REPORT

OF THE

FRUIT-GROWERS' ASSOCIATION

OF THE

PROVINCE OF ONTARIO,

FOR THE YEAR

1873.

Printed by Order of the Legislative Assembly.

Toronto:
PRINTED BY HUNTER, ROSE & CO., 86 & 88 KING ST. WEST.
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To the Honourable th

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To the Honourable the Commissioner of Agriculture:

SIR—It is my agreeable duty to acquaint you with the fact that the membership of the Fruit Growers' Association of Ontario continues to increase, so that there now are nearly three thousand names upon the list. The Annual Reports are much prized by the members, and are sought for by Horticultural and Pomological Associations in the United States and Europe. The coloured lithograph of some valuable fruit which accompanies each of the later reports, has added much to their value. The Directors have continued the distribution of promising fruits with good results. In the Report which I now have the honour to submit for your inspection will be found much valuable information in relation to matters of fruit culture, and some very valuable essays. The Report of the Committee charged with the exhibition of the fruits of the Province at the meeting of the American Pomological Society held at Boston on September last, will be very gratifying to yourself and to all others who take an interest in the prosperity of our Province. The Society labours under a want of sufficient means to carry out its objects perfectly, the very increase of membership while enlarging our field of effort and experiment at the same time greatly increases the expense of distributing trees and plants for experiment. With a view to facilitate the operations of the Association, the Directors have taken the liberty of making some suggestions in the way of revising that part of the Agricultural and Arts Act which relates to this Association. You, sir, I know will give these suggestions your most careful consideration, and will not fail to recommend to Parliament the passage of such amendments as shall place the Association on a better footing for the carrying out of its important operations. The Association has already taken a prominent position, such a position as you would wish to have it take, among the Pomological Societies of the world, and I take pleasure in handing you the Report of its transactions for 1873, believing that you will feel a just pride in its wonderful prosperity.

I have the honour to be,

Your obedient servant,

D. W. BEADLE,

Secretary of the Fruit Growers' Association of Ontario.

PROCEEDINGS AT THE ANNUAL MEETING.

The Annual Meeting was held in the Court House, London, on Tuesday Evening, September 23, 1873.—President Burnet in the Chair.

The Secretary read the Report of the Directors, which was received and adopted.

The Treasurer submitted his Report.

The Committee appointed to revise that part of the Agricultural and Arts Act which relates to the Fruit Growers' Association made their Report. The suggestions of the Committee were discussed, and, after amendment, were approved.

The President read his Annual Address, which was received with evident satisfaction. It was moved by J. R. Martin, seconded by W. McKenzie Ross, that the thanks of the meeting be tendered to the President for his valuable address, and that he be requested to place a copy in the hands of the Publication Committee.

The following officers were then elected for the ensuing year:

President.—Rev. R. Burnet, Hamilton.

Vice-President.—Charles Arnold, Paris.

Secretary-Treasurer.—D. W. Beadle, St. Catharines.

Directors.—P. C. Dempsey, Albury; John McGill, Oshawa; Geo. Leslie, Jun., Toronto; R. E. Hammill, Ancaster; J. C. Rykert, St. Catharines; D. Shoff, McGillivray; William Saunders, London; Simon Roy, Berlin; A. B. Bennett, Brantford.

Auditors.—W. J. McCalla and W. L. Copeland, St. Catharines.

Several seedling fruits having been exhibited at the meeting and others at the fair-ground, Messrs. Arnold, Caldwell, Saunders, A. M. Ross and Bennett were appointed a Committee to examine them, and report thereon to the Directors.

On motion adjourned.

Directors' Report.

The Directors at the close of another year of their proceedings take great pleasure in stating that our membership has increased to very nearly three thousand. We believe that this continued increase is unparalleled in the growth of any similar society. Three meetings for discussion on fruit matters have been held, the first at Hamilton, in February, the second at Chatham, in June, and the third at Kingston, in September. Experience further demonstrates the utility of holding these gatherings at distant points throughout the Province.

During the past Spring, the Directors caused to be distributed among the members Grimes' Golden Pippin and Clapp's Favourite Pear. We continue to be favourably impressed with the idea of making an experimental garden of the Province, and have already made arrangements to distribute, during the Autumn of this year and Spring of next, plants of the Downing Gooseberry, and Barry Grape (Roger's No. 43).

The Report of the Committees appointed to make personal inspection of the fruit producing capabilities of various parts of the Province have been full of very interesting and useful information, but from the want of funds your Directors have not been able to appoint such Committees during the past year, as they could not ask gentlemen, who freely gave their service in making such inspection, to bear also their travelling expenses.

Essays have been received on "How to increase the interest in Fruit Growing in Ontario," "Impositions of dishonest tree pedlars," and "The cultivation of the Plum." These will be placed in the hands of the committee appointed to examine them, and their award will be published in the Annual Report.

We are still satisfied with the usefulness of the coloured lithographs, which adorn the reports for 1871 and 1872, and have engaged artists to prepare coloured plates of the Saler grape, which are to illustrate the Report for 1873. In a few years such beautiful and ac

curate representations of the choice fruits of the country, will make a valuable collection in the hands of each member, by which he may test the accuracy of the fruits of his own orchard.

The Treasurer's report shows, that we will have fully used all the funds at our disposal, and have contracted a debt of $561.03. We trust that the manner in which the money has been expended will meet with your approbation.

Fruit trees have been distributed among the members this year, and the Report has not been behind any of its predecessors in the variety and value of its contents. Should the Government see fit to accede to our request for an increased grant, we believe that the usefulness of the Association will be greatly advanced, and its objects even more successfully accomplished.

There has been the largest and most brilliant display of fruit at Boston, under the auspices of the American Pomological Society, the world has ever seen. Premiums were offered for the largest and best collection of apples, also of pears, plums, grapes, peaches, &c., shown by any State or Province. The Government of our Province, on the recommendation of the Hon. Commissioner of Agriculture, granted the sum of $200 to our Association to aid in defraying the expense of sending a collection of the fruits of this Province to that exhibition. The officers of the Association, undertook the labour of gathering and exhibiting these fruits, and the results are surprising even to ourselves.

The State of Delaware, as might well be expected, received the first prize for peaches, but Ontario carried off the second prize, thus showing that in an unfavourable year, such as the present, we stand second to the greatest peach-growing State, in the number and quality of the varieties of this most luscious fruit.

But in hardy, open-air grapes, Ontario took the lead and carried off the FIRST PRIZE for the largest collection. Much has been said over the border about the peculiar advantages which one State possessed over the other for the cultivation of grapes, and we think it must have opened their eyes a bit to the *peculiar advantages* we enjoy in Ontario, to have us step in and carry off the Silver Medal.

And yet, again, Ontario bears the bell. Her collection of plums distanced all competition, and the FIRST PRIZE was again borne away carrying with it another Silver Medal.

Nor were these all the honours. Although quite out-numbered by Massachusetts and Connecticut in the number of varieties of pears exhibited, so that Ontario could not carry off either of the prizes offered, yet such was the excellence of the sample shown that the judges awarded a Silver Medal to Ontario for her collection of pears.

But we have not yet enumerated all. Her total collection of fruit was so large and of such fine appearance as to astonish every one, and the judges expressed their admiration of its beauty and excellence by bestowing another Silver Medal upon Ontario for the entire collection.

In addition to these awards for the Provincial collections, there was awarded to the President a Bronze Medal, for his own fine and varied private collection of pears, grown in his own grounds.

Thus it will be seen that Ontario comes of with flying colours, having been awarded six medals, four of them silver and two bronze, and of these, two at least were won in earnest downright competition with each and all of the States of the American Union.

These competitions have a value in bringing before the world the fruit productions of different States, and we doubt not many will be surprised to learn the high place we really hold among the fruit-growing countries of this continent.

Again rejoicing at what has been done in the interests of fruit growing, and yet more at the prospects of usefulness opening up before us, we lay our Report before the Association, and return to you the trust which during the past year has been committed to our hands, and which we have endeavoured carefully to guard.

All of which is respectfully submitted.

ROBERT BURNET,
President.

Treasurer's Report.

To the President and Directors of the Fruit Growers' Association of Ontario.

Gentlemen—At the close of the last fiscal year there was in the treasury a balance of (see Auditor's Report, 23rd September, 1872), $115 46

Since that time I have received :—

Members' Fees	2669 00
From the Government Grant	700 00
Special Grant for Exhibition at Boston	200 00
Express Charges refunded	3 95
Making a total of	$3688 41

I have expended under your directions the following sums, namely :—

For freight and express charges	$134 36
Expenses of Directors and Committees	188 20
Printing and Advertising	69 85
Coloured Lithographs, including duties	542 86
Telegrams and Postage	200 34
Prizes	36 00
Stationery	13 00
Exchange of Scions	16 50
Sundries	28 66
Trees distributed	2593 67
Clerk	226 00
Secretary-Treasurer's Salary	200 00
Making a total of	$4249 44
So that I have paid out beyond the amount received, the sum of	561 03
	$3688 41

Auditors' Report.

Abstract of the Treasurer's Account for year 1872-73.

D. W. Beadle, Treasurer, in account with the Fruit Growers' Association.

Dr.	1872, Sept. 23	—Balance cash on hand	$115 46
		To Members' Fees	2669 00
	1873, Sept.,	To Government Grant	700 00
	July,	To Special Grant for Exhibition at Boston	200 00
		To Express Charges refunded	3 95
	Sept. 23	—To Balance due Treasurer	561 03
			$4249 44
Cr.	1872-73.	By Freight and Express Charges	$134 36
		By Expenses of Directors and Committees	188 20
		By Printing and Advertising	69 85
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		By Stationery	13 00
		By Exchange of Scions	16 50
		By Sundries	28 66
		By B. and B. for Trees distributed	2593 67
		By Clerk	226 00
		By Secretary-Treasurer's Salary	200 00
			$4249 44

We certify that the foregoing is a correct statement of the Fruit Growers' Association Accounts for the year ending September, 1873, as shewn by Treasurer's books, with vouchers for all disbursements.

St. Catharines, October, 1873.

WM. J. McCALLA, } *Auditors.*
W. L. COPELAND. }

ANNUAL ADDRESS.

The anniversary of our Fruit Growers' Association has again come round, and we are again met in the City of London, where you at first conferred on me the honoured position of Chairman. Many have been the changes to the individual members of the Association during the interval, both of a sad and happy nature; but only one, and that a steady onward course, has marked the history of the Association during the period. The duty now devolves on your President to pick up the threads of the woof and warp of the past year's doings, and present them in a brief epitome, under the caption of his "Annual Address."

Your Society is rapidly increasing in numbers and influence. The membership at present is a little under three thousand. Such a large increase in so short a time as the period of my official connection with you as President must be highly gratifying to every member of our Society, and is a marked testimony to the patriotic tendency of your aims, and the humanizing influences of your efforts. More interest in fruit growing has, perhaps, been exhibited during the past year throughout the Province than during any single year of the past existence of our Association. Although there are, unfortunately, large sections of our country where the name even of our Fruit Growers' Association is scarcely heard of, or, where heard of, little known, yet our fruit culture is evoking a general and Provincial interest. Parties in the most distant localities of our wide-spread Province are vieing with each other, and with the older fruit growing portions of our country in the production of good fruit.

The past season has not been so favourable for fruit cultivation as some which we have seen of late years. In some sections, the weather has been cold; at the commencement of the season it was very dry, and during the summer months, when warm weather might have been expected, it has been remarkably cool, and personally enjoyable.

Apples are scarcely an average crop; Pears are abundant; hardy Grapes will have difficulty in ripening; Plums here and there are a full crop, but generally even they have not been as abundant as usual. The Curculio, in some quarters, have anticipated the ripening of the crop, and secured prematurely the lion's share. Peaches, in the Niagara district, and around Grimsby, suffered severely during the past winter, and only in some highly.favoured localities have they done well. The small fruits have amply repaid the labour of the Horticulturist—Raspberries, Currants, and even Gooseberries having been almost everywhere a prolific crop.

In presenting this summary, I know I may not have been able to set before you all the facts connected with Horticulture in different parts of the Province; but we believe, on the whole, it will be found to give generally a fair resumé of this matter.

I have formerly addressed you on so many kindred topics, and, at times, at such unconscionable length, that for months I have been really at a loss for a subject for my present address. The Constitution has, I think, wisely provided that the President *may* give an address on such an occasion as the present. My subjects are nearly exhausted—dried up; and should my paper lack interest and point, I trust, Gentlemen, that you will impute the cause to its right motive and source—want of knowledge and ability—and not from any want of desire on my part to make it interesting and instructive to you, and a benefit to the Society at large.

I purpose to address you on "*The Recent Progress of Fruit Culture.*" A question sometimes arises, viz., What varieties of Apple is it best to plant? Inasmuch as at our Provincial Exhibition twenty varieties are the limit for which prizes are offered, we venture to name the following twenty as really good, serviceable, marketable sorts:—American Golden Russet, Swayzie Pomme Grise, Baldwin, Rhode Island Greening, Spitzenburg, Swaar, Ribston Pippin, King of Tompkin's County, Gravenstein, Snow, Duchess of Oldenburg, Red Astrachan, Porter, St. Lawrence, Maiden's Blush, Northern Spy, Twenty Ounce Apple, Fall Pippin, Mother and Wagener.

There are few farmers in the more genial portions of our land, who cannot boast of those twenty, or of twenty others as good, or of twenty more. Orchards of choice fruit trees are everywhere to be seen, the natural fruit trees having in many localities given place to fruits of rare excellence and beauty. In every fruit market in Britain, Canadian brands are sought after, and much Canadian fruit finds its way to European markets under American brands. Several choice apple-growers cultivate select varieties for the British market, and find a ready sale for them at advanced prices because they are selected varieties. Mr. Robert N. Ball, of Niagara, easily markets the American Golden Russet, Ribston Pippin, Pomme Grise, and Rhode Island Greening. Mr. Springer, Wellington Square, has a ready market for his large orchard of beautiful Northern Spy. Mr. Leather, in the immediate neighbourhood of the City of Hamilton, has over four thousand of choice trees on his farm. And so of many more throughout the Province. The cultivation of the apple, in a few of its best varieties for export, is becoming a most profitable business to the fruit grower of our Western Province. There is, however, a market at our own doors for all our fruit. The Western and North-western States will soon look for their supply from us. Manitoba likewise, and the same may be said of the great valley of the Ottawa. Indeed, after the population of the Ottawa district has been educated to relish really good apples, we see no limit to the demand.

The great drawback, at present, in Western Canada, to the cultivation of the apple, is the the want of shelter. Everywhere wind-breaks are needed. On account of the long sweep of cold winds over great stretches of cleared land, there is an absolute necessity for shelter. Most of the trees in our orchards bear towards the north east, showing our prevailing winds to be from the south-west. We notice in the Horticultural transactions of Nebraska, that great attention is paid to wind-breaks. Governor Furnas told me recently in Boston, that their Horticultural Society had given away four farms to those who had planted the Prairie with trees for shelter to a certain stipulated extent. In fact, the cultivation of the Prairie, lately known as "the great American Desert" depends much on the planting of shade trees. The great enemy to contend against is biting northerly winds. We are persuaded that when our Association takes up this question of shelter, in earnest, the fruit-growing interests of our own country will be greatly benefited.

In this connection, we cannot do better than direct attention to the admirable essay on this subject by Mr. Bucke, of Ottawa, and to the exhaustive treatise of Mr. George Leslie, of Toronto, published in the Report of our Transactions.

We cannot pass from this interesting subject without noticing the praiseworthy efforts of individual members of our Association, who are laying the Province under lasting obligations, in their production of new, that is, of seedling apples.

Foremost in this list stands Mr. Charles Arnold, of Paris. He is our premier hybridist. Mr. Arnold's seedling apples were recently exhibited in Boston, and such of them as were in a condition to be judged of, received the high commendation of the Committee on Seedling Fruits, appointed by the Pomological Society of the United States last week.

Mr. Beadle, our esteemed Secretary, than whom few Pomologists are better able to judge of the merits of an apple, writes me in reference to our recent autumnal meeting at Kingston, that, "Arnold brought some samples of his hybrid apple grown from Northern Spy, crossed with Wagener pollen, and it is a very fine fruit of "very good" to "best quality."

Nor are Mr. Cowherd's, of Newport, to be forgotten. From home, his seedlings are judged to be of great excellency. We have had applications for scions from his seedlings from Nova Scotia. Dr. Hamilton, of Wolfville, and Mr. Starr, of Nova Scotia, no mean connoisseurs, declare some of Cowherd's seedling apples to be good in quality, long keepers, and trees perfectly hardy. This latter quality cannot be overestimated, indeed it is a grand essential in fruit-growing.

Several of Mr. Dougall's seedling apples have been submitted to competent judges, and his Goyeau has taken its place among our permanently established varieties.

Mr. A. Morse's seedling cooking apple was exhibited before the Pomological Society at Boston, and claimed attention for its large size, and excellent cooking qualities.

After all has been said with regard to the production of seedling apples, or other seedling fruits, it must be admitted, that our aim ought to be the introduction of new varieties of greater excellence, and of finer quality than many now cultivated.

The cultivation of the apple has made rapid strides of late years, but the cultivation of

the pear has not been a whit behind that of the apple. Perhaps the advance of the latter has been ahead of the former.

We commend for cultivation the following varieties:—Beurre de Waterloo (fall), Louis Vilmorin (winter), Puebla (fall), Duchess Precoce and Calabasse d' Octobre (fall), Beurre de Gees, Beurre d' Assomption, Dr. Bouvier (fall), Jackson (fall), Tarquin (winter), Bon Roi, Rene, Edmonds (summer), Lodge (fall), Souvenir de Congrès (fall), Vanderpool, Henkel (fall), Van Assche (fall), Hebe (early winter), Beurre d'Anjou, Doyenne Robin, Paternoster, Madame Andre Leroy, Hericart de Thury, St. Crispin (fall), Medale's St. Germain, Lieutenant Poitivin (late fall), Newburg (fall), Ste. Therese (winter), Columbia (winter), Horton (fall), Therese Appert (fall), and de Tongre's.

These varieties will well reward the culture both of the professional and the amateur. They are all first class in quality and size, and some of them may with propriety be called *monstreuses*. This is especially true of the Souvenir de Congrès.

The grand drawback to pear culture is *the pear-tree blight.*

It is an unaccountable disease. We can all tell what it is, but to give any reasonable account of how it is, is the difficulty. We favour the theory, that the cold winds of winter are the authors of the mischief, and especially so if the trees have been subjected to forced cultivation during the previous summer. In Britain, Belgium and France, there is none of it. As a remedy, we counsel increased and renewed attempts at the production of seedling pear-trees. Mr. Saunders, of London, has some promising sorts, exciting curiosity and speculation from the varieties springing from seeds of the same kinds. Time will develop Mr. Saunders' success in this comparatively new field of hybridization in Canada. Have any of our members known the Brandywine to blight? Has the Dearborn's seedling often blighted with them? or the Edmond's?

Seedling pears from natural hybridization were shown at our winter meeting, and obtained prizes from their fair appearance and future promise, viz.: Mr. James Reid's pear, evidently a winter variety, and Mr. Hyslop's. Neither should be lost sight of by our society. A seedling pear of great promise, the production of Mr. Starr, of Nova Scotia, was recently shown to me, and tasted. I trust that our Association will instruct Mr. Beadle to procure some scions, and try and transplant the stranger into our own congenial soil, and into our own likings.

As the stock has much to do with good fruit, and certainly along with a good soil, has every thing to do with the vigorous growth of the grafts, we would strongly recommend some of our hybridizers to try some stocks taken from the Windsor and Chatham pears. We are satisfied that they would prove to be all that the opinion of fruit growers has formed of their excellence.

The recent progress of grape culture has been somewhat fabulous. Many persons who have been hitherto touched with the fever of apple and pear growing are now betaking themselves to the cultivation of *the grape*. A remarkably profitable culture it is, and a pleasant. Mr. William Haskins, of Hamilton, says, in the Prospectus of the Navy Island Fruit Growing Association: "I have, however, several acres (of grapes) under cultivation of the more hardy varieties, which are yielding an annual net profit of over $1,000 per acre." The cultivation of the grape is rapidly spreading over the Province. At Chatham, we heard of the broad acres of Mr. Stripp, yielding bushel upon bushel. Near the City of Hamilton, the cultivation is being tried on a large scale. Mr. Haskins has obtained possession of Navy Island, situated in the Niagara River, and is preparing to plant largely there. Kingston seems a favoured spot for some varieties. Having occasion lately to visit that city, we priced bunches of Delaware in a fruit store, and found them selling for twenty cents per lb., Concord at fifteen cents per lb. On further enquiry, we were told, that instead of being imported from Ohio or Illinois, they were the products of the garden of a Director of our Association, resident in Kingston. Doubtless the amelioration of climate produced by the proximity of the warm waters of Lake Ontario, has somewhat to do with the production of the luscious fruit in this part of the Province.

In this connection we cannot but commend the devotion of our amateurs to this cultivation of the grape. They far outstrip the professionals in their success with this culture. This statement of fact is confirmed by the exhibitions of a local and provincial kind. Our Beadles, Arnolds, Leslies, Grays and Dougalls must look to their laurels, otherwise they will come out second in the race.

The obstacles opposing an extended cultivation of this fruit are many and serious.

First, there is the low prices for the fruit after it is raised. Much has been done of late years in cultivating the taste of our population for good varieties, but much remains to be done. I find that ten cents a paper is the regular price in the United States, on the railway cars, and even higher rates in fruit stores in large towns. Pricing pears in coming along, I found one small Bartlett commanded five cents. After crossing the Suspension Bridge, we found that five small Bartletts could be purchased for *one* cent. And so of grapes. The want of a market lowers the price. By-and-by, we look forward to the time when our grape growers will turn shippers, and take their fruit to the large cities of the United States, and thus secure a suitable reward for their labour.

The uncertainty of ripening is another great drawback in our northern latitudes. This season, for example, varieties that ripened well last year, at this time, are quite green to-day. The present, however, is an exceptional season, and we may not have another like it for a quarter of a century to come.

There is little doubt that the truth is beginning to dawn upon us, however reluctant we may be to admit the fact, that in our climate the covering of the grape vine in winter is an absolute necessity. There is no covering to compare to a covering of earth.

It is generally admitted that the cultivation of the Plum is one calculated greatly to reward the labour of the horticulturist. Of late years its culture has been carried on under the most discouraging circumstances. The Plum Curculio has been a pest that has almost driven the cultivator from the field.

There are those among us, however, that can fight, and that successfully, this fruit pest. Jarring the tree is the only remedy that has yet been employed, proving entirely satisfactory. The variety of new Plums that is cultivated is very startling. Mr. Saunders, of London, has quite a variety on his farm, and Mr. Mills, Hamilton, cultivates many of the choice varieties. Mr. Mills has volunteered the statement that the Victoria is more free from the ravages of the "Little Turk," than any other variety which he cultivates. We fear that there is no kind of Plum free from attack. Mr. Roy, of Berlin, has a splendid assortment of Plums, and beautiful samples of this fruit are raised by Mr. Elliott, at Guelph, and by Mr. Ross, Goderich. We hear less of the black knot than usual. Is that because the disease is less prevalent? We trust it is.

Much progress has recently been made in the continued additions to existing Plum lists of excellent new varieties. Ontario can certainly boast of one splendid contribution. We refer to Glass' Seedling, raised and propagated by Mr. Alexander Glass, of Guelph. Our Association has done well to promise the dissemination of this seedling to our members some time hence. It will prove a great acquisition to Plum growers, inasmuch as it will lengthen out the Plum season, is equally as good for dessert as it is for cooking; the tree is hardy and vigorous; the foliage remarkable, and the fruit, when well grown, is much above the average.

The Peach culture is, perhaps, the only one that can be said not to have participated in the general progress of fruit culture in Canada. The winters have been so severe, the borer and the curculio so persistent, that the producer has no chance to secure a crop, with so many obstacles opposing his success. Here and there, however, perseverance has been rewarded, and good crops secured. The great desideratum, after all, is shelter. Mr. Ball determined some time ago to put this to the test by clearing a few acres of bush land, but whether this has been done or not, I am not aware. We have again and again suggested low bush culture, the renewal system, and winter protection with a straw rope. Labour, however, is so dear, and the practice of protection so irksome, that little or nothing has been done in this connection. Twenty years ago, from Hamilton to Suspension Bridge, one might have easily imagined himself travelling through a continued orchard of Peaches; now a tree is scarcely to be seen where once a continued line of blossoms gladdened the eye.

There are some choice spots for the cultivation of the Peach in our wide country. Long Point Ridges could not be excelled anywhere. I have seen peach trees there in full blossom, when almost every twig had suffered on the adjoining mainland. Niagara and Grimsby can still hold their own with any other section of the Province. Mr. Haskins thus writes of the situation of Navy Island as a peach-growing locality: "In consequence of its being surrounded by water which never freezes, the fall frosts are fully three weeks later in affecting vegetation than in the vicinity of Hamilton; thus allowing the finer varieties of grape to ripen, and also enabling the wood of the peach tree to become hard and ripe, and prepared to withstand the action of the winter frosts. As an evidence of its adaptation to grow peaches,

I may state that there are several trees on the island that are well loaded with peaches this year, although they have had no care, and this season is undoubtedly the worst for peaches that there has been for many years. There are extensive peach orchards on the American islands adjacent. Mr. Burdett, an American gentleman, owns a small island near Navy Island, on which he has ten acres of peach trees, which have a good crop on them this year, and from which, in 1871, he sold $11,000 worth of peaches, and in 1872, 6,200 baskets, at $1.50 per basket. His orchard is now upwards of 20 years old, and since it commenced to bear he has never failed in having a fair crop."

In no respect has fruit culture made more rapid strides than in the increased attention that has been given to seedling fruits. We do not believe that any limit can be set to attainment in this respect. The secrets of nature are being extorted. Like Jacob in the propagation of his cattle, man is now having recourse to various expedients to improve plants and fruits. One of the most striking of these attempts is that of Mr. Saunders, of London, in his crosses between the black and the red raspberry. He has succeeded in producing a new, or rather several new and prolific fruits—fruits which blend the taste of the black and red raspberry, and which exhibit all the fertility and productiveness of the Philadelphia. Our present report will contain some account of the interesting results of the experiments of Mr. Saunders.

Mention ought also to be made here of Mr. Saunders' gooseberry hybrids, some of which are most promising, as also of his seedling grapes, and his seedling pears.

Mr. Haskins, of Hamilton, places on the table at this Annual Meeting a very remarkable and, we are bold to say, a very superb seedling grape, of his own raising. We will venture to call it No. 1, as we believe it to be A. 1. It is a cross between the Hartford Prolific and the Black Hamburg, the Black Hamburg being the male and the Hartford Prolific the female. Gentlemen will notice that the bunch is very large and compact, with good sized berries, greatly over the average. The fruit has all the characteristics of the Black Hamburg, seedlings usually taking after the male parentage; the vine is perfectly hardy, now growing where it sprung from the seed, without any winter protection; the leaves are also submitted for inspection; the wood is well ripened and very short jointed.

Another seedling of his, which for convenience I will call No. 2, ripens before September, and is a cross between the Delaware and Creveling. The colour and characteristics are Delaware; the leaf has a peculiar shiny appearance, and the fruit is ripe very early. I have tasted the fruit, and can speak most favourably of its excellence. Mr. Haskins has over 150 of these hybrids.

We believe that our Fruit Growers' Association are to look in this direction to accomplish the great object of fruit growers—the diminution of blight, and short livedness in the production of new varieties. Let the work be systematic—done with greater nicety—greater attention to nature's laws, and marvellous results will follow. During the past season Mr. Arnold has produced a remarkable strawberry—from a basket of his fruit, one of the berries taken at random, and weighed, was found to be over an ounce and an eighth of an ounce. In flavour, size, and hardihood, it promises to be a great acquisition to our country. Mr. Arnold exhibited samples of this fruit at our summer meeting at Chatham—a report on this seedling has already appeared.

Arnold's white seedling raspberry is not to be spoken of as much behind his seedling strawberry. Lately, in conversation with growers from the United States, we heard his seedling fruits highly complimented. Some recognition of the services of our hybridizers ought to be made by our Society, in the shape of a medal, or other fitting distinction, to mark our appreciation of most disinterested and patriotic labours. Unless our Society steps forward in this course, and it ought, no one else, it seems to me, will notice to reward the unremitting labours of our veteran fruit growers and hybridizers. This act of courtesy and recognition of labour ought to be entirely independent of the value of the fruits added to our Pomology.

CONTRAST BETWEEN PAST AND PRESENT VARIETIES.

