goes, it has answered the purpose.

Corroborative Evidence. Mr. Balfour:—I have something to say in corroboration of what Mr. Sharpe has brought forward. About the same time he mentioned I planted a small orchard in heavy clay soil, which was considered not the very best. The land had been heavily burned. I was not living on the place, and, consequently, had no stock and no manure to put on the soil, so that the trees made very slow growth. There were 130 trees. It was in the spring of 1891 I planted them, and to this day there is not a single tree that has a canker. My neighbours who have orchards planted in similar soil, living on their property and applying heavy coats of manure, have many of their trees badly diseased, and many have been replaced with others. My experience has been entirely corroborative of Mr. Sharpe's, and I believe that a soil too heavily manured forces the growth too fast, and is one of the principal causes of this disease.

Mr. Butchart:—I find where I put hen manure around my trees that the black spot does not appear, and all the other trees are affected. I would like to ask Mr. Sharpe whether he thinks the Bordeaux mixture has any effect on the black spot on the trees?

Mr. Sharpe:—I think the only results would be from the amount of lime there would be in the Bordeaux mixture.

Mr. Butchart:—Since using the Bordeaux mixture I have not found any marks of the black spot, and I think that is the cause of it.

Mr. W. Grimmer:—I think the trouble arises from the soil. There may not be, as Mr. Sharpe says, sufficient lime or potash in the soil.

Mr. Mead:—With reference to Mr. Sharpe's remarks, I may say that I have been troubled very much with this black spot. I planted out one season about 60 trees that I lost. I went to work to cut out all these spots that I possibly could, and I found I had to keep cutting and cutting till there was scarcely any bark left on the tree at all. In fact, there are several now just in the same condition. I have not been able to find a remedy so far, but if Mr. Sharpe's turns out to be satisfactory, I think possibly the black spot may be eventually stopped. It is a great loss when we are just beginning to receive a revenue from these trees. I would like to ask Mr. Sharpe what quantity of lime and potash he would recommend to be used?

Part of his Religion. Mr. Sharpe:—In my case it was partly an experiment. I just dressed the young trees with about 1½ or 2 lbs. of the slaked lime. The reason I used it at the time was because it was some that had got air-slaked, and was no use for anything else. I just scattered it on the soil for a radius of five or six feet. And the same way with the ashes. I now make it part of my religion to save the ashes from every tree and every bush that we burn. I have not used any stated quantity, but just distributed it as far as it would go. If the ashes are from a fir tree, where there is a good deal, I use three or four shovelfuls, on account of the quantity of sand with it. But where there is less sand and stronger with potash, I would use less. In the analysis of the wood and leaves of apple trees there is about 7 per cent. of potash; but the leaves are shed and blown away, and the tree does not get the benefit of the decay. In the seed of fruit trees there is a much larger percentage of potash. There is a heavy drain of potash on the soil in a tree producing fruit. Our fir and cedar trees that make such remarkable growths are remarkably deficient in potash. I just mention that to show you that vigour or size of growth does not denote the amount of potash.

In speaking to Prof. Saunders on this point last summer, he said it was better to be very cautious in making any statement. I said that was true, but that the people under whom I am working are entitled to know what I am doing, and if I see that I am making progress it is my duty to let them know. He said most emphatically, yes, but always make it plain that in a case of this kind you do not give it as a fact but as a result of the investigation as you go along. So I hope you will bear this in mind that I do not say it is a preventative, but as the result of what I have accomplished up to the present time it is satisfactory to me so far.

Experience of Others. Mr. Thrift:—I would like to say my experience bears out what Mr. Sharpe has been saying in this matter, only instead of using lime I use principally soft maple ashes. Until four or five years ago I had only one tree that had this black spot on it. That tree I had occasion to move. It only bore once prior to my moving it, and when I moved it I put these ashes around it, and last year it bore again and had a better crop of fruit than it ever had. I think there is a great lack of lime in the soil.

Mr. T. Wilson:—In the fall of 1890 I planted 50 Gravenstein apple trees, and in the following spring and fall I put out another 200. In these first 50 I put out there were one or two vacancies, and I took trees from among these 200 and filled up these vacancies. In the summer following that I found that about 10 per cent. of those 200 trees were affected with this blight, and not only on the place where I planted this 200, but also among these vacancies that I filled up. And yet the original 50 that I planted in the fall of 1890 were not affected at all, and there is not one tree affected yet. They got exactly the same treatment.

A somewhat lengthy discussion here took place as to the desirability of making separate classes for upper and lower country apples in the New Westminster prize list. No action was taken.

The meeting adjourned till 7 p.m.

EVENING SESSION.

On motion of Mr. Moggridge a committee consisting of Messrs. Cunningham, Palmer and Hutcherson to revise the constitution, was duly appointed.

The election of officers was then proceeded with.

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Paper on Spraying and Pests.—By R. M. Palmer.

Mr. Chairman and Gentlemen,—

I do not propose on this occasion to place before you a detailed account of any particular pest or disease affecting fruit-trees, although holding myself at your service in that respect if so desired.

A few remarks and hints suggested by observations made during the past year may, however, deserve your attention.

Spraying is now generally recognized as a necessary part of the work attached to fruit-growing, but perhaps, on the whole, too much has been expected from it, especially as a means of restoring worn out or neglected orchards to a state of vigour and fruitfulness.

Professor Bailey has aptly said, that successful orchard culture depends upon four fundamental operations, viz.:—tillage, fertilizing, pruning, and spraying. For Lower British Columbia, I would add to this "thorough under-drainage."

This being the case, it is absurd to expect that spraying will accomplish that for which it was not devised, and so become a universal remedy for all the phases of ill-health and non-productiveness affecting fruit-trees.

Many instances come to my notice where spraying has been performed with unsatisfactory results to the sprayer, because the first principles of successful fruit-culture have been neglected.

Again, considerable spraying has been done on what may be called "general principles," without any definite knowledge of the pest or disease to be dealt with, or the proper methods to be employed. For instance, I have on several occasions been told that Bordeaux Mixture had no effect upon "aphis" or "caterpillars," or that they "got fat" on it.

Work of this kind can, as a matter of course, have only disappointing results, and I earnestly recommend the study of the pests and diseases of our fruit-trees, both from the Reports issued by this Association and the Board of Horticulture, and also in the orchard and garden, so that appropriate means may be used in fighting them. It is a good plan to note down dates when the pest or disease first appears or is noticed, amount of injury done, variety of fruit attacked, result of spraying, and other items, which will naturally suggest themselves.

Information so obtained will often prove valuable, as close observation has shown that insects and insecticides may vary either in resisting power or in effectiveness in different localities, and methods successful in one case, may under different conditions, fail to give satisfaction.

The orchardist himself will usually have to decide just when and how he should spray. Meteorological conditions, rain, wind, etc., will have a very decided influence upon the success of the work done, especially in spraying against fungous diseases.

A good deal of spraying has been done in too much of a hurry—the old saying, that "what is worth doing at all is worth doing well," applies with special force to the practice of spraying. A tree is well sprayed when every part of it is wet all over trunk, branches, and, if in foliage, both sides of the leaves, with the mixture used. We cannot expect that fungous growths will be destroyed unless they come in contact with the spray, nor that insects will commit suicide and search a tree for the poison which is calculated to cut short their existence.

On the other hand, I am glad to say that much good work has been done, and marked benefit has resulted from the careful and persistent use of spraying mixtures as advised by this Association and the Board of Horticulture.

Apple and pear trees which, owing to fungous diseases, had been for several years non-productive, or which bore fruit of no value, because covered with scabs or cracks, have completely changed their appearance since being treated—the foliage and new growth becomes healthy and vigorous, and the fruit, or a good percentage of it, free from spot and well flavoured.

Fungous Diseases.

The standard remedy for fungous diseases, "Bordeaux Mixture," as usually made, is sometimes washed off, shortly after application to the trees by heavy rains, and when this occurs, should be renewed as soon as the weather permits, its action being largely preventative. Once it is thoroughly dried on the trees, it is not so easily removed.

Spraying against our worst insect pest, "the woolly aphid," has not been altogether satisfactory. During the past summer, this pest did not as a rule make much headway, owing to spraying and the presence of large numbers of the larvae of syrphus and lace-winged flies which fed on the pest. About the end of August, these larvae became scarce, and the aphides increased very fast, the weather conditions, a warm dry fall long continued, just suiting their requirements.

Apple trees at this time being mostly full of fruit very little spraying was done and, consequently, the pest is as bad as ever and has spread still further by winged specimens, so that it behooves fruit-growers to be on the alert for its appearance this spring and take vigorous measures before it gets well established.

So far science has not evolved any spraying mixture which will exterminate the pest altogether where it has a good foothold, still the methods recommended will undoubtedly, if properly carried out, keep the pest in subjection and prevent any great amount of injury from their presence. The fact that certain varieties of apple trees are preferred by this pest for feeding and breeding grounds indicates the necessity of removing such trees from our orchards, and I strongly advise a close inspection of infected orchards with that end in view, and also the destruction of weak or unhealthy trees generally, as in accordance with a law of nature such trees are specially subject to attack by this as well as other insect pests and diseases. In spraying against this pest, while the trees are dormant, use the lime, salt and sulphur wash, or the lye and soap wash. It is important to be well prepared for spraying operations by having outfits and material ready for use. Winter spraying with strong washes should on no account be neglected.

In summer spraying against aphides, the most effective and economical work can be done while the pests are few in number. Under ordinary conditions aphides increase at an enormous rate from a very few individuals, which appear about the time growth commences or later in the season from winged specimens. I have found in summer work against aphides that two sprayings at close intervals give better results than a larger number at long intervals. It is a good plan to look over the orchard once a week during the growing season, and not allow any pest to get ahead. A little work promptly done will often save a great deal later on.

The shot-hole fungus and brown rot of plums has appeared to some extent, and it is good policy to give our plum trees a thorough spraying with Bordeaux mixture as a preventative measure. Trees which were infected with these diseases last season should be sprayed three times with the mixture, once before the blossoms expand, again when the fruit is well formed, and again ten days later. The dried or mummied plums which hang on the trees through winter should be collected and burnt, as it has been shown that these are the chief sources of infection.

Spraying Outfits.

Now a word as to spraying outfits. Most of these as fitted up for sale have too short a length of hose. In practice, 12 to 15 feet of hose and a light 6 or 8 feet extension rod will be found necessary to ensure thorough spraying, and enable the operator to reach all parts of trees of any size.

And, above all things material used. The division, the object of a thin film or covering
Mr. King:—I have me. I was called upon spraying and pruning planting trees that a to hold the moisture,

"Cum grano m salis."

got a number of trees and I suppose he thought of salt, with the result the cloth is not of the matters of this kind

Mr. King:—Went from London to prove

Mr. Jas. Mellis never had a visit from his visit very much, for people who are in instruction.

Bud bugs.

would like to ask about buds, as they appear heads and legs, and

Mr. Palmer:—wire-worms, usually which is really very buds are expanding deposited in the buds some young pruned

Mr. Wells:—I a large number of

Mr. Palmer:—to spread a cloth off, and then can be

Mr. Hutchers ago I was considered to spread a cloth cloth. But I think generally find the clean it is only once

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f these as fitted up for sale 2 to 15 feet of hose and a cessary to ensure thorough parts of trees of any size.

And, above all things, be sure to use a nozzle adapted to the work to be done and the material used. The Bordeaux mixture, especially, cannot be applied in too fine a state of division, the object of the operator being not to drench the trees, but to cover every part with a thin film or covering of the mixture.

Mr. King:—I have had a little to do with spraying and pruning, and this paper just suits me. I was called upon to spray and prune some trees last winter, but not only did they want spraying and pruning, but feeding as well—they were simply starved to death. I find, too, in planting trees that a lot of wet cloth about three or four feet down is a good thing. It seems to hold the moisture, and the better you plant, the better the tree.

Mr. Hutcherson:—Mr. King's recommendation of the cloth reminds me of a case which happened through a recommendation of Mr. King, "Cum grano salis." made in a paper he read two years ago. At that time he recommended the use of salt before planting a tree. A gentleman in Cowichan District got a number of trees from me at that time. He had read over Mr. King's recommendation, and I suppose he thought that if a little salt was good a lot would be better, so he put in a lot of salt, with the result that a good many of his trees died. I hope the recommendation of the cloth is not of the same description. A person has to be very careful in recommending matters of this kind.

Mr. King:—When I was a boy I remember seeing a farmer have 12 tons of old cloth come from London to plow in a young orchard.

Mr. Jas. Mellis:—Mr. Palmer came down to our part of the country last spring. We had never had a visit from anyone to give us any information about spraying, and we appreciated his visit very much, and I think if he visited almost every orchard it would be a great thing for people who are growing trees, as a great many do not know how to do without some instruction.

Bud bugs. Mr. H. A. Thompson:—I noticed last spring a number of my grafts would have quite a number of small black bugs about a quarter of an inch long, and at the approach of anyone to the tree they would tumble off. I would like to ask Mr. Palmer's opinion if he has noticed them. I think they feed on the buds, as they appear about the time the buds spring from the graft in May. They have red heads and legs, and the back is black.

Mr. Palmer:—I may say that I have seen the pest spoken of, they are the parents of wire-worms, usually called click-beetles, but I do not know that I have come across any remedy which is really very effective. They only work a very short time, just as you say, when the buds are expanding. I would recommend Paris green spraying, and a small amount of poison deposited in the buds at that time will answer the purpose. The first time I saw them was on some young prune trees, and they certainly injured a number of buds that year.

Mr. Wells:—I have found these bugs on pear trees. For years now they have destroyed a large number of the pear blossoms just as they open out.

Mr. Palmer:—About the only measure you can use with these at that time, would be to spread a cloth beneath the tree and jar the tree in the early morning and they will drop off, and then can be burned, or put fresh lime on the ground and jar the trees.

Mr. Hutcherson:—In connection with the spring-back beetle, I may say that two years ago I was considerably troubled with them. I found the only means that could be used was to spread a cloth under the tree and give the tree a jar and they would then drop on the cloth. But I think the better way to deal with them is to keep the ground clean. You will generally find them around the old sods, and I think if the ground in the orchard is kept clean it is only occasionally that you will be troubled with this beetle.

Mr. Veddar:—It is pretty hard on the fruit growers if something cannot be done to exterminate the pests from the Indian orchards.

Indian Orchard. Mr. Palmer:—This question of dealing with the Indian orchards of the Province is a very difficult one. We are in correspondence now with the Indian Department in regard to this matter, and I have the satisfactory hope of being able to deal with the pests found there.

A letter was read from the Standard Soap Works regarding soap they are manufacturing for spraying purposes, and it was resolved on motion of Mr. Wells to refer the letter to the spraying committee, and that the company be asked to send a sample to that committee to be tested.

Mr. Cunningham, on behalf of the Transportation Company, made the following report:—

C.P.R. Rates. We have had a very pleasant interview with Mr. Loutit, the representative of the C. P.R., and I think the company want to meet our views.

My doubts have been all removed as to the sincerity of this company in their desire to help us, and if they carry out the views advanced by their representative I have no doubt we will have a better system of transportation and better rates than we have ever had. The terms agreed to by the company are as follows:—There would be a charge of \$5.00 for shunting at way points. The freight on apples would be \$1.61½ to McLeod and Lethbridge, \$1.75 to Edmonton and \$1.45 to Calgary. The freight on B. C. apples will be \$1.12½ to all these points. There will be no discrimination against terminal points. A pass will be allowed to a distributing agent. Ventilated cars will be provided. The committee is requested to inspect a car that is now at the Westminster yard, and make such suggestions as to changes as shall be necessary. The through distributing rate on plums will be \$1.75—reduced from \$2.00.

On motion of Mr. Hutcherson, it was resolved to turn the work of the Transportation Committee over to the Co-operative Association as soon as they are in working order.

Shipping.

Mr. Catherwood read a paper on "Fruit Shipping."

I have not had a very extensive experience in shipping fruit, but what I have had has been thoroughly practical.

I might say that I went to the North West and Manitoba last fall **The North-West** in charge of the shipments of plums which were sent from Mission City.

Market. I carefully watched the fruit from the time it was picked here in British Columbia, till it was delivered to the consumers in the Prairie Provinces. I saw and noted the effects during the different stages of the journey. I shall deal first, and for the most part with the shipping of plums to the country east of the mountains, for that is the natural market for our surplus fruits, after supplying the Coast Cities and the mining camps of the interior. Of shipping to the Coast Cities, everyone here is more or less familiar so I will say nothing beyond the preparatory steps, and as to supplying the mining camps of Kootenay and Cariboo I do not feel qualified to say much, but this is a question that should be looked into and investigated, as there is a very extensive market there practically undeveloped, only waiting the solution of the problem of transportation.

Now, before the question of shipping is tackled, the style or kind of package to be used should be decided on. If this is done by the Association it will be much better as all the packages would be uniform and would greatly facilitate handling and shipping.

Handling the Fruit.

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Handling the Fruit.

After the fruit has been carefully picked and packed, if it has to be hauled to the steamboat or railway it should be done on a light waggon with good strong springs. If possible, the fruit should not be hauled on a lumber waggon without springs, especially if it is intended for a long distance shipment.

The next thing to be considered is the kind of car the fruit is to be shipped in.

Now, during the past season we had to use the ordinary box car with no means of ventilation, excepting small end doors open half way down from the roof and covered with wire netting, the consequence was, the fruit heated and a lot of it was lost.

Now the car that would answer best for car load lots to one point would be a refrigerator. But as there are a very few towns in the North-West that are large enough to take a car load at one time, most of the carload shipments will have to be distributed among two or more places, therefore a ventilated car would be required.

I think a short description of a suitable car would not be out of place here.

The kind of Car.

A ventilated fruit car would require to be a little higher than an ordinary box car, and should have openings at both ends from the roof to the floor, about two feet wide, the side doors should have open spaces the full height, there should also be open spaces at the top and bottom on each side of the side doors, about 8 or 9 feet long, and those at the bottom about 1 foot wide, while those at the top should be about eighteen inches wide. All openings should be provided with shutters, somewhat after the principle of venetian blinds, so that they could be closed or partially closed to keep out rain, snow or cinders.

The car should be provided with a perforated false bottom, raised a little off the floor, or the floor should have strips nailed across with open spaces between connecting with small openings at the sides to provide circulation of air from the bottom upwards. This latter provision about the floor might be dispensed with, but in my opinion it would make the car less perfect.

After the car has been carefully loaded (and this is a matter which requires great care and some experience, but which I do not intend to discuss in this paper), it should be sent by fast freight or by passenger train, if possible, as far as the first distributing point, at least, for time is of vital importance in the case of perishable fruits of this kind.

During transit the car should be frequently opened and the fruit examined, and if more ventilation is required all the openings should be left open, and even the side doors if necessary; even if cinders or wet

should come in, they will do little more than discolour the packages, while want of ventilation will ruin the fruit.

As to the shipping of cherries and berries, they will have to go by express, or at any rate they will have to go by an express train, as the so-called fast freight of the present is from a day and a half to two days too slow in reaching Brandon. The heavy crates and cherry baskets should be more open at the sides.

As to apples, they will have to be put up in barrels, to meet the wishes of the consumers in the Territories; they seem to be prejudiced against apples in boxes. One dealer told me that he would have to empty the apples from the boxes into barrels in order to sell them.

Now as to rates, I think we should leave that to the transportation committee. I think the C. P. R. will do the right thing by us, especially

if we show them that it is to their advantage as well as ours. The chief trouble in the past was that we did not really know what was a fair rate, but we have found out a little on that subject now, and we should endeavour to impress it on the C. P. R. officials, and I feel sure that when it is put to them in a proper light, they will give us a fair rate.

While we are looking after a fair rate there is another thing that must not be lost sight of, and that is quick transit—this we must have, whether we get the rate or not. The tea train service is very good, but this service does not last throughout the fruit season. I had intended to say a little about local shipping from the Islands in the gulf and along the river, but on second thought I will leave that to others who have had more experience, and who can no doubt tell just what to do, and how to do it, much better than I can.

Mr. Hutcherson:—I am very much pleased with Mr. Catherwood's paper. It seems to be more practical than most of the papers. It is the experience of a man who has been through the work, and these are the kind of papers we want.

Mr. Bent:—Mr. Hutcherson has said what I wanted to say. It comes from a man who has had practice, and he has not only had the practice, but he has also had the capabilities of taking in and reducing to practical use the experience he has had, and has succeeded in giving it to us in a very clear and vivid manner.

Mr. G. H. Hadwen read a paper on "Buying Fruit-trees."

MR. PRESIDENT AND GENTLEMEN:—In the buying of fruit trees it would be a very safe statement to make that the farmers of British Columbia expend every year several thousand dollars more than they should, and this in spite of papers read at these meetings or articles written in the press on the fascinations of the tree peddler and his picture book.

Too much spent. Therefore, I thought it might not be out of place to prepare a short paper on this subject, not with the idea of presenting anything new, but rather on the old principle that a constant dropping wears the stone away.

The selection of varieties will depend on many considerations into which I do not pretend to enter.

But an important guide in this matter is a visit to your neighbour's orchard during the fruiting season. Varieties doing well there are much more likely to do well with you than varieties recommended by the Ontario, California or Nova Scotia Horticultural Societies.

Localizing varieties. As a rule the fruit in one district narrows down by degrees not only to one kind of fruit but one or two varieties, and that district becomes known for that particular kind, and this may be expected in this province of ours where great differences of climate occur in a few miles. The market or future market has also to be taken into consideration.

If the orchard is one for private use plant as many varieties as you may fancy, but if it is on a commercial scale I would not advise planting less than 80 of one kind out of 200 trees, or less than 100 in an orchard of 600.

Presuming that the choice of varieties is now determined and that the site and ground are suitable for the fruit, the question arises as to where and how to buy. If possible visit a reliable nursery and choose the stock yourself.

If not, then write to one for quotations and obtain as much information from your neighbours or other persons qualified to know as to the best nurseries available.

Patronize home industry. Patronizing home industries has, in this case, a good deal of satisfaction in that it is easier, if everything is not satisfactory, to obtain redress from a nurseryman in British Columbia than one in Oregon or in the East.

Buying trees from the Eastern Provinces is not likely to continue, I think, owing to the adverse conditions. Remember that new varieties with a delicious sub-acid flavour, highly coloured, etc., are very expensive and what the dealers make a good deal of

profit in. In buy that their creden profess to be ager cheapest trees the you with an ord variety you want pay him, for they

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profit in. In buying from peddlers great caution must be used. In the first place make sure that their credentials are good and that they really are agents, because there are men who profess to be agents for some well known nursery and who, at the end of the season, buy the cheapest trees they can find, very often only culls from the nursery represented. If he presents you with an order form to sign cross out the conditions which allow him to substitute a variety you want for one you do not, and examine the roots when you get the trees before you pay him, for they are equally important with the top.

It is generally admitted that the younger the tree is the more roots it has in proportion to the stem, as sent out from the nursery, and the less it will suffer from the transplanting.

In the yearling the roots are nearly all feeding fibrous roots situated close to the stem; in the 3-year old the roots have gone 18 inches to 3 feet from the stem, and consequently the greater portions are cut off with the spade when lifted.

Again, as the row of young trees remains in the nursery practically just as it is until sold, the 3 or 4-year old, which you buy, is what is left after other people have had the pick of that row as yearling and 2-year olds. If the trees do not thrive do not blame the nurseryman without first making sure that the fault does not lie somewhere else, either from the roots being exposed too much before planting or from the land being too wet.

In conclusion, I will say that I do not think farmers realize the advantages offered to them in the form of the Agricultural Bureaus in Victoria and Ottawa. From my experience the officers of these Departments have always been ready to give information of all kinds and assistance in many ways, and in a similar manner the officers of our Horticultural Society should always be ready to assist anyone in doubt.

EXPERIMENTS IN SPRAYING.

Paper on "Experiences in Spraying during the year 1895" read by Mr. H. T. Thrift.