It is quite exhilarating to think of the progress made in choice varieties of late years. The varieties that were satisfactory to fruit-growers only a few years ago, have given place to far finer varieties than they ever dreamt of producing. In apples, pears, and grapes, this is especially true, and ever increasingly true; which leads

as to entertain bright and hopeful prospects for the future. There is no finality in this field of labour, and no finality to the contemplated success. If aught would excuse a little boasting at our annual gathering, and cause our mutual congratulations to assume practical shape, it would be the success that has attended our Exhibition of the fruits of Ontario at Boston, during the meeting there of the Pomological Society of the United States, on the 10th, 11th and 12th instant. Ontario took her own place, based on her own fruit merits. The display made by the Fruit Growers' Association of Ontario afforded the utmost satisfaction to those of your office-bearers delegated to Boston, and we are bold to say, that it was equally agreeable and surprising to the members of the Pomological Society, to the members of the Massachusetts Horticultural Society, and to the citizens of Boston, who took an interest in the proceedings of the quarter-centennial celebration of the Pomological Society of the United States. In our anxiety and desire to do honour to the Honourable Marshall Pinckney Wilder, we honoured ourselves. We were accorded what might be almost called the place of honour, having apportioned to us the one-half of the centre table. Nebraska and Ontario filled it, and were cramped enough at that. Our fruits were observed by all observers. Questions of the following import were put: "Can you grow peaches in Canada?" "Is that fruit from Canada?" When reply was made that we had our peach orchards like as we had our apple orchards, the expression of wonder could not be restrained. Mr. Saunders' bottled blackberries, and my mulberries, were a source of endless curiosity. The individual grains of the blackberry were frequently commented on. When enquirers were told that they were blackberries, and that the bottle had no magnifying power, the common exclamation, "Well!! well!!" was again and again repeated.

At Boston, Ontario stood A, 1, in plums. Nothing of the kinds exhibited came near them. Paris, Berlin, Guelph, Goderich, and especially London, did wonders. The plum might be said to be Mr. Saunders' specialty—he took much interest in this part of the display, had many sorts of his own there, and put himself to much trouble by correspondence and otherwise to get them together. The silver medal and fifty dollars well rewarded him, and us, for all his care and trouble.

Similar testimony can be borne to the excellence of our hardy grapes. We were literally foremost in hardy grapes. It was with some difficulty that visitors and others could be persuaded that they grew in the open air with us. I had frequent requests from fruit-growers for one berry of Arnold's Brant, just to taste it. Arnold's seedling grapes, from all I could learn, were thriving well in the Southern States. We made a very fair display of hardy grapes. It might have been better. There was not a single bunch contributed by Hamilton that I am aware of. St. Catharines, Paris, Beamsville and London did nobly and sustained our reputation.

The exhibition of pears was greatly indebted to Mr. Whitelaw, of Paris, to Mr. Saunders, to Mr. James Dougall, of Windsor. Mr. Dougall's addition of rare varieties was greatly prized, and also those from Mr. Bennett, Brantford. Mr. Smith, of Paris Road, also sending a handsome contribution. A silver medal and fifty dollars well rewarded our Association for this part of the exhibition.

The apples exhibited wanted colour. The 10th of September wa too early for the western portions of Ontario, or indeed for any portion. There were, however, some magnificent specimens from Ancaster—from Mr. Hammill, Mr. Brooking, Mr. Hyslop, and from others in that neighbourhood.

The summation of our Boston visit sounds well. Four silver and one bronze medal, and one hundred and twenty-five dollars in cash, were our awards. My modesty will not prevent me adding that your President brought home a bronze medal for his exhibit of pears. It might have been and, we believe, it was considered by many, that it was like carrying coals to Newcastle to take pears to Boston, but pluck often does wonders, and in this particular instance, through the courtesy of the examining committee, and the munificence of the Pomological Society, a reward was conferred on your President, which will be a subject of honest pride and delight, as long as horticulture remains a gratification to him.

We have to add that the Hon. Marshall P. Wilder, and his band of noble coadjutors, were all that we had previously heard them depicted to be. If urbanity, gentlemanly bearing, devotion to your cultivation, could call forth admiration, respect and praise, we found them all embodied in the highest degree in the person and manner of the venerable and Honourable Marshall P. Wilder, and in those who direct the affairs of the Pomological Society of the United States.

The uses of such an exhibition as that of Boston are not few, nor unimportant. It served to stimulate those of us who witnessed the admirable display of fruits from almost every State of the Union. We saw much and learned much. The efforts of the Pomological Society in bringing the confused appellations of Pomology to something like order and precision, merit all praise, and are worthy of efforts so untiring and skilled as those of the members of the Pomological Society. Barry, Thomas, Ellwanger, Hooker, Meehan, Campbell (Ohio), Quinn, Daniels, and others, are all labouring with unflagging assiduity, to bring order out of confusion, and unity out of a legion of synonymes.

Worthless varieties are carefully dropt; as Barry justly said, it was a pity to perpetuate even by name worthless varieties. We close by saying that Canada took an eminent place among the fruit growing States of the Union, and we have only to put shoulder to shoulder, and foot to foot, and our pomological triumphs in the future will far transcend our efforts and successes in the past.

Let us now prepare for the Grand Centennial Exposition to be held in Philadelphia in 1876. Let us look forward and prepare also for the next Biennial Exhibition of the Pomological Society, to be held at Chicago in 1875.

Allow me to encourage the members of the Fruit Growers' Association here present, and also those absent, to continue to foster this institution. It has been, now is, and, by proper effort, will continue to be a power for good in the country. Its beneficent results no one can estimate. Its influence for good must be made to bear on all classes of our community. Let our artisans, as well as our farmers, share in its kindly benefits. We must not relax our efforts till our chosen and loved culture finds its way to every cottage and every home. It is within our knowledge, that prudence, foresight, saving industrious habits have been gendered by a consideration of the objects of our Society. Mechanics, in Hamilton, are known to have purchased a lot which they might call their own, in order to plant fruit-trees which might prove an incentive to their taste, and a benefit to their families.

In order to test the hardiness of Tart Bough, Benoni, Red Astrachan, Duchess of Oldenburg, St. Lawrence, Saxon, Sweet Bough, Ben Davis, Utter's Red, Hislop Crab, Eureka, Soulard, Transcendant, Red Siberian, Golden Beauty, Purple Apricot, Wine Sap, Wagener, Haas, Fallawater, Perry Russet, Tetofski, Northern Spy, Ribston Pippin and Fameuse, Mr. Warren Holton, of the nurseries, Hamilton, has forwarded one or more of these specimens of apples and crabs to my friend Mr. John McIntyre, at Fort William, Thunder Bay, Lake Superior. By and by we will hear from Mr. McIntyre a report of their value and hardiness.

It might be well for our membership to consider the propriety of adding flowers and flowering shrubs to the object of their present attention and consideration. Fruits and flowers blend so nicely, seem so adapted to produce happiness and contentment to the human family that we ought not to seek to disjoin what our Maker has so clearly and graciously allied. By the cultivation of the divine art of music in conjunction with fruits and flowers, we may long for a measure of happiness and civilization which, although it has not now, yet at no distant date will characterize the hearths and homes that are thickly planted in our wide extended and heaven-blessed territory.

Let our Society encourage tree planting of every kind throughout the land. The ruthless axe and the devouring flame have done much to devastate our soil, and thus render it unfruitful: be it ours to lead public sentiment and opinion in restoring the bounties of Providence to a happy, contented and religious people. *Shelter* must be our watchword, not merely for fruit growers and their interests, but for the kindred and important interest—the farming interests of Ontario. Seasons become modified by the abundance of wooded districts —rain is thereby made to fall—winds are withheld in their cold devastating ravages—tree and animal are alike protected. Let our fruit-growers attentively peruse Mr. George Leslie's paper on tree planting for shelter, and, observing its benefits, go and encourage others to undertake this beneficentwork.

Let our Association be more lavish than it has been in awarding medals and prizes—diplomas, if you will, to all who engage in the production of seedling fruits. Such recognition stimulates flagging zeal, and anew animates expiring ardour. Disappointment is apt to break in upon the most devoted and diligent student of nature's arcana Let us strengthen by all legitimate means, the tiring hand and the saddened heart, and thus develope the mighty future issues that are held much in our own disposal. By every possible effort let us call forth

the bringing out of new varieties. Let us attempt to outstrip a Grant, an Underhill, a Clapp, a Ricketts, a Brinckle, a Warder, a Hovey, an Arnold, and a Saunders, and lay our Province under a contribution of commendation to our perseverance and skill.

Allow me further to say, as I have had occasion oft to say before, how deeply indebted I feel to the Board of Directors for their forbearance with me in the chair. I do congratulate myself and the direction, that no difficulty or disagreement has openly marred our past intercourse; and nothing has arisen, unless a deep sense of poorly discharged duty, to make the retrospect of our official connection otherwise than pleasant and agreeable.

If in the discharge of the duties of the honourable office which your partiality has conferred on me, I have offended any one of you by word or action, lay it to the account of inadvertence, and not to that of any ill feeling. I have made life-long friendships among you. I can, and do address you all as friends. I have much satisfaction and comfort in thinking that with so many kindred spirits as I see around me, I am spared with you to find ourselves at the end of another official year of our Society's existence, engaged in deeds of beneficence, sowing seed which we may never see bloom or fruit, but which, notwithstanding, we are perfectly persuaded will spring up to bless future generations of our countrymen, and among other results bear testimony to the fact that we have not lived in vain,—our duty being not to live to ourselves, but unselfishly for others. When the day comes that our works bear fruit, and we are known thereby, my earnest prayer is that we

> "Will all receive a meed of priceless worth,
> When ripely gathered by the heavenly reaper."

ROBERT BURNET,
President.

REPORT OF THE DELEGATE APPOINTED TO ATTEND THE MEETING OF THE WESTERN NEW YORK HORTICULTURAL SOCIETY, HELD AT ROCHESTER, JANUARY 10TH, 1872.

To the Directors of the Fruit Growers' Association:

GENTLEMEN,—Through your distinguished consideration I was appointed to represent your Board and your Association at the meeting of the Western New York Fruit Growers' Association, which met in the City of Rochester on the 10th and 11th of January, 1872. On that occasion I was accompanied by your Secretary—he being a member of the Convention—and by Mr. William Saunders, of London, who is equally well known for his taste in fruit culture, and for his accurate knowledge of insect pests. Both gentlemen ably sustained the *prestige* of your Society at the meeting, and during the discussion of the various important matters connected with fruit growing submitted to the Convention, took a respectful but prominent part.

Your deputy was received and heartily welcomed, and soon learned that he appeared among a class of men who knew how to be courteous. After presenting my credentials, the worthy President, P. Barry, Esq., in the name of the Association invited me to take a seat with them, and expressed a kindly interest in our success as fruit growers in Ontario. Your President learned much from the admirably conducted proceedings of the meeting of the Western New York Fruit Growers' Association. We were much astonished to find the meetings largely attended, not only by the fruit growers of Rochester and the surrounding country, but by a large number of gentlemen whose names are as household words among the fruit-growing fraternity. We had anticipated great satisfaction in meeting the President of the Pomological Association of the States, the venerable Marshall P. Wilder, but a previous engagement at Philadelphia prevented his being present, and abridged our expected pleasure. Great attention was bestowed upon the samples of native fruits, and such men as Thomas, Downing and Hooker composed the committee for investigating the merits of any new arrival lately ushered into the pomological world. The Hubbardston Nonsuch (a sample of which name I placed on the table), had its merits freely, but favourably discussed; and some other new varieties, with whose names I was not familiar. Marshall P. Wilder's favourite pear, the Burre D'Anjou, seemed to make a good impression on the members, its merits were most favourably spoken of, and the advantages of its culture warmly recommended.

Foreign fruits had their fair share of attention. Some fine new varieties of foreign pears shown by Messrs. Ellwanger and Barry attracted my sharp scrutiny, and made me long for a larger acreage.

It was entirely new to your delegate to find long and earnest discussions on ornamental trees and plants. Our subjects of discussion are so limited, viz., fruit and fruit trees, that I was not prepared to find a kindred culture forming part and parcel of the proceedings of the Western New York Horticultural Society. It might conduce to the advancement of our Association, should any amendment be contemplated on our constitution, to enlarge our sphere of subjects, and embrace ornamental trees and shrubs, in the discussions of our Society.

The shipment of fruit received a careful consideration. Producers, on comparing notes, found that they were being deprived of their just gains by the action of middlemen. A plan suggested by your President was favourably entertained, viz., for the fruit growers of Western New York to club together and send one of themselves as agent for the sale of fruits, to Boston, New-York and Philadelphia, to whom they might independently consign their fruit.

We found all the subjects of discussion eminently practical. One—that of fruit drying—was canvassed at great length. The question was: "Will drying fruit by fire heat be profitable when there is a surplus crop, what kinds, &c., how done?" There were gentlemen ready to offer their own practical experience. Foremost amongst those was Mr. Purdy, who explained the method he adopted in his drying house, and who gave the results of the process. The "Alden" process was also ventilated by letter from the inventor. The marked interest displayed in these means of drying fruit was sufficient to testify to its importance to fruit growers. Mr. Charles Alden stated that fifty pounds of apples could be dried at the expense of thirty cents. When dried the apples sell at twenty cents per pound.

We perceived that everybody had their own nostrum to advance fruit interests, and also perhaps to advance their own pecuniary interests. There were plates and peans exhibited of "Comstock's Cultivator and Onion Weeder," "a Pony Cultivator and Weeder," "a Hand Cultivator and Weeder," "The Rochester Berry Basket," styled, "the best ventilated and neatest basket made," "Market Crates and Baskets," "Grape Boxes," the "Oval Box," and the "Round Box."

My friend Mr. Saunders and I visited the manufactory of the "Berry Boxes," and were amply repaid for our patience and diligence in ferreting out the place. At first we were received with suspicion, but on further acquaintance nothing could exceed the urbanity with which we were received. The machines seemed to us to be perfect. After a careful inspection we reluctantly bade a farewell to one of the most useful and important of industries. The Americans deserve the highest praise and consideration for their push and invention. We learned that "Berry Box material will be packed in crates holding 1,000 each, for which a charge of fifty cents per crate for quarts, and forty cents for pints will be made."

We had also exhibited "Wagener's patent method of grape and tree grafting."—"Wagener's system of vine grafting." In short nothing could exceed the display of all kinds of nostrums to produce the penny and advance fruit culture. The members all had some speciality. One circulated his list of standard pears, another his price list of strawberries, a third his catalogue of dwarf pears, and a fourth his vine list. Nothing could exceed the interest in fruit matters, and the presentation of kindred objects. There was a matter-of-fact aspect in everything said and done.

The Bug men were there, and enthusiastics among them just as among us; but our premier entomologist, our Saunders, of London, seemed to me to carry the palm in every discussion advanced in fruit pests. "Palmam qui meruit ferat."

Grapes were pretty fully discussed—"What new grapes will replace the old standard sorts?" The Isabella and Catawba were the favourites, and the Concord was just taking an A. 1 place in the esteem of New England growers.

The measurement of barrels, the sale of fruit by weight, and other kindred subjects had a large share of thought and attention.

We visited Mr. Vick's establishment. The importance of this firm may be somewhat estimated when it is stated that they have a post office despatch for themselves; that the gift-offering to journalists alone cost $10,000; that Vick's Illustrated Catalogue costs $60,000 an issue.

The hospitality of the polite and gentlemanly Ellwanger was generously shown to your

deputation and greatly enjoyed by the participants. Indeed our whole visit was a sort of ovation. Whenever, gentlemen, you want a volunteer to do duty on the other side of the lines you have only to apply to your President, and he will only be too ready to carry out your views to the best of his ability.

I have only to add that everything was superbly managed by P. Barry, Esq., President. A model president he is. He set apart an evening for your deputy to address the Convention, which he did, and gave an account of our operations, and presented a copy of our last Report.

After mutual interchanges of good-fellowship, and Mr. Saunders and myself being made honorary members, along with such names as Marshall P. Widder and Downing, we bade them a hearty farewell, equally grateful for the opportunity of representing you, gentlemen, and your Society across the border, and greatly benefited and instructed both by what we heard and saw.

ROBERT BURNET,
President.

REPORT OF THE DELEGATE APPOINTED TO ATTEND THE MEETING OF THE WESTERN NEW YORK HORTICULTURAL SOCIETY, HELD AT GENEVA, JANUARY 8TH, 1873.

Having been appointed a delegate to attend the Annual Meeting of the Western New York Horticultural Society, held on Wednesday the 8th of January last, at Geneva, New York, I beg to report.

On the 7th, I reached Rochester, joining there our worthy Secretary-Treasurer. On the following morning we left Rochester in company with several gentlemen, delegates from that vicinity for Geneva, arriving there about 10 o'clock, A.M. At 11 o'clock, A.M., the meeting was called to order by the President, P. Barry, Esq., a name familiar to fruit growers. The meeting was well attended and the show of fruit fair, especially pears—Messrs. Ellwanger and Barry having on exhibition a collection of 40 varieties of winter pears, all in an excellent state of preservation. The show of apples did not equal the exhibitions usual at our winter meetings. In fact I am led to believe, as a general rule, the apples grown in Ontario are superior in colour and flavour to those grown in Western New York, owing probably to the fact of our climate being a little more crisp, giving increased healthfulness and vigour to this class of fruits, while to the pear and peach the slightly milder climate of their latitudes is more congenial.

There is one important feature in which our Society differs widely from theirs—it is in the membership and attendance—theirs being chiefly compared of professional fruit growers, ours on the contrary is principally made up of amateurs—their Society imparting information and interest to comparatively a few whilst ours is disseminating useful knowledge upon fruit culture to all classes in the land—theirs increasing and improving a commercial knowledge how best to make fruit culture a profitable business—ours, with a still small voice inviting by a natural love for the occupation its amateur Votaries, carrying increased usefulness and happiness to many a home—theirs concentrating horticultural knowledge in the commanding centres, such as Rochester and Geneva—ours has comparatively no leading centres, but its influence is as broad as the land.

In regard to the mode of conducting the meetings, and the subjects discussed, the Societies are quite similar, with one noticeable exception. In their discussions any person speaks as frequently as he pleases, the whole drift of argument at times being confined to two or three individuals, to the exclusion of others who might give valuable personal information. With us the custom heretofore adopted of the President calling upon any member in rotation, as they chance to be seated, is to my mind far preferable, thereby, securing to a much greater extent, information from all parts of the country.

One other feature different from us I would mention. Their Society being horticultural, properly allows the discussion of garden vegetables and flowers, whilst ours being strictly fruit growing, everything of this character is excluded. I was very much interested in their discussions of garden vegetables and flowers, and have no doubt that much good is the result. It has occurred to me very forcibly, that inasmuch as most people who take an interest in fruit culture, have also a taste for the vegetable and flower garden, I have asked of myself the

question, ought not the growing of vegetables and flowers to be incorporated in our Society. I am not, however, sufficiently convinced to propose such an innovation (as some might suppose it to be), but the suggestion is thrown out, and may be thought worthy of some consideration.

Pear blight which seemed to be the leading question at Geneva, was very fully discussed and with considerable ability, by persons whose personal experience extended from New England to Southern Georgia, with close observation as to climatic changes and test of soils, but really no settled conclusions were arrived at—in fact they seem to be no more settled in opinion as to the cause and cure of this pear tree scourge than ourselves.

Your delegate cannot close this report without referring to the kind and friendly reception met with at the hands of the horticulturists of Western New York, particularly those who proffered to your Secretary-Treasurer and Delegate the hospitalities of their delightful homes.

All which is most respectfully submitted.

A. B. BENNETT.

REPORTS OF DISCUSSIONS.

WINTER MEETING.

(Held at Hamilton, February 6th, 1873.)

At eleven, the members met in the City Council Chamber, Rev. R. Burnet, President, in the Chair.

D. W. Beadle, Secretary, being in his place, proceeded with the business set apart for this the winter session. There were some forty or fifty members present from all sections of the Province, who exhibited a deep interest in the proceedings. A number of new members were received, and their names added to the roll.

The meeting having come to order, the Secretary read the minutes of the meeting held in the Board Room, Toronto, Oct. 9th, 1872, which were confirmed.

A large number of apples and other late Fall fruits in excellent preservation were produced by members, and carefully examined. They were also referred to a special committee for further examination.

Mr. Moodie, the delegate representing the Fruit Growers' Association of Western New York, being present, was invited forward and took a seat upon the platform.

He returned thanks, saying that as all fruit growers are genial whenever they meet, he felt as much at home in Canada as in the States.

Mr. Bennett, appointed a delegate to the annual meeting of the Fruit Growers' Association of New York, which met at Geneva, New York, January 8th last, made his report. (See Report, *ante* page 217.)

Mr. Saunders, Vice-President, having taken the chair, the President read a lengthy report of his and the Secretary's visit to the annual meeting of the Western New York Fruit Growers' Association, held at Rochester, in January, 1872.

MARKETING FRUIT.

This was the first subject which was upon the programme.

Mr. Moodie, of New York, being called upon, made a few remarks concerning the subject. In Niagara County, from whence he comes, he said that fruit was a staple production, and then to make it marketable it was packed in the most careful and even expensive manner. The fruit was all carefully selected and nicely packed in the best and cleanest barrels or baskets. The chief thing was to get the finest packages possible. It was not too much to put pears worth $20 a barrel in varnished barrels, for it is the first impression that makes good fruit sell. Some of these barrels had sold for $35 wholesale. For instance, a certain producer took two barrels

of excellent and similar Bartlett pears. In one of these the pears were protected with coloured tissue paper, and the heads of the barrels were nicely attended to, and the other was packed in the ordinary way. The first barrel quickly obtained $15, and the other, equally good fruit, could not get $5. Such, in the main, was the object of the principle upon which fruit was marketed—*put splendid fruit up in the most showy and fitting packages*, then sellers may be certain of good prices.

Mr. John Freed gave his experience as confined to Hamilton market. It had struck him on many occasions that those farmers who brought their fruit in the nicest manner obtained the best prices.

Mr. Smith, Clifton, said he was chiefly interested in the production and sale of strawberries, and he knew it to be a fact that berries in dirty stained baskets would not sell in any market for two-thirds of the price the same fruit obtained in clean neat baskets. He agreed with Mr. Freed concerning his statements as to farmers.

The Secretary believed that a good deal lay in the honesty of middlemen, and many persons had come to think that they were rogues, and obtained all the profits.

Mr. Lynus Woolverton added his experience on the sale and packing of apples. He believed the best policy, where one could not sell his own fruit, was to send it to some honest commission merchant. One of these at Montreal had acted well, and made very satisfactory returns. Montreal, so far, has been found the best market for apples.

Mr. Smith added that a friend of his sent a lot of grapes to Ottawa, but no returns had been made yet. This was unsatisfactory.

Mr. Biggar had found that neighbours of his had lost two cents a pound upon grapes which had been poorly packed. Sell the best fruit and keep the other at home.

THE BEST VARIETIES OF WINTER PEARS

was the next subject.

Mr. Morse preferred the *Sheldon* to the *Beurre D'Anjou*, both as far as production and lasting qualities are concerned. He liked the *White Doyenné* variety. He succeeded in keeping his pears extremely well by folding them in paper, keeping them high up on shelves in a dry cellar, and *keeping the temperature as nearly at the freezing point as possible*. A thermometer is kept in the cellar. This low temperature was not artificially obtained. The north window was opened to admit the cold, and the southern one and door open for warmth. This winter was the first when frost had entered; this was excluded by some heat introduced.

Mr. Arnold had no great satisfaction with his pears, as he could not keep them. He considered the *Winter Nelis* was the best; the *Vicar of Winkfield* was a pretty pear, and sold well. The *Duc de Bordeaux* was, in his opinion, a good one, although new. He would not advise people to raise pears for profit.

Mr. Morse had great satisfaction with the *Glout Morceau*.

Mr. Bennett entirely differed with Mr. Arnold, as winter pears had become a hobby with him. The *Winter Nelis* had not kept well with him, but he had great satisfaction with the other kinds. His cellar was also kept at a low temperature. He had a number of beautiful samples with him. The *Seckle* had proved an excellent variety.

Mr. Graham believed that the weather of last summer and this winter accounted, to some extent, for the exceptional good keeping of pears this year.

Mr. Bennett agreed with the President in pronouncing the *Beurre D'Aremberg* as a superb pear. He had had no success until he grafted it upon the *Winter Nelis*, when every result was satisfactory.

Mr. Moodie pronounced the *Lawrence* as an excellent pear for production; the *Josephine de Malines* was also good, but he was not aware that as great care is taken in the winter time in New York as in Ontario. Russet pears needed a damp cellar. The *Bartlett* pear could be made to last into the winter, simply by the time observed in the picking. As a rule, fruit is left too long on the trees. When the leaves begin to turn in colour then is the time and *not later*, to pluck them.

Mr. Freed said that it was useless to attempt to dispose of pears in the winter time on the market, if there were any frost, as the fruit would be lost.

The President asked after the *Winter Doyenné* and *Josephine de Malines*. He spoke highly of the *Lawrence*, but advised the cultivation of the first mentioned pear as a really

excellent one. He thought the *Doyenné Du Comice* the finest pear he had ever grown, and was an excellent keeper.

Mr. Arnold asked after two old pears, the *Princess St. Germain* and *Easter Beurre*. He had found them inferior in quality.

Mr. Grey, of Toronto, did not care much for the first, but the second was good when cared for.

Mr. Moodie said in New York the first was discarded.

The President said that he had last summer an excellent crop of *Easter Beurre* pears, and they were not at all gritty.

The Secretary had not a good word to say in respect to winter pears. They were a failure with him. He had planted *Glout Morceau*, and found them all dead in a few years.

Mr. Grey said the same pear died out rapidly at Toronto.

The President noted that this past year, the *Glout Morceau* had blighted more than ever. It was not well to force fruit too much; a friend of his had, by forcing, obtained an excellent crop in 1871; but, last year, all the trees blighted.

Mr. Barnes had two hundred pear trees, and during the past year had not lost a tree, because he had split the bark with a knife, and placing two shovels full of iron fillings about the trees.

Mr. Mills followed the same practice, with the same results. He did this splitting in June, when the growth was most rapid, so that the cuts would heal over. The bark became thicker, and protected the trunks from the frost. He made four slits down the tree each year.

Mr. Barnes used one slit.

Mr. Arnold had not faith in the slitting. He mentioned a four-inch tree that seemed to die, when in June he took a spade and cut off the bark for several feet to the ground, and the tree entirely recovered, put forth new leaves, and bore for a number of years after. He would by no means recommend this practice.

Mr. Barnes said that on Main Street a number of willows could be seen, which had been girdled with a view to killing them, but this had been by no means the case.

Mr. Mills mentioned a tree he had tried to kill—a useless tree, but it had recovered and bore better than ever.

AFTER RECESS.

The Association met at three o'clock, when the following Committee to award the offered

PRIZES FOR CANADIAN SEEDLING FRUITS

was named by the President:—Messrs. Mills, Chairman; Grey, Field, Smith (Clifton), Saunders and Anderson.

The Directors offer a prize of ten dollars for the best Canadian seedling winter apple, and five dollars for the best Canadian seedling winter pear, to be shewn at the Winter Meeting. If two or more varieties of equal merit are shewn, the judges will award a prize to each. The attention of members is drawn to the list of prizes for other Canadian seedling fruits in the Report for 1872.

The President then read an excellent paper on "The connection between fruit growing and the farming interests of the Province."

The essay was ordered to be printed, and Mr. Burnet received the vote of thanks of the meeting.

NEXT PLACE OF MEETING.

The Secretary stated that Kingston, Chatham, St. Catharines, Galt and Brantford had asked for meetings at each of these places. The Kingstonians desired it when the Fall fruits were ripe and ready for inspection, as there were a large number of apples upon which they were anxious for information. The other towns had been equally strong in their terms of application.

On motion of Mr. Martin, seconded by Mr. Beadle, the Summer Meeting was arranged to be held at Chatham.

On motion of Mr. Arnold, it was resolved that the Fall Meeting be held in Kingston. In both places the inhabitants to set the precise time of their holding.

ARE CATTLE AND SHEEP USEFUL IN ORCHARDS?

Mr. Martin asked whether it was the general opinion that cattle and sheep were useful in orchards? He thought they were.

Mr. Lee thought not.

Mr. Chambers said that some time ago his trees had been injured by codling moths. He then used an application of cow dung to the trunks of the trees, and allowed his sheep to run in the orchard, when the moths disappeared. The sheep did not gnaw the young trees.

Mr. Martin put the application on the trunks of the trees with a brush.

Mr. Barnes used lime, black sulphur and soot, made into a mixture with water. This he applied with a stiff brush or broom.

Mr. Bennett used lime, sulphur and cow dung, which he mixed in a pail, and in another pail containing water and a stiff brush, applied this, which keeps off mice and lice. This he decidedly recommended.

The President said that Mr. Barnes' trees had the glossiest bark possible.

Mr. Glass was of the same opinion as Mr. Bennett. Besides, the mixture was superior to wax, &c., for healing cuts or broken branches.