MR. PRESIDENT AND GENTLEMEN,—In submitting this paper for your consideration I have no striking record of anything valuable to offer—nothing accomplished in the interests of fruit culture, simply a record of failure, with still a possibility for future advantage through avoidance of that particular line of action that resulted in failure during the past season. Hence it is with the earnest wish that others may profit by my experience that I now place on record the following resume of my spraying operations.

To begin then, I gave my bearing trees, early in the spring, a good wash with the concentrated lye solution as advised by the Horticultural Board, after which the trees presented a particularly healthy appearance, with promise of a great yield of fruit. Up to this time I had always used as a spraying mixture, after the application of the lye, either a solution composed of whale oil soap and quassia, or one of my own concoction, and composed of pearline, wormwood and tansey, with excellent results both on hop-vines as well as on the fruit trees.

But at this time my supply of those materials was completely exhausted, so, as I had a considerable supply of blue vitriol on hand, purchased the previous season, also part of a barrel of lime, I concluded to experiment with the Bordeaux mixture as recommended by horticulturists for spraying, so without more ado I consulted the prescribed formula for the mixture and made it up in the regular order, adding to the mixture the regulation quantity of Paris green—this, of course, for the special advantage of the codlin moth and other pests of like ilk. So, after all the preparations were complete, I was ready for the onslaught, the spray pump was brought into requisition. The fruit had just set on a number of the trees, while on others it was not so far advanced.

There was great promise of a splendid crop of fruit. I only had occasion to make one application with my precious mixture, that single application doing most effective work—certainly the fungus spots on the fruit were pretty well cleaned out for that season. The experiment taught me that there were other things necessary in making a successful spraying mixture besides bluestone, lime, Paris green and a good spray pump. It also showed me that there are some varieties of fruit trees that are much more tender than others. 1st, I discovered a short time after the spraying that it had killed a considerable portion of the foliage, buds and all, on the lower boughs of some of the plum and apple trees, the effect being more noticeable on the plum than on the apple trees. 2nd, It was worse on apple trees than on some varieties of pear trees, in fact I really believe (whilst I don't propose to try the experiment in the same way again) that some Bartlett pear trees were benefited by the operation, certainly I never had more in quantity or better fruit on the trees treated before. 3rd, I found that the Baldwin, certain trees of the Golden Russet variety, the Kamnus and Jonathan, withstood the dose better than any other, and that the fruit (some specimens of which I beg to submit, showing the action of the spray on the fruit) was less affected than some other varieties. 4th, The fruit was completely destroyed on the Ben Davis, Yellow Wilson, Duchess of Oldenburgh and Western Beauty, while the fruit on a number of Russet trees was seriously affected. 5th, While the foliage on some varieties of pears was not so seriously injured as others, I found both fruit and foliage on Keiffer's Hybrid very much injured, whilst the plums, principally Coe's Golden Drop and Green Gage, were almost entirely destroyed, the few specimens left on the trees being distorted in shape and having small drops of gum exuding all over them. This hardened as the season advanced and prevented the development of the fruit. And now for the cause of this failure and loss.

I believe from what I have read about this matter that the whole cause of the thing lay in the fact that my lime used in the spraying mixture was not so fresh as it might have been. I can see no other reason for it, as I followed the formula particularly in making up the mixture, and in this connection I think the recommendation of Mr. R. M. Palmer, Inspector of Fruit Pests, in his communication to the Board of Horticulture, dated August 27th, 1894, see page 1065, Report on Agriculture for 1894, should be adopted.

I believe that the regulations adopted by the Board, and as enforced by the provisions of the Horticultural Act and its amendments are absolutely necessary and essential if the development of fruit culture shall attain the proportions in this country that many of us believe it is destined to reach, still I would suggest—are not some of those regulations of rather an arbitrary character? For instance, a man may be an excellent farmer, well up in the principles and practice of agriculture; he has a small orchard of fruit trees; he does not consider that there may be any great advantage in having them; he has planted them because it is the custom to do so. Now this man considers his time would be wasted in pottering around his few trees, purchasing a spray pump and making up spraying mixtures, etc., etc., and yet

he is just as much liable to several acres into fruit. Hence I believe the ingredients for making for use (by simply adding else that thoroughly districts in the event

In conclusion, whilst many of the neighbourhood where of those pests have necessity for action in near future be clear average, still a large on it.

Good Lime is an essential.

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Must be fresh.

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Follow the Formulæ.

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he is just as much liable to the penalties of the Act for neglect as the man near him who has several acres into fruit trees and who, presumably, depends on his fruit crop for his living. Hence I believe that either the suggestion of Mr. Palmer should be followed, and the ingredients for making the various solutions should be put up in solid form, mixed and ready for use (by simply adding the water) under the supervision and guarantee of the Board, or else that thoroughly competent parties should be appointed to do the spraying in the several districts in the event of neglect or refusal of parties interested doing so.

In conclusion, Mr. President and Gentlemen, it is very gratifying to me to report that whilst many of the pests incidental to fruit culture were very much in evidence in the neighbourhood where I live during the past season, still by persistent application the ravages of those pests have been materially reduced, and as the people come to understand the necessity for action in the matter for their own protection, I believe our orchards will in the near future be clear of those pests. And while the crop of fruit was considerably above the average, still a large amount of it was not of first-class quality owing to the fungus spots, etc., on it.

Mr. Palmer:—I would like to say that it has been very good of Mr. Thrift to bring this matter before the meeting, because in spraying we learn a great deal more from failures than from successes. I have no doubt the chief cause of the trouble has been in the lime, as I have used the Bordeaux mixture for several seasons with the very best results. I have always been very particular about the lime. The lime in that mixture is put in for a particular purpose, and unless it is good it will not attain that object.

With regard to the use of Paris Green, the same thing applies. A certain amount of lime is always added, but if it is not fresh slacked lime it does not have the effect desired.

Mr. Cunningham:—I have experimented with the Bordeaux a good deal during the past year at considerably greater strength than the rule, but I was very careful to select lime that was fresh. I had to discard several packages of lime that were not fresh. I think this is where the whole secret lies. I know it is difficult for a man living in the country to obtain lime of the condition for good spraying. As far as I am concerned I can recommend the Bordeaux mixture, as I have tried it time and again, and if I live during this year, I shall use it at still greater strength than that prescribed by the Board.

I have some goose-berry bushes that I was determined to throw out of the garden, they were so affected with mildew, but I thought I would experiment with this strong solution of Bordeaux mixture, and to-day they are the most healthy bushes in the garden. I applied it half a dozen times—35 gallons to 4 lbs. of lime, and 4 lbs. blue vitriol.

Letter from J. Fletcher, Experimental Farm, Ottawa.

MY DEAR MR. MACGOWAN:—Your letter kindly inviting me to prepare a paper for your annual meeting, came to hand while I was absent from Ottawa.

It is rather late to prepare a paper, but I shall be obliged if you will convey my greetings to the members of your Association, and express my wishes that the meeting may be successful and useful. There are just two points to which I should like you to draw the attention of the British Columbia fruit-growers—one is the importance of using the remedies suggested exactly in accordance with the recommended formulæ. In Mr. Anderson's excellent report for 1894, there is a

**Follow
 Formulæ.**

valuable article by Mr. Palmer, giving formulæ for most of the mixtures which experience has shown us are the best. Not only is it advisable for fruit-growers using these to follow the instructions, but to know what they are using and for what pest, so that, in case of either success or failure, they may be in a position to discuss the matter at the next annual meeting. In the case of any doubt as to the best remedy, or the way of mixing or applying them, definite instructions can be obtained with very little delay by writing to either Mr. Palmer or myself. Both of us will be always pleased to give any assistance in our power, and I feel confident from the number of mistakes which have come under my notice that anyone who will take this little extra trouble will be well repaid for it.

The other subject which I should like to mention is the Pear-leaf Blister-mite. Mr. Sharpe, at Agassiz, has had good results with the lime, sulphur and salt mixture, No. 2, page 1071 in Mr. Anderson's report. It will be well for anyone whose trees are infested with the Pear-leaf Blister-mite to try this remedy, and I shall be much obliged to anyone who will let me know the results of the experiment.

As tobacco and soap wash are so much more popular in British Columbia as a remedy for plant lice than the kerosene emulsion, it would be well for some of your members to try the cultivation of tobacco in several districts, even if this experiment were confined to only half a dozen plants.

As Mr. Sharp will probably be at the meeting it will be well to ask him to give his experience in treating the Pear-leaf Blister-mite.

Please assure the members of your Association that I am entirely at their service, and shall at all times be pleased to give any information in my power.

FRIDAY, 7.45 P. M.

Mr. T. G. Earl, President, in the chair.

Report of the Auditing Committee read, and on motion of H. Kipp, seconded by G. W. Henry, the Treasurer's report was adopted.

It was resolved, on motion of G. W. Henry, seconded by Mr. Palmer, that "Whereas, at the annual meeting of this Association a resolution was passed that all delinquent directors be notified that if their subscriptions be not paid within a month from date of notice being served that their subscriptions are due, their names will be removed from the list of Directors; and whereas the passing of this resolution may have a tendency to decrease the membership of this Association, resolved, that it is very essential that the Secretary use his best efforts in collecting the unpaid subscriptions and in getting all new members possible."

It was resolved, on motion of Mr. Kipp, seconded by Mr. Hadwen, that the next quarterly meeting of the Directors of this Association be held at Vernon, on Tuesday, May 5th, and be open to the public.

The meeting then adjourned.

An informal meeting was held at the Lytton, was in the presence of Hutcherson, Ladner

A Bank Account. Governed by the Bank of Montreal.

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It was resolved Government approval of the Bank of Montreal

Meetings in Upper Country.

the Upper Country, send a strong Lower Country, held as follows: Sunday, May 27th; Vernon, evening, 29th. At the question of co-operation of local

Mr. Earl opened the Growers Committee, be considered are the freight rates and market

A market for fruit.

necessary to develop the land possessed by the Canadian Government placed upon the market

The modus operandi.

A DIRECTOR'S MEETING.

NEW WESTMINSTER, B. C., April 14th, 1896.

An informal meeting of the Directors of the Horticultural Association of British Columbia was held at the Hotel Guichon yesterday afternoon. The President, Mr. Thos. G. Earl, Lytton, was in the chair, and there were also present Messrs. G. W. Henry, Mission; E. Hutcherson, Ladner's; R. M. Palmer, Victoria; and A. H. B. Macgowan, Secretary-Treasurer.

It was resolved that a banking account for the Association be opened with **A Bank Account.** the Bank of Montreal, New Westminster, with which institution the Provincial Government grant and other moneys received from time to time shall be deposited. All withdrawals of money shall be by cheques, signed by the President, or Vice-President, and Secretary-Treasurer.

It was resolved, that the Honourable the Provincial Treasurer be requested to pay the Government appropriation of the Fruit-Growers' Association to the credit of the Society, at the Bank of Montreal, New Westminster.

The President, Secretary, and Messrs. Henry and Palmer were **Meetings in Upper Country.** appointed a committee to interview the Canadian Pacific Railway authorities with the object of securing reduced passenger rates and stop-over privileges for those attending next month's meetings of the Association in the Upper Country, at which it is hoped there will be a large attendance. It was decided to send a strong Lower Country representation to those meetings, which it is proposed shall be held as follows: Salmon Arm, on the evening of May 26th; Kelowna, on the evening of May 27th; Vernon, at 4 o'clock in the afternoon of 28th; and Armstrong the following evening, 29th. At these meetings special prominence will be given to the discussion of the question of co-operation in shipping fruit. Every encouragement will also be given to the organization of local associations of fruit-growers. Meeting adjourned.

At Salmon Arm.

SALMON ARM, B.C., May 26th, 1896.

Mr. Earl opened the meeting by stating that this was the first meeting of the Fruit-Growers Committee on Co-operative Marketing in the Upper Country. The main questions to be considered are the best methods of disposing of fruit and other produce grown in the valley, freight rates and markets. He then introduced the president of the Central Exchange.

Mr. J. W. Henry said that he would speak about the British Columbia **A market for fruit.** Fruit Exchange, and to place the matter in a proper light, he commenced by reading the principal rules and by-laws of the Exchange. Mr. Henry pointed out that local markets will be overstocked and that it is now necessary to develop the markets of the North-West. He pointed out the advantages possessed by the California growers from the careful manner in which their fruit is packed and placed upon the market.

The modus operandi. Now, although we can produce very superior fruit, and so far local unions have been fairly successful in shipping to the North-West, he said it is considered advisable that the local unions existing, should combine and ship together so that prices may be maintained on a paying basis, and that



a proper distribution of the fruit and other products can be made to the different towns without causing a glut at any point.

The membership fees clause was read and explained; voting methods and reasons for same; officers and management; amount of stock and handling of same; raising of funds for business purposes; withdrawal of members; division of profits, pointing out that all profits after payment of necessary expenses are paid to the shippers of produce; subscription to shares and methods of assessment; the method of dealing with surplus fruit, although at present there is no prospect of this; buying of fruit to make up shipments.

Mr. R. M. Palmer, who acted as secretary for the meeting, spoke on the markets of the North-West, and the necessity of co-operation to ensure the profitable marketing of fruits there; also that the packing and grading of fruit be uniform.

Mr. A. J. Palmer asked for information as to the acceptance by the Exchange of members of a Local Farmers' Union.

Mr. J. W. Henry answered, explaining that it is not the intention of the Exchange to interfere with the right of private sale of fruits or other products.

Mr. Palmer asked for information in regard to the formation of the Farmers' local union. In reply, it was stated that although it had been decided to form a union, that no permanent organization was formed.

Mr. Calhoun asked for information from the chairman as to freight rates and the amount of reduction which has been obtained.

Mr. Henry replied to this, stating the rates and privileges given by the C.P.R. to the Fruit Exchange, and that the company had decided to build special cars for the transportation of fruit.

Mr. Earl, in speaking of the Farmers' Union, stated that it must be borne in mind that the Vernon and Kelowna districts would be shipping produce to the Kootenays, and it is advisable, indeed necessary, to combine with other districts in shipping to secure fair prices; there would also be a saving in the handling of the product.

Mr. A. J. Palmer said that he was not a member of the Farmers' Individual Union. He had, during the past few years, raised large quantities of garden produce. Two years ago he had hired a man in Calgary to sell his produce there. The first lot of produce was detained in the sheds for several days, then, after shipping several lots of produce, he received word from his agent that the stuff was not arriving. After a while word came that the produce had all arrived at one time, but in a worthless condition. The season's work resulted thus, after making continuous shipments, owing to the bad condition of the produce on arrival, caused chiefly by detention en route, sufficient cost was not realized to pay the agent. He hoped that the Exchange will be able to make such arrangements that in future freight rates and facilities for shipping will be made so that he would be enabled to resume his gardening operations at a profit. The needs of this section in the season for shipping early vegetables is a way freight car, say two days in a week.

Mr. Hutcherson asked for information as to the amount of produce which would be available for shipment if this facility was offered.

Mr. A. J. Palmer stated that the rates charged would determine the quantity of produce raised. The North-West requires early vegetables for at least a month.

R. M. Palmer asked if the rates to Kootenay are satisfactory.

These were given as \$9.20 per ton for potatoes; 63 cents per 100 to Three Forks; car to hold 18 tons.

Mr. Earl pointed out the need of co-operation with Shuswap in shipping to the Kootenays.

Mr. Henry stated that produce, and cost

It was here stated that the cost was \$1.13; from Salmon

Co-operation necessary.

Mr. R. M. Palmer stated that the Exchange, and pointed out

Mr. Earl suggested that the Exchange should emphasize the

Mr. Earl spoke of the fact that Mr. Hutcherson and some other farmers had

and some other farmers had joined the Exchange.

Rules and regulations.

Mr. R. M. Palmer stated that the Exchange is able to co-operate

Mr. Harris stated that the Exchange is a season.

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the manager of the greater part of the

G. W. Henry stated that the Exchange is successful in the

and other produce

Mr. Henry stated that the Exchange sometimes received orders for vegetables and other produce, and could handle small quantities.

It was here stated that the rates to Slocan, east of Otter Lake, from Vancouver were, \$1.13; from Salmon Arm, \$2.63; general merchandise, \$1.29.

Mr. Calhoun stated that to make farming profitable here he had come to the conclusion that co-operation in marketing was necessary. The crops can be raised here, but the cost of marketing at present was too great.

Railway rates must be reduced. He hoped to see this idea worked out.

Mr. R. M. Palmer said he was glad to find this meeting was strongly in favour of co-operation, and pointed out that prompt action should be taken.

Mr. Earl suggested that a strong committee should be appointed to draft rules and regulations, and emphasized the losses which arise from conflict between individual shippers.

Mr. Earl spoke also on the high passenger rates.

Mr. Hutcherson said that the Fruit-Growers' Association was started in 1889 by himself and some other fruit-growers. The Horticultural Board was an offshoot, also the B. C. Fruit Exchange.

Mr. Henry stated that some copies of the rules and regulations of the Exchange, which would form a basis for rules of a local union, were available for distribution, and pointed out that it was necessary that the B. C. Exchange should be posted on the amount of fruits to be handled.

Mr. R. M. Palmer pointed out that in the best interests of the district it would be advisable to co-operate.

Mr. Harris asked if the B. C. Fruit Exchange could arrange to ship garden produce this season.

Mr. Henry answered that in his opinion it would be advisable to co-operate with the Vernon and Kelowna districts in this matter.

Mr. Earl and Mr. Palmer spoke to the same effect.

Mr. A. J. Palmer said that he believed the Vernon and Kelowna people had been very successful in the business done the past season.

It was decided to communicate with the secretary of the local union the result of meetings at Vernon and Kelowna.

Mr. A. J. Palmer proposed a hearty vote of thanks to the visiting committee. This was seconded and passed unanimously.

At Kelowna.

The second meeting was held at Kelowna on May 27th, Mr. R. M. Palmer acting as secretary.

Mr. Earl opened by saying that this meeting was called by the British Columbia Fruit-growers' Association. The country now was producing a large amount of fruit, and we have in Manitoba and the North-West a good market for the produce raised. In order to reach these markets to the best advantage co-operation was necessary. In California organizations

to handle exported fruit had done much good. It was now time for us to act on similar lines. He hoped that a thorough discussion would take place as to the best manner of carrying out these ideas. Mr. Henry was the manager of the British Columbia Fruit Exchange, which would probably handle the greater part of the fruit exported this season.

G. W. Henry said the Exchange had been formed for the purpose of marketing our fruit and other products, and although at present the amount of fruit available for sale in this

district was limited, yet he hoped good would result from this meeting in a better understanding of the situation. Commencing with the objects of the Exchange, Mr. Henry explained the principal rules and by-laws governing it. The markets of the North-West required a certain amount of fruit, and it was important that not more than that amount should be placed at the different points, so that fair prices could be maintained. Some losses occurred last season in shipping because proper cars for fruit shipping were not available, but now the C. P. R. are building cars especially made for holding fruit, and these would be available the coming season. Local unions each shipping fruit to the North-West would be in no better position in regard to

Effects of competition.

shipping than individuals, in some cases the evil effects of unnecessary competition would be increased. In shipping fruit a direct charge will be made against each package to cover cost of handling and shipping, and returns would be made to the growers of uniform prices for each grade, the Exchange assuming all responsibility in connection with the marketing.

Mr. Pridham asked if fruit would be shipped in car lots by fast freight.

Mr. Henry replied in the affirmative, and stated that last season there was no delay in getting the fruit through. In regard to rates, he gave those offered by the C. P. R.

Mr. Pridham asked if in case a carload of fruit was detained en route the loss occasioned could be recovered from the C. P. R.

Answer—The presumption is that it would be.

Mr. Stirling asked what other products besides fruit the Exchange would handle.

Mr. Henry stated that the shipping commenced with strawberries, and that local markets would be handled as well as the export trade. Plums would be handled principally in the North-West. He was of opinion that vegetables could perhaps be better handled in the Kootenay market by the existing Farmers' Union of Kelowna. A certain amount of tomatoes and vegetables could be handled by the Fruit Exchange with the fruit sold, and this they would be glad to have, but would want some information as to the amount required to be sold. Apples and plums of fine shipping quality could be grown in this district.

A large trade. Mr. Hutcherson said that he was firmly of opinion that a large trade could be built up with the North-West in tomatoes, melons, etc., and that the visiting committee would take this matter in hand if desired.

Mr. Stirling asked for information as to how the local union could unite with the Fruit Exchange, as he was firmly of opinion that co-operation was necessary to secure best results to shippers.

Mr. Palmer said that it might perhaps be advisable to form a small local union for the purpose of handling fruit through the British Columbia Fruit Exchange.

Mr. Hutcherson said that he saw no objection to individual members of the local union joining the British Columbia Fruit Exchange.

Mr. Earl said that the agents employed in the North-West would increase the amount of business done, and that it was necessary to have the fruit, etc., shipped in the best possible manner as to grading and packing.

Mr. Palmer stated that at a meeting held at Salmon Arm the previous evening this committee had advised the co-operation of that district with Kelowna in shipping garden and farm produce to the Kootenays, and asked that this matter be taken into consideration and communication held with that body.

A discussion took place as to packages for different fruits suitable for the markets.

In reply to a question from the Chairman, Mr. Crozier stated that the questions brought before the meeting would receive the careful consideration of the local union.

The meeting concluded with votes of thanks to the visiting committee, and for the use of the hall.

The third meeting acting as secretary

T. G. Earl of Mr. Earl. This was Fruit Exchange by that dealers in the growers in the market fruit handled by the

Home vs. Foreign Supply

and to meet these Fruit Union has mentioned loss of are now being built distributing at times necessary to prevent to ship vegetables developed in these

Terms and Conditions.

pointing out that would be sufficient procedure in case rates for shipping American lines were far, these low rates season. Distribution lines. In regard granted. If it were C. P. R.

Tom Wilson Sicamous with a view it would be a very

Mr. Henry

Proportion of Charge.

small matter like the Association.

Mr. Postill from Vernon.

Mr. Henry

At Vernon.

The third meeting in this series was held at Vernon on May 28th, Mr. R. M. Palmer acting as secretary.

T. G. Earl opened the meeting by asking Mr. Palmer to read a few notes prepared by Mr. Earl. This was complied with, and then Mr. Henry introduced the question of the B. C. Fruit Exchange by reading from the rules and by-laws. Mr. Henry in speaking to these, said that dealers in the Coast Cities were not inclined to render much assistance to our fruit-growers in the matter of marketing their produce, being already satisfied with the imported fruit handled by them in the past.

A great many of our fruit-growers are not as yet practical men, so that individually it has been impossible to take advantage of our own home market to the best advantage. In shipping to the towns of the Northwest, the difficulties in the way of individual shippers are still greater, and to meet these, local associations have been formed for shipping fruit. Now a Central Fruit Union has been formed from these local unions, and including others newly formed. He mentioned loss of fruit from improper cars, and that ventilated cars for the shipping of fruit are now being built and would be available for use this season. He also mentioned rates for distributing at towns along the line, the formation of a strong central association being necessary to prevent ruinous competition in this market; that at present it was not intended to ship vegetables from the Coast, but he thought that here in the interior a trade could be developed in these. There is no intention of interfering with the right of private sale of fruit or other produce. Shipping charges against fruit were 2 to 3 cents per package, and he explained that in case of it being found necessary to repack fruit, the cost of doing this will be charged against that particular lot of fruit. As to subscription to shares, he showed how it was payable, pointing out that it is not intended to call up more than 20 per cent. of the stock, as this would be sufficient at present to carry on the business of the Exchange. He also touched on procedure in case of a surplus or scarcity of fruit or other produce. Cars for shipping, and rates for shipping fruit were mentioned. Rates were reduced last year, when it was found that American lines were handling fruit at lower rates than those given by the C. P. R. But so far, these low rates had not been taken advantage of, though it was proposed to do so this season. Distributing rates and privileges granted by the C. P. R. are not given by other lines. In regard to loading cars, the privilege of collecting fruit at different points was granted. If it was found necessary to switch off the car, a charge of \$5 is made by the C. P. R.