Mr. Martin said that the presence of sheep kept away field mice.

Mr. Arnold used lime and soft soap. Sulphur was too drying. To add a little tobacco water, it was a complete success.

THE BEST METHOD OF DRYING FRUITS.

The Secretary had received a letter from Mr. Gibb, of Montreal, who had a drying apparatus, which was brought to the attention of the Association. The apparatus was simple. A usual sized stove was chosen, around which was built a brick wall to retain the air. The fruit being prepared was put in at the lower end of an inclined plane, and was gradually run up over the fire, so that, when it got to the top, the fruit was supposed to be dried. At Geneva the speaker had seen a good contrivance, for persons having a small stock of fruits which could be prepared for the market. A machine for family use, a sheet-iron square with shelves, was placed around the stove-pipe, making a little oven answering all purposes excellently. At the same place he had seen the "Aldine" process, which seemed to be good enough, but it was too expensive to recommend. Such dried fruits, carefully packed and preserved from insects, were preferable to ship all over the world than in the canned shape. There was no doubt that, if fruit were dried free from dirt and insects, much that was now lost to the producer and consumer would be saved. Although in Canada there is sufficient sale for all fresh fruits, and there are canning establishments, yet drying ones might with excellent advantage be brought into use.

Mr. Moodie added some explanation to some of the schemes alluded to by the Secretary. The Ryder system was so good that a quart of fruit could be reduced in weight to two ounces, and yet could be swelled out again to its normal size, without loss of taste or appearance. The machine, with patent right and all, would not cost more than $25; and while using little fuel, the drying was accomplished as fast as four persons could prepare the fruit. With this system peaches had been prepared, and sold at a greater price than when fresh. They were coated with sugar, and carefully packed. Dried fruit, by this process, sells for double as much as those prepared by other processes.

Mr. Craddock stated that a kiln used for drying hops had answered admirably for drying fruits.

Mr. Brooking endorsed the last remarks, but the person referred to had abandoned his hop kiln, as the taste of the hops was, to a degree, absorbed by the fruit, and he built another kiln, exactly like it, which was excellent.

Mr. Bennett had dried Roger's Grapes, No. 9, down as fine as any raisins he had ever eaten.

Mr. Martin had been equally successful with Roger's No. 15. No sugar had been used in the process. Sweet-Water Grapes had also been tried. Canning's Grapes had proved excellent, with the exception of there being too many seeds.

Mr. Johnson stated that one Fall he had put away a lot of Grapes in a drawer for an exhibition, but they having been forgotten, were next Spring found to be excellent raisins. These were Roger's Nos. 3, 4 and 15.

IN REFERENCE TO LATE DELIVERY OF TREES,

The President stated that some of the members were to blame, as their subscriptions were sent in too late, and the Secretary was therefore pushed. Nearly all the trees were received in Hamilton in good order.

The Secretary referred to many reasons, among others the extraordinary increase of membership, running up in one season from 800 to 1,700 members. (Applause.) Taken all in all, the delivery was very good.

The President said that dwarf trees are chiefly called for in the cities and towns.

Mr. Morse said that in the country, standard trees were in the greatest demand.

Mr. Hyslop said the trees for Ancaster had been sent to Dundas, where they had been left in a warm room, and were much damaged before taken away.

Mr. Brooking stated that a brother of the last speaker was to blame at Ancaster, for when he was notified that they had arrived, he paid them no attention for two weeks.

Other members made complaints. Another member stated that at Toronto his trees laid two weeks, and upon being opened, appeared dead. He soaked them in water for four days and they not only recovered, but grew better than all the other trees he had ever known.

Another member endorsed this statement.

CAN FILBERTS BE SUCCESSFULLY GROWN IN ONTARIO ?

Mr. Craddock said a neighbour of his had tried them, but they were scarcely hardy enough and did not do well.

Mr. Arnold had found the hazel nut growing wild in Canada, and very good. The variety known as filberts were as good as those of England.

Mr. Gregory doubted the correctness of the last statement.

The President had for years raised English filberts here, but they need to be sheltered. Some seasons he had gathered excellent crops. He believed that, if properly cultivated and pruned, they should do well in this latitude.

Mr. Morse had been unsuccessful.

Mr. Glass, of Guelph, raises English filberts. and some years they do excellently.

Mr. Arnold had more faith in cultivating native varieties than in imported ones.

THE AUDITOR'S REPORT

of Mr. Beadle's accounts was received and passed.

DWARF PEAR TREES.

The Secretary introduced this subject.

Mr. Moodie, of N. Y. (and a large cultivator), liked dwarf trees on heavy soil best, but very well on any. He believed that the opinion was growing that too much pruning had taken place. It was not the thing to "cut back" so much. There should be some pruning, especially *Duchess D' Angouleme*, which is no use on the standard. The *Bartlett* was best on the standard. He did not manure, but used plenty of unleached ashes which produce good wood and fruit. He preferred a bushel of such ashes to a waggon load of barnyard manure. The ashes were scattered broadcast, say one hundred bushels to the acre. His firm used many thousands of bushels a year. Ashes produced good wood and leaves and these ensured excellent fruit. He had found that composted manure would cost $9 a waggon load, which was too expensive, and then it was inferior to ashes. He had never tried gypsum, thought it was good. They got all the ashes they wanted at 20 cents per bushel. He was not in favour of mulching;

surface roots should be ploughed down low. Tender roots near the surface were easily affected by heat and cold, and these should be kept down to ten inches below the surface, so that they would be beyond these changes of temperature. The codling moths were removed by pigs, which are kept hungry. Annual "cutting back" is injudicious. He liked the following varieties best: *Beurre D'Anjou*, *Duchess D'Angouleme*, *Duchess De Bordeaux* and *Louise Bonne de Jersey*. Dwarf pears are set out with the stock entirely under ground. Scions set down one or two inches. He liked the *Angier* and *Fontenay* quinces—not the *apple* quince. He also preferred ashes for apples.

The President had spread four inches of leached ashes over his garden with the happiest results.

Mr. Moore had used ashes and had never failed one year in the pear crop, while others around him had.

Mr. Brooking found that ashes were wonderfully adapted for peaches.

Mr. Moodie used salt for the manuring of plums, and found it excellont. A friend of his used salt for all his crops. He sowed it early in the season, as soon as the frost was out of the ground, at the rate of four barrels to the acre.

Mr. Barnes had used a pail of salt to a waggon load of manure, and found it good; 15 bushels per acre was a heavy dressing.

Mr. Arnold thought the benefit of salt depended much upon the season. He had sowed a strip of it across a field where there were carrots, raspberries, potatoes, strawberries, etc The strawberries were killed, but the raspberries were abundantly benefited. The carrots and wheat seemed to be the better for it.

THE COMMITTEE ON FRUITS

made their report through the chairman. There had been a number of excellent and other samples, which had all been carefully examined. The prize of $10 for the best Canadian seedling apple was awarded to Mr. Wm. L. Stott, of Markham. The first prize for pears was awarded to Mr. James Reid, of Hamilton, and one of equal merit to Mr. James Hyslop, of West Flamboro'.

A number of very commendable specimens of apples, pears and grapes on the general and special lists were shown and reported upon.

EVENING SESSION.

Question—Have we any valuable new variety of apple?

Mr. Beadle explained the term "*new variety*" and instanced the *Swayzie Pomme Grise* as an example. Another apple of this sort was *Norton's Melon*, a valuable apple. Another is a summer apple raised in Western New York, *i. e.*, *Early Joe*. It is like a pear, it is so good. The *Wagener* is another of the same sort—not generally known. What experience have we had of these, and of the *Benoni*? an apple well known to Mr. Arnold.

Mr. Moodie knew the *Norton's Melon*. It is a very poor grower. In New York State people like large growers. The same may be said of the *Early Joe*. Mr. Moodie mentioned the *Primate* as an excellent apple, a poor grower. Nurserymen across the lines cannot sell these trees. The *Wagener*, a good grower; strong, healthy tree. Don't think much of the *American Pearmain*.

Mr. Saunders wanted to know how many of these mentioned are exempt from the codling moth. *Pomme Grise*, he had found, were exempt. He wanted to know what experience the other members had in reference to that matter. *Rox Russet* and *Baldwin* were badly injured by the codling moth.

Mr. Beadle thought the *Swayzie Pomme Grise* would rise much in public estimation. There is no better winter apple. *Lady Apple* commands $15 per barrel in New York.

Mr. McCallum had a *Primate* and found it a good apple.

Mr. Freed thought the *Spitzenburg* class was the first attacked by the codlin moth. He thought highly of the *Red Quarrenden*. The *Swayzie Pomme Grise* is the best apple going. The public must be educated to have a taste for the *Swayzie Pomme Grise*.

Mr. Arnold found many apples old which were represented *new*. He instanced the *Swayzie* and the *Wagener* as examples. One or two others he might mention not generally

known, the *Benoni*—a delicious apple, it is spicy, and ripens in the course of five or six weeks. *Grimes' Golden* is a splendid apple. *Early Strawberry* a delicious apple. New seedling sorts not to be thrown away. Plenty of seedlings better than the *Baldwin*. The *Moyle* is a strange sport from the *Spitzenburg*—a bud variation—the branch bears the same kind of apple year after year.

Mr. Saunders and Mr. Townsend knew but little of the new varieties. The *Baldwin* suffered badly from the codlin moth. *Rox Russet* suffered too, and the *Spitzenburg* less than usual. *Summer Rose*, a splendid apple, medium size and fine flavoured. Mr. Saunders referred to a seedling of *Mr. Arnold's No.* 4, a fine apple. He prefers it to the *Spitzenburg*. Children are fond of it. The specimens presented to-day were very poor, and therefore its merits were not fairly before the Committee.

Mr. Barnes said the *Hawthornden* would bear as much as fifty other trees.

Mr. Arnold said the *Summer Rose* cracked badly. The *Hawthornden* could not be eaten. It had, he thought, little flavour. It was a splendid cooking apple.

Mr. Beadle said the *Summer Rose* bore well. The apples are a little below the medium size—much sought for. The *Early Harvest* is higher flavoured, but is badly injured by a black blotch, which mars their appearance, and deprives the apple of all its flavour. The *Summer Rose* is not liable to the attack of the black blotch. Dwarf trees bear good *Early Rose*. The *Hawthornden* is no favourite of his—there is no flavour about it; it is a great cropper.

Mr. Brooking spoke of the *Fallawater* as a good market apple; free from the attacks of the codlin moth; keeps till May; don't rot from any bruise. The *Swayzie Pomme Grise* had been grown by him for fifteen years; the outside was apt to be punctured, but not gritty. The tree requires to be pruned close to make it grow. He asked about the *Orange Pippin*—ten days earlier than the *Early Harvest*.

Mr. Moodie, of Lockport, was asked about the *Canada Red* and the *Hubbardston Nonsuch*. He said that the *Canada Red* was a poor grower.

Mr. Beadle thought the *Fallawater* was below par, and could not recommend it for general cultivation.

Mr. Morse said that a neighbour of his thought little of the *Fallawater*, and wished to be rid of his tree.

Mr. Morse has the *Dutch Mignonne*, a splendid apple—a sure seller—an autumn apple, perfect in shape, good flavour, a little coarse. Has some seedlings. He has Pownal's *Spitzenburg*—a good apple, superior to the *Æsopus*. He does not agree with those who spoke highly of the *Baldwin*. All the *Russets* are eaten with avidity.

Mr. Saunders spoke on the "spotting" of fruit. Some thought that the "spots" arose from the puncture of the curculio. Fruit growers should notice this those years when the curculio is abundant.

Mr. Barnes defended the excellence of the *Baldwin*. It has a good flavour in some localities.

Question: "What encouraging results have our hybridizers obtained in the production of new varieties of fruit?"

Mr. Beadle wished to know what had been effected by hybridizers. Is it true that two varieties can be blended?

Mr. Arnold thought it was the work of man to improve the varieties of fruit. What but hybridization has produced the *Wilson Albany*? What of Rogers' varieties of grapes? Twenty years ago it was said—it was believed—that Rogers' varieties of grapes were not crosses. Facts now established show that they were hybrids. The *Black Hamburg* is seen in a cross raised between it and the *Clinton*. It bears greatly the character of the foreign variety.

Mr. Beadle looked forward to great improvements in hybridizing, and complimented Mr. Arnold on his distinguished experiments.

Mr. Saunders gave an admirable resume of his experience in cross fertilisation. This is fast becoming an art, as sure and certain as any other of the useful arts.

Mr. Beadle said that the United States was about to hold a grand pomological meeting at Boston next September. The different States have appropriated large sums to carry out the grandest exhibition of fruit that has ever been shown on this continent.

Mr. Macallum moved that the President, Secretary, Mr. Saunders and George Leslie be

a committee to wait upon the Government to get an appropriation for securing a collection of fruit for exhibition at the Pomological Society of the United States, at Boston, in September next. That the deputation, if successful, should see that the matter be carried out.

SUMMER MEETING.

Held in the Music Hall, Chatham, June 24, 1873. The President in the Chair.

The minutes of last meeting having been read and approved, the President reported that the Committee appointed at the last meeting to confer with the Honourable the Commissioner of Agriculture in reference to an appropriation for defraying the expense of sending a collection of the fruits of Ontario to the meeting of the American Pomological Society to be held in Boston in September, had been favoured with several interviews, and that the Commissioner was giving the matter his earnest consideration. It was resolved that the President be requested to attend the meeting of the American Pomological Society in Boston as the delegate of this Association, and that his expenses be paid out of the funds of the Association.

Resolved that Messrs. James Dougall, William Saunders and D. W. Beadle be added to the delegation, and that the sum of seventy-five dollars be appropriated out of the funds of the Association towards defraying their expenses.

Resolved that the sum of one hundred dollars be appropriated towards defraying the expenses of sending a collection of the fruits of Ontario to the meeting of the American Pomological Society.

The following subject was then discussed, namely.—*What varieties of apple are most profitable for shipping.*

W. Stripp found the Golden Russet kept best last year. They kept better than the R. I. Greening and Baldwin. Those varieties rotted some, and barely paid cost, while Golden Russet paid well, and it is a variety that will grow far north.

Van Horn and Dunlop prefer the Greening, Baldwin and Northern Spy.

W. McK. Ross thought the Pennock and Baldwin were the best for shipping.

O'Hara named the Swayzie Pomme Grise, and said it kept well and had an exquisite flavour.

J. A. Allen found that the Golden Russet stands first.

C. Arnold said those varieties which pay the best, and that depends on the market to which the fruit is sent. Golden Russet is a first-class fruit in every respect He thought well of the Wagener, and considered the Northern Spy a good sort for this purpose.

Ellison named Greening, Æsopus Spitzenburg, and Seeknofurther.

The next subject considered was the question to what soils are these several varieties adapted ?

J. Dougall remarked that it was very difficult to say. It is to be ascertained only by experiment.

W. Stripp would have the Baldwin and Greening on gravelly soil, while the Golden Russet did well on all soils, even on one that was somewhat damp.

Dunlop named clay loam as best for Baldwin and Greening; the Spy does best on a lighter soil, the Snow Apple spots on clay soils.

McNaughton preferred sandy loam.

Ross said Baldwin did well in sandy loam.

O'Hara and Saunders said the soil must be well drained.

How shall we market our apples to the best advantage ?

D Wilson—By forming county associations, and meet and learn the quantity and quality of the crop, and then seek out the best markets.

J. A. Allen said, Sort the fruit.

Are Dwarf Trees of these varieties of Apples as profitable as Standard Trees ?

J. Dougall said dwarf trees were fit for small gardens.

C. Arnold thinks dwarf trees more hardy than standard, though not profitable for orchard.

Is there any danger of cultivatiny apple orchards too highly, and should they ever be seeded down, and if so, with what kind of grass ?

Smith—No danger in this region; there might be in the colder parts of the country.

Dougall—A vigorous tree stands cold better than one too poorly cultivated. He recommends blue grass.

Arnold—A rapid growth continued late in the season is objectionable.

D. Wilson—Leaves the grass in the orchard, and manures on the surface.

Stripp—Lets the wild grass grow ; it acts as a manure when not removed.

Have grapes proved profitable in Ontario, and if so, what varieties?

Dougall—The Concord has proved profitable.

Smith said Yes, it had.

Arnold—The price has been three cents per pound, and that does not pay.

Saunders—We are not able to grow them profitably in London.

Stripp—Fabulous profits are not to be realized, but is sure that the profits per acre are more than from the cultivation of corn. He had a vineyard in which he had grown the Concord for three years, the Delaware five and six years. The Clinton was not as profitable, but would yield a return of fifty dollars per acre.

J. A. Allen—Have to cover the vines in the fall. Rogers No. 3, 19, and Salem ripen perfectly ; also No. 9 was early, and a favourite sort. The Concord was rather late. Delaware and Adirondac ripened.

J. R. Martin, named the Adirondac, Hartford Prolific, Delaware and Iona.

On a table in the Hall were laid out numerous varieties of various kinds of seedling fruits, and the President said the next business was to appoint a Committee to examine them and report, when the following gentlemen were appointed, viz :—The President, Vice-President, and Messrs. Saunders, Ross and O'Hara, who duly gave the following

REPORT.

Your Committee appointed to report on the seedling fruits on exhibition, beg to report as follows :—

That we have examined the seedling strawberry exhibited by Mr. Arnold, of Paris, being a cross between the Wilson and Dr. Nicasse, and recommend it for the prize of $5 offered by the Association for the best seedling strawberry on exhibition. A plate of Wilson Albany Strawberries, exhibited by Mr. John S. Jarvis, of Chatham, are of fair size, and well ripened.

CHERRIES.

Your Committee are very favourably impressed with a seedling cherry, exhibited by Mr. James Dougall, of Windsor, being a seedling of Early Purple Guigne, and would recommend it for more extended cultivation, it being decidedly the best very early cherry we know of, and ripening about a week before the Early Purple ; and we award to it a prize of $5.

GOOSEBERRIES.

Mr. Charles Lee, of Hamilton, exhibits two varieties of seedling gooseberries, raised from seed of the English varieties, one of them showing a great tendency to grow double.

Mr. Charles Arnold, of Paris, exhibits a branch of Downing seedlings, well laden with berries and with foliage, partially variegated ; also a very promising seedling from Downing's seedling, with berries more elongated, and averaging a little longer than Downing's.

Mr. James Dougall exhibits a large number of different varieties of seedling gooseberries, ten of them being seedlings of Houghton's seedling, supposed to be hybridized by English varieties, and thirteen seedlings from a cross between the wild prickly and the English gooseberries. We would particularly recommend the variety marked Houghton No. 7 ; it is very productive, and larger than the Houghton, at this period of its growth, and of a more oval form. If the flavour of the fruit, when ripe, is in keeping with its present promise, we would recommend that it receive the prize of $5, and that Mr. Dougall be requested to send samples of the fruit of this and of some of the most promising of the other varieties to the President in season. We may state that Mr. Dougall exhibited other two plates of fine cherries, one of the Early Purple Guigne, and one of May Duke.

STRAWBERRIES.

Mr. Biggar, of Drummondville, exhibited a seedling Strawberry of very handsome appearance and good size. It is of fair quality, rather acid, and appears to be a good bearer. We deem it worthy of a prize of $5.

Mr. A. M. Smith, of Drummondville, exhibits nine varieties of Strawberries of the leading sorts, most of them in good condition and of fine appearance.

AUTUMN MEETING

Held at Kingston, September 17, 1873.

The President being absent, the meeting was called to order by the Secretary.

F. Hora called to the chair.

The Secretary tendered the apologies of the President, and stated the result of the Boston exhibitions.

The subject of pear culture was discussed.

Nicol—has found only two pears that will stand the climate, they are native seedlings. One of the trees is sixty years old, the fruit is of a medium size, ripening in winter.

Allen.—Pear culture for the last few years has been very uncertain ; his place being very near the water he can grow the Louise Bonne de Jersey, Bartlett, Flemish Beauty and Stevens' Gennessee. They do best on pear stock. The Louise Bonne and Flemish Beauty are among the most hardy.

Seale.—Mentioned pear trees growing on Mr. Wilson's farm that are some sixty years old.

Mr. Radford spoke of a seedling pear tree growing on Wolfe Island over sixty years old —the fruit is inferior. Flemish Beauty does well with him. Pear trees do best on clay knolls.

Mr. Briggs has grown the Flemish Beauty, and it succeeded well. Also cultivates the Louise Bonne de Jersey and Josephine de Malines. The main trouble is fire-blight. Seckel did not succeed. The Oswego Beurre did well for two years and then appeared to blight. His experience extends over a period of from twelve to sixteen years. His soil is under cultivation, is under-drained and in good tilth.

Professor Ferguson had a good crop the first season, but the fruit was very knotty; he applied refuse lime and the knotty character disappeared.

Dr. Williams—The White Doyenne for three years has not suffered. The Church is one of the best and most hardy. Osband's Summer, Bergamot Cadette and Seckel have proved hardy. His oldest trees are twenty years old, and all except three are dwarfs.

Mr. Dempsey, of Albury, said: There was a pear tree in the Township of Hillier, a seedling, growing on the bank of the lake in a very exposed situation, and was then eighteen inches in diameter, with thirty bushels of fruit upon it, but on transplanting sprouts from this tree he found them as tender as the Bartlett.

APPLES IN KINGSTON AND VICINITY.

Mr. Nicol said, the Fameuse, Golden Russet, Northern Spy, Talman Sweet, Brockville Beauty (an early Fall variety, a size larger than Snow, of fine quality, tart, very prolific, very hardy, raised by Mr. Beatty, near Brockville), Pomme Grise, St. Lawrence, Ribston Pippin, Tallow Pippin, Larne, (raised by Mr. Larne at Mallory-town), and Wagener did well.

Dr. Williamson—showed Indian Rareripe, which he said was very hardy and a great bearer, conical with a blush on a yellow ground, a ribbed eye, cavity at stem smooth.

Mr. P. C. Dempsey, of Albury, exhibited three bunches of a seedling grape, the second year of fruiting, his No. 19, Hartford Prolific, crossed with Black Hamburgh grown in the open air, laid down in winter, the bunch and berry were very large, flesh meaty, skin thin, no pulp, very foreign in flavour, something of the Muscat about it.

He also showed a seedling plum raised by himself, an accidental seedling, purple, with a blue bloom, very prolific, of "good" flavour, separates freely from stone, stone large, tree perfectly hardy, fruit nearly round; has fruited for three years in succession, has not failed to produce a crop since it began to bear.

Charles Arnold showed a seedling apple, a cross between a Northern Spy with Wagener. The form is very like the Wagener, with much of the colouring of the Spy; size medium, flesh crisp, tender, juicy, yellow, quality "very good," mild subacid, stem straight, inch long, in a smooth cavity, of medium depth.

F. Hora showed a seedling apple raised by Mrs. Dunlop from seed, tree very hardy, now 40 years old, fruit keeps finely, in use in April and May, size medium.

Report of the Committee on Essays.

To the Directors of the Fruit Growers' Association of Ontario.

Gentlemen,—Your Committee have to report that they have carefully considered the essays that have been submitted for competition for prizes, with the following results. There are three essays on the cultivation of the plum. The first prize has been awarded to that bearing the motto "Peradventure." Your Committee believe that it would tend to further the views of the Directors in offering prizes that another essay on the cultivation of the plum bearing the motto "For everything there is a season," should be published in the Annual Report. It is an admirable paper giving the experience of an extensive plum grower, and the regret is felt that the Committee have no discretion to award it a second prize, as it is well worthy of that distinction.

One essay has been given in on "How to increase the interest in fruit growing in Ontario." Your Committee have no hesitation in awarding the prize to this truly original and unique essay, bearing the motto, "The world is only to be taken by show."

Your Committee regret much that there is only one essay on the important subject of "Impositions of dishonest tree pedlars." Although the essay does not come up to the others in literary ability, or even in vigorous discussion of the subject, yet in order to keep perfect faith with essayists, the prize is recommended to be awarded to the essay. It bears the motto, "By their fruits ye shall know them."

All which is respectfully submitted.

Robert Burnet.
Convener of Committee.

Hamilton, November 14th, 1873.

The Successful Essayists.

To the President and Directors of the Fruit Growers' Association,

Gentlemen.—Having received the Report of the Committee on Essays, I proceeded to open the envelopes accompanying those to which the prizes were awarded. The envelope bearing the motto, "Peradventure," contained the name of George Elliott, Guelph; that inscribed with the motto, "The world is only to be taken by show," contained the name of George Peacock, Mount Salem; that with the motto, "By their fruits ye shall know them," contained the name of A. M. Smith, Drummondville; and the one inscribed, "For everything there is a season," contained the name of William Saunders, London.

Yours truly,

D. W. Beadle,
Secretary.

St. Catharines,
15th November, 1873.

PRIZE ESSAY ON THE CULTIVATION OF THE PLUM.

"PERADVENTURE."

By George Elliott, Guelph,

The plum in its wild state is a shrub or low growing tree, and is indigenous to most parts of the Continent of Europe, the north of Asia and North America—it appears to have been cultivated at a very early period in Asia Minor and also in the north of China. The cultivated varieties of Asia Minor were, doubtless, introduced into the south of France by the Romans, where at the present day plums are cultivated to a large extent and form an important article of trade—being exported as dried French plums and prunes.

The varieties of the plum now in cultivation are so numerous and so varied by hybridization that it is in a great measure difficult to correctly ascertain the wild parent variety from which each class of our cultivated plums is derived—in general terms plums may be divided into three classes or possibly four: first the blue or dark purple variety, second the red or violet; third the green, and fourth the yellow. Of these varieties I give the following well-known plums as example of the first or Blue: Damson, Bradshaw, German Prune; second or Red: Victoria, Pond's seedling; third or Green: Reine Claude or better known as Green Gage, Lawrence's Favourite; fourth Yellow: Orange, Yellow Egg.

Of the first of these varieties the blue plum, the common Sloe, "Prunus Spinosa", is probably the most remote parent. It is found wild in many parts of Great Britain and the Continent of Europe. It grows as a shrub 4 to 10 feet high, but sometimes under favourable circumstances becomes a small tree 15 to 20 feet high. The Damson, which is said to have its name from the ancient City of Damascus, in Asia Minor, may be looked upon as the first improvement of the Sloe; it, the Damson, still retains some of the spines the small leaf, downy wood and the austere flavour of its parent; but in the genial clime of the south of France, by ages of cultivation, doubtless from the Damson as a parent, have been developed many of the fine large and luscious plums that we now have of this variety. Second in the red or violet variety, of the parent or wild original of this class of plums we have in Europe the "Prunus Domestica," and in this country the well-known Canada red plum of our woods. The cultivated plums of this variety mostly bear a strong affinity to the parent in the softness of the flesh, sweetness, and the freedom from the austere flavour of many of the blue plums derived from their parent the sloe or Damson. These characters would seem to indicate the original stock from which this class of plums come.

The third and fourth varieties, green and yellow plums—their origin is in all probability derived from the Bullace "Prunus insititia", a well known wild plum in Great Britain and the Continent. The tree is more of the character of a cultivated plum tree in the size of its leaf and freedom from spines, the fruit greenish yellow with an acid flavour and clingstone. Our green and yellow plums are mostly clingstone and most of them possess a character for acidity that makes them resemble the Bullace, which is in all probability their original.

Upon this subject, I am aware a great variety of opinion may be entertained; and whatever research is made it is but an opinion after all. Centuries of cultivation and hybridization have so removed and improved the varieties we now have that to ascertain the exact wild original from which each class of plums is descended, with absolute certainty, impossible. I only submit my opinion as above on the probable original stock of our cultivated plums.

The subject of the essay being the cultivation of the plum, I propose to consider the subject under the following heads and order. First the soil and manures suitable; second, the stock most suitable for grafting; third pruning; fourth, insects injurious to the plum and the remedies; fifth diseases of the plum; sixth, varieties; seventh profitable culture.

First: Soil and Manures.—The plum flourishes best in a rich deep loamy soil. Its roots strike deep, so that it does not suffer much from drought. Light sandy soils are not well adapted for the cultivation of the plum. The trees may be planted 16, 18 or 20 feet

apart according to variety, which will be 170 trees at the first distance ; 134 trees at the second distance, and 109 trees at the third distance upon an acre of land. Plums should not be planted on too highly manured a soil, as too rich land causes the young trees to grow too fast. The wood will be soft and not well matured to stand the effect of the winter frost. Prabably no better manure can be found than unleached wood ashes, sprinkled around the trees early in the autumn, before the rains set in.

Second : Stocks most suitable for grafting.—A very general complaint respecting plum-trees is that they are short-lived ; that the wood becomes rotten, and the tree perishes when it ought to be in its prime. In my opinion a great cause for these complaints is to be found in the stock on which the plum is grafted or budded. The peach stock is sometimes used—one of the most short-lived fruit trees we have—and also plum stocks raised indifferently from any kind of plum stone that can conveniently be had without regard to its kind or hardiness. Our native Canada red plum, which in its wild state is a good sized hardy, sound tree, and will live and produce fruit for many years, will from the stones of its fruit produce a stock on which to graft the plum, that will furnish sounder and longer lived trees than those generally sent out from the nurseries, and grown without any care as to the selection of the stock.

Third : Pruning.—Respecting pruning, my time for pruning is in the Autumn when the leaves are falling, which with the plum is usually early. I cut back the summer shoots to about twelve to fifteen inches, and thin out superfluous wood. The wound heals well, and the Spring shoot is from the last bud—but if the shoot is allowed to remain unpruned on the trees during the winter the wood at the end of the shoots, sometimes not having matured when the frosts set in, is frequently killed, and the injury extends down the bark and seriously injures, if it does not kill the tree, if of a tender kind. By cutting off the shoots in the fall, down to where the wood is matured, this difficulty never occurs, even with the most tender kinds. These remarks apply most particularly to the northern part of Canada, where the frost sets in sometimes very suddenly and early, and before the wood of the summer growth has had time to mature.

A plum orchard should be planted, if possible, in a situation where it is protected from the effects of high winds, which are very destructive in bruising and injuring the fruit, destroying its beauty and injuring its value in the market.

Fourth : Insects injurious to the Plum, and the Remedies.—I will first deal with the great enemy, although small in size, which has by its ravages caused many almost to abandon the cultivation of the plum—the Curculio. This insect is a small beetle of a grayish black colour. It is too well known to need description. By means of its proboscis it cuts the skin of the plum when about the size of a pea, and in the aperture thus formed (which presents, when healed, the appearance of a mark in the plum of a semi-circular shape) deposits a single egg, from which is hatched a whitish maggot that eats its way to the centre of the plum, which causes the plum to wither and fall from the tree when about one-third or one-half grown. The maggot, when the fallen plum has rotted, enters the ground, is there matured into a perfect beetle to come forth the next spring and commence again its destructive ravages, and, if unchecked, will increase to so great an extent as to completely destroy every plum upon the trees. From the fact that rarely more than a single egg is laid in each plum it is certain that it will not require many insects to perforate every plum upon a tree, as probably each Curculio, if not disturbed, will lay, at a very moderate estimate, forty to fifty eggs.

My own experience is, that with a slight amount of care and pains the enemy may be conquered. For the last eight or ten years in my garden I have not had as many plums fall by the attack of the Curculio as were necessary to thin the crop. Many remedies have been proposed but I think only two are of much value. Shaking or jarring the trees early in the morning, destroying the Circulio that fall, and regularly and systematically picking up and destroying the fallen plums, which can easily be done by pouring boiling water upon them when they are collected in pails. A very cheap and simple apparatus can be made with two light frames in a semi-circular form, with a curve cut out of the straight side to admit the trunk of the tree, over which frame white cotton is stretched. It is very useful and easily carried from tree to tree, and facilitates the operation of shaking down and destroying the Curculio.

The plum is liable to the attacks of a species of borer, the larva of which eats into the

wood of trees mostly at the base of the tree, descending to the larger roots. It is di
covered by the gum exuding from the injured part, and can be destroyed in the usu
manner by cutting out or following its course with a wire and so destroying the insec
With a little care and attention this borer is not formidable and can be readily overcom

Caterpillars of various kinds attack the leaves of the plum. The Tent Caterpillar
the most common, the parent moth of which lays its eggs in the form of a ring arou
some of the smaller twigs or branches; these eggs are easily seen and removed at th
time the trees are pruned. The caterpillars hatch early in the spring, and when you
cluster in a web in the forks of a branch, and are then easily destroyed before they scatt
over the tree. Some kinds of hairy caterpillar eat the leaves late in the summer, but th
are not usually sufficiently numerous to be very injurious or destructive.

Fifth: Diseases of the Plum.—Perhaps the most formidable and destructive disea
that affects the plum tree is the well known Black Knot, a peculiar fungoid excrescen
that breaks out from the bark of the tree, principally in the smaller twigs and branch
and which, if not checked, spreads to the larger limbs, and increases until the tree is d
stroyed. A great variety of opinions exist respecting the origin and causes of this disea
some considering it inherent in the constitution of the tree itself, and arising either fro
a deficiency or a redundance of some element in the soil; some have professed to discov
that it arises from deficiency of iron in the soil; others suppose that it is a disease of
fungoid character, and that it is propagated by minute spores which are carried in the a
and that the disease is so spread and communicated; others, that the disease is caus
by the puncture of an insect of a similar character to those insects that produce the g
nut on the oak. However, which of these theories may be correct respecting the orig
of the disease, the most efficient remedy is cutting off every twig as soon as the disea
appears, and burning them: if this plan is carefully carried out, the injury to the t
will be very slight, and the progress of the disease checked: carbolic acid and water
recommended to wash the part where an extensive cut is made. It is remarkable th
the common blue plum, Damson, and all blue plums, are more affected by the Black Kn
than the green and yellow varieties.

There is another disease which attacks the fruit when nearly or about ripe, which
some parts of the country proves most destructive to the crop: it, for want of a mo
correct or scientific name, is called the "rot," which is sufficiently descriptive of its effec
It exhibits itself in the first place by a spot on the skin of the plum, generally near t
stalk, which spreads and affects the whole fruit, which becomes rotten throughout, a
the skin covered with minute fungoid excrescences. The plum does not always fall, but
retained on its stalk, and communicates the contagion to the whole cluster and the plu
near it. If these diseased plums are not picked off and destroyed, the remainder of t
crop will soon become affected: the disease is evidently a fungus that attaches itself
the fruit, and is propagated with great rapidity, especially in damp weather. T
remedy which I apply is to carefully watch the first appearance of rot, and with a sm
V shaped instrument, formed like two teeth of a rake upon a handle, pull down all affe
ed plums as the disease appears on them. They should be carefully picked up and burn
no fallen fruit should be allowed to remain under the trees. Some recommend t
slacked lime should be sprinkled under the trees, which probably might prove to
very useful.

Sixth: Varieties.—The varieties of the plums have been, and are constantly be
increased by new seedlings to an immense number, in many of which the distinct
difference is but very slight. As it is suggested that this essay should give the opin
of the writer on the varieties with which he is acquainted, I will proceed to classify
plums I have cultivated and am acquainted with, with a view to describe their quali

The Common Blue.—A plum grown on its own root, and commonly propagated
suckers, comes true from the stone, small size, is a most prolific bearer and an excel
plum for preserving, being of the damson class; the fruit cracks badly from the wet,
falls from the tree when ripe; the tree is hardy and long-lived, but is more affected
Black Knot than any tree I know of; from its great bearing it is profitable.

Bradshaw—Is a very fine, large, handsome, dark purple plum, not of a high flav
but a fair plum for preserving; from the thickness of the skin and firmness of flesh
well adapted for drying; this is an early plum; hangs well on the tree; the tree is

upright grower, stro
appears to be of tha
Smith's Orleans.
bearer; good for the
table plum for the g
and is very subject t
Lombard.—A p
abundant bearers I
not first-rate for pre
fully ripe is a good t
out long, weak limb
tendency to overbea
Victoria.—One
ous growing tree, ma
very distinct in its cl
shoots have a green
ree from Black Kno
eddish purple colou
Pond's Seedling—
having an uneven su
strong vigorous up
Duane's Purple.
vith me has proved
Columbia.—A fi
earer; late, and ha
Washington—A
n the sun; tree spre
able, and, when gat
pted for a private g
Lawrence's Favo
grower, bears evenly
ll respects a first-cla
Huling's Superb.
eins in the fruit wh
n excellent plum fo
lum for market; t
earer.
Imperial Gage an
rage, being of the bes
re much cultivated.
nd rots very readily
Reine Claude de
pecked with red in t
s a vigorous upright
ral cultivation.
Yellow Egg.—A
un. The tree a goo
he very best and mo
ess of ripening, comi
lum for market, for
Coe's Golden Dro
ke cheek and high
ully ripe, and first-cl
ree is a good grower,
te that only in the
ned.
Orange.—A fine,
nd hardy. An exce

upright grower, strong in the shoot, the leaf quite distinct; it is of French origin, and appears to be of that class of plum which in that country is dried for exportation.

Smith's Orleans.—A most excellent plum, large size, of a purple colour, most prolific bearer; good for the table when fully ripe, and for cooking when still hard; a very profitable plum for the grower; fruit hangs well on the tree; it is a straggling, slow grower, and is very subject to Black Knot.

Lombard.—A popular plum, of a good size, oval, reddish purple; one of the most abundant bearers I know; profitable for market on account of its fine size and appearance; not first-rate for preserving on account of the softness of the flesh and want of acid; when fully ripe is a good table plum. The tree is a good grower, but has a tendency to throw out long, weak limbs, and requires well cutting back when young; it also has a great tendency to overbear, and therefore requires that the fruit should be thinned out.

Victoria.—One of the more lately disseminated plums of English origin, is a fine vigorous growing tree, making strong shoots which have a drooping tendency. This plum is very distinct in its character. It has a pointed leaf and a downy wood. The young shoots have a green appearance as if not perfectly ripened. This plum is quite hardy, free from Black Knot and a good bearer; the fruit is large and handsome, of a fine pale reddish purple colour—a plum that will sell well in the market.

Pond's Seedling—is a very large oval plum, similar in colour to *Victoria*, peculiar in its having an uneven suture, one side of the plum being larger than the other. The tree is a strong vigorous upright grower, moderate bearer, late and valuable.

Duane's Purple.—A fine large purple plum, nearly round, good flavour. This plum with me has proved rather tender, and a poor bearer.

Columbia.—A fine large purple plum, not much flavour; has the merit of being a great bearer; late, and hangs well on the tree; a good market plum.

Washington—A very large and most beautiful plum, yellowish pale green, tinted red on the sun; tree spreading, good grower, good bearer, a valuable and excellent plum for table, and, when gathered before fully ripe, for cooking; ripens early—a plum better adapted for a private garden than for sale, on account of its softness and liability to rot.

Lawrence's Favourite.—Round, pale green, with red spots in the sun; tree, a slow grower, bears evenly and well, seldom overloaded, a most excellent and valuable plum; in all respects a first-class preserving plum, but when ripe drops from the stalk.

Huling's Superb.—A fine rich flavoured plum of a pale yellowish green, showing green veins in the fruit when ripe, slightly oval in shape; clingstone, hangs well on the tree; is an excellent plum for table or preserving, but sometimes cracks with the wet; is a good plum for market; tree is a strong vigorous spreading grower, and a great and regular bearer.

Imperial Gage and *Yellow Gage*—are two plums of a nearly similar character, the *Imperial Gage* being of the best flavour. Both these plums are great bearers and on that account are much cultivated. They are better for the table than preserving. The fruit is tender and rots very readily, the trees are quite hardy.

Reine Claude de Bavay—is a large, handsome green plum, yellowish when quite ripe, speckled with red in the sun. This plum is first-class for table or preserving. The tree is a vigorous upright grower, and moderate bearer. Think this plum deserves more general cultivation.

Yellow Egg.—A large, handsome, egg-shaped plum, with some times red cheek in the sun. The tree a good grower and regular bearer. This plum, in my opinion, is one of the very best and most valuable for preserving, from its size, hardness of flesh, and lateness of ripening, coming when most plums are over, renders it particularly desirable as a plum for market, for which it ought to be extensively grown.

Coe's Golden Drop.—One of the best of plums; large, yellow, its handsome peach-like cheek and high flavour commend it to all that know it. Fine for the table when fully ripe, and first-class for preserving from its flavour which resembles the peach. The tree is a good grower, hardy, and a good bearer; but unfortunately the fruit ripens so late that only in the milder parts of the Province can it be successfully grown and ripened.

Orange.—A fine, large yellow plum, spotted with red, a good bearer. Tree vigorous and hardy. An excellent plum for table or preserving—does not fall or crack.

General Hand.—A fine large to very large plum; round, greenish yellow—a fine and valuable plum—not much cultivated.

Bingham.—Large, yellow, egg-shaped plum, of good quality. Tree, a good grower and hardy. This plum deserves more general cultivation.

One of the great difficulties connected with growing plums on an extensive scale, is that they are a difficult fruit to send to market in a perfectly ripe condition, and only in a quite ripe state is the flavour fully developed. Consequently plums are rarely seen for sale ripe enough for the table, and the bulk of plums are picked in a green or half-ripe state, in which condition they are only fit for cooking or preserving; but if our large growers were to can their ripe fruits in the same manner as peaches and other fruits are canned, no doubt a good market could be obtained for them, and they become an article of export, as in many parts of the United States plums are rarer fruit than the tropical fruits are with us. No fruit retains its flavour better than the plum when canned, and therefore in my opinion, the experiment would prove profitable, and enable the plum grower to dispose of his crop to advantage.

ESSAY ON THE CULTIVATION OF THE PLUM.

"For everything there is a season."

By Wm. Saunders, London.

Our best plums have long and deservedly held a high place in the esteem of all lovers of good fruit. The charming colours and lovely bloom displayed upon their surface, the perfection of their various forms, and their rich juiciness and luscious flavour when fully ripe—all combine to render them attractive. Unfortunately for the reputation of the plum as a superior dessert fruit, it is seldom seen in our markets in a fit condition for eating, being almost always pulled in an unripe state to insure its carrying well, as well as to avoid, as far as possible, the heavy losses frequently occasioned to the fruit by rot, where it is left to fully ripen on the tree. Hence very few, comparatively speaking, in our communities have the opportunity of tasting this glorious fruit in its perfect state of ripeness. This, while it may be a matter of regret, can scarcely be avoided where the fruit has to be carried long distances, since ripe plums if at all carelessly handled are very liable in a short time to decay: while for all kitchen purposes, for tarts or pies, or for preserving or canning, plums in this partially ripened condition seem to be equally good with those fully ripe, and it is to these latter purposes that by far the largest portion of the crop at present brought into our markets is appropriated.

The original parent of most of our cultivated plums is a native of Asia and the southern part of Europe, and is known to botanists under the name of *Prunus Domestica*. Some of the better varieties of this species were early introduced into this country, and from the seed of these our finer American sorts have been produced, We have indigenous to this country three species of wild plums—*Prunus Americana*, the wild yellow or red plum, *Prunus maritima*, the beach plum, and *Prunus Chicasa*, the Chicasaw plum, and from these many varieties of wild plums have sprung. The first is by far the most common and generally distributed, and is known in Canada as "The Canada Wild Plum." The tree is thorny and varies in height from eight to twenty feet; the leaves are nearly oval, pointed and coarsely toothed. The fruit is of a roundish oval form, yellow, orange or red in colour, nearly destitute of bloom, from one-half to two thirds of an inch in diameter, and with the stone more or less acute on both margins. Sometimes when more cultivated, the fruit will attain to the size of an inch in diameter, and with the stone more flattened and with broader margins. The pulp of the fruit is pleasant tasted, but the skin is tough, harsh and sour. The tree is common in open grounds and on the borders of woods. Some fifteen or twenty years since—or perhaps in some localities less—when the Curculio was much less abundant than it now is, many of these plums were brought to our markets, where they found ready purchasers, who used them for preserving purposes; but with the rapid increase of this terrible insect pest they have almost disappeared, excepting in a few favoured localities. The Beach plum is found chiefly along the

sea beach from Massachusetts to New Jersey and Virginia, while the Chicasaw plum is met with in Kentucky, Illinois and south-westward. But very little effort has as yet been made towards improving these varieties by cultivation, sufficient reason for which is to be found in the fact that the foreign plums and their progeny are so hardy and prolific and of such quality as to leave little to be desired. The Canada wild plum is much esteemed by nursery-men as a stock on which to grow the finer varieties, as it is extremely hardy and does not grow to a very large size. Seedlings raised from our common blue plum or horse plum are also used as stocks on which to propagate. Plums are usually propagated by budding, but sometimes by grafting in early spring.

With regard to the soil best adapted for plum culture there is a great difference of opinion. It is generally held that a clay soil is most suitable, indeed almost essential, but for the encouragement of those who may have a soil of an opposite character, we would remark that the finest plums, both for individual size and crop, we have ever seen, were grown on a light gravelly soil. It matters but little what the character of the soil is, provided it be dry and of a moderately fertile character; on any such soil with good culture plums may be grown to perfection. Heavy, *wet* land should by all means be avoided, as the tree is very impatient of wet, and soon becomes stunted and diseased, and if it lives at all, lingers out but a miserable existence. Trees should not be planted in sod, but on ground in a good state of cultivation, and before planting the soil should be thoroughly worked up with the plough and subsoil plough to a good depth, so as to enable the tender roots to penetrate more readily and absorb their nourishment.

When planting, proper attention should be given to carefully spreading the roots so that they may occupy about the same space and relative position that they have occupied in the nursery rows. Do not be afraid of digging too large a hole; at the same time be careful not to plant too deeply; trees should be so set that when covered the place of budding or grafting should not be more than two or three inches below the surface. After planting, the surface of the ground about the tree should be mulched with well-rotted manure, leaves, sawdust, or other rubbish, so as to keep the earth covering the roots moist. It is also advisable to drive a stout stake in the ground on the west side of each tree, at a sufficient distance to avoid injuring the roots, to which the tree may be tied to prevent its being swayed about too much by the wind, or permanently inclined towards the east, which is too often the case, owing to the prevalence during the year of westerly winds, thus making the rows unsightly.

As to the time of planting, we very much prefer the Spring, since trees thus get the year's growth, and a certain amount of root-hold in the soil, before having to endure the drying winds and intense cold of a long winter. It has been fully established that a certain limited amount of evaporation is going on all winter, from the leafless branches of trees, and hence when the trees are exposed to this long cold season before the roots have become so far established as to admit of some activity, there is great danger should the atmosphere during winter be unusually dry, of the wood losing so much moisture as to endanger its vitality.

The open standard is the usual form of culture for the plum in this country. The head should be thinned out sufficiently to keep it open, and any decayed or broken branches removed from time to time. Where trees are making poor growth, if they are headed in pretty severely, early in spring, this treatment will generally, if the tree is healthy, induce vigorous growth. Plum trees should not be allowed to branch less than about three feet from the ground, for if branched lower it interferes much with the proper treatment for the curculio.

In reference to the subsequent culture of the ground between the trees, much will depend on circumstances. Where the trees are making too vigorous a growth, it may be well after they are four or five years old to seed down for a time, but we think this will seldom be necessary, as plum trees usually bear so profusely that they are prevented from making too much growth; so much so indeed, that they need careful cultivation and manuring to maintain their vigour. As a rule, there should be no cropping of the ground in a plum orchard, with any kind of crop; but the weeds should be kept down with a frequent use of the cultivator, which will thus keep the surface of the ground loose and open. As it would not be safe to approach too closely to the tree on account of the danger of breaking the roots, the earth immediately around the tree should be well loosened

with a fork-spade, at least twice during the season, early in spring and again during summer. A good mulching of well-rotted stable manure will do much to recuperate a tree which may show signs of failing health. As a special manure, salt is very favourably spoken of, and is no doubt an excellent fertilizer for this tree. Where plum trees are well cared for and make good growth, a small quantity of fruit may be looked for the third year from the time of planting ; a partial crop will be secured on the fourth year, considerably increased in quantity on the fifth, with a full crop on the sixth and succeeding years.

Too much stress cannot be laid on the necessity of thinning the fruit in order to ensure uniformly large specimens. If no two plums on a tree are allowed to touch each other, the grower will certainly be repaid by superior fruit, and should wet weather set in about the time of ripening, and rot become prevalent, it will have much less chance of spreading. Most varieties of plums thus treated will usually bear a good crop every year, but where the fruit is allowed to hang in dense clusters as it frequently grows, the tendency to rot is very much increased, and the trees are apt to be so exhausted by over-bearing as to require a year's rest before they fruit again to any extent.

Plum trees should be planted about fifteen or sixteen feet apart each way, this will give them ample space for any growth they are likely to make.

Much of the success of plum growing will depend on how the fruit is picked and marketed. Dry weather should be chosen for this work ; all damaged and wormy specimens should be rejected ; the fruit should be carefully handled so as to preserve the bloom on its surface as much as possible, and if marketed in clean quart or two-quart baskets packed in crates, it will usually bring a much higher price than if sold in bulk. Where the distance from market is not great, the fruit may be allowed to get almost fully ripe on the trees, and will then possess a much finer flavour than if picked in the usual way in a half green state.

In giving the following list of varieties we have restricted ourselves, according to instructions given by the Directors of the Fruit Growers' Association to those writing essays on the subject, to such as we have had a personal acquaintance with.

Bavay's Green Gage (*Reine Claude de Bavay*).—A valuable late variety of European origin, of variable flavour, usually first class, and always of fair quality, sweet and juicy, but sometimes watery ; skin greenish yellow, flesh yellow, ripens irregularly ; mature fruit may usually be found on the trees from the second or third week in September to the middle of October. A vigorous grower, but apt to become stunted from overbearing, if the fruit is not thinned.

Bingham.—Originated in Pennsylvania. Tree a fair grower, fruit large, nearly oval, with a yellow skin spotted with red on the side exposed to the sun, flesh yellow. Not equal in quality, nor as profitable as some other varieties.

Bradshaw.—When well cultivated and the fruit properly thinned this plum grows to a very large size, which, added to its earliness, makes it a very attractive and profitable variety It is nearly oval in form, of a dark reddish purple colour, with a light bluish bloom ; the flesh is yellowish, rather coarse, and not high-flavoured, but juicy and good. In some localities, and especially where the soil is not very dry, this tree has sometimes proved tender. Ripe late in August to early in September.

Coe's Golden Drop.—Raised from seed by Mr. Coe, an English gardener, near London. The tree is a fair grower, and very productive ; the fruit large, oval, of a light yellow colour, sometimes spotted with red on the sunny side, with a yellow flesh, sweet and sometimes of a rich flavour, at other times watery. Usually a very good plum either for dessert or cooking purposes, and being late, it helps to prolong the season ; but when the weather is cold and backward it does not always ripen. Season, latter part of September or the middle of October.

Columbia.—Originated in Hudson, N. Y. A very large plum of a brownish purple colour, dotted with paler specks, nearly round ; flesh reddish yellow, rather coarse. Has not succeeded well in our experience. The tree is said to be a vigorous grower, but we have not found it so ; besides, it has a very ugly spreading habit, which makes it difficult to bring it into a good shape. It has been claimed by some that this variety is free, or nearly so, from the attack of curculio, but such is not the case.

Denniston's Superb.—A seedling of Mr. Denniston, of Albany, N.Y. Fruit nearly

round, a littte flattened, of a pale yellowish green colour handsomely dotted and spotted with rich purple, over which is spread a delicate bloom ; flesh yellow, juicy and rich. An attractive fruit, and as good as it is beautiful ; an excellent variety for the amateur, as it ripens its fruit irregularly ; ripe plums may usually be plucked from the same tree for three or four weeks. Begins to ripen about the last of August.

General Hand.—Originated on the farm of General Hand near Lancaster, Pa. Tree a vigorous grower but rather a poor bearer. Fruit very large, of a yellow colour with pale yellow flesh, of a good flavour, sweet and juicy. Ripens in September.

Green Gage.—A European variety. A first class fruit of a size from small to medium, nearly round ; skin green, flesh pale green, sweet and juicy, and of an exceellent flavour. The tree is rather a slow grower but is a good bearer, the fruit ripens late in August or early in September.

Guthrie's Apricot.—Originated in Scotland. Tree very vigorous, but a poor bearer. Fruit large, of a roundish oval form with a yellow skin dotted with crimson ; flesh yellow, juicy, sweet and high flavoured. If this plum was productive we should regard it as one of the most desirable sorts in cultivation.

Imperial Gage.—A seedling of the Green Gage raised at Flushing, N. Y. A good grower and an abundant bearer. Fruit oval, above medium size, pale, yellowish green with a whitish bloom ; flesh greenish, sweet, juicy and moderately rich, fruit very liable to crack in moist weather, and also to rot. Not so desirable or profitable for market as a brighter coloured fruit. Ripe early in September.

Jefferson.—Also an American variety. Has not succeeded so well with us as some others, tree rather a poor grower. Have not yet had enough fruit to be able to judge well of its merits.

Lawrence's Favourite.—Raised by Mr. Lawrence, of Hudson, N.Y. The tree is a fair grower and an abundant bearer. Fruit of medium size nearly round, dull yellowish green, with a greenish flesh, very sweet, juicy and high flavoured, an excellent variety, but more disposed to rot than some of the firmer fleshed plums.

Lombard.—Originated in New York State. Of all plums this is probably the most widely disseminated and generally grown, and well deserves a place in every garden. The tree is very hardy, vigorous and very productive. The fruit of a good size, of a violet red colour with a fine bloom, flesh yellow, juicy, sweet and good. Ripens towards the end of August and early in September. This variety stands poor treatment and comparative inattention better than any other plum. It is invaluable as a market fruit, and is without doubt the most profitable sort grown.

McLaughlin.—Raised by J. McLaughlin, of Bangor, Maine. Tree a fair grower and an abundant bearer, while the fruit is one of the handsomest and highest flavoured grown. It is large, nearly round, yellow, beautifully dotted and marbled with red, and covered with a pinkish bloom ; the flesh is yellow, very juicy, sweet, rich and luscious. Is among the best, ripens from the beginning to the middle of September.

Peter's Yellow Gage.—Tree a fair grower and very prolific. Fruit medium sized, nearly round, pale yellow, with yellowish flesh, juicy and sweet, but not high flavoured. Ripens late in August.

Pond's Seedling.—Of English origin. Tree a vigorous upright grower and good bearer. Fruit very large and handsome, nearly oval, of a bright reddish colour, becoming darker when fully ripe ; flesh yellow, rather coarse but sweet and juicy, not high flavoured. A profitable market variety, ripe about the middle of September.

Prince's Yellow Gage.—Much resembling Peter's Yellow Gage, already described. A very productive sort.

Victoria (*Sharpe's Emperor*).—Originated in England, a beautiful and popular plum. The tree is a fair grower and very productive. The fruit is large to very large, oval, of a purplish lilac colour, with a paler bloom ; the flesh yellow, a little coarse but sweet and good. In some of the colder sections of Ontario it is said to be tender ; wherever it succeeds it is a profitable market fruit. Ripens late in August and early in September.

Smith's Orleans.—Originated on Long Island, N.Y. The tree is a vigorous but rather irregular and sprawling grower, producing long reddish purple shoots. The fruit is large, of a dark reddish purple colour, with a deep blue bloom ; flesh dark yellow, juicy and rich.

The fruit is usually distributed over the tree in a regular and even manner, and not in such clusters as some others, and hence it has not the same tendency to overbear.

Washington.—Originated on the east side of the Bowery in New York City. The tree is a strong grower and a good bearer. The fruit is very large, nearly round, of a dull yellow colour, faintly streaked with green ; flesh yellow, juicy, very sweet and rich. One of the most desirable plums either for amateur or market culture. Ripe late in August and early in September.

Wild Goose Plum.—Tree a fair grower but rather a poor bearer. Fruit small and of a very indifferent quality. It is claimed by some to be curculio proof, but this is a myth ; we have seen as many as three or four curculio marks on a single plum, on a tree on which nearly the whole crop was stung ; not worth growing.

Yellow Egg.—A very showy popular fruit of a very large size, oval in form, with a yellow skin and whitish bloom ; flesh yellow, coarse, sweet when fully ripe but only of second rate flavour. More suitable for cooking than desert. Ripens from the middle to the latter part of September.

The question has often been asked, what are the best twelve plums for amateur growth ? As this query is an important one to many we shall endeavour to answer it by the light of our own experience placing the varieties *seriatim* in the order in which they were estimated, McLaughlin, Green Gage, Guthrie's Apricot, Washington, Denniston's Superb, Lawrence's Favourite, Lombard, Victoria, Bradshaw, General Hand, Reine, Claude de Bavay, and Coe's Golden Drop. This selection will give a succession from the earliest to the latest. For market culture the six following are suggested, although for several reasons we should feel disposed to place the Lombard head and shoulders above all other varieties for this purpose—Lombard, Victoria, Washington, Bradshaw, Yellow Egg and Pond's Seedling. It must be borne in mind that the vast majority of plum consumers will prefer large and highly coloured fruit, even if much inferior in point of flavour and quality, to smaller and less inviting varieties.

Some anxious minds, always ready to meet difficulty half way or more, have expressed doubts as to the probability of overstocking the plum market, and our not being able to find an outlet for the surplus. Similar cries have been raised in reference to strawberries, apples and other fruits, but it has always been found that good fruit well-marketed will in almost every case bring remunerative prices, and that the demand so increases with the supply, that it is almost impossible to overstock the market with fruit of such quality, a slight decline in price leading at once to an immensely increased consumption Owing to the prevalence of curculio and Black Knot in some sections, plum growing has been partially or wholly abandoned and there is usually a large demand in excess of the supply in some of our towns and cities as well as many of those of the adjoining Republic.