Terms and Conditions. Tom Wilson:—Will the local Association here be notified of the time of train passing Sicamous with a car of fruit? The local fruit would have to be at Sicamous in readiness, and it would be a very important matter that there should be no delay.

Mr. Henry replied, pointing out the duties of the managers of the local Association.

Proportion of Charge. In regard to the question as to whether freight charges on shipments of fruit to loading points on the main line should be borne by those particular lots of fruit or distributed over the entire shipment, Mr. Henry stated that this question had not yet been settled, but he had no doubt that a small matter like that would be satisfactorily settled without disturbing the main objects of the Association. The Committee of Management had this question in hand.

Mr. Postill inquired if the special intermediate rate would be given to car lots of fruit from Vernon.

Mr. Henry said that this question would be brought before the C. P. R. for a decision.

Mr. Postill stated that tomatoes had been shipped to Edmonton from Vernon at 2½ cents per pound.

Mr. Hutcherson pointed out that at present prices, a good quick service was really of more importance than lower rates.

Mr. Postill said that he was much interested in the questions brought before the meeting and thought that the local unions should, if possible, unite to ship under one management.

Mr. Palmer stated that he had no doubt that the C. P. R. authorities would grant such rates on produce shipped from the district to Kootenay as would enable growers to meet competition from the American side. It would also be of vital importance to organize the districts which proposed shipping produce to the Kootenays to ship co-operatively, as local unions were formed or in process of formation which would, without co-operation, come into disastrous competition.

Mr. Earl enlarged upon this, pointing out the great saving in expense by shipping and selling on co-operative principles.

Considerable discussion took place on the working of the Fruit Exchange, and explanations were given as to the charges against fruit shipped and the methods on which returns are made to shippers, etc.

Mr. Palmer spoke on the formation of local unions of fruit-growers for the express purpose of shipping their fruit through the Central Exchange.

Mr. A. L. Fortune said that he had been much interested in the discussion which had taken place. He hoped that in spite of the abundance of produce raised and the limited market, that times would improve. He was somewhat in dread of the growers from Michigan and other States. Prices of all kinds of produce are very low. He remarked that fruit-growers in California were not all successful. He had at one time three year's crop in hand for want of a market.

Mr. Graham said that he was glad to take a brighter view of the situation than his friend Mr. Fortune. He thought that the fact that fruit-growers and farmers had taken steps to form associations for shipping fruit and other produce, showed great progress. He thought that no money expended by the Government was better spent than that for the Board of Horticulture. He remarked on the good work done in keeping out infected fruit-trees and fruit.

Mr. Earl thanked the past speaker for his kind remarks, and said that he did not claim to be "smart," but he was a worker, and always tried to do what he thought was best for the interests of the Province.

Speaking of the passenger rates on the Canadian Pacific Railway, he thought if they were reduced to three cents per mile, it would very much increase the travel, and be of great benefit to the Company. He thought this matter should be brought before the public and the Canadian Pacific Railway authorities.

Mr. Graham said that the Canadian Pacific Railway officials, when at Vernon, stated that the passenger rates of other railway lines on the Coast were identical with theirs.

Mr. Fortune suggested that the Local Government should use their influence to have a reduction made in rates.

After considerable discussion on the working of the Exchange, it was moved and seconded that the meeting adjourn till 8 p. m. Carried.

On resuming, T. G. Earl said it was certain that in a few years a large quantity of fruit would be raised in this district, and would have to find a market. This district should naturally supply the Kootenay District, both with fruit and other produce, and to do this to best advantage, it was necessary to use co-operation in marketing. Speaking of freight rates, the Fruit-Growers' Associa-

To supply Kootenay.

quantity of fruit would be raised in this district, and would have to find a market. This district should naturally supply the Kootenay District, both with fruit and other produce, and to do this to best advantage, it was necessary to use co-operation in marketing. Speaking of freight rates, the Fruit-Growers' Associa-

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Picnic at Agassiz.

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Grower's Assoc

tion was in a better position, representing the entire Province, to obtain reductions and concessions from the Canadian Pacific Railway, than any committee representing a certain district.

G. W. Henry read the principal rules and by-laws of the British Columbia Fruit Exchange, and gave explanations similar to those given at the previous meetings. He pointed out the disadvantages under which individual shippers laboured in shipping to the North-West, and the same state of affairs would exist if different local unions shipped to that market each on its own account. To meet the difficulty, the British Columbia Fruit Exchange had been formed from the local associations, for the purpose of selling and distributing the fruit, at the least expense, and to maintain paying prices. One man in each district could collect information as to the amount of fruit which would be available for shipment, and also do the collecting and inspecting of fruit for shipment. He pointed out that shippers would receive an average price for the kind and quality of fruit shipped. From this district there would probably be more pears and apples shipped than any other variety of fruit. There was loss of fruit last year owing to want of proper cars for shipping; now the Canadian Pacific Railway had promised to supply ventilated cars, so that there should be no loss in this respect.

Mr. Earl stated that in his opinion the local shipping unions which had been formed for shipping into the Kootenays, should co-operate on similar lines to the British Columbia Fruit Exchange. We must, in the opinion of the speaker, get down to co-operative shipping to obtain best results. He hoped that those present would take part in the discussion, as the committee wanted to be informed as to the requirements of the district.

Mr. Graham inquired if in future any person in the district could join the Fruit Exchange. He was answered by Mr. Henry, stating fully the rule.

Capt. Cummings asked if it was true that apples and potatoes are shipped in from Australia to Vancouver, at lower rates than from here to Vancouver.

Mr. Hutcherson said the rate from Australia to Vancouver was \$10 per ton.

Mr. Palmer spoke in favour of local co-operation to reach the Kootenay markets for vegetables and farm produce.

Vernon.

VERNON, B. C., 28th May, 1896.

Quarterly meeting of Directors of the Fruit-Growers' Association was held on this date. Present—Messrs. Earl, President, in the chair, Henry, Hutcherson, Palmer, P. Ellison, T. Wilson, A. Postill, and others.

On motion, the minutes of the annual meeting of the Association were laid over to the next quarterly meeting.

Mr. Hutcherson spoke in regard to the holding of a farmer's picnic at Agassiz instead of a convention, as during the past two years. His idea was that a sufficient number of people would take advantage of the opportunity to justify the hiring of a special train for the purpose.

Mr. Palmer suggested that arrangements could no doubt be made for cheap fares from Vancouver and the Islands.

Mr. Hutcherson spoke to the same effect, *re* trains from the upper country.

It was resolved that an excursion be held to Agassiz under the auspices of the Fruit-Grower's Association, the date to be fixed by a committee to be appointed.

Messrs. Sharpe, Macgowan, Hutcherson, Henry, and Palmer were appointed on this committee.

Price Ellison brought up the question of the Association sending judges to the exhibitions held in the upper country, and stated that the services rendered were highly appreciated. In his opinion the money so used was well spent. Previous to the Association sending up judges the fruit had not been satisfactorily judged.

The Chairman suggested that it might be better to have the horse racing at some other time.

Mr. Postill said the show was necessarily held at a certain date, and the Jockey Club also found it convenient to hold their races at the same time.

It was resolved that, if possible, two judges should be sent to the Vernon exhibition this fall.

Mr. Postill spoke strongly in favour of this course, and said it would be a serious blow to the show if the services of the judges were withheld.

Price Ellison stated that the services of the judges sent on previous occasions were so highly valued that if it should be found that the Association could not spare the funds for these expenses, the Vernon Association would help, and contemplated banqueting the judges.

The acting Secretary read the report of the committee on transportation presented at the last annual meeting held at New Westminster.

On motion, the meeting adjourned.

Quarterly Meeting at Agassiz.

AGASSIZ, B. C., August 8th, 1896.

Quarterly meeting of Directors of B. C. Fruit-Growers' Association was held to-day.

Present—T. G. Earl, President, in the chair; G. H. Hadwen, T. A. Sharpe, R. M. Palmer, J. R. Anderson, Hy. Kipp, N. Buchart, A. C. Wells, G. W. Henry, and A. H. B. Macgowan and others.

Minutes of previous meeting read and approved.

The following were appointed to attend exhibitions as judges:—

Ashcroft—R. M. Palmer and T. G. Earle.

Vernon—R. M. Palmer and T. A. Sharpe.

Wellington—G. H. Hadwen.

Nanaimo—G. H. Hadwen, R. M. Palmer.

Duncans—E. Hutcherson.

Chilliwack—E. Hutcherson and T. A. Sharpe.

Richmond—E. Hutcherson.

After the usual routine business and correspondence had been attended to, it was resolved to hold the next quarterly meeting at Chilliwack.

The committee series of meetings districts, the ad products, herewith report:—

The members sincere regret that them, as his knowledge service.

At Salmon Arm.

drive us about the Palmer's beautiful lady. Mr. Palmer amount grown and a $\frac{3}{4}$ acre plantation was enough to produce were sorry to leave vice, he had been other points, where proper facilities for

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We also visit time to go up to the are being planted prospects for the future the great markets and conditions are for all requirements diseases; the fruit

A Farmer's Union.

MEETINGS IN THE INTERIOR.

The committee authorised by the directors of the Fruit-Growers Association to hold a series of meetings in the Upper Country and set forth, more especially to the people of those districts, the advantages and necessities of co-operation in the disposal of fruit and farm products, herewith enclose the minutes of those meetings, and beg leave to make the following report:—

The members of the committee who did attend these meetings wish to express their sincere regret that Mr. T. A. Sharpe, who had been appointed thereon, could not accompany them, as his knowledge and experience on the questions would have been of the greatest service.

Our first place to visit was Salmon Arm. Upon our arrival there we were met at the station by Messrs. A. J. Palmer and C. B. Harris, two of the leading fruit-growers in that locality, who had kindly come out with their team and waggon at so early an hour in the morning prepared to drive us about the country and show us the various orchards. We were at first driven to Mr. Palmer's beautiful home, where we were most hospitably entertained by him and his good lady. Mr. Palmer has been a very successful grower of vegetables and small fruits, and the amount grown and shipped by him from a small acreage is truly marvellous. We were shown a $\frac{3}{4}$ acre plantation of strawberries, now just in full bloom, and the appearance of these alone was enough to prove to the most skeptical the possibilities of the place in berry culture. We were sorry to learn from him that, owing to high rates on the C.P.R. and the uncertain service, he had been obliged to give up the growing of vegetables for shipment to Calgary and other points, where he had found a good market for all of his produce, could he have had the proper facilities for getting it there.

We also visited Mr. Harris' place, and here we found a still larger plantation of strawberries (composed of an acre and a half), showing also a good prospect for an abundant crop of fruit. Mr. Harris is without doubt taking the right course to become a successful and wealthy fruit-grower. His young orchard of 200 trees is kept in the very best of order, and shows that a great amount of labour and knowledge has been bestowed upon it. Mr. Harris is ably assisted in this by his good lady, whom we found to be a great enthusiast on fruit-growing.

We also visited a number of other orchards and farms, but regret very much we had not time to go up to the other portion of the valley where, we understand, the principal orchards are being planted and where the trees are doing remarkably well. We must say that the prospects for the fruit-growers at Salmon Arm are very encouraging. They are the nearest to the great markets of the North-West and Manitoba of any fruit-growing section. The climate and conditions are all favourable to the production of hardy fruits, the rainfall being sufficient for all requirements, but not too heavy. The trees grow very clean and free from fungus diseases; the fruit colours up well, and is firm for shipping.

The people there have in formation already a Farmer's Union for the purpose of disposing of their products co-operatively, and they hope to get into the Kootenay country with much of it. They were much pleased with the objects of the B. C. Fruit Exchange, and those who will have fruit to

dispose of decided to join and will have their fruit shipped by the Exchange, as they see that in co-operation only can they get advantageously into the markets of the North-West and Manitoba.

The meeting in the evening was well attended and a great interest taken in the subjects discussed.

Our next meeting was held at Kelowna. Here we found the farmers still further advanced in co-operation, they having last year successfully disposed of a large amount of produce in the Kootenay country through their Farmers' Union.

We visited the orchards of the most prominent fruit-growers in the place. **At Kelowna.** We found at Mr. Sterling's the only ripe strawberry met with on our trip.

This gentleman has just planted a very large young orchard, which we found looking remarkably well. The pear trees especially, many of them being laden with fruit, though planted but little over a year ago; his orchard consists of apples, pears, plums and cherries, and from the manner in which he is conducting the place there is no doubt that his undertaking will be very successful. Nearly adjoining Mr. Sterling is the orchard of Mr. Pridham. This orchard has been longer planted, and is already giving its owner some very valuable returns. Plum, pear and cherry trees not only showed a fine growth for the length of time planted, but were laden with fruit, and Mr. Pridham will this fall be able to estimate his crop by tons. The apple trees in this locality suffer very greatly from the green aphid, and although the growers are fighting them with great energy, yet there are some serious results to be seen from this inveterate pest. The Rose Bros. and Mr. Crozier also have large fine orchards adjoining, and enough was seen to show us the wonderful capabilities possessed by this favourable locality for fruit-growing. Pears especially, we believe, can be grown here with great advantage, and on the light lands peaches, apricots and grapes can all be grown successfully. These advantages, together with the favourable advantages possessed in the growing of tomatoes, green corn and other vegetables, make this valley one especially suited to a canning industry, though less favourable as a shipping point than places more convenient to the railway.

The evening meeting was well attended, and it was also decided by the fruit-growing members of their Farmer's Union to join our British Columbia Fruit Exchange for the shipping of fruit.

Next meeting was held at Vernon in the afternoon of the 28th. This **The Vernon Meeting.** was also well attended, and a very great interest taken in the subject of co-operation. Here also a Farmers' Union is in existence and was in operation last fall shipping into the Kootenay country. Near Vernon is situated the "Coldstream Ranche" of Lord Aberdeen; this place was visited by the committee. Mr. Price Ellison, a very large farmer and enthusiastic fruit-grower, kindly drove us out there, a distance of some four miles. We were kindly received by Mr. Ricardo, the manager of the farm. We were shewn through the extensive orchards and small fruit plantations by our old friend Tom Wilson, of the Lisgar Farm, who now has charge of the fruit department of the Coldstream ranche. We were pleased to see the improvement in the care of the fruit trees to what we saw at our last visit there. Mr. Ricardo is evidently going to have the proper attention devoted to this department. The apple orchard on this place, of nearly 100 acres, is all doing well, and the vigourous healthy growth of the trees show that His Excellency, in one branch of his farming, at any rate, is going to achieve a great success.

The Coldstream Ranche. It will be but a very few years before carloads upon carloads of apples will be shipped from this orchard. Other fruit trees—cherry, plum, prune, and pear also, are doing well, and will

this year give large Crab-apple and Fle were for this localit his fruit, he with a and will in the futu orchards of which t stream ranche.

Armstrong Meeting.

attendance were in Union here, which l ation here, as in oth umbia to successfull Columbia.

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The matter of c society.

It was resolved M. Palmer, G. W. H. E. Hutcherson consti Meeting adjourn

this year give large crops, as will also the small fruits. The wonderful yields of fruit of the Crab-apple and Flenish Beauty pear trees, show how very valuable these varieties of fruit were for this locality. Although Mr. Ricardo has already contracted for a large quantity of his fruit, he with a number of others in the vicinity are going to join our Fruit Exchange, and will in the future ship in co-operation therewith. There was no time to visit the other orchards of which there are some fine young ones coming on, especially adjoining the Coldstream ranche.

Our next and last meeting was held at Armstrong on the following evening. The information had not been so well distributed here regarding the matter, consequently the attendance was hardly as large as at other places, though a good interesting meeting was held. All of those in attendance were in accord with the objects of our Fruit Exchange. They have also a Farmers' Union here, which has been shipping into the Kootenay country farm products, and co-operation here, as in other places, is looked upon as the one scheme for the farmers of British Columbia to successfully get into the markets of the North-West and Manitoba, as well as British Columbia.

The project of a Union of all the different Farmers' Unions in this country to work under one head, like the B. C. Fruit Exchange, was favourably looked upon here and elsewhere, and we hope this will be accomplished in the very near future. With so many different local unions shipping into the same markets, much expense could be saved and better prices maintained, by thus further co-operating in this work. We did not stay here long enough to get out into the country. Although a number of the people here are going into fruit-growing, there are as yet but few orchards bearing much—so there is little prospect of fruit being shipped from this locality this year. Yet in a few years there is likely to be, and those who are interested in fruit-growing were pleased to know that when they have fruit ready to ship, the market would be prepared for them, and a proper system of handling the same.

We found here a fine new flouring mill, put up by the farmers. This mill is now in operation and turning out a most superior grade of flour. It is supplied with the very latest and most approved class of machinery, and is bound to prove a success, as the country here being especially adapted to the producing of the finest wheat, can supply the material to keep it going. The farmers deserve great credit, and have shown great enterprise in co-operating together in such effectual manner.

We trust our visit into this country will not have been in vain, and that this seed of co-operation sown by us in soil so well prepared to receive it, will grow and produce a thousand fold.

THOS. G. EARL,
R. M. PALMER,
E. HUTCHERSON,
G. W. HENRY, } *Committee.*

The matter of exhibiting at Spokane Fruit Fair was introduced by a letter from that society.

It was resolved that Messrs. T. G. Earl, Hy. Kipp, G. H. Hadwen, J. R. Anderson, R. M. Palmer, G. W. Henry, M. J. Henry, W. J. Moggridge, W. C. Ricardo, J. L. Pridham and E. Hutcherson constitute a committee to arrange for an exhibit at Spokane Fruit Fair.

Meeting adjourned.

Quarterly Meeting at Chilliwack.

CHILLIWHACK, B. C., November 4th, 1896.

The quarterly meeting of the British Columbia Fruit-Growers' Association was held in the Court House, Chilliwack, on Wednesday, the 4th inst. T. G. Earl, of Lytton, the President, was in the chair; R. M. Palmer, Victoria; T. McNeely, Ladner; H. Kipp, I. Kipp, J. G. Evans, A. J. Street, A. C. Wells, W. Knight, J. H. Bent, A. S. Vedder, J. Peers, L. W. Paisley, Rev. J. Hall, G. W. Chadsey, Joseph Ogle, of the Chilliwack section, and others, were present.

The President, who, by the way, is one of the leading fruit-growers in the Province, in his opening address explained that the meeting was called chiefly to discuss the co-operation movement in shipping fruit. He spoke of the grand exhibit sent from British Columbia to the Spokane Fruit Fair, and thought that fruit-growers of this Province should be proud of it. He then spoke of the rapid increase of local exhibitions, and considered that for all the amount paid in prizes by some it would be better to have a grand central exhibition, say at New Westminster. Mr. Earl then spoke of the boxes used for shipping fruit, which usually hold 20 lbs. This, he considers, too large, and recommends the California system of shipping it in five-lb. packages and crates. He thought that the British Columbia Fruit Exchange or Co-operative Society should adopt the system of the Earl Packing Company, of California, who never send out anything but first-class fruit. Their name alone is a guarantee of their goods. It should be the same with those bearing the name of the British Columbia Fruit Exchange, then when fruit is shipped to the North-West the name should be the guarantee that it would be first-class. A. H. B. Macgowan explained that he was at Mission when a car was loaded. He said that some of the French prunes were not fit to be shipped anywhere, but there was a great deal of good fruit. The car was well loaded. He thought that the car must have had rough usage on its way to Winnipeg. It was six days in transit. They had asked for a combination car, but it was not given, and, as an outsider, he was quite sure that competition in transportation was necessary before fruit shipping to the North-West is successful. He hoped that all would pull for the proposed road through the Fraser Valley to the Kootenay to connect with the Crow's Nest Pass Railway. The loss on fruit shipped to the North-West was so great that the net price received was less than could have been obtained locally. Mr. Macgowan read a letter from E. Hutcherson expressing his regret that he was unable to attend. He also read another from T. Cunningham to the same effect.

Shipping to Winnipeg.

Joseph Ogle said that the loss on the car shipped was about 25 per cent. Mr. Earl understood that the car was sent to the North-West without anyone to take care of it. This he considered a great mistake, as it might have been in a collision for all the association would know. It cost but \$35 to send a man along, and it should have been done. H. Kipp thought that the car must have been roughly handled or it would have gone through all right, as it was well packed. There were 10 tons in the car made up of 20-lb. baskets, and it must have been side-tracked. He thought that a man should be sent along with a car of fruit. Mr. Earl was also of the opinion that a man should have been sent along. The car of fruit was worth \$800, and if anybody had been in charge there would have been some chance to get recompense if it had been roughly used.

Mr. Bent considered that as the company had agreed to take the car to Winnipeg on a tea train there was just cause for complaint, as it had not been sent through accordingly.

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A. S. Vedder explained that good sale could have been made for the car if it had reached Winnipeg on time, as there was an empty market.

T. McNeely then explained the California system of shipping fruit in five-lb. cartoons, which are crated, and carry splendidly.

Joseph Ogle thought some of the plums shipped to Winnipeg were too ripe. If a car could have been sent every three days instead of every ten they would have gone through in better shape.

Better facilities. Mr. Earl said that next season a committee should wait on the C. P. R., and it would be to their interest to make fair rates. They had promised refrigerator cars, but had not delivered them, therefore the association had learned a good deal by sad experience.

Mr. R. M. Palmer said that it had been understood that he was to speak on fruit shipping, but as he had already written a paper giving his ideas he had not much more to say. He would like to know whether Americans sent a man to look after their cars. This question was pretty fully discussed, and it was generally agreed that it would be to the advantage of the association to send a man along.

Mr. Earl spoke of one large fruit fair again. He thought it would be better than a number of smaller ones. The association had been furnishing judges for all the local fairs, and they could not very well continue to do it. He then spoke of his visit around the Chilliwack valley and the grand farm of A. C. Wells & Son.

Mr. Vedder thought the local fairs the very best educators that it was possible to have. They could get their fruit named, and in many cases there are men who have no time to attend any but local fairs.

Small Fairs. Mr. Wells said that he could see the force of the president's remarks in the rapid increase of local fairs. Some have very small prize lists. He thought that a certain standard should be attained before they could be incorporated. If a motion was passed condemning local fairs, Chilliwack fair would be included. It is one of the first fairs in the Province, and liable to be one of the last (applause). He found that local fairs were the means of bringing exhibitors together, and they then find out that they have something good to take to larger ones.

Mr. Earl thought that the local fairs were all right, if the exhibitors in all sections would only make one grand rally and meet at Westminster or Victoria and make a show similar to Spokane.

The Chilliwack Fair. L. W. Paisley, president of the Chilliwack show, was in favour of local fairs. He said that about \$1,500 was paid out in prizes in Chilliwack this year. He considered that many in this valley had the best stock in the Province. He said that we have the best Jersey cattle in the Province, the best Ayrshire cattle, the best sheep and the best pigs. The competition commenced here and it would end here. Owing to the large amount paid in prizes at Chilliwack this year they will be entitled to a \$1,000 grant from the Government next season, as the grant is given according to receipts. He spoke of the advertisement that Chilliwack got this year by advertising the fair. It is thought by some that there is very little in Chilliwack, but when they see the fair bills they come to the conclusion that there must be something and they come to see. It also created a rivalry at home. He said that \$40 is to be given for the best acre of roots to be grown next year, which would give every one a chance. He thought that the judges at Chilliwack were better used than at any other fair in the Province. The Chilliwack judges had their expenses paid while they were here, which amounted to a great deal, but they will come to us again. He thought that a society like the Chilliwack one

with 1,800 entries should get a larger grant than a fair like Mission City or others which pay out practically nothing. He would suggest that the fairs be held consecutively so that exhibitors can attend one after another with little expense. He referred to Victorians not holding their fair in order and that they had none this year at all. He hoped that the day would never come when there would not be a fair at Chilliwack. In butter and fruit, said he, our exhibit this year was equal to New Westminster (applause).

All right. Mr. Earl here explained that Chilliwack was all right, only that some of the other ones were so small that justice cannot be done to all. He did not want to discourage the good people of Chilliwack, but hoped that all would turn out at New Westminster.

H. Kipp said that Mr. Paisley and Mr. Earl were both presidents, one of a fair, the other of the Fruit-Growers' Association, and they were both anxious to make a grand success. He was of the opinion that there were too many small fairs, but he did not even understand that Chilliwack was to be included.

A. S. Vedder said that Chilliwackers were the largest exhibitors at New Westminster, but they purpose always to make Chilliwack's the leading in future.

R. M. Palmer said that there was too many small fairs in the Province, but Chilliwack cannot be classed in this category, for it is one of the largest in the Province. He hoped, however, that what Mr. Paisley said about the holding of fairs at convenient dates would be brought about.

Mr. Paisley said that the Government should ask the amount of prizes paid, then they would find out what the various societies are entitled to. The mere fact of entries and promising to pay does not count for anything.

H. Kipp wanted to say something about his work in connection with the Association. He said if a horse pulls he is all right; if not he is no good. It is the same with some fruit-growers; some are good and some will not assist in the least. He had spent a great deal of money in travelling around, and all that he had got in return was what he had learned. He wanted all to join as it only cost a dollar, and they would get a great deal of information.

It was moved by A. S. Vedder, seconded by A. J. Street, that the Fruit-Growers' Association be considered worthy of being continued on its present lines, and should be supported by the Provincial Government, and all fruit-growers of the Province, and that a larger grant be given by the Government. Mr. Earl thought that the system of co-operation should be kept up and encouraged in the interests of fruit-growing.

Mr. Wells moved, seconded by T. McNeely, that we regret the fact of **A resolution.** the rapid increase of local exhibitions without apparent usefulness, and we recommend that the distribution of Government patronage to exhibition associations be made in proportion to the membership fees and prizes actually paid.

Mr. Earl said that there were not sufficient funds to carry out the work.

Mr. Paisley said that there was one way to finance matters of this kind, and it is to wait on the Government in lobby, and lay wants before them. If this be done, he was of the opinion that the Government would consider any reasonable requests favourably.

The President stated that he had nominated Mr. Hutcherson to go to Spokane Fruit-Fair.

Letters were read from C. B. Reeves, Chilliwack, and A. Postill, Vernon, as Secretaries of their respective exhibition associations, appreciating the work of the Fruit-Growers' Association.

From G. H. Hadwen and T. Cunningham, advising holding of annual meeting in Victoria.

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The President stated that it was the wish of Hon. J. H. Turner, that the annual meeting be held in Victoria. He, himself, had the same desire. **Meeting at Victoria.** Pressure could then be brought to bear through members for more financial assistance.

It was resolved, that the annual meeting of the Association be held at Victoria, on some suitable day after 1st of January, exact date to be fixed by the President.

On motion, Mr. Hutcherson's expenses, *re* Spokane Exhibit, were ordered paid.

A lengthy discussion, *re* the British Columbia Fruit Exchange Society and the idea of amalgamating same with the Fruit-Growers' Association, took place.

Mr. J. Howe Bent moved, and Mr. R. M. Palmer seconded—Resolved, **Amalgamation suggested.** That a committee be appointed to act with Managing Committee of the British Columbia Fruit Exchange Society (Limited), with a view of effecting an amalgamation of the two Associations, such committee to include the committee on by-laws of this Association.

The following to constitute the committee:—

Thos. McNeely,	D. Stevens,
Hy. Kipp,	R. M. Palmer,
T. Cunningham,	E. Hutcherson,
G. H. Hadwen,	Wm. Knight,
J. C. Metcalfe,	A. Postill.

It was arranged for the committee to meet at New Westminster on first Wednesday in December, at 3 p. m., with an evening session if necessary.

Programme of the annual meeting was left in the hands of the President and Secretary.

Meeting adjourned.

COMMITTEE MEETING.

NEW WESTMINSTER, B. C., 2nd December, 1896.

Present, T. G. Earl (in the chair), G. W. Henry, M. J. Moggridge, Wm. Knight, Hy. Kipp, R. M. Palmer, T. Wilson, E. Hutcherson, T. Cunningham, and the Secretary.

The Secretary read the resolution of the Directors of the Fruit-Growers' Association, which states the object for which the meeting was **discussed.** called, *viz.*:—To take into consideration the advisability of amalgamating the Fruit-Growers' Association and the B. C. Fruit Exchange.

Mr. Henry thought the Fruit-Growers' Association had done some good work, but many seem to think we could get along without it now; he thought it might be arranged to save expenses by carrying out the proposed amalgamation.

Mr. Hutcherson considered the present lack of interest in the Fruit-Growers' Association was largely the result of hard times, and doubted if the Fruit-Growers' Association had the authority to carry on commercial transactions. Could not the meeting of each society be held at the same time and thereby save expenses? We must remember the Fruit-Growers' Association has done little else but help the Exchange since the latter's organization.

Mr. Earl objected to the grant being diverted to the Fruit Exchange, but suggested that we might assist the Exchange financially.

Mr. Palmer pointed out that it would be necessary to extend the objects of the Fruit-Growers' Association to render this assistance feasible. This would necessitate an amendment to the constitution. He would be very sorry to see the Fruit-Growers' Association lose its identity.

Mr. Cunningham would favour any scheme that would cheapen or simplify the management of the Exchange.

Left to a Committee. After a great deal of general discussion the matter was turned over to a committee consisting of Messrs. Henry, Hutcherson, and Palmer, it being generally admitted that the amalgamation could not be consummated.

Evening session assembled at 8.30 p. m. The sub-committee of the committee on amalgamation of the Fruit-Growers' Association and B. C. Fruit Exchange Society, reported as follows:—

That the funds of the B. C. Fruit-Growers' Association, estimated at \$1,580 for the ensuing year, be expended, in addition to the ordinary work of the Association.

Committee's Report. In developing the markets of the North-West for the disposal of British Columbia fruit by placing our fruit before the public by means of exhibitions held in the Eastern Provinces, and by a thorough investigation as to the markets available in Manitoba and the North-West Territories.

And for this purpose we suggest the addition of the words "and the profitable disposal of fruits" to the end of article eleven of the Constitution of the B. C. Fruit-Growers' Association.

And we make the following estimate of expenditure for the ensuing year required for the above and the general purposes of the Association:—

Secretary's salary	\$480
Printing and advertising	100
Man to work up fruit market in Manitoba and North-West	300
Committee expenses	200
Printing report	300
Other expenses	200

Moved by T. Cunningham, seconded by W. J. Moggridge, and resolved, That the report of the committee be adopted, and that the same committee be requested to present the report to the annual meetings of the Fruit-Growers' Association and B. C. Fruit Exchange Society.

Moved by T. Cunningham, seconded by Hy. Kipp, and resolved,

Government Memorialized. That the Government be respectfully requested to print a special condensed report of the Association's operations for the information of the members of the Legislature, having particular bearing on the special work now under contemplation.

On motion of Henry Kipp, seconded by Wm. Knight, it was resolved,—That the annual meeting of the B. C. Fruit-Growers' Exchange Society (Limited) be held at Mission City, date to be fixed by the President.

Meeting adjourned.

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ANNUAL MEETING AT VICTORIA.

VICTORIA, B. C., 29th January, 1897.

In pursuance of notice, the annual meeting of the B. C. Fruit-Growers' Association was opened in the City Hall.

The snow-storm of Wednesday night, and the consequent failure of the steamer to connect at Vancouver, somewhat demoralised the arrangements that had been made for the annual meeting of the B. C. Fruit-Growers' Association yesterday. On this account the forenoon programme was altered so as to keep the more important business and the President's address until the greater number of the Mainland delegates could get down by way of Nanaimo.

Mr. Thomas G. Earl, of Lytton, the President, was on hand and took the chair at the City Hall at 11 o'clock, Mr. J. R. Anderson, Deputy Minister of Agriculture supporting him on the left, and Mr. G. H. Hawden, acting temporarily as secretary. The big silver loving cup won by British Columbia at the Spokane Fruit Fair last summer, occupied a place of honour on the President's desk, and Mr. Earl in pointing it out to the members said, "That shows what British Columbia can do in competition with the noted fruit states of Washington, Oregon and Idaho. If our exhibit had been there earlier, it no doubt would have carried off many other prizes. I think you ought all to be proud of that prize, for the honour belongs to the whole of British Columbia." Mr. E. Hutcherson, of Ladner's, who was in charge of the B. C. fruit exhibit was referred to gracefully by the President, as deserving of great credit for his energy and ability in looking after and placing the exhibit.

The members agreed with the President, and to show their appreciation of Mr. Hutcherson, gave him a standing vote of thanks.

Mr. Hutcherson modestly blushed up, and for a moment was somewhat **Honours even.** at a loss for words to express his pleasure and thanks. He wished the members to understand, however, that the whole credit really belonged to Mr. Earl, for it was his fruit that was at the show. It was fruit of which any man might be proud, and at the fair the Canadians who saw it—and there were many there—came up to him and shook hands, saying they were proud to see Canada turn out such fruit.

Next came the consideration of the amendments to constitution and by-laws of the association recommended by the special committee which met at Westminster a couple of months ago. These were taken up seriatim and adopted with little change. The principal amendments were to change the name from the "The B. C. Fruit-Growers' Association" to "The B. C. Fruit-Growers' Association and Horticultural Society." The objects of the association were extended to making efforts to securing the proper marketing of

Marketing Fruit. fruit and for obtaining better transportation facilities. In the by-laws the quarterly meetings were changed to January, April, July and October; an amendment being made to provide that all money paid into the association should be deposited in a chartered bank; the annual exhibitions of the association were made optional instead of obligatory, and the financial year was changed from November 30th to December 31st. The membership fee was cut down from \$2 to \$1, and in this connection the President said he hoped that the membership would be largely increased, so that the association would truly represent the whole Province, for it would have then greater weight in approaching transportation companies for improved facilities. Already the association had been able

to accomplish something in this way, as the market that had been opened up with the Kootenay country showed.

Attention was called during the forenoon session to some very fine samples of new varieties of apples from the Dominion Experimental Farm at Agassiz. Mr. Sharpe had been unable to come himself, but sent these down to give the fruit-growers the opportunity to see them. The varieties were York, Imperial, Stark, Salome and Sutton's Beauty. Mr. Earl, the President, also showed some splendid samples of Vanderveer apples from his orchard, and some excellent specimens of Ben Davis from Mr. Evans, of Ashcroft.

Meeting adjourned to 2 p.m.

Afternoon session opened at 2 p.m. by the reading of the minutes and the President's address.

The President's Address. GENTLEMEN,—This is the eighth year of our organization, and I regret to say it has not been a prosperous one for the fruit-grower. Owing to the cold, late spring, the crop of fruit on the Lower Fraser and Islands was a partial failure, whilst in the Interior we have had good crops—never better, I am certain. Now, to offset all this, we had a very sudden cold snap, commencing November 9th and lasting the balance of the month. When the cold wave struck us the sap was all up, as there had been no frosts sufficient to send the sap down and prepare the tree for winter. The thermometer in a few days dropped at Lytton to 16° and at Kamloops to 22° below zero. Now, under these conditions thousands of trees in the Interior have been winter killed, mostly of the winter varieties; while on the Lower Fraser and Coast I believe the loss is trifling. In 1875, just twenty-one years ago, we lost large numbers of trees by a cold snap similar to the one that occurred this year. With these undeniable facts before us I think it is our duty to let it be known and not try to conceal it, as then all can guard against such failures in the future. Certainly no one will deny the fact that we can grow as nice fruit as can be grown anywhere.

Up-country Varieties. With past experience, is it not better to grow varieties that we know will stand the sudden changes, instead of going in for so many fancy varieties? I find that for summer the Yellow Transparent, Red Astracan, Duchess and Williams Favourite usually come out well, for early autumn, Alexander and Wealthy come through safely. For early winter the New York Vanderveer cannot be beaten, is a very nice red apple, and in general appearance resembles the Wealthy. The Blue Pearmain is a large, dark red apple, but not as good as the Vanderveer; these two varieties ought to keep well until after New Year's, and I have kept them until May. The Red Streak or Twenty-Ounce Pippin and Waxen will also stand and keep until New Year's or later. I also find for late winter three varieties do well, namely: Ben Davis, Talman Sweeting and Ribston Pippin; all the above mentioned apples I am certain will stand under most any condition.

Of pears, only Early Summer and Bartletts have endured the severe cold, while cherries, plums, prunes and peaches are a total loss; but as they come into bearing in a few years we can afford to replace them.

Effect of Mining. Now, gentlemen, I am in hopes that the fruit trees of the Interior above Kamloops are safe, as the frost sets in so early. This is not only an individual loss, but a loss to the whole Province. It is especially deplorable just now, as the mining resources of this Province are becoming so well known as the richest and of greater extent than any heretofore discovered. I venture to say there is not a day but what new ledges and mines are discovered. When we take into

account the market pause and consider others will come into the market they will retain in the Province say the horticulturists as they should have

Agriculture vs. Lumbering

all this vast wealth away.

On the other hand has been said be the backbone of the take away all that is retained in the as we may reason the very finest will soon be the producers as well as will be occupied interests general farmers grow so

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account the many millions of English capital which is sure to flow into this Province, let us pause and consider the glorious future of British Columbia. Many thousands of miners and others will come to the Province, and we may certainly calculate by 1900 to have a population of at least 300,000. This is where the fruit-grower and farmer comes in. What a market they will have. It is hard to estimate the vast amount of money these industries will retain in the Province, which, I am sorry to say, in the past, has gone out of it. Here let me say the horticultural, as well as the other branches of agriculture, have not been appreciated as they should have been.

Let us see which is best for the Province—agriculture or the
Agriculture vs. Lumbering. lumber and fishing industries. They are on the Coast, and most of their supplies are obtained from the American side; ships come to our ports and take all this wealth out of the Province. And what do we retain of all this vast wealth? You will all say a very small proportion in comparison to what is taken away.

On the other hand, our mines are all over the Province, mostly in the Interior, and as has been said before, here is where the horticultural and other interests come in; they are the backbone of the country. The miners are like the lumbermen and fishermen, for they will take away all they can; while the agriculturist is a bona fide settler, and what he produces is retained in the Province. What he raises, grain, roots or fruit, he will sell to the miners, as we may reasonably expect a ready market for all we can raise. Now, certainly we have the very finest land in the world, and if we have a ready market for all we can grow there will soon be ten farmers where there is one now. If we can only supply the demand, the producers as well as the consumers will soon be prosperous, and soon every available piece of land will be occupied by a happy and prosperous people; then the horticultural and agricultural interests generally will be more fully developed and appreciated than they have been. Most farmers grow some fruit, even if only a small quantity, and I consider this association is

working for the interests of all to the best of its ability and means to work
The Govern- with. The Government has been very generous and deserves the thanks of
ment liberal. all. This association has heretofore issued annual reports, but it was considered advisable to omit it this year, as we were running behind, and we only got out our report in February last. I think with care we will have enough to do until our next report is issued. In fact, I see no good of going to the expense of getting out a report every year, as it is mostly a repetition of the previous one and costs from \$300 to \$400, and I think the money can be used to better advantage. My friend, Mr. Henry, president and manager of the Fruit Exchange, will tell you that owing to the failure of crops and unforeseen losses the Exchange has not been a financial success this year. He will tell you about the Exchange in his report. It has been suggested that the Fruit-Growers' Association help the Exchange by donating most of our surplus funds which, in my opinion, could not be devoted to a better purpose, as the Exchange is a new institution. The expenses are heavy in starting, and reaching out for new markets, which are certain to help the whole Province.

It is to be hoped that the Government will see its way clear to helping it
**A further by granting for a few years the sum of \$500 per annum. As we have not
 grant.** yet felt the beneficial influence of the mining industry, nor can we expect to for a few years yet, as it is most all development work unless it is in the Kootenays, where most of the supplies are obtained from the American side. We have rich mines in Lillooet, Cariboo and Kamloops, and in fact all over the Interior. There can be no doubt of the future. The Fruit-Growers' Association for the first time held the quarterly meeting in the Interior and, considering it was the first time, we met with fair success. We

first had a meeting at Salmon Arm; we also had a meeting at Armstrong and Kelowna, our regular quarterly meeting being held at Vernon. It was considered advisable to have Messrs. Henry and Hutcherson attend, as they are prominent members of the Fruit-Growers' Association, and the Association to pay their actual expenses. I consider no better move could have been made on our first meeting in the Interior. **Up-Country work** Mr. R. M. Palmer attended in his official capacity. There was much good accomplished for the Fruit Exchange in coming in touch with the local Exchanges of the Interior, but I presume Mr. Henry will speak of all this. At these meetings we did not canvass for members. At the annual meeting the secretary had been requested to write to all delinquent members to pay up or their names would be taken off the list of members.

Mr. Hutcherson had very wisely offered a resolution that the constitution be amended so membership fees would be reduced from \$2 to \$1, and a committee was appointed, so I hope at our business meeting the resolution will be adopted. When the membership fees are reduced I hope the list will soon comprise at least one hundred names or more. I think by vigorously canvassing, there ought to be at least that many at the annual meeting of 1898; at present I am sorry to say there are not over twenty-five members, and then we have over one hundred directors, or over seventy-five more than actual members. I dare say this

Revising the list. was never intended to be the case. It is recommended that this year we only appoint to the directorship those who we have good reason to think will pay in the \$1 and become members, and that they be notified that unless they do so by the next quarterly meeting their names will be stricken out. With only \$1 to pay, some of my friends in the Interior wrote me they contemplated joining. I think all will agree with me that it is high time some new element was introduced into the Association if we are going to succeed. We want live, active members, who will take an active interest, and the more members we have the more good will be accomplished. I must not forget to mention that while holding our meetings in the Interior, we were ably assisted by Mr. Donald Graham, M. P. P. We found this gentleman has a fine farm and orchard, and I am happy to say most of our Local Legislature are fruit-growers as well as farmers, and I sincerely hope they will join our Association, for they are the representative men that we want in the Association, as well as in our Legislative Halls.

This Association has assisted at most of our local fairs at a considerable expense to the Association. All those acting as judges giving their time and only receiving their actual expenses paid out, but with so many fairs it amounts to quite a round sum. All these fairs are quite a heavy tax on the resources of the Association, especially as new fairs are coming into existence every year. Now the question actually arises, are there not

Too many Fairs. too many small fairs, and would it not advertise the resources of the Province to a better advantage to reduce the number, and put all the produce and energy in the main fairs of Victoria and Nanaimo for Vancouver Island; on the Lower Mainland, New Westminster and Chilliwack. Of course they can and have the right to hold as many fairs as they like, but which is the best for the Province? I think this question is open for discussion.

Now, take the Interior. Ashcroft is the first, 200 miles from New Westminster; then Kamloops, 50 miles further on; Vernon, 100 miles from Kamloops, and Kelowna, 70 to 90 miles further, or four fairs in over 400 miles. No one can say there are too many on the best land in the Province for fruit culture, and yet, when we are expected to send judges so far, it is too expensive, especially when there is not a member except myself in the Interior. I feel assured, however, we will have many new members this year if we only use energy, which,

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The Spokan Fair.

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I must say, has not been done in the past if the list of members is any criterion to go by. At our meeting at Agassiz it was agreed that we should accept the invitation given us through J.

R. Anderson, Deputy Minister of Agriculture, by the managers of the **The Spokane Fair.** Spokane Fair, to join them with the States of Oregon, Washington and Idaho. A committee was appointed to collect exhibits from all parts of the

Province, and all was going on as well as we could wish, when unfortunately the operators' strike on the C. P. R. cut off all communication, and the consequences were, that of all the fine fruit grown in the Interior, only one fair sized exhibit reached Spokane. This was disastrous for us, but something that could not be foreseen. With this great disadvantage we came out with honours, which this splendid trophy will attest, and all British Columbia can feel proud of and wonder what we would have had, provided all our exhibits had reached Spokane in time. Mr. Hutcherson will give us his report of the fair.

It has been suggested that Mr. Thos. A. Sharpe, of the Experimental Farm, and Inspector R. M. Palmer, be appointed Honorary Members of this Association, with full membership privileges for life. This I heartily endorse, and consider the honour will be with the Association.

I also hope that this Society will see the propriety of passing a resolution against any reduction on agricultural products, for the Americans, as the tariff now stands, have the best of us so far as the Kootenays are concerned, and they always have had in furnishing our coast cities and surrounding localities. I think we should keep up the

Tariff and Transportation. committee on transportation. I am happy to say the C. P. R. have seen the propriety of reducing the freight rates on produce for the mines, and sincerely trust they soon will reduce the passenger rate to 3 cents per mile, when by the increased travel they will make, at least, twice as much as they do now. When we get a competing road from the coast to the mines we will come out all right. If the Government assist the road it is to be hoped they will insert a clause reserving the right to legislate as to freight and passenger rates, or if not, build and operate the road themselves.

Now, gentlemen, in conclusion, I will mention the Board of Horticulture, consisting of five members, and a grant of \$1,000 to work with. Surely the Board cannot do much on this—just merely routine work.

I regret to say it has been maliciously reported that the Board was to absorb the annual grant of the Fruit-Growers' Association, if not the Association itself. Let me here say there is not one particle of truth in all this; nor is there the least cause to believe it. In my opinion it was started to create jealousy and trouble between the Association

No Jealousy. and members of the Board of Horticulture. As President of the Association and member of the Board of Horticulture, I certainly am in a position to know the facts in this case, and I know what I here state is true; the Board in no way wishes to interfere with the Association, but as they are working on the same lines, for the benefit of the Province they should work in harmony. The Board is bound to try to protect the interests of the fruit-grower. At the present time our orchards are comparatively free from insect pests, such as the codlin moth, San Jose scale, and in the interior the woolly aphis also. Now, the simple question arises, are the horticultural interests of this Province worth protecting? If they are we must enforce the rules of the Board at once, and in order to do so the sum of at least \$2,000 should be placed in the estimates, and the rules strictly enforced for the better protection of the fruit-grower. If this is not done at once we may soon expect to have our clean orchards infested with all the insect pests that are found in California and the East.

Gentlemen, in conclusion, I would say that I have had letters from Mr. C. B. Harris, of Salmon Arm. That gentleman assures me that he has, with A. J. Palmer, inspected quite a number of orchards in his vicinity and they are not injured by the cold snap of November. I also have a letter from Donald Graham, M. P. P., Armstrong. He also tells me the trees came through all right. I also wrote to Mr. Ricardo, Vernon, and James Crozier, of Kelowna. I have had no reply, so I think their trees must have come through safely. All this goes to

The safety belt.

prove that in the great valleys of the Shuswap, Spallumcheen and Okanagan, where the frost comes early and prepares the trees for winter, that here is the place for the fruit-grower, where also good mines are being discovered every day. I consider this is the safety belt. And here is where there are vast quantities of fine fruit lands, where the very best kind of fruit can be grown. Now, gentlemen, I thank you for your very kind attention.

The relation of the Association and the Fruit Exchange came up in the discussion that followed, Mr. Hutcherson pointing out that the efforts to unite the local exchanges into one central one had worked very well.

Mr. H. Kipp, of Chilliwack, referring to the Board of Horticulture, asked that the fruit-growers would co-operate, and this was supported by the President, who pointed out that the farmers must be united in helping the Exchange, so as to get a market for the fruit and to avoid the cutting of prices.

Mr. Munro Miller wanted to know if the Exchange fixed the price of fruit, for otherwise he did not think it would work to the best advantage.

Mr. Renouf and Mr. A. C. Wells maintained that all the Exchange could do was to prevent the market being glutted in one place, by distributing the fruit where it could be disposed of to the best advantage.

The Fruit Exchange.

It was not for the purpose of getting an exorbitant price, said the President, that the Exchange was formed, but to point out an outlet when men had fruit to sell. Other members took part in the discussion, it being observed by Mr. R. M. Palmer and Mr. Hutcherson that the Exchange did really to some extent control the markets of the North-West as far as Brandon, for that far east, British Columbia supplied all the fruit. At Winnipeg, however, they came in competition with other fruit, and that produced a different condition of affairs.