The plum grower has to contend with a trio of great enemies,—Curculio, Rot and Black Knot, as well as other foes of less moment. To these latter our limited space will not allow us to refer.

The curculio is a small beetle belonging to the family of *curculionidæ* or snout beetles and is known to entomologists under the ponderous name of *conotrachelus nenuphar*, and to the fruit growing public generally as "The Little Turk." It is a dark grey, or blackish beetle about one-fifth of an inch long, with a rough, rugged surface and having on the middle of each wing-case a black shining hump bordered behind with a broad band of yellowish white ; it is also furnished with a short snout. When the creature is disturbed or alarmed this snout as well as its six short legs are drawn close up to the body and the insect falls to the ground, where it lies motionless, and much resembles a bit of dirt or a little dried bud. In consequence of this peculiar inanimate appearance it frequently escapes detection, but if taken up between the fingers and placed in the hand, its powers of locomotion are suddenly aroused, and it does its best to escape, running quite quickly, and sometimes taking wing.

So much has been written in reference to this insect in the past reports of the Fruit Growers' Association, that it will be scarcely necessary to give here more than a very brief sketch of its operations, referring those who desire more detailed information to the Society's report for 1870.

The beetle deposits its eggs one at a time in the plum just under the surface of the skin, having first made a crescent-shaped inscision deepened in the centre where the egg

is deposited. Here the young larva hatches and eats its way into the fruit, burrowing about the centre and so affecting its vitality that it falls before maturity to the ground, where the worm as soon as it is full grown escapes, burrows under the surface, where it becomes a chrysalis and in due time comes out in a perfect state. The season of the greatest activity for this beetle is in early Spring from about the 21st of May till the middle of June, and then is the time for those who wish to save their plum crop to give their attention in this direction.

When a plum tree is suddenly jarred these insects become alarmed and fall to the ground and feign death in the manner already described. By taking advantage of this peculiarity and jarring one's trees in the proper season, the great bulk of the army of these enemies may be captured and destroyed and a crop of plums secured. This cannot be done by jarring once but by beginning early, say about the 21st of May, and repeating the operation daily for two or three weeks or more, or as long as the insect appears prevalent. Small trees may be jarred with the hand, while larger ones may have one of their lower limbs sawn off leaving a few inches of stump protruding, and the end of this be struck with a mallet; or a hole may be bored in the tree and an iron bolt inserted with a large flat head, which latter may be struck with a hammer or mallet. Shaking the tree will not do. It must be suddenly jarred to alarm the curculio, and before beginning to operate it will be necessary to spread a white cotton sheet underneath the tree on which the insects may fall and be captured. In the morning about seven o'clock or in the evening about the same hour will be found the most favourable times for this work, as the beetle is then less active than it is in the middle of the day.

Rot is a peculiar form of rapid decay to which plums are subject, in some seasons more than others, and which if unnoticed or unattended to spreads very rapidly. Very little is known regarding the origin of this trouble, but it has been observed to be more prevalent during wet seasons than in dry ones, and hence wet weather is regarded as a predisposing cause. The immediate cause is supposed by many to be the attack of a parasitic or fungous growth, the germs of many of which we know are floating in myriads in the atmosphere. Where one plum in a cluster is attacked with this disease, unless it is speedily removed the decay spreads to those in immediate contact with it, and in a few days the whole bunch is hopelessly gone. When rot makes its appearance, the fruit should be frequently inspected, and any decayed specimens at once removed so as to avoid further loss. No remedy has as yet been discovered which will enable us to control this troublesome disease.

The Black Knot is a disease affecting the branches and twigs of the tree, and one which proves a great hindrance to the cultivation of the plum in some localities. It appears as a blackish, fleshy or hard irregular swelling on the limbs and branches, which if allowed to go on unchecked, spreads rapidly, growing worse from year to year until the tree becomes perfectly worthless from disease. This enemy owes its origin to a fungous growth, which is propagated by spores or seeds, which are perfected about the latter end of July. By using the knife freely and cutting off the affected parts clean, early in the season, its further spread may be prevented. Where large limbs become involved which would damage the tree too much to sacrifice, they may sometimes be saved by scraping away as much of the diseased growth as possible, and applying at intervals a strong solution of carbolic acid. Insects and larva have been frequently found associated with Black Knot, either on its surface or imbedded in its substance, but these have nothing whatever to do either with its origin or maintenance; they are present in this as in many other diseased growths, because it affords them in some measure shelter or sustenance.

PRIZE ESSAY ON HOW BEST TO INCREASE THE INTEREST IN FRUIT GROWING IN ONTARIO.

"The world is only to be taken by show."

By George Peacock, Mount Salem.

Some of the objections to fruit growing are the following:—

1st. Poor prices are realized for fruit.

2nd. The perishable nature of fruits of all kinds.

3rd. It is of no use planting for others to steal the fruit from us.

4th. We shall not live long enough to see the trees bear fruit: it takes a lifetime to raise an orchard.

5th. We have been deceived so many times in buying trees that it is scarcely worth while trying again.

1st. Poor prices will not apply to well grown fruits of the best sorts, when well taken care of, if neatly packed and carried with care to market. What can we expect to get for apples, for instance, carried to market in grain bags, piled one upon another, and shaken over the rough roads in a common lumber waggon. Such apples are bruised all over, and are thereby spoiled, being worth scarcely any price at all. Grow the best sorts, pick and handle carefully, pack neatly, and good prices will be obtained.

We have seen poorly grown strawberries taken to market in large baskets, with a quart measure to finger them into, and that, too, after having handled the harness and horses for hours. Fruit in such a condition ought not to realize a good price.

2nd. Persons growing fruit should be provided with suitable apparatus, of recent invention, for drying all kinds of fruit, and of such dimensions as the quantity grown might require. We have lately heard of a contrivance that is capable of drying twenty bushels a-day. By such means much fruit may be preserved till convenient to be sold. Good keeping apples are always saleable at some time during the winter or spring, if picked and handled as carefully as eggs, placing them in heaps in a shed or out-building for two or three weeks; then sort them over, carefully putting none but good sound specimens into barrels, boxes or bins, in a good cool cellar, and scarcely a bushel in a a hundred will spoil, perhaps not a peck.

Good keeping winter apples will perish so long as they receive the treatment which is common in many localities,—shaking the trees, gathering the fruit from the ground, hurrying it along before winter sets in, after having been frozen once or twice, mixing the bruised, cracked and wormy apples with the good ones, teaming, or rolling, and scoop-shovelling them into a rather warm cellar, and scarcely a bushel of apples in a hundred will be usable in the Spring. This is a matter of fact description; and the fruit has been hawled out into the barn yard, in a decayed condition, at the middle of winter, for the cattle to eat, when the parties expected to have received big prices for their apples.

3rd. We know of a person who was planting an orchard, when his neighbour said, "Well, let him plant; I'll steal all the fruit he can grow." The orchard planter hearing of what was said, replied, "I shall endeavour to keep him at work," and straightway planted another hundred trees, and is about to plant a few hundred more. "Well," says the stealer, "there must be money in fruit growing, or our neighbours would not be planting so extensively. I'll plant some trees too." He has done so, and is going to plant again.

Much good may be done by persuading others to plant a few trees, at least; and they will soon discover it is easier, pleasanter, and more respectable to grow their own fruit than to take it from others without leave.

4th. Few persons know that to have trees bear young they should plant trees not more than two years old. By so doing they will often gain from eight to ten years of fruiting. There are many sorts of apples having a natural tendency to bear young. We may mention Adams, Baldwin, Bough, Brock's Pippin, Dr. Fulcher, Downing's Paragon,

Ewalt, Fall Wine, Fink, Fulton, Gravenstein, Jersey Black, Early Harvest, King of Tompkins County, Milam, Minister, Munson Sweet, Ohio Nonpareil, Maiden's Blush, Peck's Pleasant, Pennock, Porter, Pound Royal, Garden Royal, Rambo, Red Winter Pearmain, Talman Sweet, Wagener, Western Beauty, Wine Sap, Winter Queen, Baldwin, with many others. It may be added that these trees also, or most of them at least, have annual crops of fruit, if well cared for.

It is far from being generally known that some sorts of fruit trees come into bearing when they are quite young. We think that information on this matter of early bearing fruit trees will do much towards encouraging great numbers to plant who otherwise would never think of it. We have seen the Bartlett pear tree bearing fine fruit the second year after planting, and continuing to have annual crops for a number of years. Several others will fruit almost equally as young, if nicely cared for; such as the Madeleine, Bloodgood, Osband's Summer, Julienne, Howell, Duchess d'Orleans, Buffam, Beurre d'Anjou, Louise Bonne, Beurre Bosc, Seckel, Grey Doyenne, White Doyenne, Catinka, Fulton, Winter Nelis, &c.

Many cherries bear young, if planted young, such as Early Purple, Governor Wood, Black Tartarian, Downton, Cleveland, Elton, Early Kentish, Reine Hortense, Mayduke, English Morello, Belle Magnifique, &c. A great number of plums, peaches, and some pears fruit quite young. The small fruits, as strawberries, bear abundantly in about thirteen or fourteen months after planting. Raspberries and blackberries have fruit the second summer. Of the former we have seen one hundred quarts picked from a single row one hundred feet long, the third season after planting. Very fine crops of luscious fruits have been reaped, in Ontario, in the short time of from three to four months after planting the seeds of water melons and musk melons, some of the former weighing 25 pounds.

5th. Some years ago (and we have reason to suspect the same trick is being extensively carried on in the counties of Elgin and Middlesex), a person visited a few nurseries on the other side of the line, bought a large assortment of culls and refuse trees, a great many of them being ungrafted, paid for them at the rate of $4 per hundred, brought them to Canada, labelled them splendidly, showed good pictures of the best and most popular fruits, and sold his trees at the highest prices. Nor was he particular about the kind of pay, for in one instance, we know, he gave in exchange four cherry trees for eight plum suckers, which latter he labelled with good names to be sold at 50 cents each. Now, when these dealers talk of disposing of thousands of dollars worth of such trash, some check ought to be applied to this kind of trickery.

We can show pear trees bearing crabs, plum trees bearing Red Astrachan apples, Early Harvest apples ripening in March, with numbers of fruit trees having poor scrubby natural fruit, which, when planted, promised, according to labels, to be the finest and most profitable fruits in cultivation. The labelling of trees seems to be a wonderfully easy process, and is implicitly relied on till they begin to bear fruit. Then comes the grafter, with a good assortment of thrifty-looking scions and fine pictures. Hope is now revived. We shall now have good fruit; but, alas! he puts new tops on the trees which are often as bad, and sometimes worse than those he cut out. The tree planter next thinks of grafting for himself, or of giving up the notion of growing fruit, and finally comes to the latter conclusion.

Let the tree agency be remodelled, having two classes of agents, who may receive recommends or certificates from the Fruit Growers' Association of Ontario; for there are already individuals selling trees, grafting, budding, &c., increasing their business by pretending they are members of the Association. So long as the tree agency is left to Tom, Dick and Harry, with nobody responsible, the public will be cheated, and receive anything but reliable trees for their money; and the honest man's sales will be limited. Let the Fruit Growers' Association of Ontario, or, if not, let there be a nurseryman's association for the purpose of controlling the whole of the tree agency of Ontario. All agents' certificates should be signed by the principals of the Association, which will give confidence to purchasers. A statement of the requisite qualifications can be published in the annual report of the Association. The qualifications will be easily suggested by a committee appointed for the purpose.

A set of suitable apparatus might also be supplied to duly qualified agents, which, for travelling agents, should consist of a good stereoscope, with appropriate views and pictures. Let every picture or view be of the best description, nicely finished, coloured, shining, smiling. Let pictures of such fruits as are to be sold be shown to every family, with short and easily spoken descriptions of each. The time occupied by these short exhibitions will be no longer, nor need they be so long, as the present mode of showing pictures, accompanied by long persuasive arguments. The picture sells the tree, and its power is all but irresistible if rightly managed.

A set of lecturing agents should be employed who should be supplied with a good set of dissolving views, magic lantern apparatus, with late improvements, having a number of good photographic views and pictures of nursery productions, showing natural sizes, colours and appearances. A shabby treeless dwelling can be dissolved into an elegant modern domicile, surrounded by the most delightful fruit trees, fragrant flowers, falling waters, and singing birds, with the merry music of lovely children dancing on the well-shaven lawn.

With this modern dissolving view apparatus, any amount of contrasts can be shown with the most pleasing effect. By this means much useful knowledge can be imparted in the most pleasing and efficient manner, because everything is shown as it is in nature. The lecturer might remain a week at a place, exhibiting with his "stereopticon dissolving view" apparatus, and informing the people *all about fruit growing*, kinds adapted to soils, &c., giving examples of success in various localities, &c.

The gift of trees to each member of the Fruit Growers' Association of Ontario has rapidly increased their number, and, if continued, will greatly extend a knowledge of the adaptability of different sorts of fruits to all kinds of soils and localities and exposures. The gift enterprise cannot well be applied to tree purchasers, but the lottery system may be well adapted to stimulate tree buying to a high degree. The extra expenses and prizes can be raised by selling younger trees at the usual prices, for they are really worth more than older trees, and by selling all fancy fruits at higher rates. Many persons around here gave orders this year for small pear trees at one dollar each. Small apple trees have been sold for thirty cents each.

PRIZE ESSAY ON IMPOSITIONS OF DISHONEST TREE PEDLARS.

"By their fruits ye shall know them."

BY A. M. SMITH, DRUMMONDVILLE.

Of all the plagues with which Canadian fruit growers are afflicted, either of beasts, birds or insects, there are none so annoying, and (at least to their peace of mind) so destructive, and so hard to exterminate, as dishonest tree pedlers. They swarm around them like caterpillars. They are harder to shake off than curculios. Their persistent boring is worse than all other tree borers combined. Their power to transform their delicious apples and pears into insipid worthless things is greater than that of the codlin moth; and if their gnawing propensities do not equal those of the mice, the gnawings of conscience at having yielded to their allurements, and the sufferings consequent therefrom, are far more vexatious; and the blighted hopes and prospects of having fine orchards and fine fruits, and the receiving of scrubby trees and scabby apples instead, is far worse than the pear blight. They not only take away our anticipated golden pippins, but they take our gold also. They not only filch from us our juicy red-cheeked Crawfords and Sweet-waters, and give us frost peaches instead, but they take away our time and care, and the red flush of youth from our cheeks, and bring the frost of old age around our heads in waiting for them to grow again. They not only substitute puckery, sour, tough, worthless pears for our sweet, melting, aromatic Bartletts, Seckles and Flemish Beauties, but they sour our tempers, and take away the sweet, melting, mellowing influence of trust in our fellow-men. They even do worse than this. They rob some of their reputation and good name, which is dearer than all. Where is the nurseryman that has not suffered more or less from them in this respect? I know of some whose reputation has been ruined in some localities by these rascals. They palm off worthless trees

labelled as choice varieties, and represent them as coming from some particular nursery, when the nurseryman never saw them, or had any knowledge of the transaction whatever. They lead people to distrust, so that honest upright men, agents of responsible nurseries, are suspected, and do not meet with the success they deserve, or would have, if people had not been so much deceived by them.

Their operations are well known, and hardly need describing. They are unlike our other enemies—they come in the guise of friendship. They exhibit plates of beautiful fruits and flowers, and talk glibly of the profits of fruit culture, and recommend this and that variety. They extol the nurseries they pretend to represent, and show their catalogues, perhaps, and tell of the large orders they have got of our neighbours, and, before we are aware of it, they have our orders for a large amount of trees. They then go wherever they can get their trees the cheapest—the more unsaleable the varieties, the cheaper they get them, no matter what kinds. I have known them to get wild grape vines and berry bushes by the road-side. They then label them whatever their orders call for, and deliver them to their customers, and get their pay. Sometimes they repeat their operations the second time in the same locality. When they do this, the first time they generally deliver good trees, in size and appearance, as a bait to secure customers for the next year. But they are sure never to appear after the fruit begins to bear. Their victims wait two, three, and sometimes four or five years for their *beautiful* fruit to bear, and then find they have been *beautifully* swindled.

There is another class of these enemies a little less destructive to our fruit crops, perhaps, yet who filch, by their misstatements and representations, many a hard-earned dollar from our farmers and fruit growers. I refer to some authorized agents from the States. (There are honourable exceptions, I know, but comparatively few.) They, in order to effect sales in the neighbourhood of our own nurseries, make statements they know to be utterly false, and that repeatedly. They will show the plates of some new fruits, perhaps, and represent they cannot be got at any nursery in Canada, and sell the trees at extravagant prices, when they have been informed by Canadian nurserymen that they have them in quantity. I have known them to sell grape vines to men, by such representations, for $2 a-piece, which they could get in a home nursery, not two miles away, for 50 cents. I have known them to represent that they had been in certain nurseries, and that they had no trees to sell over a certain age and size, and that they had not got this and that variety, when they had never set foot upon their grounds, or, if they had, they knew perfectly well to the contrary. Farmers are, of course, to blame for not informing themselves, and, perhaps, deserve to be swindled, but this does not lessen the culpability of the agents. I would not depreciate American nurseries and nurserymen as a class. Far from it. Canada is indebted to them for her best fruits. Yet we can but condemn the tricks of their agents, many of which, I doubt not, are unknown to their employers, who would not stoop so low. But many of these agents sell upon commission, and think more of the almighty dollar than they do of the commands of the Almighty, and, for the sake of making a few dollars extra, do not hesitate to lie a little.

Canadian nurserymen, as a class, are not slow in procuring new fruits when they know them to be really valuable, though they may be behind their neighbours in puffing every new thing that comes up for the sake of making a little money out of it, and did our fruit growers patronize home industry a little more they would be far less liable to be swindled.

Generally when men find an enemy to their fruits at work they try to exterminate it, yet what has ever been done to stop the ravages of these enemies? There are laws against swindling, yet who ever heard of these swindlers being handled by the law? There is no doubt in the mind of any sane man that thousands of dollars have been lost to the country by them, yet still they are allowed to work. It seems to me we need a little wholesome legislation on this subject. Pass a law (and enforce it) that no man should be allowed to sell trees without a license and a certificate of agency from the nursery he pretends to represent and then make the nurseryman responsible for the varieties sold, and we shall have far less vexation from these fellows, and when fruit growers can, let them go to the nurseries and select trees for themselves of men whom they know to be reliable and responsible, and then we shall have one enemy less to the fruit interests of our dominion.

ON SMALL FRUITS.

(Written for the Annual Report.)

Another small fruit season has passed away, and established the reputation of some whilst others are being discarded in this section. The old English Fastollf Raspberry is still, and justly, esteemed as the leading berry of the Antwerp family, and for several reasons is superior to the much-vaunted Philadelphia, being larger and continuing longer in bearing, thus rendering it more suitable for the requirements of a private family. The Philadelphia is most prolific, but the latter part of the crop is small and ill-formed. It ripens its fruit in a few days, and for this reason is, perhaps, more suitable for preserves and vinegar, one of the most delightful and cooling drinks to be had during hot weather. Both the above varieties are equally hardy here without protection, where the snow lies deep, as, indeed, is also that queen of berries, the Brinckle's Orange, whose fine flavour is of the highest degree of excellence.

The Raspberry, as a rule, has not received that universal attention in this country which it merits, principally on account of the great quantities of wild ones grown in the neglected corners of old "snake fences," or springing up in every direction amongst the new "slashings" on the borders of "clearings." Any one, however, who is fond of this fruit—and who is not?—would do well to have say twenty-five bushes of each of the different sorts named—Brinckle's Orange, Fastollf and Philadelphia. With these kinds, and the above number of plants, he may have raspberries on his table every day for four weeks during summer, and plenty for cooking and preserving, &c. The farmer will find that, by cultivating a small "patch" as recommended, he will have a more constant supply than by relying on the wild ones. The women or children could pick sufficient for a meal during the time it would take to go to the far field and back. I should not, however, be doing justice to this subject did I omit to mention the Black Raspberry family. Another year has fully confirmed my preconceived notion that the Mammoth Cluster, distributed by the Fruit Growers' Association in 1871, is not equal to the American Black Cap, either in size or richness of fruit, its only better quality consisting in its not being so prickly, as it is almost devoid of spines. The Black Cap makes a very fine preserve, and I believe has been found one of the best fruits for drying.

In large patches of Raspberries, the greatest trouble has been found in tying them to stakes. This has been obviated to a certain extent by keeping the bushes pruned short. It is believed, however, that no extra crop can be either grown or saved without stakes, because, if the canes are heavily loaded, the fruit will bring some of them to the ground, thus doing considerable injury. As a tie, nothing has been found better than No. 13 galvanized iron wire, cut into eighteen-inch lengths; then with a pair of round-nosed pliers turn an eye on one end like the head of a skewer; take the wire in both hands, and pass it from you round the bush and the stake, and run the end through the eye, and give it a turn back, and the job is done. In cutting out the old canes, this wire is easily undone, and is ready for the new ones, and will last for years.

The Gooseberry question here, is a mixed and a vexed one. Further experience shows that only in spots can the English varieties be found to succeed. They appear to require a low, damp soil, not one that is bog in winter, and turf fit for burning in summer, but a soil that is moist all the year round. The Houghton, though not entirely free from mildew, is not affected to such a degree as to injure the berry on the lightest sands, it is an immense and constant bearer, and its only fault lies in the smallness of the fruit, this, however, is no argument against it for the various purposes for which it is employed whilst green, but merely in its ripe state. For tarts, preserves and stewed gooseberries, it is quite equal to the largest grown. I yet feel satisfied that Mr. W. Saunders, or some other hybridist will be able to overcome this "small fruit" difficulty. The Currant crop has been one of the largest ever known, the white grape and the red cherry both doing splendidly, the saw fly has not been so persistent in his attacks as formerly, and it is hoped this pest, like the Dodo, may soon become an extinct species. For some reason the white varieties of currants do not sell so readily as the red, whether it is that the beautiful tint of the syrups and jellies is sought for

in those of a darker hue I know not, but to my mind the white fruits appear sweeter and of a higher flavour than the others, but in "gardening for profit," it is necessary to catch the public taste.

Black Currants are more generally cultivated than the others by private individuals, being freer from the attacks of insects, but the measuring worm made sad havoc in places where he was an unsuspected guest, and consequently not looked after.

In conclusion, I may add there is no use trying to grow the small fruits to perfection, without four requisites: 1st, manure; 2nd, heavy pruning; 3rd, clean cultivation; and 4th, for gooseberries and currants, hellebore.

First—Thirty waggon loads of manure per acre is none too much to apply annually, lightly digging it in with a digging fork, or applied on the top of the soil to such fruits, whose roots run nearest the surface.

Second—Summer pinching for currants in June and July, and taking out entirely those shoots of the present year's growth, which spring up in the centre of the bushes, pinching back all the new branches required to extend the size of the plant when they have grown fifteen inches, thus preventing them from breaking off at the base during high winds, which they are apt to do when the foilage is abundant on rich soils. The Houghton gooseberry should be grown on a *single stem* and all suckers and branches removed within eight or ten inches of the ground, the main stem should be secured to a stout stake, driven firmly into the ground, and standing from four to five feet high. The best timber for this purpose is a two or three inch cedar pole, or if of pine it should be dipped in a pail of gas tar.

In a few years the stem will be of sufficient strength to sustain the bush, but the weight of fruit would soon bring it to grief. With regard to the raspberry, so soon in the spring as the new canes attain one foot in height, four or five should be selected for the next year's crop, and the rest persistently weeded out through the season.

Third—Clean cultivation may be obtained in small patches of half an acre or less, by frequently going over the ground, say once a fortnight, or whenever the weeds appear, with a fifteen inch wide steel rake, a process which will be found neither laborious nor troublesome if the ground is kept in high order.

Fourth—Hellebore, a free use of this article during the fruiting season is absolutely necessary, but it should not be applied when the berry is near ready for picking. Paris Green may be more economically used and with equally good effect at other times, that is before the trees come into bearing, or after the fruit is gathered. Both these chemicals should be used in water, and applied with a garden syringe, a teaspoonful of the green to a pail of water will be quite sufficient. By this method of application no danger from the dust need be apprehended. By drawing the syringe handle back and giving it a sharp push forward, a fine spray will be thrown out, quite sufficient to check effectually any depredations of this insect pest. Care must be taken not to have the water too highly charged with the green, or it will kill the bushes. I have also found this a good protection against the dark potato beetle and grasshoppers, which have been very numerous this season, also vine insects when the plant is not fruiting.

The application of Hellebore or Paris Green should always be made on a *hot, calm* day, so that it will dry rapidly, and not be removed by the action of the wind. A sediment is thus soon formed on the leaf, which defies the attacks of any injurious insect.

P. E. Bucke.

Ottawa, 15th August, 1873.

ANOTHER YEAR'S EXPERIENCE OF FRUIT GROWING ON BEAR CREEK, MOORE.

(Written for the Annual Report.)

Last winter has been more disastrous in its effects on fruit trees than any that has occurred for many years. Of the tenderer varieties of apples, pears, and plums, several have been completely killed, and others so seriously injured as to preclude the hope of their regaining their former vigour. Contrary to previous experience trees growing in situations sheltered by rising grounds or woods suffered equally with those more elevated and exposed, and

during the coldest weather, with no wind blowing, a perpendicular elevation of 20 or 30 feet was sometimes attended with a perceptible rise in the thermometer.

Every plant being an individual, living being, and passing through its periods of youth, maturity and reproduction, must be properly nourished so as to be fully developed. Some of the conditions of its development are beyond our control, such as the life and physiology of the plant, and such severe changes of the weather as were experienced last winter, which are subject to the fixed and immutable laws of the Creator. Experiments, however, have shown that although we cannot materially change the climate we can produce artificial changes in the soil and by planting hardy varieties, and by proper cultivation, and drainage, render the porosity and dryness of the soil such as to greatly aid plant life in resisting extremes of cold. Every variety of soil in every climate supports its own vegetable tribes, and of the five thousand flowering plants of Central Europe, only three hundred grow on wet peaty soils and these are chiefly rushes and sedges. The unlettered explorer amid our native forests hails the gleam of the broad-leaved trees, glittering in the sun amid the ocean of solemn pines, as a symptom of good land on which he may profitably settle. In Britain I have seen peaty soils drained—the heaths disappearing and the soft woolly grass (*Holcus lanatus*) overspreading the surface. By the application of lime, sorrel and sour grasses banished, and by guano, or the liquid of the farm-yard spread on scanty pasture soon the humble daisy and worthless moss—symbols of poverty—disappeared and rich crops of hay followed proving the close connection of the plant with the soil on which it grows.

The stunted growth of the trees in too many of the young orchards, and the prevalence of certain weeds, demonstrate that before fruit growing is as successful as it ought to be, in our stiff clay soils in Moore and elsewhere, a more thorough system of underdraining must be introduced than has hitherto been practised. Had this been attended to more before planting I believe many fruit trees irretrievably injured would have suffered less last winter.

The varieties most injured with me are the Duchesss d'Angouleme Pear growing in the face of a bank well sheltered from the north, but killed down to the ground. Bartlett Pears, in sheltered and exposed situations, suffered equally.

Fondante d'Automne, slightly injured, and three or four other varieties somewhat hurt by having spots frozen round many of the buds and small branches.

The Flemish Beauty all right.

Clapp's Favourite (Dwarf), although in an exposed position, none worse.

Beurre d'Anjou, none worse, and Doyenne d'Ete, Howel, and Seckel, not much harmed.

The old Peach trees were killed to the ground.

The Lady Apple, Early Harvest, Baldwin, Spitzenberg, Red Canada, Hawthornden, Bellflower, King of Tompkins and young Golden Russets and Greenings all suffered less or more, though some of these varieties, six and eight years planted, were scarcely injured.

The Spy, Snow Apple, Red Astracan, Duchess of Oldenburgh, Maiden's Blush and some others marked hardy in Mr. Beadle's Catalogue and Fruit Gardener, escaped injury.

Most of the varieties of Plums suffered much. Even the common *Blue ones* were long of showing signs of life. At last they began to bud feebly, and in August some of them blossomed as if making a last desperate effort at reproduction before "shuffling off the mortal coil."

It is probable that trees and plants suffered much from the frequent freezing and thawing of the ground from the first thaw early in March to the end of the month. On the 26th of that month we were visited by one of the severest snow storms of the season.

Grape vines laid down, and lightly covered with earth, came out all safe, whilst some left exposed were killed to the roots. Those covered shooted vigorously, and were from one to two feet long on the 30th May, promising a good crop; but on that night a frost killed the young shoots right back. After two or three weeks they again sprouted, but too late for a crop, although a few bunches on the Eumelan and Isabellas ripened.