A matter pertinent to the discussion was brought up in a letter which Mr. J. R. Anderson read from Mr. D. C. Webber, of Yale, complaining of discrimination by the C.P.R. in favour of the Ontario shipper as against the British Columbia fruit-grower. Mr. Webber wrote that he had found that Ontario shippers had been allowed to distribute apples from car-

C.P.R. rates.

loads at all stations, from North Bend to Donald, and that the rate of freight on apples from Yale and Agassiz to Donald is \$30 a ton. Consequently he had lost the market which he had had the year before for his apples. Mr. Anderson said he had replied that he had not known of fruit being distributed as Mr. Webber had said. The President, too, remarked that the question was an important one and should be looked into.

Further discussion on the Fruit Exchange was deferred till to-day, in the absence of Mr. Henry, of Agassiz, manager of the Fruit Exchange.

As a mark of appreciation of Mr. Sharpe, of the Dominion Experimental Farm, Agassiz, and Mr. R. M. Palmer, Provincial Inspector of Fruit Pests, Mr. A. C. Wells moved, and Mr. E. Hutcherson seconded, that they be elected honorary life members of the Association. This was carried by a standing vote, and Mr. Palmer, in returning thanks, said it would always be his pleasure to forward the interests of the Association.

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spraying question.

Mr. E. Hutcherson moved, That a committee of three be appointed to draft a resolution to the Minister of Agriculture on the tariff question. He was a protectionist himself, but he would like to get the views of the other members.

Upheld the Tariff. Mr. A. C. Wells in seconding the resolution said that just as soon as the tariff wall was thrown down British Columbia could be flooded with produce from the United States side. It was a case of life and death to the farmers here. He pointed out that the farmers on the United States side were in a condition where they could not get good prices at home, and if British Columbia was opened to them they, the farmers here, would be ruined.

Mr. M. Miller remarked that the condition of the country now was such that no party in power would dare to trifle with the customs duties.

Mr. D. Stephens, Mr. Munro Miller, and Mr. H. Kipp were named as the committee, and the President declared that the resolution was of the greatest importance to the farmers.

Mr. E. Hutcherson suggested that some information should be given to the farmers in the Upper Country as to the best trees to plant to replace those lost in the cold snap last November.

Information Wanted. Mr. Palmer agreed with this, and moved, seconded by Mr. Hutcherson, that a committee be appointed to collect information in regard to the varieties of fruit found to succeed in the various districts of the Province, with a view to publishing the names for the information of fruit-growers, and that the committee be instructed to collect such information regarding the injury done to fruit trees by the cold snap in November, and as to such varieties as have passed through without injury.

The President next brought up the subject of spraying. He mentioned instances where the efforts of one man to keep his orchards free of pests had been futile, as his neighbours had neglected to look after their trees. He would like the Association to back up the Horticulture Board in their efforts to keep down the insect pests and diseases of trees.

Mr. Grant thoroughly agreed with the President, and Mr. J. R. Anderson remarked that the law regarding spraying could be enforced, but the Board had a great deal of trouble in making people see the necessity of it.

Mr. Ohlsen, for the Horticultural Board, said that unless they were backed up by the fruit-growers they would find it difficult to enforce spraying.

The President had a little to say about the matter. There had been a good deal of jealousy against the Horticultural Board, and they had been styled "Five dollars a day men."

Board of Horticulture. He wanted them to understand as a member of the Board he was out of pocket, and it was unreasoning jealousy to say that any member of the Board made money out of it. It all resolved itself into the fact that the fruit-growers must back up the Board. An expression from the Associations would be of weight with the Legislature and perhaps then a bigger appropriation could then be secured for the purposes of the Board.

Mr. A. C. Wells spoke strongly against the carelessness of people who endangered other people's orchards because they would not spray. He would like to see people who had orchards forced to spray.

Mr. Hutcherson inquired if any inspection was made of scions and trees sent by mail, and if any members thought the Act could be enforced.

Mr. Palmer stated that as far as possible the inspection of all scions was carried out.

Mr. Stevens considered it was ridiculous to talk about the education of the people on the spraying question. If the Government raised the taxes from $\frac{1}{2}$ to $\frac{3}{8}$ per cent., they did not

educate the people up to it. The law should be enforced. He reckoned that whereas he had 90 per cent. of bad fruit before spraying, now he had not more than 20 per cent.

Mr. Todd bore testimony to the good effects of spraying on his own orchard. Of his whole crop last year he had only five boxes out of five hundred that showed any fungus on the apples, and that only slightly. The cost of spraying was only 11 cents a tree, and surely that was a satisfactory result.

Effects of spraying.

From his personal knowledge, Mr. D. Stevens said spraying paid. Two years ago 90 per cent. of his Louise Bonne de Jersey pears were diseased; last year, with one application of Bordeaux mixture and two of the No. 1 spray, he had fully 75 per cent. of his pears clean and marketable.

It was very pleasant, Mr. Palmer said, to hear the general expression in favour of spraying. When spraying was introduced here a few years ago there was a great deal of ignorance on the subject. Now people were becoming educated, and the time had come when the law could be enforced. He pointed out, too, that there was a great amount of territory to cover, but when spraying was enforced, it would have to be done in a general way, and not in isolated cases. They must not, however, underrate the difficulties attached, for some pests, such as tent caterpillars, woolly and green aphids, fed on other trees besides fruit trees, so that it was no small matter to get rid of them.

The most effectual way of having spraying carried out generally was, in Mr. F. S. Sere's opinion, for the Government to step in and do the spraying where people neglected it, and then charge them up with it.

This discussion resulted in the carrying of a resolution moved by Mr. A. C. Wells, seconded by Mr. J. Todd, that in the opinion of the meeting, the Act relating to fungus diseases and insect pests be now enforced.

The meeting also expressed an opinion as to the advantage of the farmers devoting their attention to a few central fairs, instead of holding a numerous succession of little ones. The President had broached the subject in his address, and Mr. H. Kipp said that was just the way he was going, too. It was very commendable perhaps in every place having "get up" enough to want a fair of their own, but there was too many little ones for the present state of the Province. Mr. Wells was not in favour of a wholesale slaughter, but he believed that a certain standard should be reached before they got a Government grant.

Mr. Hutcherson defended the small shows; they were not too numerous, but there were too many poor small shows. If all the small shows were crowded out, it would hurt the large ones too. His remedy would be that the Government should only grant dollar for dollar what was raised for the show. Then the good shows would remain, and where, as at present, some places raised only about \$40 or \$50 now, and depended altogether on the Government grant, they would simply be killed off and could not complain.

The question was laid over for further discussion until the evening session.

EVENING SESSION, 7:30 p.m.

The following resolution was moved by A. C. Wells, seconded by J. Todd, and carried—That this meeting is of the opinion that the Act *re* fungus diseases and insect pests should now be enforced.

At the opening practical paper on thanked for his number:—

Nature of the Soil.

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Location.

waggon.

Preparation.

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Suitable Varieties.

selecting the most Now, however, than express purpose of good work in this members who, in the profitable varieties t secure success can be this knowledge, will power to aid intendi connection is the pi local market. In m to 1.

The proportion point more clearly. community is a large 12, pears 4, plums 6,

Small fruits. w

1 bush, yield 10 lbs.

Hints to Fruit-Growers.

ADVICE AS TO THE BEST METHODS OF PLANTING AN ORCHARD.

At the opening of the evening session, Mr. A. Campbell, of Mount Tohnie, gave a very practical paper on hints to intending fruit-growers, and at its conclusion Mr. Campbell was thanked for his paper, which was declared brief and to the point. The hints were six in number:—

Nature of the Soil.

1. One of the chief considerations in selecting land is that of suitability. Secure that which is best adapted for growing all the different kinds of fruit that this climate will grow. Such land may best be described as a deep loam with a proportion of sand resting upon a clay bottom. A slight elevation is desirable, because in land where dips occur, these low lying spots are subject to spring and summer frosts. Select land with a good natural drainage. This will save you money. Where no natural shelter exists against prevailing winds, a shelter belt or belts ought to be planted.

Location.

2. The nearer you are to a good market will be an advantage patent to you all, and needs not my adding that it will ensure the delivery of fruit in good condition, the saving of time and tear and wear on horse and waggon.

Preparation.

3. Preparation of land before planting—When draining is necessary, a plan should be drawn out of the drains, so that if in after years one should be required to be lifted for renewal, or other cause, no damage, or as little as possible, would result to permanent trees. After draining, the land should be plowed and sub-soiled to the depth of at least 18 inches.

Suitable Varieties.

4. Variety of fruit suitable for local market.—Here we are brought face to face with the undoubted fact that no man, however varied his experience in other parts of the Dominion or elsewhere, coming into this Province can rely upon his past experience to guide him with certainty in selecting the most suitable varieties of fruit trees, and consequently the most profitable. Now, however, thanks to the Government, an experimental farm has been established for the express purpose of gaining definite information on this very point. This society also is doing good work in this matter, collecting as it does information from every source, and by those members who, in their journeys through the Province, are, year by year, finding out the most profitable varieties to plant, so that from these two sources the most reliable information to secure success can be obtained. I may add that these gentlemen, whose duty it is to impart this knowledge, will at all times be pleased, even consider it their privilege, to do all in their power to aid intending growers in their selection of trees. Another important matter in this connection is the proportion of the different varieties of fruit that should be planted for a local market. In my experience, the proportion of apples as against pear trees would be 3 to 1.

The proportion of plum to cherry trees would be $1\frac{1}{2}$ to 1. Let me try to bring out my point more clearly. Take an orchard for family use; a family is a small community, and a community is a large family. In such an orchard the following trees would appear: apples 12, pears 4, plums 6, cherries 4.

Small fruits.

With regard to the planting of small fruits, a safe basis to go upon would be: Strawberries, 1 running yard or 3 plant, yield 1 lb.; raspberries, 1 stool of 5 canes, yield $2\frac{1}{2}$ lbs.; gooseberries, 1 bush, yield 10 lbs.; currants, 1 bush, yield 10 lbs. With good and careful treatment these quantities can be largely

increased; but it is better in trying to give advice to give it on the safe side. Trees from one to two years old are the best to plant.

Now that we are past the experimental stage of varieties that are most suitable to be grown in the Province, it rests with the nurserymen to supply fruit-growers with the varieties they ask for true to name, otherwise much loss of time, labour and money will be the result to the grower, and even perhaps the entire frustration of all his plans, and eventually, in a measure, discredit on the Province as a fruit-growing country.

I can see no reason why nurserymen should not be as careful as the seedmen who, in my experience, rarely make a mistake, although dealing in an almost endless variety of seeds. If this society could by any means impress on them the great and important necessity of only sending out that which is true to name, a lasting benefit would be done to the purchaser and the Province.

Treatment. 5. Treatment for the first few years—To do justice to a young orchard one must be careful to keep the land well pulverized so as to prevent over evaporation, and it is good to mulch until such time as the roots have got a good and firm hold.

Judicious pruning is a very necessary part of an orchardist's work, as is also that of spraying, to keep in check and if possible eradicate fungus growths and insect pests, so injurious to the healthy development of tree and fruit. From your annual reports anyone can now have full particulars as to the right sprays and the proper time to apply them, and by carefully and intelligently following the instructions given, will attain the desired results.

Fruit-Growers' Association. 6. Fruit-Growers' Associations and membership—In bringing these hints to a close, let me address a few words to those who have not as yet joined this or any local Fruit-Growers' Association. The advantages to be gained by doing so are obvious. The discussions which take place at the meetings will enable you to obtain information from parties of more or less experience, which will be most serviceable in your work, or if you have not yet started in this our honourable calling, it will assist you to decide where and how to go about it. To the practical man having the experience, and not a member of one or other of our societies, I say to him join at once. It is your bounden duty to lend a helping hand to make fruit-growing one of the successful and profitable industries of this Province.

After this paper came the reading of the minutes of the last annual meeting and the statement of the retiring secretary, Mr. A. H. B. Macgowan. Mr. Macgowan reported a balance in the bank of \$307.66. Mr. E. Jacobs and Mr. Hutcherson were appointed to audit the books for last year, and while they were at their work the meeting went on to other business.

Paper on Co-operative Organisation, by G. H. Hadwen.

IN WHAT MANNER CAN FARMERS IMPROVE THEIR CONDITION AND GENERAL PROSPERITY.

One of the questions we must ask ourselves as farmers is the one, in what manner can we improve our condition and our general prosperity? This leads to the consideration of our opportunities, and whether we make the best of them; our methods of working, whether they could be improved; and the sale of our products, whether this is effected in the best manner possible. Let us consider how the best results can be obtained, or at all events approached.

An exchange of views.

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Agricultural Exhibitions.

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An exchange of views. It is obvious that in a community one man may be successful with cattle, while another may be a better gardener than the former. It is not natural that these two men should exchange views to their mutual advantage? Herein lies the advantage of meetings similar to this, viz., in the exchange of ideas, the mutual improvement consequent thereto, and subsequently the co-operative action which such a meeting should stimulate.

Agricultural Exhibitions. The Agricultural Societies of B. C. are not on a by any means satisfactory footing, nine-tenths of these exist merely as exhibition societies. Now an exhibition is very good in stimulating a spirit of rivalry to produce better fruit and better stock, and also in educating the public eye and taste, but there the matter ends, and to my mind the holding of an exhibition is by no means the whole duty of an Agricultural Society. These are matters which I think our Agricultural Societies should take up. The holding of meetings for the purpose of discussing matters pertaining to methods of cultivation, varieties of grass, fruit and stock, ditching, clearing, building, etc.

Without entering into party politics, they could take up public questions affecting the interests of its members, also questions of freight rates, and the improvement of public highways.

If a creamery or a fruit-cannery is to be started in the district, the Agricultural Society is the proper body to investigate the advisability of starting the same, and to assist the organisation of the same. The organisation of farmers in Ontario and the other Provinces is much better than our own, and a little examination into their methods will not be out of place. As some of you may know, the Grange system existed in Ontario some years ago, which was rather more of a political organisation of farmers. This has, to a large extent, been superseded by the Farmers' Institute system, which I will now proceed to describe. Fifty signatures with a membership fee of 25 cents will entitle the signers to an Institute. The assistance given by the Ontario Government consists of a grant of \$25, provided that the municipality grants the Institute a like amount. The Provincial Government send two delegates for two days to their meeting, paying all expenses connected with the delegation.

In addition to this, the services of a superintendent are engaged, whose entire duty is to organise the institute meetings, distribute the delegates, etc. All the members receive all the reports published by the department. These Institutes, of course, have to comply with the regulations of the department.

The Province of Manitoba has instituted a system on the same lines, with the following variations: The number of members required is only 25, with a subscription of 50 cents. I would like to hear from the members present whether they would recommend the inauguration of a similar system here; when we consider that in Ontario in 1885 the first year 12 meetings were held; in 1895, 303 meetings were held; in 1896, there were 666, with a total attendance of 102,461. Here steps must be taken in regard to the Agricultural Association appropriation at the present time, for whereas the grant remains the same, the individual grants are being continually reduced by reason of new societies being formed, and unfortunately some of these subdivisions are caused by local petty jealousies, converting what should be one good exhibition into two indifferent ones.

This paper brought out very much the same discussion as had taken place during the afternoon on the multiplicity of exhibitions.

Mr. Thomas Cunningham, of Mission, spoke out for centralization, saying that two, or perhaps one grand show was better than a lot of little ones, and cited the Toronto fair as an

example of what was doing more good to the farmers than all the other shows together. Perhaps one show east of the Cascades, one on the Mainland, and one on the Island, would meet all requirements.

G. W. Henry, of Hatzic, differed from this, and thought the little shows helped the farmers and waked the people up in the rural districts.

Finally the discussion was closed by a resolution moved by Mr. E. Hutcherson, seconded by Mr. A. C. Wells, and carried,—That it is the opinion of the Fruit-Growers' Association that the appropriations of the British Columbia Government in aid of Agricultural Societies be made more strictly in accordance with the membership and general revenue of the Societies, and that moreover, the societies be required to perform certain educational conditions to be decided by the Legislature.

In presenting his report of the Spokane Fair, Mr. E. Hutcherson remarked that while a committee was appointed at the summer meeting of the Association to take charge of an exhibit to be sent to Spokane, no arrangements were made for the calling together of the committee, nor was any appropriation made for carrying out the work. "The reason of this unbusiness-like affair," said Mr.

Mr. Hutcherson's Report.

Hutcherson, "can be better explained by those who took part in the meeting than myself. I may here say that I believe you fully understand that the past when you can find men who will give their time and expend their money in going around gathering and paying for exhibits out of their own pockets. The consequence was that the fruit exhibit made at Spokane, with the exception of a few samples from Duncan, Nanaimo, and Spence's Bridge, was from the orchard of Thomas G. Earl, Lytton. To that gentleman belongs the credit for the excellent display of apples made at Spokane. Had it not been for the enthusiasm of a few of our members your resolution would have been a dead letter. That the zealoussness was warranted has been fully proven to me by my experiences as your representative at Spokane." Mr. Hutcherson went on to speak of the highly complimentary remarks made by the people and press of Spokane on the British Columbia exhibit, and asked: "Would it not be well for you to awaken and acknowledge the responsibility of your existence as an association and look past the present to the great possibilities of this Province as a fruit-growing country? Why should not the people of Washington speak and write of your wonderful pears, plums and prunes? Why do not Ontario, Quebec, and the Maritime Provinces shout the praise of our wonderful apples, pears, plums, cherries and prunes? Simply because you as an association are not doing your duty. You could well take a lesson from the mining interests of this Province and their grand exhibit at Spokane. The following varieties of apples from Mr.

Mr. Earl's Apples. Earl's orchard were conceded to be superior to any of their kind at the fair: Gravenstein, Maiden's Blush, Alexander, Twenty Ounce, Spitzenbergs, English Golden Russets, Blenheim Orange, Talman's Sweet, Yellow Newton Pippin, Northern Spy, Smith's Cider, Blue Pearmain, Red Betingheimer, McIntosh Red, R. I. Greening, Baldwin, Ben Davis and the Wealthy." Other varieties were cited by Mr. Hutcherson as being especially fine. The report spoke in high terms of the kindness of the fair management, and touched on the fine display made by British Columbia in minerals at the show.

Mr. J. R. Anderson bore out Mr. Hutcherson's remarks as to the courtesy and kindness of the Spokane fair management, and a vote of thanks to them was moved by Mr. Kipp, and carried.

In connection with M. Palmer, and see Mr. Anderson's effort.

Next came another handsome exhibit of association.

After this, adjourned.

Mr. Anderson Spokane exhibit. No line.

Mr. Hutcherson At this state they On motion, they pay the membership Moved by E. H.

Ellection of Officers. B

President—T. C. First Vice-President—A. Ohlson and T.

New Secretary Appointed. T

year.

After consideration Henry, Stevens, and A long list of names beginning of the report

Mr. Cunningham suffered from overheating

Mr. Henry stated from Ontario spoiled

Exchange had as much Discussion was carried

A letter was her mile while travelling

In connection with this, Mr. J. R. Anderson received a vote of thanks, moved by Mr. R. M. Palmer, and seconded by Mr. Hadwen, Mr. Palmer remarking that had it not been for Mr. Anderson's efforts there would have been no exhibits from British Columbia.

Next came another vote of thanks, this time to the worthy President, Mr. Earl, for his handsome exhibit of fruit, which captured the prize at Spokane and won the trophy for the association.

After this, adjournment was taken till Saturday morning at 9 o'clock.

SATURDAY MORNING'S SESSION, JANUARY 30TH, 1897.

Mr. Anderson mentioned that a difficulty had arisen over the customs duties of the Spokane exhibit. No provision was made for forwarding the exhibit on either side of the line.

Mr. Hutcherson spoke of the value of the Spokane exhibit as an immigration inducement. At this state the committee on Directors reported.

On motion, their report was adopted, on condition that the Directors were required to pay the membership fee within thirty days to qualify as such.

Moved by E. Hutcherson, seconded by T. Wilson, and resolved—

That this meeting do now adjourn and that we resolve ourselves into a meeting of Directors. Moved by J. R. Anderson, seconded by M. Baker that we now proceed to the election of officers. Carried. The following officers were elected unanimously:—

President—T. G. Earl.

First Vice-President—G. H. Hadwen.

Second Vice-President—M. J. Moggridge.

A. Ohlson and T. R. Pearson were nominated for Secretary-Treasurer.

Messrs. Stevens and Sere were appointed scrutineers. The ballot having been taken, Mr. Pearson was elected with the following vote:—

Appointed. T. R. Pearson, 16; A. Ohlson, 2. T. McNeely moved, G. W. Henry seconded, that the Secretary's salary be \$30.00 per month for the ensuing year.

After considerable discussion, taken part in by Messrs. Hutcherson, Baker, Ohlson, Henry, Stevens, and others, the motion was carried.

A long list of names was here presented, and the names of those accepting appears at the beginning of the report.

Mr. Cunningham referred to the claim made in regard to the carload of fruit which suffered from overheating.

Mr. Henry stated that merchants had received compensation for fruit and goods shipped from Ontario spoiled while en route during the November weather, and he thought the Fruit Exchange had as much right as the commission merchants to consideration.

Discussion was continued on C.P.R. and suitable cars.

A letter was here read from the C.P.R. to the President offering a rate of 3½ cents per mile while travelling on the business of the Fruit-Growers' Association.

B. C. Fruit Exchange, by G. W. Henry.

Mr. G. W. Henry, in his introductory remarks on the reasons for the formation of the Fruit-Growers' Exchange, said that :

A practical step. "As a Fruit-Growers' Association we had for seven years or more been trying to teach people how to grow fruit and what varieties to grow ; also how to put their fruit up properly when grown. Much good we know has been accomplished, too, in that way ; but it was evident something more practical was required in order to get possession of the markets for our fruit when grown."

While the Fruit-Growers' Association and the Fruit Exchange were two distinct societies, they were in harmony in their objects, Mr. Henry said, for while the Fruit-Growers' Association was an educational one, the Exchange had in view the marketing of the fruit. That the Exchange would eventually become a strong body and accomplish important work, Mr. Henry was certain, though at first it needed great care and attention—strong food and good nursing.

Co-operation. "The fundamental principle of the society is co-operation," Mr. Henry continued, "and in carrying out the business this principle has been adhered to as closely as possible. Co-operation by fruit-growers in marketing their fruit had been in existence in the Province for a year or two years before the organizing of the Exchange, but this was with local bodies only, and it was found that the competition between localities might prove as dangerous to our interests or more dangerous, than competition of individuals. Competition has been called the life of trade, therefore we would not wish to kill it entirely ; on the contrary, our idea is to promote it in its best form.

Competition. "For us to individually compete in trying to get possession of these distant markets means great expense to each of us, and would put us largely at the mercy of the dealers whose business it would be to make all they could out of our production. Competition of that kind in these markets also means danger of glutting some, while others are left almost untouched, owing to the ignorance of each as to where the other is shipping, or by all of us trying to get into what seems the best markets. A glut of fruit shipped into any of these distant markets means serious loss to growers, for in addition to the loss of the fruit is the extra loss of from two to four cents per pound freight. The varieties of fruit we ship being of such perishable nature, have to be sold immediately on their arrival whether the market is full or not, or else they are lost. Such disastrous competition as that we wish to avoid.

"The competition we wish to encourage is at home, where the growers have control of the situation themselves. We want them to compete with each other in trying which can grow the best fruit, which can put it up in the best shape. That is the kind which will give life to our fruit trade. Let each grower learn to feel proud of his own name stamped on each of his packages, and the Fruit Exchange will soon learn which stamps to be proud of too, and will see that each man receives the just reward of his labour."

Transportation. In addition to this, Mr. Henry pointed out that the fruit-growers would gain by their combined influence in transportation. In this connection the ventilated cars furnished by the C. P. R. last year were imperfect, but the company had promised to get all the information they could on the subject and remedy the defect this year. He gave the C. P. R. credit for making concessions in distributing fruit along the line, an important privilege not generally allowed by railway companies.

Results of the Exchange.

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Remarks by the Premier.

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Committees of On annual rep T. R. Pearson.