Apple and other blossoms also suffered in this section, except near the St. Clair River, where the water modifies the temperature of the atmosphere, and often saves fruit and tender plants when injured inland by summer frosts.

No effectual means having been taken to destroy the Codlin Moth, it has seriously damaged apples and pears, which are otherwise good in quality, and superior to any that I saw exhibited at shows in the neighbouring State of Michigan.

The gooseberry blossoms escaped the frost, and the appearance of the bushes indicated a rich crop of this delicious fruit; but soon mildew (*Puccinia*) showed itself on the young shoots and fruit.

In our sea-girt native island, surrounded as it is by moving seas which the winds frequently raise into rolling waves, and lash into foam, sweeping upwards the light spray, carrying it far inland, and mingling its saline particles with the atmosphere, I have seldom noticed gooseberries injured by attacks of this fungous plant. Supposing that the sea air might to some extent account for this immunity, I resolved to experiment a little with chloride of sodium, chloride of magnesium and sulphate of magnesia, which, according to Riegal, are the principal parts in the solid matter of sea water. By sprinkling the bushes with a weak solution, and incorporating some in the soil, by hoeing it in under the bushes for a week or two, its progress seemed arrested, and the bushes cleaned. On examining them some time afterward, it seemed returning, but meantime the fruit matured all right.

This was but one experiment, and the success to a certain extent may have depended on atmospheric changes or conditions.

One remarkable thing about the thousands of species of the fungi family is, that none of them are green. They grow wherever there is damp and shade, upon trees and bushes, living and dead.

They are interesting to the scientific observer from their inscrutable ways—at one time adopting one form of development, and anon changing the whole tenour of their life. The same species, in one form, spreading a film of mould on the contents of a pot of preserves, and may be seen growing white, sometimes, on the black surface of the ink in an unused ink-bottle. But the more we study their nature, and the conditions under which they are developed, the more successfully can we combat them when they attack our grains and fruits.

JAMES WATSON.

Birkhall, Moore, 29th October, 1873.

THE FRUIT CROP IN THE COUNTY OF ONTARIO.

Cherries a heavy crop, and sold at from 5 to 10 cents per quart. I sold 140 quarts from one tree. Early Richmond at 10 cents per quart and 14 cents. Also 90 quarts from one tree (Elton) at 10 and 9 cents. Plum crop good, the best for last fifteen years; sold at from $1 00 to $1 75 per bushel. Pears a good crop, sold from $1 50 to $2 50 per bushel. Apples a light crop, summer sold at 80 cents to $1 00 per bushel; fall apples $1 25 to $1 75 per barrel; winter at $1 50 to $2 00 per barrel. Strawberries a good crop; sold at from 10 cents to 25 cents per quart. Raspberries a heavy crop; sold at from 5 to 10 cents per quart.

JOHN MCGILL.

NOTES ON SOME FRUITS AT GALT.

PEARS.

My pears have, during the last two seasons, suffered much from fire blight, especially the Buffam, White Doyenne, Belle Lucrative, and to some extent the Bartlett and Seckle varieties. Last spring I got iron filings put round, which has, I think, in some degree remedied it. I have found great benefit from spreading fresh wood-ashes in the garden, which is effectually clear of insects. The Ananas d'Ete, is the finest flavoured I have, although the tree is rather delicate.

GRAPES.

The Eumelan early and hardy, but prone to having the fly, and the fruit comparatively worthless. Rogers' 3, 4, 15 grow well here, but Nos. 4 & 15 have not ripened well this season. The Rebecca and Diana do well, but not the Delaware.

WM. TASSIE.

REPORT FROM F. H. HORA, KINGSTON.

VINES.

Eumelan has done well; borne abundantly; bunches improved in size. A few ripe by the 15th, but the average crop not ripe and fully flavoured before the 25th inst. No mildew, but does not seem with me a very free grower. This grape must be fully matured to bring out its fine flavour.

Othello has made good healthy growth, but the fruit is not yet ripe, nor so forward as an Isabella growing next it. No mildew; seems very late, and I fear will not ripen here.

The exotic vines have all done beautifully; not one failed.

PEARS.

Josephine de Malines and Beurre Clairgeau have both done well, but have not made much growth.

Bartlett was killed by the blight in the first week in September.

APPLES

Grime's Golden Pippin is healthy, and doing very well

RASPBERRY.

Mammoth Cluster seems quite hardy, bears well, but there is nothing in the fruit superior even to the wild varieties. Will try it another season, and if no improvement, will then root it out.

BLACKBERRY.

Early Wilson seems very tender indeed; evidently will not ripen here without winter protection.

Of Pears I have Belle Lucrative, Flemish Beauty, Ananas d'Eté, Doyenne d'Eté, Glout-Morceau, Beurre d'Anjou, Clapp's Favourite, Beurre Clairgeau, Tyson, Duchesse d'Enghen, Vicar, Louise Bonne de Jersey, Josephine de Malines, and some others in dwarf, of which I know not the names. There have been no signs of blight on any of them this year, so that I am inclined to think that this disease must have been dormant in the Bartlett when received this spring from the Association. Some of these trees are now six years old from the nursery, but none have yet borne any fruit except one of the Vicars. This is the first season I have been unvisited by blight.

I have two large Isabella Vines trained east and west, but this year I led some of the branches out to the north at a right angle to the others; the bunches on these certainly ripened earlier than the others, and I think the berries are altogether finer. Are you aware of any facts in corroboration of this, or the contrary?

This season I have had several bunches on my vines girdled (I suppose by an insect). In some instances the mischief occurs on the stalk, and the whole bunch shrivels without ripening. In other cases the injury is in the middle or towards the lower end of the bunch, when the berries above ripen, and all below the girdling remain green and shrivelled up. This occurs just as the berries are maturing, and before commencing to colour. I cannot find any allusion to this in the treatises on insects injurious to the vine in your annual reports.

The last spring frost with me was on the 16th May, but the night of the 29th May was very cold, and evidently did much mischief to both apple and pear blossoms. No frost perceptible yet, here on the lake shore. Plums have been an abundant crop this year, but I am inclined to think apples are scarce and inferior in size and flavour.

I would suggest for a subject for discussion at some future meeting of the Association—"The best stock for, and the best mode of grafting apples and pears."

I cannot help thinking that the common practice of root grafting on seedling stocks must be wrong in principle, and is the primary cause of both the borer's attacks and the pear

blight. I have not much studied this subject, but have no recollection of ever having seen such a mode practised in England, where, if I mistake not, the custom is to graft high on the wild stock, which of course is perfectly hardy; whereas here the hardiness of the seedling stock must always be doubtful, or rather, I should think, it can seldom be hardy. Now I question if any species of beetle ever deposits its eggs in healthy wood, from the simple fact that sound, healthy wood does not afford suitable food for the larvæ. Take for instance the different species of borers attacking the pines. If I am rightly informed, as long as the trees are healthy and vigorous no borer attacks them; but let a fire run through a pine district killing the trees, and then the lumberman cannot secure the timber in a sound state; let him hasten the chopping all he may, the borer will beat him in the race. And so it is, I believe, with all the beetle tribe; therefore, judging from analogy, I should say there must always be disease and decay before the borer appears, or the natural instinct would not lead the parent beetle to deposit its eggs where there would not be a suitable supply of food for its offspring. The borer, in my opinion, must always be the result of, and not the cause of, decay and injury.

Again, in this root-grafting, I have already in my short experience had more than one case where I have found (from bad manipulations, I suppose) that the wood of the stock and scion has never united; the bark has closed round, but the wood beneath has never joined, and after a year or two the young tree has either died or broken off at the graft.

In the absence of any wild apple indigenous to Canada, I would suggest that only the very hardiest of the crabs should ever be used for stocks. How would the wild thorn answer?

FRANCIS H. HORA.

Glen Lawrence, near Kingston,
September 26th, 1873.

FRUIT REPORT.

OTTAWA, 27th Sept., 1873.

Our summer here has been cold, and not at all favourable to early ripening.

Tomatoes and melons were generally late in coming to maturity.

My cherries, common red, have had upon their leaves a small greenish-looking snail in quantities, and I have observed other trees in this vicinity similarly affected. Can you tell me the name of the snail (or whatever it is), and how to destroy it?

One of my apple trees is badly mildewed; can you tell me what to do with it?

Fire blight has been very destructive this year in and near this city; several instances have come within my own personal knowledge.

Of the trees which I have received from the Association, the Wagner apple is growing well; Clapp's pear is also doing well; the McLaughlin plum does not like my sandy soil; nor does Grimes' apple, which has failed to grow altogether.

In my cold vinery, I have this year fruited (for first time) Black Hamburg, Gros Colmar, and Grizzly Frontignan. My other vines are not yet bearing. Out of doors I have Delaware, Israbella, and Concord; all doing well.

WILLIAM WHITE.

ESSAY, WRITTEN FOR THE REPORT, BY R. B. WERDEN, PICTON.

Mr. SECRETARY,—At the request of your Association, I desire to make a few remarks in my humble way, on my experience and observations of fruit growing in this section of Prince Edward County; but with some reluctance, as there is so much up-hill work respecting its cultivation, that it may have a tendency to discourage some from undertaking what they might otherwise do, but your request prompts me.

About thirty years ago I commenced planting fruit trees of all sorts, and soon found we had a very ungenial climate to contend with, partly by nature and partly by our country having been denuded by the merciless axe-men of its forest; opening up inroads for the cold north winds, changing our climate and making it much more difficult to grow fruit than formerly; nothing to prevent our rain-clouds from sweeping by us and carrying the rain to other

parts, leaving us to be parched up with the extreme droughts and cold frosty winds ; leaving nothing but destruction to vegetation and disappointment to the planter. Learning the cause and effects, I saw every branch reaching out its hand for help; I heard every voice cry out for protection.

And it was too plain to be misunderstood, that if man and the animal kingdom require protection, so with the same principle the vegetable kingdom does likewise require to be sheltered from the extreme changes of heat and cold that our climate is so subject to. Seeing the necessity, I set to work in right good faith planting a belt of forest trees around my orchard, but, alas ! too late for many of them, for the breath of the north-wester had already breathed its poisoned atmosphere on many of them to the tune of thirty degrees, and sometimes more, below zero, to which tune they could not dance long, especially those with long trimmed-up distorted trunks, thereby causing the sap to be diseased and disarranged, causing the tops to become blighted, and the sun to scald their bodies, and the bark to peel off, and ultimate death.

I then thought I would try another plan. I let the trees grow as nature had designed all trees to grow, in the open fields, with the limbs branching out from the ground, what some call Dwarf Standards. But I call them Self Protectors, as they ward off the whipping trees, and the plough, keeping them at a proper distance from tearing off the best roots, and causing the cold winds to sweep over them instead of through them. I considered that I had them safe in the fold from all enemies, but not so, for on comes the extreme drought we are getting subject to here for the past summers, penetrating and drying every particle of moisture to the very ends of the roots, causing many of the trees to become weakened in their constitution, and then the cold winters would finish them.

And to my observation, this is the doom the most of the trees meet with when planted on high and dry soils, without any lakes to the north of us to protect them from the poisonous dry north-easterly winds. Thus my belief is the dry summers are as detrimental to our trees as the cold winters are, being the first cause to weaken and make them tender.

But I would not have you think that all our orchards are so badly affected. There are some sandy loamy soils that do not suffer so with the drought, and along the lake shores and points projecting out into the lake, where we have some fine orchards. They are doing well but not to be compared with those I saw this summer at Rochester, Lockport, and at Niagara where I saw large orchards, and was told they were from fifty to eighty years old, without scald, blight, or a decayed trunk about them.

And now I hope I have said nothing to discourage any one from planting, for every tree if it don't live to over twenty years, will pay all expenses in half that time. So plant away and keep on planting; abandon many of what we had learned to consider as our best or most desirable varieties of fruit, but too tender, and substitute for them those that have come to be designated as Iron Clads, because of their ability to withstand our trying winters and summer droughts. Then let us plant a screen of forest trees for their protection around them, not forgetting our hardy sugar maple, so useful for the production of that article, sugar—the emblem of our Dominion—until they will attract the passing clouds of rain, as the rod draws the electric fluid, and the tops will catch and tear open and let the rain fall on us ; also serving as pumps, drawing the water from the great reservoir below and emitting it from the leaves; keeping the air moist, which makes it so beneficial for all vegetation.

Then for a noble and good cause let us go to work in right good faith, and try to restore that paradise which has been lost by our transgression, and be as great benefactors to our country as Lord Athol was to Scotland, who planted over fifteen thousand acres of a barren waste of sandy plains to forest trees, and made it to valuable and green pastures, and lived to build ships and sail across the ocean on timber of his own raising. Now can't we do as much as one man, if not, then let us petition to the Legislature to help us, and pass laws as they have done in other countries, and release any one from a portion of his taxes by his planting trees along the road sides, for timber and shelter, thereby save our country from famine and destruction that may await us. For, among all the utilities relating to the improvements of our great country, no one thing interests us more than the cultivation of trees, trees for fruit, for timber, for ornament, &c. All our waste places should be dotted with acres of forest trees. Our mountain tops and sides, our hills, ravines and vallies, may, and should be planted to trees. It has long been considered an admitted fact that the existence of timber growths in a country, has the

effect to secure to such country a more considerable rainfall than would otherwise occur, and as evidence of such fact, it is stated that the Island of Madeira, when first disrovered by Europeans, was clothed with timber, and enjoyed an ample and well distributed rainfall, but since their advent the forest has been gradually melting away, till little is now left to decoy the moisture from the passing clouds, and as a consequence, droughts have been steadily becoming more and more severe, occasioning the failure of the crops, and compelling the levy of contributions in other countries to save the population from the horrors of famine.

Germany, Spain and France are also quoted as furnishing a similar result from the same causes, and extending over a far more lengthened period. A very striking instance of change of climate from this cause is said to be even now in progress on the Island of Barbadoes, one of the West Indies, on a portion of which the timber has been entirely removed, thus giving the ocean full sweep from shore to shore. The portion of the island so denuded of timber, is said to have become in consequence almost, or quite a desert from lack of rain, and this process is extending over the now fertile portions of the Island, as rapidly as the forest disappears.

Science, with unerring finger, is pointing to our treeless plains, swept by parching winds in summer, and arctic gales in winter, as the true and present cause of the dire calamity. The acceptance of this conclusion, carries with it the further conclusion that the work of destruction is yet far from complete, but is rather proceeding at an accelerated rate, and that if allowed to progress unchecked, it is difficult to imagine when, and at how calamitous a point the evil will culminate.

R. B. W.

REPORT BY GEORGE PEACOCK, MOUNT SALEM.

Fruits generally about Mount Salem scarce. Strawberries were a good crop, and sold at 12½ cents, 10 cents and 8 cents per quart, main crop Wilson of course. Raspberries bore well this year, which sold for about 8 cents per quart. Blackberries none in market.

Cherries very good yield this year, sold at 6 cents to 4 cents per quart, some wormy ones for less.

Peaches none, all winter killed.

Plums, heard of none in market except by one individual who attended to Curculio catching, prices consequently were 3 to 4 dollars per bushel, while more customers went without plums than could be supplied.

Apple trees suffered last winter so much that some have not yet recovered. We have King of Tompkins and Baldwin trees nearly dead, which would have borne from 10 to 12 bushels each. Some trees look like recovering, others seem like dying.

REPORT BY GEORGE COWAN, CRAIGVALE.

I became a member in '71. The pear and raspberries sent me that year are all dead, the two raspberries died at once, the pear lived and did well until this spring, It came out in leaf in the end of May, but on the nights of May the 30th and 31st it was a very hard frost; it burst all the bark of this tree from top to bottom; it died at once. The trees sent in '72 are doing well, pear and plum, also '73 pear and apple, both doing well. Fruit in this part was a great crop this year, especially old orchards, young trees being more tender. Plums were the largest crop I have ever seen; the trees had all to be propped up to prevent splitting. All kinds were alike, Lombard, Washington, Golden Drop, Green Gage, and others. I got two first prizes at the County Show for Lombard and Coe's Golden Drop. Plums sold from 10 to 15 cents per quart. Apples from 12½ cents to $2 per bushel, for early sorts; good keeping apples about $1 per bushel. In mostly all the old orchards here are seedling apples. Orchard planting is going on very brisk just now. Several agents have been travelling here for the Rochester Nurseries, this summer, and taken a great many orders. We had two worthies in this neighbourhood this spring from the State of Ohio, grafting. They came round last fall,

with a book showing the different kinds of apples. Parties selected the scions from the book, all were to be brought from Ohio, true to name; their operations extended from Bradford to eight or ten miles north of Barrie. It has now been found out that these grafters pruned a a man's orchard near Bradford, and got their scions there, for their trouble. They grafted at the rate of one hundred per hour, two scions to every limb,or cut at 8 cents each, some trees, large ones, they put in a considerable number, twenty to thirty. Some parties had to pay from thirty to forty dollars for a few hours' work; in about four weeks they took from the district mentioned, eleven thousand dollars ($11,000). There is also a considerable number of shade and ornamental tree-planting, such as hard and soft maple, spruce, balsam, cedar, hemlock, larch or tamarack. I myself supplied parties with about 1,200 of the above.

FRUIT REPORT, BY DANIEL MACPHERSON, LANCASTER.

Mr. SECRETARY,—You will doubtless think me very careless and ungrateful in neglecting you so long. At your request I made inquiries, and obtained all information possible when I travelled in Glengarry and Stormont. The only information of any value was varieties successfully grown. Waiting to receive promised lists of them is the cause of my waiting so long. Unfortunately, I have not yet received them, and I will send you a few hurried *items* of information in the meantime. I found that seedling apples, some very valuable, were formerly successfully grown in nearly every locality; that the "*blight*" killed or injured the apple trees through all this section; that seedling apples seem yet to grow well in many places, though a failure in others; that improved varieties of apples introduced within six years have generally failed; that native plums do well in nearly all sections, where soil is suitable; that pears are not grown; a few were in old orchards, and seemed as hardy as the apple; but there is not a single specimen now in the County.

Very few berries grown.

Strawberries grow well when tried, but generally neglected, and so with all small fruits.

Currants all destroyed by worms, and cultivation neglected.

There is a general want of information on the subject of fruit growing; and the result of these efforts, in nine cases out of ten, is complete failure.

Though the majority of those experimenting with fruit trees blame the nurseryman for their want of success, and doubtless in many cases the trees furnished were very much abused, still the almost universal ignorance is a great cause of failure also. Dozens of parties take no care of their trees, know nothing of varieties, and when they have a few surviving specimens cannot say what they are, or order more of same variety if they need them.

A great many Toronto trees were introduced and very extensively distributed three years ago through Glengarry. Unfortunately, they are nearly all dead, and the parties have decided to try no more. In nearly every case there are survivors, precisely the information you want; but I could not ascertain the varieties. Still I have found trees, and in some cases *lots*, which have all lived, procured from the same source. Of these I am promised lists, and will soon be able to send names.

Several gentlemen are succeeding with young orchards; a very few have very fine ones, of which they are justly proud; but the majority are hopeless of ever growing their own fruit, and will take no interest in the matter.

To give you an idea of the interest taken in Glengarry generally. With the repeated tale of anxiety to grow fruit, of efforts and failures, of confession of ignorance on the subject, and wish for information, I succeeded in introducing in Lancaster about 15 to 20 copies of the "Fruit Gardener"—about half of them to farmers; in Charlottenburgh only 4 copies—a member of Fruit Growers' Association, a Secretary of Agricultural Society, a manufacturer, and a young lady interested in horticulture, being the only parties.

In the rest of Glengarry not one copy, though I called upon many hundreds.

Still a few are successfully growing apples, and a good many have set out from a dozen to hundreds of apple trees last year; and though my experience is limited, I have met with as fine specimens of apples in Charlottenburg, especially at Mr. Cameron's, as I have ever seen in localities considered more favoured.

Formerly a great many apples were grown. A good many—some very fine—are yet

grown in Charlottenburg; a few barrels are imported yearly; but the majority of the inhabitants use very few green apples, or simply do without.

Several gentlemen have united in the effort to grow apples. Mr. Young, of Lanark, has a fine young orchard of several hundred trees, all bearing, principally seedlings. Mr. McLennan has set out within six years about 1,000 trees, a very small percentage lost with the hardier varieties. He has many of the tender varieties which I believe are doing well, *but* he *pays attention to them.* Unfortunately I have not his list, but I am aware of it being a good selection, has been a fair test, and a success. Mr. Cameron has splendid Fameuse and Golden Russets.

I must not forget that where I found there was a survivor of trees formerly introduced before the "*blight*" it has invariably proved to be Talman Sweeting, at least I presume so from description given. Mr. Dingwall will shortly be experimnting on a very extensive scale, he has a fine nursery and will test a great many varieties. His trees received from Association are flourishing.

My pear Beurre d'Anjou received last spring lived, but did not look very thrifty.

Plum, ditto.

Of varieties which I grafted and budded in nursery and planted in spring of 1871, I found during summer specimens of all living and doing well; where some had died I knew the cause had been want of shelter during the first early frost of December, 1871, the mulching being removed to escape mice and snow not yet fallen to pack. I enclose a list. You must excuse these horrid lines without any arrangement. I will give you a few notes from my memorandum book, "Answer to enquiries made." I consider them satisfactory in many cases, so far as showing that 25 to 60 and 75 per cent. of trees lived, and with more information and a better selection, apples can be successfully grown here.

Front Lancaster, 4th Con.

Two or three good orchards, generally seedlings, '69, '70, '71. A great many young apple trees set out lately, a general failure. A few summer trees planted in '72 generally have succeeded.

Riviere Raisin, near Front.

I. M. L. does not succeed in growing apples. 20 from Leslie 1870; 15 living.

Charlottenburg.

I. G.—Set out a great many young trees; all dead.

McD.—Old orchard dead; young trees all die in about two years. Suppose when reach clay.

D. G.—Grew apples extensively formerly; tried Seedlings, Swaar; failed.
Native Plums do well.
Strawberries do well.
Cherries failed.

McD.—Apples did well previous to blight; cannot grow them now; all die.
Plums and Berries do well.

J. R. H.—Grew Toronto trees; did not live.
Plum do well.
Grapes, well.
Currants, not grown.

J. H.—Consider apples should do well; succeed with seedlings.

A. McL.—Seedlings succeed.
Plums do. Foreign born, do.

E. Cherries; planted 20; few do well.

R. K.—Grew apples previous to blight; fail now; consider drought the cause.
Native Plums do well; curculio injured badly, 1870, 1871.

S. E.—Grew apples formerly; Toronto trees all dead.

D. C.—Apples did well formerly; all planted since failed.
Native and Blue Plums succeed.

New Peaches and Pears failed; same with Grapes and Berries.

All through Charlottenburg I received nearly the same reply.

Old trees all killed by blight, and winter apples should do well, as formerly.

Mr. Murray Tried Toronto trees in 1870; 50 trees; 3 living.

Tried Hamilton trees; all dead.

Tried Montreal, 1 dozen; 2 living; a lot of seedlings have grown well.

Another account from Kenyon:—Failed with apples now. Tried 15 Toronto; 3 living. Hawthornden, Baldwin and Crabs; Pear and Cherry of same lot, living.

It would appear that in the greater number of localities I have visited apples did well formerly, and that in many cases seedlings still grew well; but in nearly all cases the trees of improved varieties introduced lately have died. As I went along, each party's statement was but a repetition of the last, so I ceased making inquiries until I entered another route. Of course many reasons were argued for the failure, and many in bitter terms expressed their disappointment; however, the success of a few individuals will, I hope, encourage them to make further and more intelligent efforts to grow at least their own fruit.

On receipt of the promised lists of summer apples promised by several parties, I will send you a further statement, that will be more satisfactory than this my hurriedly written letter. I hope shortly to send the names of several parties who will join the Association.

Please send me one of the first copies of report for 1872, as I go into the section this winter.

I send list of trees out of my own memory, planted in spring of 1871, specimens now being apparently healthy of following varieties:—

Fameuse.	Spitzenberg.
St. Lawrence.	King of T. County.
E. Harvest.	Golden Russet.
Bourassa.	Seek-no-further.
T. Sweeting.	R. I. Greening.
Red Astrachan.	Ribston Pippin.
Sweet Bough.	Primate.
Sour Bough.	Fall Sweeting.
20 Ounce.	Dormer.
Early Strawberry.	Wagener.
Porter.	Snow Apple.
Baldwin.	Colvert.
N. Spy.	

With several seedlings of hardy varieties of Summer and Winter.

REPORT ON SEEDLING GOOSEBERRIES, AND RASPBERRIES.

26th July, 1873.

Seedling Gooseberries.

Mr. R. Ibson, Malton, sent two seedling gooseberries, from Whitesmith and Crown-bob. Crown bob, fair sized and well flavoured; Whitesmith, scarcely ready, good size, and free from mildew.

Seedling Gooseberries, from Jas. Dougall, Esq., Windsor.

No. 1. Seedling from Houghton; green, small, and indifferent flavour.

No. 2. Seedling from Houghton; dark purple, small, pleasant wild flavour.

No. 4. Seedling from Houghton; green, very small, indifferent flavour.

No. 5. Seedling from Houghton; green, small, little flavour.

No. 6. Seedling from Houghton; green, small, disagreeable after-flavour.

No. 7. Seedling from Houghton, male parent, English; green, large, well flavoured, and agreeable, worth propagating.

No. 9. Seedling from Houghton, light purple, small, flavour not agreeable.

No. 11. Seedling from Houghton; very light purple, medium size, thin-skinned, inferior flavour.

No. 16. Seedling from Houghton; green, small oblong, firm berry, scarcely mediocre in flavour.

No. 17. Seedling from Houghton; purple, rather small, watery, and insipid.

American seedling; dark purple, small, wild flavour.

No. 13. Seedling from Houghton; English male parent, green, approaching medium, poor flavour.

No. 2. English seedling; green, very small, indifferent, worthless.

No. 4. English seedling, Houghton male parent, green, very small, sweetish flavour: worthless.

No. 12. English seedling, green, small, soft berry, watery flavour.

No. 3. English seedling, Houghton male parent, dark purple, good size, good flavour, resembling Ironmonger; would preserve well; worth propagation.

No. 8. English seedling, Houghton male parent, green, small, disagreeable after-flavour.

No. 7. English seedling, green, rather small, very poor flavour.

No. 1. English seedling, green, very small; worthless.

No. 6. English seedling, soft and indifferent.

The seedling gooseberries shown by Mr. Dougall are very much alike, in character and colour, with few exceptions. A large number are worthless for cultivation.

No. 3 is really the only red one we can commend for propagation.

No. 7, green, is a good berry, and also worth propagating.

They came to hand in good condition; they were well and carefully packed. All which is respectfully submitted.

Seedling raspberries, sent by John McGill, of Oshawa. Good size, well flavoured, soft, and therefore useless for market.—21st July, 1873.

PETER MURRAY.
ROBERT BURNET.

REPORT OF THE SPECIAL COMMITTEE ON SEEDLING APPLES, AT THE WINTER MEETING AT HAMILTON IN 1873.

The first sample—Entered by Mr. Cornelius Sullivan, of Caledon East; medium size; handsome apple; a little out of season. Committee are unable to say, from its present condition, whether it be worthy of cultivation or not.

Second sample—Entered by J. W. Johnston, of Campbellford; medium size; pretty firm flesh, and from its appearance, we judge, would be a good market fruit, flavour pleasant.

Third sample—Entered by Mr. W. Brooking, of Ancaster. It was ascertained to have originated in the United States, and therefore not in competition with Canadian seedlings. But the Committee cannot pass by remarking that this fruit they consider worthy of cultivation. Size over medium; handsome flesh; crisp, juicy and good flavour.

Fourth sample—Entered by W. Nicoll, of Cataraqui, very large; over-ripe; fine, showy apple, but not in a fit condition to judge of its quality.

Fifth entry by Amos Chamber, of Winona; medium size; handsome and showy dark red apple; almost sweet; lacking flavour.

Sixth entry by Wm. L. Stott, of Markham; above medium; yellowish ground; sprinkled with russet; fine grained; agreeable aromatic flavour. Committee think this apple worthy of extended cultivation, and would recommend it for the prize offered by this Association for the best apple exhibited at this meeting.

Seventh entry by D. Vanduser, of Grimsby; below medium in size; fine grained; white flesh; past its true season; might be a good dessert apple in its season.

Eighth entry—Mr. Charles Arnolds, No. 4; scarcely medium; not showy; mild spicy flavour; rather over ripe. Committee think it would be a good dessert apple in season.

No. 3—Committee see nothing in its appearance or flavour to recommend its cultivation.

No. 1—Above medium; juicy; rather acid; think it would be a good cooking apple.

Ninth entry by Mr. Jonas Neff, of Port Colborne; small; not attractive nor sufficiently high flavoured to recommend it as a desert fruit, or large enough for cooking.

Ten entries by James Cowtherd, of Newport:—

No. 3. Below medium; imperfect specimens; all its characteristics very much resembling Vandevere.