"The results of the season were not as favourable as we had hoped," he continued. "Not that the system proved unsatisfactory, but that the **Results of the Exchange.** expense of organizing, printing, advertising, etc., has been a greater cost than anticipated, and the fruit crop has been so very much lighter than expected. We are satisfied, however, that the growers on the whole received much better prices for their fruit, after all losses and expenses, than they would have had the Exchange not been in existence. The officers and servants of the society are the ones who have suffered the loss, not being able to get out of the percentage allowed for the purpose all their salary and expenses. For my part I feel that, considering all the disadvantages, we came out well—that the exchange proved itself a success even in such an unfortunate season."

Mr. Henry did not advocate the sending into the home markets inferior fruit of any kind. "Our own people," he said, "should get the best fruit, but some varieties are too tender, and in gathering fruits often some of the specimens are too ripe for distant shipments. These are usually the very choicest fruit, and should therefore be daintily put up and supplied to our own people. They would soon learn, too, this fact, that they were far superior in flavour to fruit that had been shipped in from a distance and consequently picked before fully ripe. There are so many points that could be taken advantage of, if the fruit-growers could or would all work together harmoniously. I know how difficult it is for them to do so, scattered as they are so widely, how easy and natural it is to let little jealousies and selfish motives spring up, and how much injury just one such spirit in a locality can do the cause by giving vent to his feelings.

"Therefore, whether we can overcome these impediments and receive the full benefit which should accrue to co-operation is yet to be proved. One great question remains, and this we should impress forcibly upon our mind, that in years to come, when all our plumb orchards are in full bearing, if something has not been previously done to prepare the way, what will become of all our fruit? What will become of it next year if we have a full crop, if some plan is not in operation for advantageously disposing of it in distant markets? You who are growing fruit or intend to be fruit-growers, should remember this. Remember that this year we had in our scarcity a surplus. Then, with a good crop next year, which we shall likely have, we may look for at least three times as many plums, to say nothing of the other fruit.

"These are thoughts we must take into consideration, and even though at first we meet with extra expenses and losses, our only salvation as fruit-growers is to get an established trade in distant markets."

During the forenoon, the Premier, Hon. J. H. Turner, was present for a short time, and congratulated the Association on their valuable work. He referred to what had been said the previous day in the discussion regarding the Agricultural Fairs, and expressed the opinion that something might be done in the direction of several of the societies agreeing to hold a joint exhibition, which would necessarily be better than if they acted separately. He alluded in words of praise to the excellent results that had followed the introduction of spraying, and in concluding said that the expression of opinion from such bodies as this Association would naturally receive consideration from the members of the Legislature.

Mayor Redfern also made a few congratulatory remarks during the morning, expressing his deep interest in all that was for the welfare of the Province, and saying that the City Council would always be pleased to render any assistance they could to the Association.

Committees of the Association were appointed as follows:—

On annual report—G. W. Henry, Thos. Cunningham, G. H. Hadwen, R. M. Palmer and T. R. Pearson.

For assisting exhibition associations in fruit departments—M. Baker, A. Ohlson, R. Layritz, G. W. Henry, E. Hutcherson, T. G. Earl, R. M. Palmer, T. A. Sharp, G. H. Hadwen, A. Postill and T. R. Pearson.

On recommending varieties of fruit—D. Graham, R. Layritz, G. W. Henry, T. Wilson, M. Baker, T. G. Earl, R. M. Palmer, E. Hutcherson, T. A. Sharpe, A. Ohlson and T. R. Pearson.

To make experiments on spraying and report—E. Hutcherson, G. W. Henry, T. Wilson, W. Knight, J. W. Todd, D. Stevens, R. Layritz, T. McNeely, G. Melhuish, W. J. Moggridge, P. Latham, S. Sherdahl and H. Kipp.

On finance—Thomas. Cunningham, A. Wells and G. W. Henry.

Moved by E. Hutcherson, seconded by H. Kipp, resolved—That \$150.00 be voted to the B. C. Fruit Exchange. Carried after some discussion.

Meeting adjourned.

Paper on Spraying by Henry Kipp.

EVENING SESSION, SATURDAY, 30TH JANUARY, 1897.

Mr. Henry Kipp read a paper on spraying experiments in his orchard during 1895-6, stating that he had found the lime, salt and sulphur wash very effective when properly made and applied in the dormant season. No rule of thumb was allowed in making the spray, but everything was weighed or measured. The wash was used to destroy the eggs of green and black aphides, and when trees were mossy two cans of Gillet's concentrated lye were added to 60 gallons of the mixture, and this gave good results.

Mr. Kipp strongly recommended the use of the well-known Bordeaux mixture for scab on pears and apples—two applications, one before the blossom opened, and another after the blossoms had fallen—giving good results. The Vermorel nozzle was the best for use with this mixture, and care should be taken to keep it well stirred while spraying.

In regard to the woolly aphis, Mr. Kipp warned orchardists to be on the lookout during the latter part of September and first half of October for the winged brood, which appear about that time, and drifting about with the wind, get into crevices in the bark of apple trees. He used strong tobacco wash against this pest as soon as they were observed, and wished his neighbours would do the same.

Dead Spot on Apple Trees, by R. M. Palmer.

"This disease is reported from all districts of the Lower Province, as prevailing to a greater or less extent, in many instances killing young trees. There is still great diversity of opinion in regard to this disease or condition of the apple tree. Prof. L. B. Pierce, who was specially detailed by the United States Department of Agriculture for the purpose, has been making careful, systematic investigation regarding the disease as it occurs in Oregon and Washington, and although the investigations are not complete, it is stated that "dead spot" is the result of a parasitic fungus, which is probably transmitted from tree to tree by means of spores, blown by the wind, or carried by insects, etc. Mr. M. A. Lowndale, of Lafayette, Or., who has studied the disease, writes me in regard to it as follows:—

A Parasitic Fungus.

How Propagated.

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How Propagated.

“Dead Spot is caused by a deep-seated fungus that finds its sustenance in the inner tissues of the bark, and only appears on the surface for the purpose of spore formation and reproduction. The mycelium of the fungus spreads in various directions through the bark, and can generally be cut out without any injury to the tree, by stripping off all the dead outer bark and diseased tissue. After the fungus has attained its growth, it produces its spores in small excrescences on the surface of the dead spots. These little pustules burst, when the spores escape, and are carried by the air and insects to other trees and other portions of the same tree. They germinate in autumn, and begin to penetrate the bark at once, and repeat their cycle of growth. The spore-bearing vessels burst during July and August, and as no spray can reach the fungus after germination, a midsummer spraying when trees are badly infected is important.”

Preventatives.

“As an ordinary preventative, autumn spraying would probably be sufficient, but in severe cases both should be used. All dead spots should be cut out and burned, for they hold myriads of spores that only await a favourable opportunity to produce new infections. The midsummer spray to use on bearing trees would be five ounces copper carbonate and three pints ammonia in 45 gallons of water. On young trees, or trees not in fruit, six pounds sulphate copper, six pounds lime, 50 gallons of water. The autumn spray should be six pounds sulphate copper, ten pounds lime, 50 gallons of water. It will be noted that these sprays are about one-half stronger than the ordinary Bordeaux mixture as advised for use in British Columbia.

“In British Columbia I have observed that dead spot does not occur in the interior valleys, and either not at all or to a very slight extent in orchards of the Lower Province situated on soils containing plenty of lime, such as clam shell beaches where there is a good under drainage. It is now pretty well established that many soils on which orchards are planted contain a very small percentage of lime, and again the question of proper drainage of orchard land has not received the attention required. I have frequently noticed that fruit trees are standing in soil where the water-table during the winter months is almost or quite level with the surface. Now, whatever direct treatment is made to trees affected with ‘dead spot,’ it is most important that these matters should receive attention—healthy trees cannot be expected, unless they are surrounded with what may be termed proper ‘sanitary conditions,’ and supplied with the elements of plant food necessary to promote healthy growth. Where wood ashes are available, in sufficient quality, they should be used freely in the orchard, and if not obtainable, lime and muriate of potash in their place, and if convenient, well worked in with the harrow or cultivator in early spring, as far as the roots of the trees extend.

Hints on Planting.

“In planting new orchards, care should be taken not to plant the trees too deep. I draw attention to this, as I find it is rather a common error, and one very difficult to remedy later on.

“On soils inclining to be wet, it is better to plant on or near the surface and mound up the soil over the roots of the trees.

“For young trees, stable manure should be applied very cautiously, as it stimulates wood growth to an undue extent. On some rich soils it has been observed that frequent cultivation has had the same effect.

“In regard to these matters, orchardists should study their soil and local conditions, the aim being to produce a fair amount of new wood on trees every year, which will harden and ripen up properly in the fall, and avoid the production of overgrown sappy shoots, which apparently indicate a condition of the trees highly favourable to the development of ‘dead spot.’

"Give your fruit trees as nearly as possible 'ideal conditions' by planting on soil suitable for the purpose, and supplying proper care, cultivation and plant food, then if disease appears, treat them with remedial applications designed to destroy the intruding disease or parasitic growth."

Mr. Palmer also offered some remarks on another fruit pest known as **The Apple Tree Miner**, the apple tree miner, which was also known to have made its appearance in some of the orchards on the Lower Mainland. It is of the same family as the codlin moth, and Mr. Palmer suggested as a means of eradicating it, the destruction of all infected fruit. A long discussion followed, during which a number of useful facts were elicited.

Mr. Ohlson compared "bark disease" to consumption in mankind, and thought it entirely depended on drainage and suitable treatment of land.

Mr. Palmer said that it occurred on high banks where drainage was practically perfect, consequently Mr. Ohlson's contention did not hold good.

Mr. T. Wilson said that he first noticed it in a high, dry place with a gravel subsoil. He had noticed it in several places in the Upper Country.

Mr. Palmer had not noticed new spots in the Upper Country, though he had seen a little of it in small trees. But he thought if there was much of it we should hear more about it.

The report of the Spraying Committee was here handed in.

A vote of thanks was tendered to the District Fruit-Growers Association for their exhibit of spraying at Cedar Hill.

Mr. Palmer remarked that it was particularly necessary to have all spraying mixtures thoroughly strained and kept in a state of agitation.

Grading and Packing of Fruit and Fruit Packages, by F. L. Sere.

A standard subject. This is a subject which has been written upon on so many occasions that any ideas or suggestions that may be advanced will, to a great extent, be a reiteration of former efforts in that line. But as there are always new members joining the Association who may not have any experience in the grading and packing of fruit, and also many of the old members who have not profited as much as might have been expected from the advice given to them in former papers read by other members of this Association, I thought it would not be amiss to offer a few suggestions on this very important subject to fruit-growers, believing that much of the value of any paper read on an occasion like this lies in the discussion which it brings about, more especially when the most experienced growers of the Province are gathered together, and can, by the expression of their ideas, gained by past experience, give the members many useful pointers in regard to the best methods of preparing their fruit for market. If the growers of this Province expect to sell their fruit in competition with the attractive and neatly packed fruit imported from abroad, they must be prepared to discard the slipshod methods of gathering and packing which have prevailed with too many of them in the past. The day has gone by when fruit brought to market, thrown into packages of all kinds and sizes, can be sold at the same price as fruit properly packed in a clean and neat box. I believe that the time has arrived when the fruit-growers of this Province should come to a definite conclusion as to the sizes of packages to be used for the different kinds of fruit, and then ask the Government to pass a law making that a standard, for it is not until some such action is taken that we will be able to secure uniformity in size of package.

Uniformity in packages.

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Uniformity in packages. An attempt was made some two or three years ago by this Association to attain this object by recommending the use of certain sized packages, but very little has come of it as we still find growers using almost any kind of boxes and of various sizes.

The securing of uniformity may seem to some to be difficult to attain, but I do not share in that opinion, for, in reality, there is very little difference of opinion, except in regard to apple boxes, of which several sizes are used in the Pacific Coast States. In California a smaller sized box is used for Gravensteins and a fancy grade of apples, but, as in British Columbia, only a small quantity of Gravensteins are grown, and the amount of apples that would grade as fancy is limited, I think you will agree with me that one size of box will suffice for all kinds of apples, except crab apples.

Last season the B.C. Fruit Exchange adopted a size of box holding from 40 to 45 pounds of apples. The only fault found with it, and with which I fully agree, was that too much space was left between the pieces forming the top and bottom of the box. I think that if these pieces were cut a little wider, so as to nail close together in the centre, leaving only a space of $\frac{1}{4}$ of an inch on each side, we would then have a box well adapted to our wants, and affording ample ventilation to the fruit as well.

Co-operation suggested. The suggestion has also been advanced that an attempt should be made, in conjunction with the neighbouring States, to secure uniformity. Now, as the market for British Columbia apples is entirely at home, and will continue to be so for some years yet, I think we could safely adopt a standard of our own, and then buyers would know what they are getting when buying apples, and growers would be placed on an equality with each other.

In regard to pear boxes there is no difference of opinion. The standard box adopted in California being used in Oregon and Washington, and has also been recommended by this Association. It is well adapted for the purpose and will hold 40 pounds of closely packed wrapped pears.

For plums there are two kinds of packages used in the Pacific Coast States, viz.: The 20-lb. box and 5-lb. tin top grape baskets, placed four in a crate. This style of package would also answer well for shipping currants. The 20-lb. box does well enough for the home market, but will not give as good satisfaction for shipping as the crate and 5-lb. baskets which have come into general use in California.

California method. In fact, in the matter of packages for the exportation of all kinds of fruit we could not go very far wrong if we were to adopt the style of packages generally in use in California, and could rest assured that they are the best that years of experience have suggested.

The 20-lb. Eastern baskets have, to some extent, been used in this Province. They make a neat, attractive package for the home market and would probably answer well for short distance shipments, but for carload shipments to a long distance they are not equal to the crates and 5-lb. baskets.

As for cherries, either of the boxes used in California, Oregon or Washington, is well adapted for shipping. 5-lb. baskets made in the East, have been tried in British Columbia and have given satisfaction, but they would cost more than the boxes.

Concerning strawberries, the 1-lb. baskets and crates made in the East, are well adapted for shipment. For the local market the 5-lb. basket used for plums, makes a very neat and convenient package, and will hold 4 lbs. of strawberries, raspberries and blackberries. It would not do for shipping.

In Michigan a law has been passed, requiring that packages made for **The Michigan** fruit must be marked plainly on the outside, not on the bottom, with their **Law.** real capacity. The passage of the law was secured by the fruit-growers to protect honest growers and shippers from being obliged to meet the ruinous competition of those that use undersized packages. A similar law might be of benefit in British Columbia, as large quantities of strawberries are imported into this Province, packed in square 1-lb. boxes, the bottom of which is adjustable. This package, if honestly put together, will hold 1 lb. of fruit, but the bottom is very often placed so high, that it will hold considerably less. The home-grower is thus placed in unfair competition with a short-weight package, and the consumer is robbed as well.

Now for a few words *re* the packing and grading of fruit. Fruit should always be picked by hand and carefully placed in the box; it should never be shaken from the tree, nor handled roughly, as such fruit not only will not keep, but loses that good appearance which carefully handled fruit has. After the apples have been picked they should be graded, all undersized, ill-shaped, or scabby apples should be put aside, to be sold to cider-makers, or fed to hogs.

In packing apples, the first layer should be faced (the box being raised **Apples.** a little at one end to facilitate the work); after that the apples should be closely placed by hand, but should never be thrown in. After the box is full, I have found it a good plan to cover the apples with a folded sack, and placing a board over the sack, to press down the apples with the knee. The apples are thus pressed tightly in the box, and it is easy to nail down the cover without bruising the fruit. In regard to pears, the great mistake which many growers make, is that they allow their pears to remain too long on the trees. All pears should be picked by the end of September (that is around Victoria); they will then be more juicy and keep longer after ripening, than if they had been allowed to remain longer on the trees, although they may be smaller in size. Pears are so easily bruised, that they should be graded immediately after picking, and placed in a cool dry room to ripen. The rule for grading apples will also apply to pears. Pears should always be wrapped in paper and placed in the box one at a time; if properly packed, the box will hold four layers of good sized fruit.

Pears, when not wrapped in paper, will bruise in carrying to market, **Pears.** and after being taken out of a fruit-house, where temperature varies but little, and exposed to wind and sudden changes of temperature in the open fruit-stands, will not keep long, whereas those wrapped in paper will keep longer. As to when plums should be picked, a great deal depends upon the distance to which they are to be shipped. They should never be allowed to remain on the trees till they are dead ripe, not even for the local market.

Dealers will not buy plums, as a rule, that cannot be kept for at least **Plums.** a week. If the 20-lb. box is used, the plums should be arranged in layers (not thrown into the box); three layers of good sized plums filling the box. By raising the box at one end, the plums will roll into place very easily. Care should be taken to reject all over-ripe or scrubby fruit. If the 5-lb. baskets are used, the plums should be arranged so that the baskets when filled, present an even appearance, a piece of paper being put in the basket before placing the top layer.

Raspberries and blackberries should never be allowed to get over-ripe, but should always be picked when ripe enough; every other day would be about right. In conclusion, I wish to make one more suggestion, which might, if carried out, be of some benefit to growers, viz. :— That the Board of Horticulture should take steps to have lectures given to growers, at the time when fruit is ripening, together with practical lessons in packing; such lectures could be given by our able and efficient Inspector of Fruit Pests, provided it would not interfere too much with his other duties.

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Report of the Auditors.

The following was the report of the Auditors:—

GENTLEMEN:—We beg to report having examined the three documents submitted to us for audit, viz.: (1) Memo. of receipts for year; (2) statement of account of the Fruit-Growers' Association with A. H. B. Macgowan to July 20th, 1896; and (3), statement of account of Fruit-Growers' Association with A. H. B. Macgowan, Secretary-Treasurer, to January, 1897, respectively. As, however, these are not accompanied by books of account, vouchers for payments, bank pass-book or banker's certificate, showing balance of cash at credit of the association, or, indeed, by anything at all affording the information necessary to satisfy us of the correctness of the several statements, we are unable to certify to their correctness or otherwise.

Awaiting your further instructions we are, gentlemen,

Yours faithfully,

E. JACOBS,
E. HUTCHERSON, } *Auditors.*

Moved by T. Cunningham, seconded by J. R. Anderson:—"That the Secretary *pro tem.* write a letter authorising the auditors to proceed with the audit, and to inspect the books of account, vouchers, etc." Carried.

One of the most important events of the evening was the report of Messrs. M. Miller, H. Kipp and D. Stevens, the committee on the tariff. This report read:—

"Your committee to whom was referred the communication of the Minister of Agriculture, *re* revision of the tariff, beg leave to report as follows:

Revising the Tariff.

Your committee believes that the true policy of every government is that policy which will cause the greatest investment of capital and secure the best returns to the labourer and the investor. British Columbia being comparatively a new country her industries are to a certain degree undeveloped, and unless protection is afforded they are liable either to languish or remain dormant for an indefinite period. We would also call your attention to the imports into B. C. from our neighbours to the south, and point out that if protection is continued, although we may not be able as yet to supply our home demand, we will become a good market for the products of our sister provinces of the East.

"To particularize would be long and tedious, and possibly not accomplish nearly so much as a short conference with a committee appointed by you for that purpose.

"Therefore, be it resolved that this association believes that the tariff laws, as affecting agricultural interests, should not be lowered."

Two Sides of a Shield.

This brought up opposition from Mr. J. Dougan, of Cobble Hill, who styled the tariff a parasite, and contended that instead of humanity advancing they were degenerating in the scale because of this tariff.

Mr. D. Stevens in reply said they had only to look across the line and notice the low prices there, to see what would be the disastrous effect of pulling down the tariff wall. He wanted, too, to see the duty on malt increased, so that the farmers, as in the old days, should have a market for their barley.

Mr. Thos. Cunningham, as a farmer, said that if they took the tariff off, the B. C. farmer might just as well leave the country.

The report was adopted, with only one voice dissenting.

The special committee composed of Messrs. G. W. Henry, E. Hutcherson and R. M. Palmer recommended the following resolution, which was carried:—

"Whereas it has been considered necessary for the best interests of the fruit-growers of the Province to extend the work of this association in the way of investigating and developing the markets available for B. C. fruits, and also by placing them more prominently before the people of those districts by means of exhibitions:

An Increased Grant. "Resolved, That the government be respectfully requested to increase the annual grant to this association to the amount of \$1,500, in order that the work may be satisfactorily carried out."

Votes of thanks to the city, the C. P. N. and the President, closed the session, and the meeting adjourned.

Quarterly Meeting.

NEW WESTMINSTER, 14th April, 1897.

The quarterly meeting of the B. C. Fruit-Growers' and Horticultural Society was held in the City Hall at 7:30 p.m.

Present—T. G. Earl, President, in the chair; W. J. Moggridge, E. Hutcherson, H. T. Thrift, Jas. Mellis, R. M. Palmer, G. W. Henry, T. McNeeley, Geo. Mead, T. Cunningham, R. Layritz, and the Secretary.

On motion, the minutes of the previous meeting were read and adopted.

Mr. J. Mellis was added to the subscription committee and the Secretary instructed to forward him a membership ticket book.

Mr. Henry moved, and Mr. Cunningham seconded—"That the **Annual Report.** Secretary get the matter ready for the annual report, and call the committee together in about a month's time."

Mr. Hutcherson, for the auditing committee, reported having found the books and accounts in order.

The committee's report was adopted and the committee discharged.

Messrs. Hutcherson, Palmer and Sharpe were appointed a committee to gather information in regard to the varieties of fruit found to succeed in the various districts of the Province, with a view to publishing the same for the information of fruit-growers, and to collect information regarding the injury done to fruit trees by the cold snap in November, and the varieties which have passed through it without injury.

A vote of thanks was passed to the Mayor and citizens for their cordial reception and the use of the City Hall.

Mr. Hutcherson moved, and Mr. Moggridge seconded. Resolved—"That the next quarterly meeting be held at Agassiz."

Messrs. Hutcherson, Palmer, Sharpe, Hadwen, and the Secretary were appointed a committee to arrange a programme for this meeting and for an excursion as well.

Excursion to Agassiz. The Secretary was requested to communicate with Farmers' Alliances and Agricultural Societies in connection with the excursion to Agassiz, with a view to securing their co-operation in making the meeting a success.

Meeting adjourned to the call of the chair.

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AGASSIZ, B. C., August 27th, 1897.

The regular quarterly meeting of the B. C. Fruit-Growers' and Horticultural Society was held in the office of the Experimental Farm.

There were present—G. H. Hadwen, Vice-President, in the chair, E. Hutcherson, R. M. Palmer, T. A. Sharpe, Thos. Cunningham, J. R. Anderson and T. R. Pearson. During the progress of the meeting two or three gentlemen dropped in, but took no part in the meeting, which was purely a business one.

It should be explained that a combination of circumstances militated against many being present. However, although the attendance was small, a large volume of business was transacted, and the meeting did not adjourn until nearly midnight.

After the reading of the minutes, the committee on the varieties of fruit trees which have proved successful in the various districts of the Province, and the damage done to fruit trees by the cold snap last November, asked for further time until the annual meeting, which was granted. It was suggested that growers might be written to and their opinions obtained.

R. M. Palmer said many thought the damage was done in the spring, when it was really in the fall.

Moved by T. Cunningham, seconded by J. R. Anderson. Resolved—

Size of Apple Boxes. That the Secretary communicate with the Minister, Mr. Fisher, advising him that legislation is required on the size of apple boxes, as these are used altogether in British Columbia for shipping apples in.

The Secretary was requested to write and ask the members of the respective committees to report in writing on the various subjects placed in their hands. This also applied to experiments in spraying.

The following committee was appointed to confer with G. W. Henry, Manager of the British Columbia Fruit Exchange Society, on the size of apple boxes, and report to the Secretary—T. A. Sharpe, E. Hutcherson, G. W. Henry and A. S. Vedder.

Mr. Hutcherson spoke of a display of fruit being made at the Toronto exhibition. He pointed out that it would be a splendid advertisement for British Columbia.

Mr. Anderson said that he had been asked to lay a letter before the meeting asking that a display be made at Spokane again this year.

Mr. Hadwen said the best way to collect fruit was for those attending shows to make arrangements to get the fruit exhibited locally.

Mr. Anderson said that the Government would defray the cost of sending exhibits.

Mr. Hutcherson said that if the fruit from British Columbia had arrived at Spokane last year in time, the judges could not but have helped to have awarded many first prizes.

Outside Exhibitions. Prof. Sharpe, T. Cunningham, and R. M. Palmer, spoke in favour of an exhibit being made in our own country instead of across the line.

Mr. Hutcherson said that the exhibit made at Spokane had done much good.

T. R. Pearson said the object was advertising, and the point to attract as much attention as possible.

After further remarks Mr. Hutcherson said that to show what British Columbia could produce, was for our growers to go in and compete in the East for prizes.

The meeting found that it would be too late to make an exhibit in Toronto this year. Touching upon the Spokane Fair, Mr. Anderson said that the exhibit last year had done much good, and he had received many enquiries from across the line.

R. M. Palmer moved, and E. Hutcherson seconded, a resolution,—That the sum of \$250 be set aside for an exhibit at Spokane. The motion carried.



The duty on the fruit, cereals and vegetables sent will be paid, instead of a bond given. E. Hutcherson was appointed to take charge of the **Spokane Fair** exhibit. J. R. Anderson, R. M. Palmer and G. H. Hadwen will look after the exhibits from the Island, while contributions will be received at New Westminster and Victoria. All present at the meeting will work in conjunction with T. G. Earl for the general exhibit.

T. Cunningham said that in order that the regulations in regard to infected fruit be enforced, we here had to live up to the law. Fruit unfit for sale was damaging the name of the Province, and, what was more this state of affairs was forcing some to buy from abroad.

Prof. Sharpe said that those selling fruit should be made to brand their names in big letters so that it would be known who was sending bad fruit to the market.

Mr. Palmer said that the Government was enforcing this, and notices to that effect were being printed to be posted up.

Prof. Sharpe said that those who had sent in bad fruit should not be allowed to sell it. If a man got a bad box of apples it lasted him for some time, but if it was good, perhaps he would eat three or four.

It was pointed out that the Vancouver market had been flooded with bad fruit, and Mr. Cunningham said that this had spoilt the sales.

In bringing the matter to a head, Prof. Sharpe moved, and E. Hutcherson seconded,— That on account of inferior fruit being placed on the market this meeting considers that it is advisable that the regulations *re* infected fruit be enforced. The motion carried.

Mr. Anderson said in reference to the Farmers' Institutes, that he had been appointed Superintendent under the Act, but unless the farmers took the matter up themselves, nothing could be done. The sentiment had not been taken up by the farmers, and they did not appear to be aware of the Act's benefit and effects. It might be well for the meeting to use its influence in this direction. Two petitions only had been sent in for the formation of Farmers' Institutes under the Act.

Mr. Hutcherson said that in Ontario, the way the Institutes had grown, was through the Government sending lecturers to show the benefits of such organisations. The growth had been gradual, and it would be the same here.

Mr. Hadwen said that most of the agricultural societies here were only exhibition societies, and were dormant the greater part of the year.

Mr. Anderson said that many could impart much information on various subjects, and they only wanted to get confidence established so that a benefit would be derived.

Prof. Sharpe said that more knowledge was acquired by exchanging experiences from practical work.

Mr. Anderson agreed with this. What he wished was to enlist the efforts of the meeting in furthering the object. There seemed to be a feeling that local experience was what was wanted.

The members of the Fruit-Growers' Association, on motion, were requested to give all assistance to the formation of Farmers' Institutes.

The following appointments were made of judges:—

Wellington	R. M. Palmer.
Kelowna	E. Hutcherson.
Duncan's	R. M. Palmer & T. A. Sharpe.
Vernon	E. Hutcherson.
Chilliwack	T. A. Sharpe & G. W. Henry.

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New Westminster	The whole Committee.
Ladner's	P. Latham.
Nanaimo	R. M. Palmer & T. A. Sharpe.
Glenwood	E. Hutcherson.
Surrey	T. Cunningham & P. Latham.
Kamloops	E. Hutcherson.
Ashcroft	"
Comox	T. A. Sharpe.
Salmon Arm	E. Hutcherson.

Before adjourning, a hearty vote of thanks was passed to The World for sending a representative to report the meeting, and Mr. Hadwen was thanked for the manner in which he had presided.

During the meeting Prof. Sharpe placed many kinds of fruits at the disposal of those present, and opinions were exchanged on the respective varieties dissected and sampled.

J. R. Anderson, Deputy Minister of Agriculture, left for Surrey on Saturday, whence an application has been made to receive the benefits accruing under the Farmers' Institutes Act.

On Monday, at New Westminster, R. M. Palmer, G. H. Hadwen and T. R. Pearson, will be engaged in drawing up the annual report of the Association in pamphlet form.

Paper on Growing of Tomatoes, by W. B. Walker.

The conditions.

At the request of your Committee, and in reply to many letters I have received on growing tomatoes, I take this opportunity of giving my experience in tomato growing in British Columbia. In the first place a suitable soil is essential—a gravelly, porous soil and plenty of water, and not too much manure, as a soil too rich runs to wood and not to fruit. In the next place you require good seed, which is rather difficult to purchase, as the seedsmen do not grow their own seed and they do not know what kind of tomatoes the seeds are taken from. The variety may be correct, but if taken from poor vines and rough tomatoes they will certainly produce small and rough fruit. I always save my own seed from the first and best tomatoes and the most healthy vines, having all smooth tomatoes on the vine. The next requisite is thorough pruning and cultivation. The vines should be tied to stakes or trellis. If stakes are used they should be seven feet long and firmly driven in the ground. Distance between the stakes, eighteen inches, and double rows. Distance between rows, four feet. The next requisite is

Plants and planting.

good plants. The seed should be sown about the last of January or the first of February. When the plants are about four inches high they should be transplanted into boxes 12x8 and 3 inches deep, 15 in a box. When the plants in the box are 12 inches high they should be again transplanted into cold frames or houses with no-artificial heat except the heat from the sun through the glass, and given plenty of air. The object in transplanting so often is to toughen the stems and make them stocky. In transplanting, the plants should be put a little deeper in the ground than they were before, as they root along the stem—it gives them more feeding roots. These plants ought to show the bloom about the first of May. They ought to be ready to plant in the open ground. In taking them up out of the cold frames a ball of dirt should adhere to the plants, with good feeding roots enclosed therein, as they ought to commence growing as soon as possible. They withstand the cold much better in a growing state than in

a dormant state, as they will not form feeding roots in the cold, but if the feeding roots are in the ball of dirt they will commence to grow notwithstanding the cold.

You probably would like to have my experience with the different kinds of manure. I think British Columbia the most wasteful country in the world. The fish offal that is dumped into the sea is the most valuable manure in existence to-day, as the bones contain a large proportion of lime, and this gravelly soil is deficient in lime. It also contains a large proportion of phosphate. I consider the cannery refuse superior to any other manure for this upland soil along the coast. It is very durable and it contains no seeds of weeds. I think it is better than Peruvian guano, as Peruvian guano is very often adulterated.

Apple Growing in the Interior.

BY THOS. G. EARL, MEMBER OF BOARD OF HORTICULTURE.

The apple may well be considered the king of fruits, for some varieties can be kept nearly the year round. I find that in the interior of this Province the apple does best, especially at

Asheroft, Kamloops, and all along up the Thompson, Shuswap, and Okanagan Valleys. In the Kootenays, apples do well. While there

were severe losses on the Fraser River, in the vicinity of Lytton and above, I find not much loss at Asheroft and Kamloops, where the cold was much more severe than at Lytton. I believe that the loss at the latter place was caused by the south wind thawing them out so quickly, while in the interior the conditions were quite different. In fact, I could not better illustrate it than by the example of frozen vegetables which, if thawed out very slowly, would hardly be affected by having been frozen, but if thawed out quickly, would be spoiled completely. I find such to be the case with trees.

This can be avoided to a great extent by choosing the hardy varieties. This is a matter that should be well considered by those intending to go into fruit-growing for home consumption or for market. During the past summer (1897) I made a trip through the Kootenays and saw some fine fruit growing at Nelson. On my return through the Kettle River country I saw, near Grand Forks of the same river, the extensive orchard of W. H. Colbert, who thoroughly understands his business, and has some very fine apples and 1,000 of the finest prune trees that I have seen in the Province. There are a few more

small orchards in the near vicinity all doing well. I find very little damage done here by the sudden severe cold of last November. I am quite certain apples can be profitably grown all through the Kettle River country to Penticton. No finer apples can be found than are grown at Trout Creek, Okanagan. I found, at Midway, some apples and other fruits doing well, although sadly neglected. All this goes to prove that all through the vast interior is the home of the apple as well as other fruits. I met here Mr. W. H. Norris, editor and proprietor of the Midway Advance, a gentleman well versed in horticulture. He has some 30 or 40 acres of as good fruit land as can be found. He proposes going into fruit-growing extensively. Right here, at Midway, is where money is to be made at fruit-growing, as there are rich mines all around which will be

developed as soon as the railroad comes through, which cannot long be delayed. I find the Townsite Company has constructed, at considerable expense, an extensive ditch over four miles long which will furnish plenty of water to irrigate some 500 acres of first-class fruit land which they propose to sell in 5, 10, or 20 acre plots, to actual settlers; and soon this will be a beautiful place, populated by many happy people. I am well satisfied that with careful selection of trees, the very

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best of apples and other kinds of fruits can be grown all through the interior where water can be had. The intending fruit-growers must be educated up to their work, for I find most of them set out the trees and leave them to their fate, when, in fact, they should be well cared for. They should be carefully cultivated until they are at least 10 years old, when the orchard may be seeded down to clover or timothy. I find most of the farmers set out the orchard and seed it down at once; consequently the trees are stunted and have no chance to grow, when by proper cultivation they would grow thrifty and soon come into bearing. When at Vernon I visited the extensive orchard of His Excellency, Lord Aberdeen. I

**Lord Aberdeen's
Ranche.**

venture to say that there is no other orchard in British Columbia that is to be compared to this, and the whole farm is under the able management of Mr. Ricardo. This gentleman has accomplished wonders in the short time he has been in charge. In fact, the change is most astonishing in all the various branches carried on—grain fields, hay fields, and the extensive hop fields. I would advise all fruit-growers that have the opportunity to visit this place where they can have an object lesson in farming and fruit-growing which will repay the whole trouble. In the orchards there are about 5,000 trees in rows, straight as an arrow, set out in the first place by G. W. Henry, of Hatzie. Right here can be seen an orchard properly cultivated and not a weed in sight; all is kept clean by the cultivator which is kept constantly going in these orchards, and the trees are as thrifty as can be and well loaded with fine fruit. The trees are kept clean from insect pests by judicious spraying. In the large orchard there was scarcely any loss by the severe cold of last November. The severe cold did very little damage in the Okanagan, Spallumacheen and Shuswap Valleys; therefore very little damage was done in the vicinity of Vernon and Kelowna. All this goes to prove that here, in the interior, is the home of the apple. I think the hardy varieties should be selected instead of choosing from the show book of tree peddlers, as there are many varieties too tender for this climate. I find for Summer, Yellow

**Climate of
Okanagan.**

Transparent, Tetofsky, Duchess of Oldenburg and William's Favourite will stand most any winter, but I do not recommend many early varieties as they will not keep. For Fall, the St. Lawrence and Wealthy, which is an excellent apple and will stand under most any conditions. For Winter, Ribston Pippin, Ben Davis, McIntosh, Red Vandevere, 20 oz. or Red Streak Pippin, Blue Pearmain, Red Cheek Pippin, Longfield, Fameuse or Snow Apple (very fine), Tallman Sweeting, Belle de Boskoop and Blenheim Orange. I am quite certain these varieties will stand, while the fine varieties, such as Gravensteins, Kings, Baldwins and Greenings will not stand as I have experienced to my sorrow, and I don't mean to try them again, as I consider it best to stand by the varieties that came through safely last winter. I find the Northern Spy is one of the very best of winter eating apples that can be grown, but it is very late coming into bearing and is not so profitable as the others.

Canning and Preserving, by Mr. G. H. Hadwen.

Canning is an improvement upon the old fashioned method of preserving a pound of fruit with a pound of sugar. It retains more of the fresh and natural flavour, is far less trouble to prepare and more economical. All fruits may be canned with or without sugar, as the *sugar takes no part* whatever in the preservation.

The main principle in canning is the driving off or the destruction of all germs, enemies to the preservation of the fruit, by heat, and their exclusion afterwards by the hermetic sealing of the jars or cans.

Nothing but sound fruit (on no account should it be overripe) may be used. The ripening of fruit is a stage towards decay, and at this point the sugar in the fruit begins to turn into alcohol, which in its turn changes into acid. This process is what is called fermentation, and it will be seen that once this process is fairly under way it is almost impossible to arrest it.

The next point to observe is the selection of perfect cans or jars; those with porcelain lined tops by preference, and sound rubbers. Rubbers are now so cheap that it is advisable to renew them every season.

Test the jars by filling them with water and turning them upside down.

It is well to sterilize the jars by setting them in a cool oven, gradually raising the temperature, or by filling them with cold water and heating gradually to boiling point. This should be done immediately before using or it will be of no avail, and is more important in the case of vegetables than that of fruit.

Next, fill the jars with fruit as closely as possible and place in a large pan filled with water, with straw in the bottom of the pan and between the jars. Heat gradually. When hot, pour in to overflowing a syrup made of sugar and a little water, allowing a quarter of a pound of sugar to a quart jar. Place the covers on the jars without screwing, and bring to a boil and cook until the fruit is soft. Fill the jars to overflowing with boiling water and screw the tops down as quickly as possible, tightening these as the jars cool.

Cool slowly or the jars will crack—it is well to leave them in the water. Next morning the jars will need tightening up again. Notice then whether there are any air bubbles round the neck of the can, if there are, use quickly as they will not keep. Store in a dry, cool, dark place.

In canning pears or apples, throw them into water while peeling to save discolouration.

Plums and peaches are better canned without the stones.

In canning pease, shell and fill the cans very full, shaking down well; fill to overflowing with pure water. It is safer to boil and cool the water just when it is needed. Treat the cans as above, bring slowly to a boil and boil for four or five hours, then screw on the lids and tighten as they cool.

All vegetables for canning should be as fresh as possible. If they are at all musty they are quite sure to spoil, no matter how much care has been taken in the canning.

Perfect cans must be got, and good rubbers.

Projections on the glass can be taken off with a file dipped in turpentine.

Everything that comes in contact with the vegetables should be thoroughly sterilized.

Cook thoroughly, and if they are vegetables that are cooked in a pan, have them boiling when they go into the cans, which must also be hot. Store in a cool, dry, dark place, but remember that they will freeze sooner than fruit which contains sugar.

In making jam, the fruit should be sound. Allow three quarters of a pound of sugar to each pound of fruit. Place the sugar in the pan—which should be granite ware—with a wine glassful of water, say a quarter of a pint to each pound of sugar; let it melt slowly by the side of the fire, then bring to a boil. Then put in your fruit and bring the whole to boiling point, and boil *very quickly*, stirring constantly to prevent burning until the fruit will set. Try by putting a few drops on a cool plate; if done, it will jelly. This will take from half an hour to three quarters, according to the fruit. The more quickly it is done the better will be the colour. Warm the jars and fill with jam; set aside until cold, then cut rounds of thin paper and place on the surface of the jam without breaking the skin on the top of the fruit. Cover the pots with thicker paper and

Selection of Fruit.

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paste it down. The paper is only necessary to keep out the dust and insects. The keeping only depends on the fruit being boiled until it sets.

Very serviceable pots can be made from ordinary bottles by breaking off the necks either with a red-hot ring of the right size, or by tying a string dipped in coal oil round the bottle and setting this alight.

The following is a good receipt for marmalade:—

Take 12 large oranges—the thin skinned ones are preferable; 6 large lemons, 8 pints water, $\frac{3}{4}$ lb. sugar to each pint of juice. Take the peel off the oranges and lemons and cut into very fine strips with a knife on a board; collect these in a muslin bag, and put the peel and the fruit to soak in the water for twelve hours. Place the whole in the preserving pan and let it cook from five to six hours—it will not need stirring; take out the strips and squeeze the pulp and juice through a jelly bag. Put it in a clean pan, open the muslin bag and strew the peel in, adding the sugar (which should be previously warmed), and boil furiously until it will jelly. Try on a plate as before. It will probably take half an hour, and must be stirred constantly. Allow the jars to cool gradually, and then place them in a cool store-room to jelly. It often takes a week or so to become stiff.

Lemon syrup, a cool summer drink:—

- 3 oz. citric acid.
- 4 lbs. sugar.
- 3 pints boiling water.
- 2 teaspoonfuls of best essence of lemon.

Put the sugar and citric acid in a porcelain vessel and pour on the boiling water; add the essence of lemon and stir once in a while with a wooden spoon until cool; then bottle. This will keep for months. Allow one tablespoonful of the syrup to a glass of water.

Pruning, by A. Ohlson.

So much has been written on this subject, that of the numerous works, periodicals, and reports published on Horticulture, it would be difficult to find any that do not contain advice on pruning—very often excellent advice too—yet the beginner may read these and still be at a loss to know just what to do, because climatic and local conditions, and the habits of varieties vary to such an extent, that a method of pruning found to be a success in one locality, may prove a failure in another.

There are certain facts, however, that hold good everywhere, and while I do not propose to give advice on the hard-and-fast-line principle, I will point out these—draw the outlines as it were—and leave it to the experience and good judgment of the reader to work out the details.

The question is often asked, "why do you prune?" Are you not interfering too much with nature in pruning, and why not leave it to her to do the work?

Well, the fact is that the cultivation of fruits is an interference with, or rather improvement on nature. The natural apple, for instance, is the crab-apple of the woods, or some species of it. This, in course of time, probably longer than is generally supposed, has been improved by cultivation, and selection of the best sorts and varieties, as well as by proper pruning. For it has no doubt been known to man since a very remote period, that the thinning of a heavy crop improves the size and quality of that which is left, and the cutting out of old and weak wood improves the remainder by the admission of light and air.

Most of our choicest varieties of fruits have been produced by improved methods of cultivation, from time to time bestowed on their parents by man, and we have abundance of evidence, that unless a high state of cultivation is continued, these varieties will deteriorate, while on the other hand, if continued, they may still further improve.

Pruning is, therefore, of very great importance in fruit culture, for, by intelligent pruning, we are able to shape a tree in the most desirable form, increase or diminish the crop, and improve its quality, and in no small degree maintain the vitality of the tree.

In order to get strong, well shaped, and well developed trees in the orchard, the pruning should begin in the nursery, with that object in view. **Begin in the nursery.** To produce such, the side-shoots, or laterals, should be cut off about two or three inches from the main stem during the summer months, this will cause the stems, being well covered with leaves, to increase in size much faster than if the side-shoots were left their full length until the winter pruning be done.

Many nurserymen make the mistake of stripping the young trees of their side-shoots too soon; the result is that the trees become top-heavy, the diameter of the stem often greater at the top than at the collar.

It is waste of time and labour to try to improve such deformities by staking, tying, etc. The better way is to cut them down when planting to about six inches from the ground and train a stem as indicated above, but the best way is "to burn them" there and then.

The criterion of a "headed tree" is that it should be strong enough to stand without staking.

Cut back at the time of planting to four or five buds, if the trees are headed, if not headed cut back according to strength and variety. No definite rule can be given. A one year old tree of Red Egg Plum, seven or eight feet high, may be cut back to two feet, about the right height for this upright growing variety; a yearling Reine Hortense Cherry, two or three feet high, should be cut back to six inches, or close to the ground and have a stem grown, to be headed down when sufficiently strong to about five feet, about the right height for such a drooping variety. It will thus be seen that some knowledge of the habits of varieties must be had, and this can only be gained by experience and observation. Low stems, however, are much to be preferred, three feet or three feet and a half being ample for varieties of ordinary habits of growth.

The reason for cutting back at the time of planting is to give the tree a chance to make roots the first year. As it cannot do this and at the same time support the whole top, it must either die or get into that stunted condition from which it will seldom recover.

There are individuals who advocate leaving the trees unpruned the first year after planting and cutting back the second year, but actual experience will show which is the better way.

Cut to a bud pointing outward on an upright growing variety and to a bud pointing inward on a spreading or drooping variety. For instance, if a drooping variety like the Yellow Bellflower were pruned to buds pointing outwards, the head of the tree would soon reach the ground like a weeping willow, while an upright growing variety, like the Northern Spy, if pruned to buds pointing inwards would become too tall in the head, like a poplar; both forms should be avoided as much as possible.

Of the buds that have started, select the best three or four, as the case may be, and pinch or cut back the rest to an inch or two from their base during the summer months. This is better than rubbing them off, because by pinching or cutting the fork of the tree can be well covered with leaves which will draw the sap to that place and make the tree increase in size and strength where it is most needed.

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The first year after planting, the young shoots of apples, pears and plums (cherries need only be thinned out) should be cut back to about eight or twelve inches. Cut a weak shoot more severely than a strong one, and cut to buds that are well developed and point in the right direction. Pinch or cut off any shoots during the summer that cross, crowd, or do not take the proper direction, but do not cut off the fruit-spurs unless the tree is a very weak one.

The next stage.

The second and third year after planting, cut back as during the first year, adding from a foot to a foot and a half of young wood each year. Cut off any stumps left by summer pruning the previous year, and lay the foundation for that open, rounded head so desirable in the orchard. To do this the centres of upright growing kinds, should be well cut out in time.

We have now arrived at a stage where the motto of the orchardist should be "to maintain vigour without producing an undue amount of wood and to maintain fruitfulness without overbearing." Some varieties are apt to produce too many fruit-spurs, and these should be thinned out to prevent overbearing; others not so prolific should have their heads well thinned out, and any branches that are taken out should be cut off at their base.

The idea of cutting back severely every year, and then pinching the young shoots back during the summer in order to produce fruit-spurs is absurd. The more severely a tree is cut back the more wood it will produce and *vice versa*. A shoot left its full length will develop spurs and bear fruit if other conditions are favourable, but if shortened will produce wood.

Knowledge required.

To become an expert pruner requires some knowledge of plant life, as well as a habit of close observation, but a person in possession of these should be able to master the art, especially if he gives his mind to the work.

Get the best books on the subject, and read these carefully. Get the best tools to be had, and keep them sharp and in perfect order. Always cut off a large branch close to the stem or to some other branch, and cut a smaller one close to a bud. Do not use a cutter on a ten-foot pole; a man cannot do proper work with such a tool. Do not climb a tree that can not bear your weight, nor have on a pair of hob-nailed boots that will bruise the bark. Never cut a large branch from above in such a way that when it falls a portion of bark and wood will be torn away with it; cut first from underneath, then from above, and splitting will be avoided. Do not cut off the roots when planting, "cut only the ends smooth" of such roots as have been broken. Do not cut the life out of your trees, and then blame the climate because they do not bear—the climate is all right.

FRUIT EVAPORATION.

Paper by Henry E. Dosch, Horticultural Commissioner for the State of Oregon.

Read at a meeting held in the Board of Trade Rooms, Vancouver, November 1st, 1897.

Mr. Dosch writes:—To be invited to read a paper or deliver a lecture before any society is an honour at all times, but when it comes from a neighbouring Province it is doubly so, and I assure you the honour conferred is highly appreciated and I desire to thank you for it.

The science of fruit evaporation and the construction of the proper apparatus to produce the best results, has engrossed the minds of scientists and laymen alike; however, the first question which arises in our minds is, "what is fruit evaporation." The Encyclopedia Brit-

tanica says:—"Evaporation is that process by which liquids and solids assume the gaseous state at their free surface. The rate at which the evaporation takes place depends upon the temperature of the liquid or solid, the extent of the exposed surface and the facility with which the gaseous particles can escape from the neighbourhood of the surface, either by diffusion of the air or by the motion of the air itself, hence a strong current of air or wind will generally accelerate the process of drying."