No. 4. Medium size; acid, pleasant flavour; specimens imperfect.

Of the eight others, the Committee regret that the specimens are so imperfect that they would not be warranted in expressing a decided opinion of them.

One entry by A. B. Bennett, of Brantford; small; high coloured; agreeable sprightly flavour; quite juicy. We think it would be a good dessert apple.

PEARS.

One entry by James Reid, of Hamilton; very large handsome fruit; not yet ripe, but very juicy and free from grit; having all the characteristics of a good baking pear. We cannot judge of it in its present unripe state as a dessert fruit, but consider it worthy of the prize offered by this Association for the best seedling pear now on exhibition.

One entry made by Mr. James Hislop, of West Flamborough; rather above medium size; flesh rather fine grained; pleasant flavour, even in its present unripe state; and although not so handsome a fruit as that of Mr. Reid, we think it has points of excellence of its own which entitle it to an equal prize.

Mr. Brooking, of Ancaster, exhibits ten varieties of apples in good preservation, embracing some of the leading varieties. The Fallawater, we consider particularly fine; also fair samples of Vicar of Winkfield and Doyenné Sieulle.

Mr. Bennett also exhibits fair samples of the following pears:—Lawrence, Winter Nelis and Jaminette.

Some fine samples of unusually well-preserved Isabella grapes are shown by Mr. Vanduser, of Grimsby.

President Burnet exhibited nice specimens of Hubbartson's Nonsuch in good preservation.

Mr. Freed also had on exhibition, from Elwanger and Barry, of Rochester, handsome specimens of Hubbardston's Nonsuch and Red Canada.

REPORT OF THE COMMITTEE APPOINTED TO PROCEED TO LONDON, TO VISIT MR. SAUNDERS' FRUIT FARM.

During the course of this summer the Direction of the Fruit Growers' Association, at the request of Mr. Saunders, of London, appointed a committee composed of Messrs. Arnold, Beadle, and Burnet, to proceed to London, examine and report on the hybrid seedlings of Mr. Saunders, and generally give such a *vidimus* of his doings, successes and failures, as might be profitable to the members of our Society. In pursuance of our commission, your three members of committee put in appearance at London on the days designated by Mr. Saunders. We need not say how cordially we were received by Mr. Saunders, and welcomed by a thousand nameless courtesies. Indeed he did everything to render our labour of love agreeable and pleasant, and explained and unfolded every mystery connected with his intellectual and refined pastime of hybridization. To a less modest worker than Mr. Saunders, the results of his labours would have called forth a large amount of trumpeting. Issues, however, were left to do all this, and verily they did this with trumpet-tongue. We lost no time in finding our way to the farm. On our way, having an invitation extended to us, we cursorily examined the grounds of the London Institution for the Insane. The place is just in its infancy; the planting, however, has been judiciously performed, and shortly the trees will afford an abundance of shelter, which is at present much needed. The ribbon culture was much admired as exhibited in the different flower plots in front of the main building; the taste was good, and the varieties of plants very choice. From the delight arising from viewing the finely adjusted hues of nature's flowers, we were ushered into the Institution, where several hundreds of immortal human beings had been deprived of the godlike rays of intellect, and where drivelling idiocy proclaimed in unmistakable language that the flowers of Divine genius were withered, and the full fruition of reason nipt in the bud! The offi-

cers were to us all that could be desired in the way of guides, and various curious episodes with the inmates afforded us food for talk for hours to come. Thankful to the Sovereign Disposer of all events, that reason, use of sense, a sound mind in a sound body, were vouchsafed to us, we left the close stifling atmosphere of the corridors of the Asylum for the exhilarating beauties of nature, and the nice manipulations of human genius as presented to us on Mr. Saunders' fruit farm.

The farm to be visited lies immediately opposite the Asylum on Dundas-street. It has a pleasant aspect, the location being admirably adapted for the purposes of the owner. The day being warm, a severe thunder storm looming afar in the western horizon, we stript for our work. The first sight that greeted our astonished vision were some rows of very heavily loaded Raspberries. Entering through the gate we found them to be:

The Philadelphia.

They were really fine, a most abundant crop, and ready for gathering. They bore no evidence of winter-killing, and as usual justified the almost universal experience of being exceedingly hardy. To them succeeded

The Clarke

A very fine crop, large berries, bright, very bright red fruit. The grains were very large, noticeably large but soft, this latter quality being the great drawback to the excellence of the fruit as a good market variety. In succession to these were

Wilson's Early and Kittatinny Blackberry.

In the rows of these varieties of blackberry, we found unmistakeable evidences of the severity of the winter. Indeed we might say with truth, that *they had suffered much.* The Wilson was almost killed to the ground, the Kittatinny had not suffered quite so much—here and there branches in sheltered positions had escaped, which were loaded with unripe fruit.

The Doolittle Black Cap

Succeeded, and showed a good, fair crop.

Mammoth Cluster

Followed, with fair fruit, and very heavily laden. We then examined

White Cap.

Fruiting very heavily. We noticed and noted that the wood of this variety was poor, ill-grown, but such of the fruit as was fit to taste, rich and well flavoured.

The Hornet

Came next, which we found had partially withstood the winter; it had in consequence made weak growths of wood, but the berries which were matured were indeed very fine.

Brinckle's Orange,

We found a complete failure; only a small cane here and there having survived the winter.

Currants.

Black, white, and red currants succeeded these other varieties of fruit. The foliage of the red and white currant was damaged a good deal from the ravages of the currant worm. We learn that they had been treated with hellebore. The insect had been very abundant. The berries, notwithstanding the multitude of enemies, of the white and red varieties were very fine.

The Franconia.

Raspberry came next. It had suffered much from the winter. Here and there was found a cane with fine fruit.

The Gooseberry.

We found in the rows of gooseberries an almost indefinite number of hybrids, exhibiting almost every characteristic of colour, of fruit, variety of wood-growth, fruitfulness and barrenness. There were twenty-three varieties of hybrids, which claimed and received our especial attention. Mr. Saunders made us acquainted with the genealogical descent of his pets, of which he had great reason to be proud. Houghton's seedling was the female, crossed with Roaring Lion, Ashton seedling, and Warrington.

The first of those, viz., Houghton seedling crossed with Roaring Lion, which we noticed, though not the first examined, was No. 6. We may mention, once for all, that sometimes it happened that the fruit was unripe, or perhaps, during this season, some of the hybrid plants had not borne. In such cases, with some exceptions to be noticed, we altogether omitted mention of such varieties, and hence the many blanks in our enumerated list. To return to

No. 6. We found it of medium size; thin skinned; sweet; colour, red. There was no difficulty in characterizing it as *promising*, a verdict passed unanimously.

No. 11. Was larger than "American seedling," sweet, and good. The emphatic word "propagate" was unanimously recorded after our examination, which means that it is well worthy of propagation, as a serviceable variety.

No. 17. Fruit large, and promising.

No. 19 was a hybrid between Houghton seedling and Ashton seedling. Large berry, pale, very prolific; unripe when examined. Mr. Saunders afterwards forwarded samples of this sort to the President, who found it good flavoured when matured.

No. 21 was a cross between Houghton and Warrington. The berries were larger than Houghton, with the colour of Warrington, being similar in form of berry; very promising, good and sweet.

No. 24. The same parentage as the last. Large, white fruit, thin skinned, rich and sweet; *very promising*.

No. 26. Same parentage, very promising, fruit large.

No. 31. Same parentage. In shape subovate, abundant bearer, larger than Houghton seedling, red, sweet, good.

No. 33. From Houghton seedling with Warrington; has a long, reddish, large berry. Our Secretary, who always has an eye to the practical and useful, at once with some emphasis exclaimed "propagate." This expression became identified as a kind of free masonry, as the other members of the committee were ready to acquiesce when the result of the examination warranted the exclamation. The peculiar merit of No. 33 is, that it is a very late variety, and will serve to lengthen out the season of the gooseberry. The flavour is fair and good, and from partial examination when matured, the berry is all that it is here represented to be.

Black Currant.

The seedlings of the black currant were found generally not to be an improvement on the Black Naples, although it ought to be mentioned that on a second investigation, we were inclined to note *one* of these hybrids as bearing a berry over the average, and with a very decided black currant flavour. This is true of Nos. 35 and 42. The fruit of these two were large, sweet and good. They will probably prove to be superior to the Black Naples, and will, at least, be worthy of further trial.

Raspberries.

These hybrids were from the Philadelphia, crossed with Brinkle's orange No less than 49 of these varieties were carefully examined, 26 of these were worthless from not setting their fruit well, of the remainder many seemed no improvement on the Philadelphia, though varying somewhat in form and size.

No. 3. Fruit large, large grain, bright red, fair flavour, promising.

No. 4. Did not appear perfectly hardy, fair size, rather large fruit. It was observed that some canes were partially winter-killed. On further examination the ground was found to be a little damp, probably the growth had continued longer in the Autumn than usual, and contributed to this result.

No. 6. Fruit fair size, red, conical, moderately promising. It was noticed that its softness of berry was against it.

No. 7. A late variety, fair,—not ripe, but promising.

No. 9. Also a late variety, promising, berry red, did not seem perfectly hardy.

Nos. 15 and 16. Were both noted as of fair promise.

Nos. 31 and 33. Good medium sized berries, good bearers, promising.

No. 34. Late berry, very abundant bearer, large size, *very large grain*. Note, the grains separate from each other very readily, which was considered a disadvantage by the committee as affecting the value of the berry for market purposes. This berry was moderately firm.

No. 36 was an abundant fruiter, not extra large, red, fair flavour.

No. 39. Conical berry, very promising, good bearer. The flavour very like Brinckle's Orange, the berry considerable firmer than Brinckle's and begins to ripen about the 24th of July.

No. 40. High flavoured, softish, good bearer, fair size.

No. 72. This plant we found growing in Mr. Saunders' garden in town. It was very prolific, large, fine flavoured, strong grower.

No. 73. Not so good a bearer as the former, though growing near it, equally sheltered and cared for. Prolific, sweeter, fair size, good flavour.

Doolittle Blackcap crossed with Philadelphia Raspberries.

Mr. Saunders' hybrids from the Doolittle Black Cap, crossed with the Philadelphia Raspberry, are very interesting, and surprising in many respects. There is nothing so apparent as that they are PERFECT HYBRIDS, so perfect that there is no predominant feature of either parent, and yet there is such a blending of the characteristics of both parents as to prove the complete hybridization. In taste as well as in appearance this is the case. There is a remarkable blending of both parents in the flavour of the fruit of these hybrids. The growth of the plants, the fertility of some individuals, the habit of the bush, all proclaimed the respective family connection to the practised eye. It may be worthy of note, too, that while in the former class of hybrids, there were many worthless from imperfect setting of blossom and fruit, only ONE of this class could be said to be so.

No. 28. Examined. A very large proportion of these were similar in their characteristics, though firm and good sized, but rather too acid to meet with general favour. There are, however, among them some berries of great promise.

No. 52 is an enormous bearer, fruit large, fine flavoured, firm berry, sweet. In reporting on the colour of the whole of these berries, we may say once for all, that they are uniformly of a dark purple colour, sometimes of a very deep purple, especially when a little over-ripe. In form, they are intermediate between that of a large Black Cap and Philadelphia Raspberry. They are propagated by rooting from the tip; the plants are Black Cap in growth, the berries grow in clusters, similar to those of the Mammoth Cluster, but looser. The wood varies very much in colour, from pale to very dark purple. We may mention that they vary in the season of ripening as much as several weeks, a consideration not to be lost sight of by producers, seeing that the season of the raspberry is so brief. The hardiness of these hybrids is all that could be desired; all are perfectly hardy; there is not even the least sign of winter killing; they had received no protection, no extra nursing, no special care. Last winter, from its severity, was well calculated to test the hardiness of these plants. The committee are unanimously of the opinion that having stood the test of last winter in the neighbourhood of London, they would flourish much further north and west with a little care and protection. This judgment was the more readily arrived at, as these plants have had no protection whatever before or since the seed germinated.

In reference to this particular No. our Secretary emphatically remarked: "Propagate this, Gentlemen, propagate it by all means." A testimony not to be lightly received, considering the temperament and correct judgment of the speaker.

No. 55. First class, sweet, well flavoured, late.

No. 60. Late, good, sweet. Mr. Saunders, in imitation of Mr. Beadle's last exclamation, cried: "*Propagate, propagate.*"

No. 62. A like sentence was unanimously passed on this number: "Propagate, because *promising.*"

No. 63. Was superior to the last in many respects, although a little more acid.

No. 67. First class. The fiat went forth regarding it also, that it was to be propagated.

No. 69. Proved to be the Belle of the whole. The committee beg leave to direct particular attention to this plant. Our Secretary's opinion was that it was the most promising of all hitherto examined. In this opinion there was perfect unanimity. It is an immense bearer, having, in this respect, the characteristic of its parent the Philadelphia. Your committee never saw anything like it in productiveness—the berries were very large and fine in quality. Indeed, the flavour was most excellent. This variety will probably turn out a great acquisition. We think it might, with some propriety, be styled "Saunders' *ne plus ultra.*" (Scotice "it caps aa!")

No. 70. About equally good, scarcely so sweet, would suit more palates. There is little difference in other respects between the two plants.

In concluding our report on these hybrids, your committee would take the opportunity of congratulating Mr. Saunders on his marvellous success, and would rejoice that fruit cultivators have, through his hydridization, been put in possession of another variety of raspberry —a variety which immensely lengthens out its season. Members of your committee were favoured with samples of the varieties marked "late" in the foregoing report, after they had matured, and in almost every instance, they proved to be of superior merit, great size, and good flavour. Some believe that hybridization is only in its infancy, but if such results have flowed from these essays, what may we expect in the future. Whatever may transpire in the future, we are persuaded that these efforts of Mr. Saunders will gain for him a name and a fame, which will always rank among the premier hybridists of our country.

Perhaps it may not be considered an unnecessary digression for us to state, that having tasted these fruits, after being cooked, we can also testify to their singular adaptation for the table after the culinary process.

Grapes.

New Seedling Grape Vines.—The members of our Fruit Growers' Association will be partially prepared to hear a report of Mr. Saunders' Seedling Grape Vines, from the publication of certain particulars regarding them in last year's Report.

At the first blush of our examination of these seedlings we were much struck with the appearance of the foliage—its variety, its colour, its form was most interesting. Every now and again we were ready to exclaim in wonder at the (to us) new colours and forms of beauty which they presented. Judging from appearances—and we had no other criterion—we may indulge great expectations. Many of the plants were singularly thrifty, short-jointed, some showing the characteristics of both parents. One claimed our attention simply from the beauty of its foliage—a hybrid between the Concord and the . . . . . ., which would well reward its cultivation as a beautiful creeper. Were it even to turn out worthless as regards its fruit, we are still of opinion that it ought to be propagated for the singular beauty of its leaves. We trust, however, that the fruit as well as the foliage will prove an acquisition to our grape list.

Seedling Pears.

Mr. Saunders has a goodly list of seedling pears. They nearly filled two long rows. They had all the appearance of being thrifty; not being yet in bearing, it would seem to be almost premature to pronounce any judgment. We had noted several for comment, but we esteem it better to wait and let them prove themselves. By their fruits we shall yet know them. The variety of foliage and wood was as remarkable in them as in the seedling grape vines. Some seedlings from the Seckel were of themselves quite a study. Some of them bore unmistakeable marks of their parentage; others of them were, in wood and foliage, not unlike the Glout Morceau. In the language of one of the committee, "the foliage was queer, and the wood very strange."

Your committee also inspected seedlings of a younger growth and earlier stage, which

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had not yet fruited—seedlings of gooseberries and raspberries, vines, &c., many of which exhibited unmistakeable signs of vigorous growth. We trust that a rich harvest awaits Mr. Saunders' labours, and much important information and instruction to the members of our Association.

We examined seedlings from seedlings. Mr. Arnold declared that in his eyes these were the most interesting plants that we had yet seen.

A few seasons, of course, will test the utility of these plants. Some looked very promising—there is a something about a plant, just as about an animal, that you cannot doubt is a good token. Some of these seedlings from seedlings in appearance, at least, were very taking to our fancy. Probably there were not less than a thousand of these plants.

General Remarks.

Your committee believe themselves to be safe in saying that the fruit farm of Mr. Saunders in the immediate neighbourhood of London is the most extensive in the western portion of the Province of Ontario. It consists of a hundred acres under the closest fruit culture. The pear orchard received careful attention. We found over 2,300 trees, divided in the following proportions between summer, autumn and winter varieties, viz: nearly 500 summer pears, about 1,500 autumn pears, and 300 winter pears. Last winter was very trying to the pear orchard. Mr. Saunders assured us that 300 to 400 trees newly planted last year died from frozen sap blight. These blanks were replaced with fresh trees this spring.

On examination, and much to our surprise, we found that these orchards have suffered but little from fire blight. Our astonishment arose partly from the fact that fire blight has been severely felt all over the Niagara, Toronto, and Hamilton districts, and great damage from that cause has accrued to fruit growers. The trees, many of them, were in bearing. We had thus an opportunity of seeing the fruit of the Beurre Clairgeau, Belle Lucrative, Duchess D'Angouleme, Beurre D'Amanlis, Osband's Summer, Doyenne D'Eté, Tyson, Bartlett, Baron de Mello, Sheldon, Seckel, Urbaniste, Winter Nelis, Beurre Giffard, Kinsessing, Kirkland, Dearborn's Seedling, Brandywine, Beurre Diel, Louise Bonne de Jersey, Ott's Seedling, Doyenne Dillon, Fleur de Neige, Vicomte de Spoelberg, Jules Brevort, America, Flemish Beauty, &c., &c.

The soil is clay loam, and well drained, and to your Committee seemed admirably adapted for the growth of Clapp's Favourite, Beurre Clairgeau, and Beurre Diel. We noticed that the trees were doing well, little blight, good fair growth, and no crop cultivated between the rows.

Apple Orchard.

Apples can scarcely be said to be Mr. Saunders' specialty. He has indeed planted a large number of apple trees, but his apples bear no proportion to the number usually planted by orchardists. 2,500 comprise the number of his apple-trees and these embrace all the leading varieties, such as the Golden Russet, Rhode Island Greening, Baldwin, Grimes' Golden, Famuse, Northern Spy, Swayzie Pomme grise, Roxbury Russet, King of Tompkins County, Spitzenburgh, Ribston Pippin, &c., &c., and thirty or forty other varieties, for testing their respective merits. These trees had nice shaped heads, the bark was fair and clean, the whole appearance indicating good cultivation and consequent healthy action. The same may with truth be said of the 150 varieties which we saw. As we have said the bulk of the trees consisted of old well tried sorts; other sorts being represented by one, two, three, or four trees, as the case might be. The trees sent out by the Society were growing, that is almost all that can be said of them; they had nothing to boast of in their growth.

There was a row of Clapp's Favourite, very fine indeed, bearing splendid samples of fruit, which might be characterized as grand. There was not the least appearance of suffering from blight or winter. The foliage was luxuriant and beautiful, showing no indications of fire blight as yet.

Plum Orchard.

The Plum Orchard consists of about 700 trees, comprising forty-seven varieties, embracing most of the sorts cultivated. Many of the plum trees had made but poor growth, some

were dead, and many sickly-looking. Mr. Saunders accounted for this state of things in the plum orchard by saying that the ground was not drained before the trees were put in.

Planters cannot be too particular on this point. We are persuaded that draining will not dry the ground too much. It is almost proved to a demonstration by the condition of Mr. Saunders' plum orchard, that draining should in all cases precede the planting of fruit trees.

Notwithstanding the activity of the curculio there was a fair crop of plums. There were fine specimens of McLaughlin, Washington, Pond's Seedling and Lombard. Mr. Saunders had a large number of other varieties fruiting, which were only cursorily examined by your committee. We noticed among others Coe's Golden Drop, which has the excellent property of coming in late, when other varieties have almost all disappeared.

Cherry Orchard.

We had looked forward with great pleasure to an examination of the cherry orchard. There was felt, however, considerable disappointment, when we found the trees not in such good feather as we could have wished. The number of cherry-trees was over 330, comprising 35 varieties. We know of few cultivators with more varied experience than Mr. Saunders. He has spared no expense in gratifying a natural taste for fruit trees, and the choice he has made has always been after careful deliberation. A portion of the cherry orchard was in the same state as the Plum patch. The ground had not been properly drained before planting. The trees had died, and have all been replaced. If we mistake not, some of them more than once.

This was apparent from the size of the trees, exhibiting an aspect entirely different from the pear and apple orchard, which were generally regular in size, with well shaped and proportioned heads. The older trees presented a melancholy aspect, the bark having burst, as it were, calling for our utmost commiseration—pity, however, for the planter, not for the planted. We learned, for the season of cherries was past, that some varieties bore fair crops during the past season. We found that the winter severity had killed limbs here and there, and some have had whole sides destroyed from the same cause. The Reine Hortense, we observed, badly affected by the bursting of the bark, while the Elton in the immediate neighbourhood was free from this scourge The impression left on the minds of your committee on the survey of the disaster to Mr. Saunders' plum-trees, was, that the cultivator of the cherry, under such drawbacks, must certainly be a man of unwonted patience and indomitable perseverance.

Peaches.

The report of your committee on the peach orchard is as brief, as the facts are disastrous. The orchard comprised at least 100 trees—which had been planted for four years. They have never borne a single peach yet. The winter has invariably killed trees, buds and fruit. Peach culture may with propriety be said to have run its course at London and neighbourhood. We are persuaded, however, that were a straw rope to be used in protecting the trees, by gathering in the heads and saving them from the cutting winter winds, peaches would flourish even in this forbidding climate.

Vinery.

Mr. Saunders cannot be said to have succeeded with his vinery, nor has he failed. He has planted 500 vines. Clinton and Concord are the two prevailing varieties. There are not less than 350 plants altogether of these two sorts; about 100 Clinton and 250 Concord. Probably on account of the unsuitability of the soil, the better varieties of vines have not succeeded. The plants that were fruiting fruited finely; indeed, we were inclined to think that they were a magnificent crop. They did not seem to please Mr. Saunders, however. There was a portion of the vineyard composed of younger plants, which were not yet in bearing. They appeared, however, to be healthy and vigorous, and free from thrip. We noticed the *cultivation*, the cleanness of the land, abundance of care bestowed on this culture, as well as the other portions of the farm, and did not wonder at one attending to the first principles that good crops were the issue. Indeed, Mr. Saunders is to be fairly commended

for his unusual perseverance. Obstacles, drawbacks, blights, which would have overcome other men, seem only to have inspired him to go forth to combat with and conquer them. All honour to such a fruit culturist.

Protection.

Shelter, and the means of shelter, have been carefully studied by Mr. Saunders. Its advantages are too apparent to need to be insisted on. Hence Mr. Saunders has all along the front line a belt of trees planted, which subserves several important purposes—1st, for winter protection against hyperborean blasts; 2nd, against intruders, or those who but for the blind would intrude. The latter object is gained by obstructing the view of the fruit trees. Outside is an eight foot picket fence, which is a pretty formidable front of itself. Then there succeeds, two feet from the fence, an osage orange thorn hedge, which, although it does not stand the winter well, grows vigorously, and the mixed dead and living wood forms an admirable fence against interlopers. Three feet from that is the barberry, growing thriftly and doing well. At a distance of four feet is the acer dasy carpum (silver maple), which, having made fine growths, presents a fine row of trees. The next row is composed of Scotch fir and Austrian pine, planted in the following fashion :—

. . . . . .
. . . . . .
. . . . . .

We were at a loss whether to admire most the beauty of the Scotch fir, or the lovely colour and fine spray of the Austrian pine. Both were superb. The next row consists of Norway spruce, the whole making 27 feet of unsurpassed wind break. The trees are planted diagonally, already almost meeting, presenting a mass of foilage, which, for beauty and usefulness, is difficult to be excelled. This frost windbreak, as hinted at already, serves a double purpose :—It runs along the northern road, and serves to hide the view of the fruit farm from the road, a most necessray object, and it at the same time screens the trees from the sweep of the biting northern blast.

Along the west side suitable provision is also being made for future protection. Immediately west of the vinery, is a closely planted row of Norway spruce, planted three feet apart, to make a close evergreen hedge of 8 or 10 feet in height, which will serve as a protection against high winds, and even when it does not entirely serve this purpose, it will in effect sufficiently break the force of all winds, and thus prove of essential service to the vineyard and trees.

Following and bounding the apple, cherry and peach orchards, is a belt of thrifty mazzard cherry stocks, which are forming nice heads. Planted ten feet apart, they promise to make a handsome belt of beautiful trees in a very short time, and besides serving the purpose of windbreak, it is hoped that the fruit, which they will bear, will be a source of attraction to the birds, and keep them from the other cherries. Should this experiment prove successful, our friend, Mr. Saunders, will give an impetus to tree planting for shelter, which it has never heretofore had in this country.

For a short distance there is a double hedge of wild apple stocks, which are being grown as an experiment—the remainder of the boundary being fenced with a double hedge, the westerly and outer one being honey locust, and the inner one barberry, extending nearly the whole depth of the farm on that side.

Along the eastern border, the hedges are as yet only partially planted. Five or six hundred feet are planted—that nearest the northern boundary, already described, being a double fence ; the eastern row is composed of alternate plants of barberry and honey locust, the inner row being entirely of English white thorn.

Drainage.

This fruit farm is thoroughly drained with over three miles of drain tiles. We visited one of the outlets, and then only fully understood the power of thorough draining. Though it was in the driest season of the year, the drain was accomplishing its purpose. The flow, indeed, was wonderfully less than in spring or fall, but there was enough to show the utility of good under drainage. Over the whole farm there were three outlets, all built of four-inch tiles. The smaller tiles are two-inch, the mains four-inch.

Thus terminates a report, the subject-matter of which has given your committee abundant pleasure. We trust that it may be accepted by your honourable Board, that hereafter it may stand in your Reports, a testimony to the unflagging zeal of one of our most earnest, most disinterested, and most talented of our co-labourers.

All which is most respectfully submitted by your committee.

D. W. Beadle.
C. Arnold.
R. Burnet.

THE CONNECTION BETWEEN FRUIT-GROWING AND THE FARMING INTERESTS OF THE PROVINCE.

(Read at the Winter Meeting.)

Your President is in a position to know that no subjects have been prescribed for Essays to be read at the present meeting. It has occurred to him that a volunteer paper with the above caption might not be out of place, and might prove acceptable to the members present, as it might afford a peg on which to hang some useful remarks by the hearers.

That there is an intimate connection between fruit-growing and the farming interest of our own, and of the sister Provinces of our Dominion, cannot be gainsayed. The subject of fruit-growing is looming up in such large proportions that it is beginning to affect all the large productive interests of our country, and through the fostering care of the Fruit Growers' Association of Ontario, it is assuming such a shape and bulk as to interest the Government and the Parliament. This is as it should be. There is no class of persons, however, more benefited by the furtherance of fruit interests than the farmers. As yet, being almost the only producers of the staple fruits of Ontario and the States, they must be brought to the conclusion that whatever affects fruit-raising, less or more, affects themselves. On the threshold of our paper, we may be met with the oft-started difficulty that, as a general rule, farmers, as a class, have too many irons in the fire—that the rearing of cattle, the cultivation of the ground, and the rotation of crops is enough to engage the attention of any man, or any body of men. This assertion, to a certain extent, is true, and it has been truly said that one man can only carry out one business well. But there are many good reasons why farmers should plant, care for, and reap the full advantages of a good orchard. The trees are growing and bearing when he sleeps. The product of the orchard is singularly conducive to his health, and the recreation and pleasure which it affords to the mind are not to be overlooked. It is, however, on the pecuniary benefits of fruit-growing to the farming community that we would like to say a little. In New York State, especially in the more favoured sections for fruit-growing, fruits are becoming not only an interest, but an object of immense wealth. It is a low calculation, I understand, which infers that there are not less than 300,000 barrels of apples exported from the Genesee valley alone, every year. It may be easily summed up what amount would be realized on this quantity at the low estimate of a dollar and a half the barrel. Our fruit is not inferior to that of any part of New York State. In fact, we are led to believe that the Niagara district, the Hamilton, the Toronto, the Lake Erie and Lake St. Clair districts, produce fruits not a whit behind the choicest samples in New York State, or, indeed, in any part of the Union. What we require is to foster fruit-growing; recommend the best varieties, the kinds that have the most money in them, and advertise the best markets for the choice fruits. Much has been done, much remains to be done.