It will then be seen that the two great principles involved, therefore, are heat and rapid circulation of air, without which proper fruit evaporation is impossible. We must therefore at first have a correctly constructed apparatus to accomplish this and which is now known as an "Evaporator." While we have not yet reached the acme of perfection in evaporators, we have one or two which come very near being so. In order to produce all the heat necessary, it requires

Furnace construction.

the proper construction of a furnace, which is at once economical in fuel and gives the largest amount of radiating surface. I have studied this particular point for years, and believe that I have solved the question; as many furnaces have been built after my plan, giving perfect satisfaction, I feel warranted in saying that it is perfect; there being no patent upon it, anyone is at liberty to build it, and will therefore describe it. It consists of a fire brick furnace 28 inches wide by 26 inches high, and 23 feet long; this being the whole length of my evaporator, and of course, it can be lengthened or shortened as required. The sides are 8 inches thick, arched over with single brick made especially for arches; at the further end, the smoke and flames enter a 12-inch number 20 iron pipe, passing over the brick furnace to the front again, rising three inches; it then separates into a T of two pipes of the same size, with rounding corners so as to offer no resistance to the circulation or draft, and turns to the rear on either side of, and about fifteen inches from, the centre pipe, raising three inches again, where these two pipes come together through another T, and there enter the chimney which should have an iron damper so the draft can be regulated and the heat kept under better control. This furnishes all the heat necessary, as high as 250 degs. Fahrenheit, if required, and also gives a large radiating surface, which adds materially in keeping the heat uniform. It is a well-known fact that hot air currents are not only difficult to control in space, but are affected by the

outer winds. In order to overcome the latter, the evaporator proper must be enclosed on all sides by a house, and the former controlled by perfect circulation, which is regulated by the cold air entering at the furnace level and vent shafts for the escape of moisture extracted from the fruit in process of evaporation. I use about 600 square inches of cold air constantly passing in at the bottom, to 3,500 pounds of fresh prunes in the evaporator, or about 10 square inches to every bushel of prunes. Over this furnace there is built the evaporator proper. Many patented and unpatented evaporators are now in use, giving more or less satisfaction, but after years of practice and observation, I have come to the conclusion in order to obtain best results, prevent dripping and thereby conserve the aromatic fruit juices, the best evaporator is that one in which the fresh fruit is first placed in, furthest from the furnace or at the coldest place, allowing the trays to gradually slide towards the furnace or hottest place. In other words, evaporation should begin with a low temperature and finish at high temperature, varying according to the fruit in process of evaporation, and if the evaporator is properly constructed, heated air should pass through the fruit trays at the rate of twelve to fifteen miles per hour.

We now come to evaporation proper, beginning with the prune, which requires more attention and care than all the other fruits combined, and must therefore begin at the beginning, in the orchard.

Prune evaporation

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Preparation of fruit.

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Results.

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2nd Tray—28

3rd Tray—28

This proves to dry seasons the ev prunes took 30 to 3 prunes were subject None of these prun



Prunes should be allowed to drop to the ground and not be shaken from the tree, as otherwise we get too many unripe prunes, out of which it is impossible to make good fruit; when a good proportion has fallen boys and girls may be set to work picking up, beginning at one end of the orchard and continuing through to the other end; then begin over again in this way four times; at the last time the trees may be shaken clean, as by that time all prunes will be ripe enough; they are brought every day to an evaporator and passed through a grader to separate them into four sizes; are there washed by dipping them in a wire basket, made for that purpose, into clean, cold water and spread on trays, each size separately, and placed into the steam box; the object of steaming the fresh fruit is manifold. It will open the pores of the skin to facilitate evaporation and prevent dripping, or, as Professor Hoesch-Durren says, "prevents the loss of the aromatic juices and fruit meats." It obviates the necessity of dipping in lye solution, so objectionable to refined tastes; it makes the skin tender and eliminates that leathery substance found in most of our dried fresh prunes; it hastens evaporation; it requires less heat, and fruit will dry heavier or more meaty than unsteamed fruits. This alone is a strong recommendation and is worth all the trouble and expense. The trays are then transferred to the evaporator.

The steam apparatus is a tight box, which holds from six to twelve trays, as desired, one over the other. The steam is introduced at the bottom and allowed to escape at the top through a pipe gauged at all times so that but a slight steam pressure ($\frac{1}{8}$ of a pound) exists within the box; too much pressure will burst the skins. Prunes are subjected to the steam pressure from ten to fifteen minutes, pears, fifteen to twenty minutes, and apples two to three minutes.

Pears and apples need not be bleached with sulphur, to which so many consumers object, for not only does steaming leave them in their natural pure colour, but they become beautifully transparent. The fruit must be transferred quickly from the steam box to the evaporator.

Preparation of fruit. Apples are peeled, cored and ringed by peeling machine, placed loosely on the trays, steamed as required, and then evaporated.

Pears are also peeled by machine, then cut in halves, leaving the core in, placed on trays, steamed and evaporated.

The question as to the amount of heat necessary and length of time the fruit should remain in the evaporator depends upon the kinds of fruit in course of evaporation. For six years past I have experimented every year with this object in view, and have reached the following conclusions.

FRENCH PRUNES.

Results. Taking 3 trays each filled with 28 lbs. of fresh fruit of equal size and ripeness, brought these results:

- 1st Tray—28 lbs.; 10 hours; produced 10 $\frac{1}{2}$ lbs.; very bright but tart.
- 2nd Tray—28 lbs.; 24 hours; produced 11 $\frac{1}{4}$ lbs.; quite sweet and bright.
- 3rd Tray—28 lbs.; 36 hours; produced 10 $\frac{1}{4}$ lbs.; dark, but very sweet.

This proves to me that 24 hours is a very happy medium for weight and sweetness. In dry seasons the evaporated product will be a little heavier, being more meaty. The Italian prunes took 30 to 36 hours to produce similar results, and Silver prunes 36 to 40 hours. These prunes were subjected to a heat of 180° F., allowing the trays to cool off during the night. None of these prunes were dipped in lye solution.

BARTLETT PEARS.

One hundred pounds of fresh fruit with skin, core and stem left on, cut in halves, produced $19\frac{6.5}{100}$ lbs. of dried product. One hundred pounds of peeled fruit, not cored, only cut in halves, produced $13\frac{7}{10}$ lbs. dried fruit. If pears are cored they lose too much flavour. While the peeled product is finer in appearance, and is considered by some as fancy fruit, the pears with skin, core and stem are certainly the best flavoured. The peeled fruit will evaporate in 24 hours, while the unpeeled requires from 48 hours for the small ones to 4 days for the larger ones, using 160° and allowing to cool off nights.

Apple evaporation.

I evaporated a large lot of various kinds, peeled, cored and ringed, and found that 100 lbs. of fresh fruit produced $14\frac{1}{4}$ lbs. of evaporated product; they evaporated in four to six hours at a heat of 160° F.

All prunes should be graded, and only the larger size used in evaporation; the smaller ones, as well as those bursted by rain, and apples, pears, peaches, etc., not salable in their fresh state, nor good enough to be evaporated, should be conserved into jams or fruit-butter.

You will note the expression, "allowing to cool off nights." This is a very essential point, and is perhaps best attained by letting the fire go out in the late evening, and start again in early morning; experiments by myself have proven it a correct principle; it is practised throughout the prune-evaporating districts in France and Germany, though they go even further, by taking out the trays and stacking up until perfectly cold, and then replace them in the evaporator; this will assist in developing the sugar, makes heavier, finer fruit, and will retain their aromatic flavour better than if allowed to remain in a continuous heat.

Before leaving the evaporator at night, it is necessary to remove all such trays of fruit, which are likely to be finished before morning, and fill their places with fresh trays; you will find in the morning that fully 75 per cent. of these will not need to be returned to the evaporator, and many others ready to come out, cured to perfection.

Test for prunes.

The fruit is to be removed from the evaporator before it is quite finished, as it will continue to evaporate several days after being placed in the bins; and right here is where so many make the mistake of drying too much, and frequently burning the fruit. While it is an easy matter for an expert to tell just when a prune is sufficiently dried, it is not so easy for the novice; a good test, however, is this:—Take the prune between thumb and finger, rub back and forth; if it slips too easy and feels mushy at the pit, it is not quite cured through, while the prune should be soft and even slippery on the pit, it should not be mushy; when cut open the flesh inside should be of a golden colour; and when the prunes are thrown into the bins, they should be alive, in fact, to crawl as it were. Dead plums and dark coloured inside, are over-cured, and not first-class palatable fruit. When large quantities are evaporated, the prunes should be placed on smooth clean floors, overhead in the evaporator, to be shovelled over every two or three days for a week, thus assuring uniformity of finish. When evaporation is finished, all

Prune sweating.

the fruit should be covered up with paper and cloth on top, to exclude all light, and allow the fruit to go through the sweat. Prunes will then become very glossy, so much desired by consumers, and other fruits will soften more uniformly. After three or four weeks sweating, they should be boxed; the small fruit in 50-lb., the large fruit in 25-lb. boxes, tight, to keep them fresh and palatable, and to exclude insects.

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Permit me to quote from Dr. J. T. Zimmonds, of Fayetteville, Ark., who is considered one of the highest scientific authorities in the United States on fruit evaporation. After discussing the chemistry of evaporation of the apple as between sun-dried and evaporated fruits, and what is true of the apple is equally true of the pear, he continues: "I will now describe the process of true evaporation. It has been found that by removing a part of the water rapidly in swift moving currents of air, heated to 240° Fahrenheit, a different product is the result, wholly unlike either the fresh or the sun-dried fruit, and which will keep better, is more digestible and nutritious, is less acid and will sell for more in the market. But if, after having heated the air hot enough, there is not sufficient circulation or the current not rapid enough, the fluids will cook and then dry or burn, the same as in a close oven. Apples will cook in boiling water at a temperature of only 212° Fahrenheit, or bake in an oven at 225° Fahrenheit; but, if the heated air circulates fast enough, the fruit will not cook or burn, or become itself heated to the temperature indicated by the thermometer, even at 300° Fahrenheit; for the evaporation of the water is a cooling process, and every particle of vapour leaving the minute cells which contained it carries with it also a large amount of caloric in a latent form, and thus keeps the heat of the apples far below the surrounding air. The chemical change which belongs to truly evaporated fruits will now begin, and the albumen, instead of being slowly dried, coagulates, precisely the same as in an egg when boiled. The soluble starch existing in all the fruit, and composed of $C_5H_{10}O_5$ will, if the heat is high enough, combine with one equivalent of water (H_2O), so that now we have an entirely different compound, to wit: glucose or fruit sugar, which will assist in the preservation of the fruit, instead of being liable to decomposition, as dried starch is in the sun-dried or slowly dried product.

Chemical Change.

"All the pectin, or fruit jelly, remains in the cells undecomposed, or is left upon the surface by the evaporation of the water in which it was dissolved and may be seen condensed upon the surface, instead of being decomposed and passing on with the starch and gluten into the acetic fermentation. The diastase or saccharine ferment contained in all fruit, and which is the primary cause of its decay, has been rendered inoperative, and all germs of animal or vegetable life have been destroyed by the high heat. It is by this chemical change, which I have briefly described, in writing, in a part of the water already contained in the fruit with the fruit starch, that these truly evaporated products are rendered more wholesome, more digestible, more indestructible, and are thereby made more valuable, not only as an article of food, but because they are not subject to deterioration and loss. And it is also the reason why a bushel of apples will make more pounds of evaporated fruit than can be made by sun-drying it, as a portion of the contained water, which would otherwise be lost, is retained by combining with the starch to form glucose, and the carbonic acid, which is always lost in slow decomposition resulting from sun-drying, is retained in its natural combination with the other substances composing the fruit, and hence is heavier. These profitable and healthful chemical changes which I have mentioned are all in accordance with the laws of nature, and are certain to take place if the necessary conditions of heat and air, as I have detailed them, are properly supplied, otherwise you will have a different product, and no matter how fine your apples, how perfect your paring, coring and trimming, or how white you may have bleached them, you have not made truly evaporated fruit, and no matter how many may have been deceived by its colour and full weight or fancy packing, your fruit will not stand the test of keeping in warm, damp weather. The natural starch, gluten or albumen of the fruit, instead of being cured or made indestructible by the chemical changes which constitute the difference between the evaporated and dried fruits, will absorb moisture from the air, will swell or increase in bulk, and can be attacked by mould, will absorb additional oxygen, and finally sour and decay."

It will thus be seen, as I stated before, and so scientifically explained by Dr. Zimmonds, the two principal requisites to evaporation are heat and circulation; that fruit-evaporation is a science of the highest order, and requires care, study, and steady attention. The man who is in charge of the evaporator must be constantly on the alert, from the time the fires are started in the morning until banked late at night, watching his furnace and thermometers, to see that the heat is uniform throughout the evaporator, so fruit does not burn in one place and mould in another, and regulate his draughts according to the outer atmosphere and winds.

HENRY E. DOSCH.

Hillsdale, Ore., October 20th, 1897.

PROVINCIAL BOARD OF HORTICULTURE.

Rules and Regulations made and published under authority of Section 7 of the "Horticultural Board Act, 1894," and of the amendments thereto.

Title.

1. These regulations may be cited as the "Horticultural Regulations."

Definitions.

2. In these Regulations the word "pests" shall mean and include woolly aphid, apple tree aphid, scaly bark louse, oyster-shell bark louse, San Jose scale, red scale, borers, codling moths, currant worms, caterpillars, or other known injurious insects, and all fungous diseases. The "Board" shall mean the Provincial Board of Horticulture.

Notification of the Presence of Pests.

3. All nurserymen, fruit-growers, and all persons owning, occupying or managing an orchard, garden or nursery infected with any pest, shall notify the member of the Board for the district in which such orchard, garden or nursery is located, or the Secretary or Inspector, or the agent of the Board in the district, of the fact that such orchard, garden or nursery is so infected.

Inspection of Nursery Stock.

4. All importers of nursery stock, trees or plants, must give notice to a member of the Board, or his agent, or the Inspector of Fruit Pests, upon the arrival of any nursery stock, trees or plants, before the removal of such nursery stock, trees, or plants from any dock, wharf, mole, station, or warehouse where such nursery stock, trees, or plants have been landed, and if such nursery stock, trees or plants are found to be free of insect pests and fungous diseases, the said member of the Board, his agent, or the Inspector of Fruit Pests, shall issue a certificate to that effect; and all such nursery stock, trees or plants, if found to be infected with any insect pest or fungous disease, shall be dealt with according to the Rules and Regulations of the Board. All dealers, nurserymen, or persons selling or distributing nursery stock, trees, or

plants, for which any article above whose district a Fruit Pests, when if they are found stating that said three months fr

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plants, for which no clean certificate is in force shall, before distributing or offering for sale any article above mentioned, notify the member of the Board, his agent or representative, in whose district any such article is found, or the Secretary of the Board, or the Inspector of Fruit Pests, who shall inspect or cause to be inspected such nursery stock, trees, or plants, and if they are found to be free from pests, shall issue a certificate to the owner or person in charge, stating that said articles appear to be free from pests. Such certificate shall be in force for three months from date of issue, unless revoked by further inspection.

Disinfection of Nursery Stock, Trees and Plants.

5. All persons owning or having in their possession nursery stock, or trees and plants of any kind, infected with insect pests or fungous disease, shall cause the same to be disinfected and cleansed by using the remedies herein prescribed, or such other insecticides and fungicides as may be found effective, and are approved of by a member of the Board or the Inspector of Fruit Pests, and no such infected nursery stock, trees, or plants shall be sold, forwarded, distributed, or parted with until a certificate of the satisfactory cleansing thereof shall have been obtained from a member of the Board or his agent, or the Inspector of Fruit Pests. Any member of the Board or the Inspector of Fruit Pests may order the destruction, by rooting out and burning, all infected nursery stock, trees, or plants of any kind, if, in the opinion of such member of the Board or Inspector of Fruit Pests, such a course is considered expedient in the interest of the fruit-growing industry.

Inspection of Imported Fruit.

6. All importers of fruit must give notice to a member of the Board or his agent, or the Inspector of Fruit Pests, upon the arrival of any and all shipments of fruit; and all fruit and fruit packages imported into this Province shall be inspected, and if found to be free from insect pests and fungous disease a clean certificate shall be issued therefor in conformity with the Rules and Regulations of the Board: Provided, however, that no fruit or fruit packages imported into this Province shall be removed from any dock, wharf, mole, or station where such fruit and fruit packages have been landed, before inspection and such clean certificate thereof shall have been obtained, and all such fruit and fruit packages as may be found infected with any insect pest or fungous disease shall be either destroyed by the importers thereof, by such process and within such time as any member of the Board, the Inspector of Fruit Pests, or any agent appointed by the Board, may direct, or shall be re-shipped, within such time as any member of the Board, the Inspector of Fruit Pests, or any agent appointed by the Board, may direct, by the importers thereof to some point without the Province.

Inspection of Imported and Home-grown Fruit.

7. All fruit, whether imported or grown in this Province, or exposed for sale, shall be subject to inspection under the authority of the Board, and if found to be infected with any injurious insect pest or fungous disease shall be quarantined, or may be destroyed at the expense of the owner of said fruit, by such methods as the Board or its agents may direct.

Stencilling and Labelling.

8. All persons shipping, sending, or delivering any fruit, fruit trees, scions, cuttings, or plants within the Province shall place upon or securely attach to each box, crate, or other package or parcel containing the same, a distinct stamp, mark, or label showing the name of the producer and shipper or sender, and the locality where grown, but boxes and barrels containing fruit shall be stencilled or stamped with letters not less than three-quarters of an inch in length.

Treatment of Nursery Stock.

9. All infected nursery stock shall, before being distributed, be disinfected by dipping in a solution of one pound caustic soda (concentrated lye) and one pound whale-oil soap to every five imperial gallons of water, thoroughly dissolved, and applied at 103° Fahrenheit in a vat or any suitable vessel, or the said nursery stock may be disinfected by covering with an airtight tent or box, and for each and every 100 cubic feet of space therein one ounce of fused cyanide of potassium (58 per cent.), one fluid ounce of sulphuric acid, and two fluid ounces of water shall be used. The cyanide of potassium shall be placed in an earthenware vessel, the water poured over the said cyanide of potassium, afterwards adding sulphuric acid, and the tent or box to be immediately closed tightly and allowed to remain closed for not less than forty minutes. Treatment for disinfection shall continue until all insect pests or their larva are destroyed.

10. (For sprays see *Bulletin of the Board of Horticulture on Insect Pests and Plant Diseases.*)

11. Where pests or fungous diseases are found to exist during the growing season, while the trees are in leaf, spraying must be done and such remedies applied as shall be recommended by or under authority of the Board from time to time, so that the insects or diseases can at least be held in check until the stronger washes of the dormant season can be safely applied.

Destruction of Packages.

12. All boxes, crates or other packages or wrappings which have contained infected nursery stock shall be destroyed by fire immediately after the removal of the contents thereof.

Hop-fields.

13. Where hop-fields are infected with the hop-louse, spraying must be done as the Board from time to time shall recommend.

Inspection at points other than Quarantine Stations.

14. Importers or owners of nursery stock, trees or plants, desiring to have such nursery stock, trees or plants inspected at points other than regular quarantine stations, may have such inspection done where required: Provided, however, that such importers or owners shall pay all charges of inspection and expenses of the officer employed in such inspection. Such charges and expenses to be paid before a certificate is granted.

Quarantine Regulations.

15. STATIONS.

QUARANTINE OFFICERS.

Victoria	{	The Inspector of Fruit Pests, any member of the Board, and E. A. Carew-Gibson.
Vancouver, New Westminster and Liverpool	{	T. Cunningham, any other member of the Board, and the Inspector of Fruit Pests.
Nanaimo	{	Geo. Pennell, any member of the Board, and the Inspector of Fruit Pests.
Comox	{	George H. Roe, any member of the Board, and the Inspector of Fruit Pests.
Mission City	{	G. W. Henry, any member of the Board, and the Inspector of Fruit Pests.
Vernon	{	Herbert Francis Denison, any member of the Board, and the Inspector of Fruit Pests.

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<i>Osoyoos</i>	{ C. A. R. Lambly, any member of the Board, and the Inspector of Fruit Pests.
<i>Kettle River</i>	{ R. R. Gilpin, any member of the Board, and the Inspector of Fruit Pests.
<i>Golden</i>	{ F. C. Lang, any member of the Board, and the Inspector of Fruit Pests.
<i>Fort Steele</i>	{ R. L. T. Galbraith, any member of the Board, and the Inspector of Fruit Pests.
<i>West Kootenay</i>	{ John F. Costello, Northport, any member of the Board, and the Inspector of Fruit Pests.

Transportation companies or persons shall deliver and cause to be detained all nursery stock, trees, plants and fruit, at one or other of the quarantine stations for inspection, as provided by the Rules and Regulations of the Board, and all such nursery stock, trees, plants and fruit shall not be removed without the consent of the quarantine officer having been first obtained.

A quarantine officer may also, if in his opinion such a course is necessary, detain any nursery stock, trees or plants, for the purpose of disinfection, at a quarantine station, until such quarantine officer is satisfied that all infection is removed: Provided, however, that in no case shall the inspection of nursery stock, trees, plants and fruit be done by a quarantine officer having any pecuniary interest in the same.

Inspection Fees.

16. The fees for inspection of apple, pear, plum, cherry and other fruit trees, shall be as follows:—

On all consignments numbering—

Under 100 trees	\$2 50
100 trees and under 250	3 50
250 " " 500	4 50

And for every additional 500 trees or fraction thereof over 500, \$1 additional.

For other nursery stock the fees shall be as follows:—

\$2.50 on \$25.00 in value or fraction thereof.

\$3.50 on any consignment over \$25.00 and up to \$50.00 in value; and 5 per cent. additional on the value over \$50.00.

When nursery stock, trees or plants are found to be infected with insect pests or diseases, a charge of 50 per cent. will be added to the foregoing rates, to pay expenses of the quarantine officers for supervising, disinfection, and subsequent inspections.

On fruit, viz.:—

Apples, pears and quinces, the minimum fee shall be \$1.00 on any sum up to \$33.00, and 3 per cent. on any sum over \$33.00 in value.

It is furthermore provided that all other varieties of fruit shall be subject to inspection, if deemed necessary, on the same terms, and subject to the same fees as those above mentioned.

Certified invoices will be required.

Penalties.

17. Every person violating the provisions of the "Horticultural Board Act, 1894," or any amendments thereto, or the Rules and Regulations adopted by the Board, is liable, upon summary conviction before a Justice of the Peace, to a penalty not exceeding fifty dollars for each offence.

Repealing former Rules and Regulations.

18. All Rules and Regulations heretofore adopted and published under the authority of the "Horticultural Board Act," or any amendments thereto, are hereby repealed, and the foregoing Rules and Regulations substituted in lieu thereof.

Recommendations.

Horticultural and Agricultural Societies, and all those interested in advancing and protecting the interests of fruit-growing, are requested to co-operate with the Board in the enforcement of the provisions of the "Horticultural Act," and the regulations thereunder, as adopted by the Board.

Correspondence.

All correspondence relating to the extirpation of fruit pests should be addressed to the Inspector of Fruit Pests, or the member of the Board whose district may be affected. Correspondence relating to other matters should be addressed to the Secretary of the Board.

By Command,

J. R. ANDERSON,

Secretary.

Office of the Provincial Board of Horticulture.

Victoria, 25th June, 1897.

MEMBERS OF THE BOARD.

The Honourable the Minister of Agriculture.

Jas. R. Anderson, Deputy Minister of Agriculture.

R. M. Palmer, Inspector of Fruit Pests, of Victoria, to represent the First Horticultural District, which comprises Vancouver Island and the islands adjacent thereto.

Thomas Cunningham, of New Westminster, to represent the Second Horticultural District, which comprises the Electoral District of New Westminster City, Vancouver City, Westminster, Cassiar, and that portion of Comox lying on the Mainland of British Columbia.

Thomas G. Earl, of Lytton, to represent the Third Horticultural District, which comprises the remainder of British Columbia not included in the two other districts.

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