An objection commonly heard from farmers is the difficulty of procuring a man to prune and care for their trees. We are persuaded that the time is not far distant when the advance of fruit growing will necessitate several farmers joining to secure the services of a competent pruner. After all much depends on the care bestowed in training the trees. After a few years from the planting, trees require less and less attention. Early attention secures a good head, prevents interlacing of the branches, overcrowding of the limbs, and generally as the result good crops. The outlay necessary to secure these objects will soon pay for itself. A season's good crop, fair prices and a ready market will bring the cash into the farmer's pocket, and it is almost found money. It is within my knowledge that some tenants who occupy rented farms of one hundred acres pay their rent from the produce of their ill-attended, neglected orchard. What would be the result were proper care and cultivation given to the trees?

Farmers sometimes say, as some have said to us, trees require attention in spring, just when the farm requires attention, and in the fall when work is not to seek in securing the crops. True! The orchard work, however, ought to be done in early spring, and done by competent hands. The apple crop may be easily gathered by selling the fruit to the buyer, who himself should be ready to gather them. Let the farmer team the loaded barrels to the nearest mart or shipping place; let the purchaser be at all necessary expenses. We believe that every sack should bear its own seam, and where the farmer cannot grow fruit to make it pay, he ought to let it alone, and allow others to grow and reap the benefit. It not unfrequently happens in our latitude that the summers are warm, dry, and the cereals suffer in consequence. With a diminished crop there is probably a diminished income. Such seasons, it may be, are just those prolific in fruit. Apples may abound, grapes are luxuriant, and the deficiency from the farm may be partially made up, if not entirely covered, by the income from the abundant fruit crop.

Farmers have not yet sufficiently estimated the benefits of fruit as an article of diet. In almost every case fruit is wholesome. From the present mode of living it is especially beneficial to the farmer, and that both in winter and summer. Few articles of food are more conducive to health than dried or canned fruit. It tends to add to one's comfort, happiness, and health. In the south of France, on a parallel of latitude similar to our own, fruit constitutes a large staple of the food of the cultivator. It would be peculiarly beneficial in summer, when our temperature is so high as to render much animal food greatly prejudicial to health. An outcry is sometimes made that the best trees for planting are not known. The following kinds of apples will be found profitable for pleasure or for market, and give a continuous succession the season through:—Red Astrachan, Hubbardston's Nonsuch, King of Tompkin's County, Rhode Island Greening, Swazzie Pomme Grise, Roxburgy Russet, Gravenstein, Fall Pippin, Cayuga Redstreak, Ribston Pippin, Pomme Grise, Swaar, Norton's Melon, Snow, Golden Russet, Northern Spy, Newton Pippin, Baldwin, St. Lawrence, Esopus Spitzenburg. Such a collection will not only enable the farmer to compete wiih his fellows at the county or township shows, but if produced in sufficient quantities, would take the highest prices in the European markets. No farmer, however, need be at a loss for a list of good apples, who has the opportunity of consulting the back numbers of the Reports of the Fruit Growers' Association.

There is no good reason why pear culture should not be made to enhance the profits of the husbandman. Sir William Hamilton used to say to his students, "Gentlemen, read *non multa sed multum.*" So we would say to pear-growers, cultivate not the many varieties, but the few. If our experience is worth any consideration, we would be inclined to recommend the few following varieties for the suitable localities of the Province:—Louise Bonne de Jersey, Duchesse d'Angoulême, White and grey Doyenne, Beurre Clairgeau, Beurre d'Anjou, Grasslin, Supreme de Quimper, Doyenne du Comice, Josephine de Malines, Bartlett, Winter Nelis, Lawrence.

Fruit drying and canning have both important bearings upon fruit growers. In the United States the questions for discussion at most horticultural meetings are less or more connected with improved modes of fruit preservation. Most farmers have good cellarage, and where the cellarage is dry, and even in its temperature, fruit can be kept considerably beyond the season. Pear is an important item, and has a ready sale in the markets of Boston, New York and Philadelphia. Large prices are also to be had for the Bartlett, Beurre d'anjou and Clairgeau in Montreal and Ottawa.

There is also nothing to hinder, but a want of sufficient energy, any farmer from having his five or six acres of vineyard, which would furnish him with means of adding to the comforts of his table beyond his most fabled wishes. Grapes preserved, grapes dried, grapes from the vines are most valuable as an article of diet. Where the usages of society demand the moderate use of wine as a health preserver and invigorator of the human system, we can conceive of nothing more conducive to a manly feeling than the fact that, from his own vintage, he has derived the means of cheer and soberness.

A cultivation of fruit little thought of by the farming community, and yet very important in its connection with the farming interest, is the culture of the cranberry. There are very few farms in which there is not a swale or spring swamp, from which, with very little trouble in grubbing up the useless scrub which luxuriantly grows in our marshes, and planting a few thousand plants of the cranberry, our farmers might not raise a bountiful supply

of berries for their own table, and from which their wives might not add to their house money, by carrying with their butter to the nearest market a few bushels of this delicious fruit. Indeed we are not sure but that our professional gardeners might do something in this way, and speedily earn a competency to enable them to retire comfortably in their latter years.

We notice in the printed report of the Fruit Growers' Association, that Professor Buckland has introduced the coloured lithographs of our society into the Agricultural Report. This is as it should be.

Who can estimate the silent influence of our utilized works thus spread broadcast among our farming community? Men learn as much by the eye as they do by the ear.

We regard this as one of the best directions which our efforts can take for the quiet advancement of our fruit interests. The more we can amalgamate the agricultural and horticultural interests of our Province, the more successful will be the ultimate results of both. Let us only excite a general interest in two of the principal productive industries of the western Province, and not one of the other industries will suffer.

ROBERT BURNET.

REPORT ON FRUIT PROSPECTS, BY MR. JAMES DOUGALL, WINDSOR.

MR. SECRETARY,—Last winter was a most severe one on many kinds of fruit trees here. The old peaches are either killed entirely or badly injured. Many of the old cherries and plums are also killed or injured, and all the bearing quinces are killed to the ground. Pears have also in many cases suffered severely. The young trees in nursery, however, suffered very little, being more vigorous. What is most strange is that a great many apple trees in thrifty bearing orchards, have been killed or injured so badly that they will never recover.

There will be very little fruit here of pears, plums and cherries, and no peaches or quinces. The trees were loaded with blossoms, but I noticed that the blossoms were very small in general and weak, and at the time I did not think they would set. I think we may attribute this to the weakening influences of the two previous years of intense drought, not enough of rain falling here during the whole two years to reach the roots of the trees, causing them to succumb to the severity of last winter, which healthier trees would and did with stand with ease,

Yours, &c., J. D.

REPORT OF INJURY DONE TO GRAPE VINES AT HAMILTON, JUNE 8, 1872.

The grapes of J. B. Bagwell, as they appeared on June 8, 1872:—

		Good order.	Killed.	Injured.
21	Clinton vines 4 years planted	17	3	1
24	Concords "	20	0	4
18	Delawares "	16	0	2
6	Dianas "	0	0	6
3	Isabellas "	0	3	0
4	Israellas "	0	0	4
3	Hartfords "	2	0	1
2	Rogers 15 "	1	0	1
2	" 19 "	2	0	0
2	" 4 "	0	1	1
2	" Salem "	1	1	0
3	Iona "	1	2	0
1	Creveling "	1	0	0
91	Vines	61	10	20

REPORT OF PERMANENT SEEDLING COMMITTEE, MET AT LONDON, JULY 17, 1873.

Samples of two seedling cherries were exhibited by Mr. J. Rattenbury, sen., of Clinton, Co. Huron, one a seedling from the White Heart, a light red cherry a little below medium size, tender, juicy and sweet. The other a seedling of the Mazzard, under medium size, black, juicy, sweet and of good flavour. The President was requested to write to Mr. Rattenbury to get further information in reference to the hardihood and productiveness of the trees.

Mr. Arnold, of Paris, submitted samples of seedling raspberries, raised from seed of Hornet, crossed by Orange King, and from seed of Orange King, crossed with Hornet. No. 1, which belongs to the latter cross, is a large conical orange yellow berry, a good bearer.

REPORT OF COMMITTEE APPOINTED TO EXAMINE FRUITS AT ANNUAL MEETING IN LONDON.

A very promising seedling grape is exhibited by Mr. Dempsey, of Prince Edward County —a cross between the Hartford Prolific female and Black Hamburgh male. Bunch large and slightly shouldered, berry large, sweet, with a pleasant melting flesh ; in flesh and flavour it very much resembles the Black Hamburgh. The foliage, which is also shown, is very much like that of the Hartford.

Also a promising white grape, from the same cross. Mr. Dempsey informs us that out of a number of seedlings of this cross *five* out of every seven were white.

In view of the fact that the first grape mentioned, although grown so far east, is now fully ripe, and of so good a quality, your Committee are so favourably impressed with it, that they would recommend the Directors of the Association to appoint a Special Committee to visit the grounds of Mr. Dempsey next season, and see this grape and any other seedlings he may have in fruit, so that we may learn more of them.

Mr. Wm. Haskins, of Hamilton, has on exhibition two new seedling grapes, one of which is also a cross between the Hartford Prolific and Black Hamburgh, and is very promising. This Mr. Haskins calls seedling A. Bunch compact, above medium size, slightly shouldered ; berry of medium size, sweet, juicy, with readily melting pulp, and of fine flavour. Seedling B is a cross between the Oporto and Black Hamburgh. Bunch large, loose and heavily shouldered; berry black, scarcely medium in size, with a melting pulp and sprightly flavour. A very promising wine grape.

A number of seedling apples were shown, some of them of promising appearance, but in consequence of their unripe condition, your committee are unable to express any opinion regarding them. One exhibited by Mr. Stibard the Committee think favourably of, and would suggest the propriety of Mr. Stibard's submitting this apple again to the Seedling Committee when in perfection. Mr. Russell, of London, also exhibited a handsome seedling apple, but unripe.

By special request of the meeting your committee on the following morning examined the seedling apples of Mr. Cowherd shown in the Brantford collection at the Provincial Exhibition;—

No 1. Is a fall apple ; large greenish yellow, splashed with red in the sun, mixed with russet. Flesh fine grained, yellowish, and of good flavour.

No. 2. A handsome looking apple, medium to large, very much resembling Ribston Pippin in appearance. We think it promising, but it is not ripe enough to judge of.

No. 16. A very pretty looking winter apple, resembling Maiden's Blush. Nos. 3, 26, 21, 20, w[illegible] winter apples.

Nos. [illegible] are fall apples, which your committee do not think are equal to some of the varieties already in cultivation.

A seedling from *Snow* in an unripe state is, we think, promising, of medium size and good appearance. Also one other variety without name, resembling Ribston Pippin ; a fall apple above medium size, juicy and of good flavour.

An interesting specimen was shown of No. 19 of the crop of 1872, in an excellent state of preservation. It is a pretty dessert apple, below medium in size, of a green colour, and as far as we could judge from a sample so long kept, of good flavour. We should like to see more of this apple.

Mr. Cowherd also exhibited some ten varieties of seedling Crabs, some of them very pretty; these may prove of value in some of the colder sections of the country, where the apple will not succeed.

Mr. George Smith, of Brantford, also exhibited several varieties of seedling apples, which we should like to inspect again under more favourable conditions.

WILLIAM SAUNDERS
CHARLES ARNOLD.

SPECIAL EXPLANATORY NOTICE TO THE MEMBERS.

The Directors have to intimate that they proposed to send out the Barry Grape (Rogers' 43) in the Spring of 1874, and instructed the Secretary, by correspondence with leading nurserymen, to secure them. He was only able to find one man who would undertake to furnish the required number. Late in October, he received word from this person that, owing to the drought of the last summer, his plants were poorly grown, and that he could not conscientiously send them as agreed upon, and sent samples to the Secretary in verification of his opinion. After consultation, it was determined to issue, instead of the Barry, another of Rogers' hybrids—the Salem—a grape by some esteemed equal if not superior to the Barry. This course was made imperative from the fact that it was impossible to obtain more than two hundred plants of the Barry anywhere, and the Salem was the only one of the Rogers' Grapes that could be procured in sufficient quantity.

Those members who do not wish to receive the Salem will have the Barry sent to them as far as the number we have will allow, if they will intimate their wishes to the Secretary, on or before the 1st of March, 1874, when remitting their annual fee.

The Secretary, in distributing the Barry, will be instructed to act upon the rule, "First come, first served." In order that credit may be given to those to whom it is due, it is further proper to notice, that the gentleman who acted thus honourably with your Association was Dr. Schrœder, of Bloomington, Illinois, from whom we have received the small number of Barry which we have.

The Salem grape vines have been obtained from Mr. Hubbard, Fredonia, New York. The gooseberries sent out this Fall were procured from Graves, Selover, Willard & Co., Geneva, New York, and those that will be sent in the Spring from Mr. Arnold, Paris, Ontario.

We regret to hear from various quarters that a number of the Grimes' Golden Pippin sent out in the Spring of 1873 have died. From what has been represented us, we are inclined to believe that they were injured before they were received. Owing to the impossibility of procuring a sufficient number from any one person, they were obtained from several different sources, so that we are unable to trace whence the defective trees came. Unfortunately, our finances are in such condition that we are unable to replace those trees that failed to grow last Spring. We trust, however, notwithstanding occasional failures in the apple trees, enough will have survived to test their adaptability to the climate of the various sections of our Province.

It gives us much pleasure to learn that the pear trees, although they were obtained from very many different nurserymen, have generally lived, and made a healthy growth.

The Directors have learned that there is a wide-spread desire to make a trial of the English Filbert. In order to meet this wish, they will distribute it, in the Spring of 1875, to those members who may intimate such wish to the Secretary, on or before the 1st March, 1874.

Those who choose the Filbert will not receive from the Association any other trees in the Spring of 1875.

It is necessary that we should know, as early as the 1st March next, who desire to have the Filbert, in order that arrangements may be made to procure the requisite number of plants.

PRIZE LIST.

Permanent Prizes.

First.—An Honorary Medal to the originator of any new fruit which, having been thoroughly tested for a series of years, is found to be worthy of being placed among the fruits of its class for cultivation in Ontario.

Second.—Fifty Dollars for the best Canadian Seedling Late Winter Apple, to be at least equal to the old popular varieties now in cultivation.

Third.—Thirty Dollars for the best Canadian Seedling Harvest Apple of like merit.

Fourth.—Twenty Dollars for the best Canadian Seedling Autumn Apple of same excellence.

ANNUAL PRIZES.

Prizes for 1874.

First.—Awards may be made by the Committee on Seedling Fruits of sums *not exceeding Ten Dollars* for any seedling fruit that may be submitted to them during the year which they may deem worthy, although they may not yet be prepared to advise the Directors to bestow either of the permanent prizes. Such award shall not in any measure disqualify the exhibitor from eventually receiving, for the same fruit, one of the permanent prizes.

Second.—Five Dollars for the best Winter Seedling Apple, fruit to be grown in 1874, and exhibited at the succeeding winter meeting of the Association.

Third.—Five Dollars for the best Autumn Seedling Apple to be shown at the next Provincial Exhibition.

Fourth.—Five Dollars for the best Summer Seedling Apple, to be sent when in condition for examination to the President, Rev. R. Burnet, Hamilton, all charges prepaid, and to be by him submitted to the Committee on seedling fruits.

Fifth.—Five Dollars for the best Seedling Winter Pear, fruit grown in 1874, and exhibited at the succeeding Winter Meeting of the Association.

Sixth.—Five Dollars for the best Seedling Autumn Pear, to be shown at the Provincial Exhibition.

Seventh.—Five Dollars for the best Seedling Summer Pear, to be sent, when in condition to be examined, to the President, Rev. R. Burnet, Hamilton, carriage prepaid, for submission to the Committee on Seedling Fruits.

Eighth.—Five Dollars for the best Seedling Plum, to be sent to the President when in season.

Ninth.—Five Dollars for the best Seedling Peach, to be sent to the President when in season.

Tenth.—Five Dollars for the best Seedling Grape, of any colour, to be sent to the President, when ripe.

Eleventh.—Five Dollars for the best Seedling Strawberry, to be sent, if possible, to the Summer Meeting; if not possible, then to the President.

Twelfth.—Five Dollars for the best Seedling Raspberry, to be sent, if possible, to the Summer Meeting; but if that be impracticable, then to the President, when in season.

Thirteenth.—Five Dollars for the best Seedling Gooseberry that is not subject to mildew, whether of European or American parentage, or a cross between them; to be sent to the Summer Meeting, if possible, otherwise to the President.

Fourteenth.—Five Dollars for the best Seedling Blackberry sufficiently hardy to endure the climate of Ontario. Fruit to be sent to the President, when ripe.

Should two or more Seedlings of equal merit be shown, the prize shall be awarded to each. The Committee shall in all cases withhold the prize altogether, if they do not deem the fruit worthy.

A Seedling to which one of these annual prizes has been awarded cannot compete a second time in this class, but may compete in the class of Permanent Prizes.

A Seedling Apple which has received one of the money prizes in the class of Permanent Prizes cannot again receive a money reward, but may be offered in competition for the Honorary Medal.

Certificates of Merit.

Seedling fruits which have received any of the foregoing money prizes may be offered in competition for certificates of merit.

The Committe on Seedling Fruits will report to the Directors those fruits which they think to be worthy of a Certificate of Merit. The Directors will then make full inquiry and examination concerning the character of the fruit, including size, appearance and quality, the habit, vigour, health, hardihood and productiveness of the tree or plant, and its general adaptation to the climate of Ontario; and bestow such Certificate, if any, as they may think it worthy to receive.

A fruit which has received a Certificate of Merit may be offered in competition for the Honorary Medal.

The Honorary Medal may be given any number of times to the same person for different fruits, but only once for any one fruit.

Conditions of Competition.

Seedling fruits offered in competition for these prizes must be shown in quantities of not less than *half a dozen specimens* of each sort, if they be Apples, Pears, Plums or Peaches; if Grapes, not less than *three bunches;* if Berries, not less than *one pint*. Each sort or variety must be accompanied by a statement, signed by the person sending the fruit, setting forth the origin of the tree or plant, if known; if the origin be unknown, then so much of the history of the tree or plant yielding the fruit sent, as may be ascertained—its vigour, hardihood and productiveness, the character of the soil in which it is growing, and what, in the estimation of the sender, are the peculiar excellencies of the fruit. This rule *must be observed in all cases*, whether the fruit be shown at the meetings of the Association or sent to the President for the examination of the Committee.

DISTRIBUTION OF FRUIT TREES.

The Directors would call the attention of the members to the following announcement of the trees and plants which it is their intention to distribute to all members of the Association in the several years mentioned below.

1874

The Downing Gooseberry.—The Salem Grape.

See page 264 of this Report for explanation of the necessity for substituting the "Salem" Grape in place of the "Barry," (Rogers, No. 43.)

1875.

The Swayzie Pomme Grise Apple, and either The Goodall Pear or The Flemish Beauty Pear.

Members in sending in their annual fee to the Secretary will please to notify him which of these pear trees they prefer to have sent.

1876.

Glass' Seedling Plum.

This variety of plum was originated by Alexander Glass, of Guelph, Ont. It is of more than usual promise as a very valuable market plum. It is of large size, dark purple colour, and attractive appearance, ripens after the bulk of the plum crop is harvested, keeps a long time after being gathered, bears handling and carriage well, and, so far, has been exempt from the rot.

The tree is a strong, upright, vigorous grower, very productive, quite hardy at Guelph and Berlin, and gives promise of proving hardy generally. The trees will be grown by Mr. Glass at Guelph.

The Directors find that it wil not be possible to send any other tree with this, and feel assured that members will be well satisfied to receive one tree of such a promising Canadian seedling fruit, and one which they could not purchase for less than a dollar per tree.

1877.

NEW CANADIAN HYBRID RASPBERRIES.

Members will find in another part of this Report an account of some of the wonderful results produced by our indefatigable Hybridists, W. Saunders, of London and Charles Arnold, of Paris. Your Directors have made an arrangement with these gentlemen whereby they are enabled to announce that these interesting and very promising raspberries will be distributed among the members, for trial by them, and it is believed that those who receive them will find that they are exceedingly valuable additions to our list of small fruits.

1878.

NEW CANADIAN HYBRID GRAPE.

Believing that P. C. Dempsey, of Albury, County of Prince Edward, Ont., has produced a Hybrid grape that excels in quality any grape now in cultivation, and which ripening as early as the middle of September in that County, gives promise of ripening throughout a large part of ths Province; your Directors have entered into negotiations with Mr. Dempsey to have a sufficient number of vines grown for distribution among the members, and now announce that they expect to be able to send it out in the spring of 1878.

1879.

NEW CANADIAN HYBRID APPLE.

This apple is the product of the labours in cross-fertilization of Charles Arnold, of Paris, whose skill in this department of labour is so well known to most of our members. This apple sprung from the seed of the Northern Spy, fertilized with pollen of the Wagener and Spitzenburgh. It shows unmistakable marks of its parentage, combining many of he excellencies of all of these valuable fruits. The trees will be grown by Mr. Arnold, at Paris, and will be sent out to all who may be members at that time.

1880.

SOUVENIR DU CONGRES PEAR.

This is a new French Pear that is but recently introduced to the notice of fruit growers on this continent. It is of very large size, ripening a little before the Bartlett, and much resembling that popular variety. We shall endeavour to perfect arrangements for securing a sufficient number of the trees to enable the Board of Directors to send a tree of this splendid variety to each of the members of 1880.

REPORT ON EXOTIC AND HARDY GRAPES, &c.

BY ROBERT RUSSELL, BRANTFORD.

I have growing at present in my vinery, viz.:—

White Frontignan.—Bunch medium, but good flavour.

Chasselas Musque.—Bunch medium, but berry liable to split.

Chasselas Golden.—Splendid flavour, bunch medium but pretty.
Chasselas Rose.—Flavour medium, bunch medium, good keeper.
Madresfield Court Black Muscat.—Not yet fruited.
White Nice.—Bunch very large but poor flavour.
Black Hamburgh.—The very best, take it all and all.
Grizzly Frontignan.—Bunch medium, flavour No. 1, but last season the berries shrunk and wilted bad (vine appeared in splendid health all season), would thank any one to give me a reason.
Victoria Hamburgh.—Flavour good and fine bunch.
Black Frontignan.—Not much account, going to inarch it.
Bowood Muscat.—Flavour good, large berries but shy setter.
Duchess of Buccleuch.—Very good flavour, but rather shy setter. Don't think that it will realize all that is said about it.
Muscat Cannon Hall.—Fine berry, good flavour, shy setter.
Muscat of Alexandria.—For a cold vinery, not to be depended on.
Muscat Hamburgh.—Flavour No. 1, bunch a little loose.

In regard to open air grapes, some of them I have succeeded very well with, such as the
Concord.—One of the best for this locality.
Delaware.—Answers well, bunch small but good flavour.
Isabella.—Good bearer, but altogether too late.
Sweet Water.—Did splendid when the vines were 3, 4, 5 and 6 years old, but since have not done near so well.
Hartford Prolific.—Some seasons done well.
Rebecca.—Not to be depended on, too tender.

Have tried a few of Mr. Roger's Hybrids, but have not succeeded well in starting them, but going to try again.

Now for a few words in regard to that excellent fruit the *plum*, and its great enemy the Little Turk or Curculio.

I cultivate the Yellow Magnum Bonum, Duane's Purple, Bolmer's Washington, Bradshaw and Imperial Gage, Pond's Seedling and Purple Magnum Bonum, which are all doing well now, thanks to the information received, I think from the report of 1867.

My expectations when I first beheld them all covered with blossoms, and after the fruit, were high indeed, but must say they were like the plums to be brought very low—being at the time a novice at growing fruit. However, I thought if this is growing fruit, there is not much pleasure in eating it. Having made up my mind not to be discouraged, after some inquiries as to the cause, I soon found out what it was like, also its name. Now as to the jarring of the trees, I must say that my success was small indeed, taking into account the havoc they had made. On examining the fallen plums I found a small insect or worm in the most of them, so I came to the conclusion if I could not catch the old ones, I would the young ones, leaving the old ones to die the death of Jenkins' hen for the want of breath. I, therefore made a contract with my family that for each quart of fallen plums, and also the plums on the trees that had the Turk's mark, by bringing them to me I would pay them 5c per quart. No doubt I paid attention to them by burning them entirely up. Now I have the pleasure to say that the sign of a Curculio is a rare occurrence on my premises now a days. It is my opinion that if this was carried out to the letter of the law, the place that knows them now would soon know them no more.

REPORT OF STRAWBERRIES SHIPPED FROM OAKVILLE.

OAKVILLE, Nov. 27, 1873.

DEAR SIR,—Having noticed in last year's Report of the Fruit Growers' Association that there was no return or report from Oakville of the Strawberries grown there, I beg to send you the following, thinking it may interest members and others:—

Total of cases shipped from Oakville, 2,682, or 144,828 quarts. The principal growers are:—

Mr. Robertson, who raised off		$4\frac{1}{2}$	acres, old and new,	22,000	quarts.
Mr. Shelley	"	6	"	17,000	"
Messrs. Jones & Lackie	"	$4\frac{1}{2}$	"	15,000	"
Mr. W. Martin	"	4	"	14,017	"
Mr. M. Phelan	"	$3\frac{3}{4}$	"	12,000	"
Mr. Baker	"	4	"	6,048	"

Yours truly,

ARTHUR L. F. BRYMER.

D. W. Beadle, Esq.,
St. Catharines.

LIST OF THE CONTRIBUTORS AND THEIR CONTRIBUTIONS TO THE EXHIBITION OF THE AMERICAN POMOLOGICAL SOCIETY, HELD AT BOSTON, ON THE 10TH, 11TH, AND 12TH OF SEPTEMBER, 1873.

A. M. Smith, of Drummondville and Grimsby, sent in 22 varieties of pears, 38 varieties of apples, 4 varieties of crabs, a large assortment of peaches and other fruits. Charles Woolverton also contributed.

R. E. Hammill, of Ancaster, sent in plums, pears and apples and crabs. Those contributing were John Hyslop, John Cruickshank, Fred. Shaver, Daniel Shaver, M. J. Olmstead, W. E. Garner, S. N. Olmstead, W. B. Garner, Edward Armstrong, William Hardy, J. Trotman, Allen Smith, A. J. Swaizzie, John Robertson, Charles Phillips, Charles E. Whitcombe, Eyre Thuresson, Thos. Bauslaugh, John McMillan, George Thomson, John Curry.

John B. Osborne, Beamsville, sent 8 varieties of grapes, several varieties of apples, 5 varieties of pears, seedling peach, from Royal Kensington, and $1\frac{1}{2}$ dozen almonds.

James Hyslop, Ancaster Township, sent in 10 varieties of apples, pears and crabs. Moore and Kitchen helped.

Charles Meston, of Hamilton, 5 varieties of apples.

D. Nichol, of Kingston, varieties of apples.

Charles Arnold, of Paris, was a very large contributor, and took much pains to make the collection complete. He sent in a large variety of rare apples, pears, grapes and plums. His coadjutors were William A. Smith, Paris Road; C. Whitlaw, Paris; N. Hamilton, J. W. Acres, John Arnold and Henry Hatt.

Mr. Arnold also sent 18 varieties of seedling apples, which were brought under the attention of the Seedling Committee appointed by the Pomological Society.

They were all from seed of the Northern Spy, crossed with pollen from the Wagener and Spitzenburg.

A. J. Faulds, Walkerton, sent in apples, plums, crab and seedling apples. His assistants were Wm. Rowan, Rev. M. Moffat, William Lamb.

W. H. Brooking, Ancaster Township, sent in 21 varieties of apples, 2 seedling apples, called the Wentworth Seedling and Ancaster Seedling, a variety of plums, 10 varieties of pears, and took much trouble and pains to forward the views of the Association.

Beadle and Buchanan, St. Catharines, sent 43 varieties of apples, some of them rare varieties, 24 varieties of pears, good specimens, and some of them not otherwise to be had; 42 varieties of hardy grapes, including common sorts, Rogers' and Underhill's varieties.

T. H. Graydon contributed a large number of choice varieties of grapes.

W. H. Reid sent his seedling grapes.

Geo. B. Wilson got up the collection from R. N. Ball and S. J. J. Brown, of Niagara; Gage Miller, Wm. Longhurst, and J. A. Wilson, of Virgil; R. Niven, Wm. J. Parnall, Seymour Parnall, and W. H. Nelles, of Grantham; and Mr. Bowman, of Harrisburgh.

A. M. Ross, Goderich, sent a box of splendid plums. The Victoria and Pond's seedling from A. Watson; and the McLaughlin from J. Brophy.

George Elliott, Guelph, sent 14 distinct varieties of plums, nicely and carefully packed. They carried almost without a bruise. David Allan, Wm. Alexander, Thos. Halliday, Charles Davidson, And. Armstrong, and Alex. Taylor were contributors. Alexander Glass's seedling plum arrived in good condition.

William Sanderson sent 5 baskets of apples, pears, grapes, &c. We regret we cannot give the names of our friends at Brantford who aided Mr. Sanderson. The contributors' names were written on the address on the baskets; amid the haste in getting the fruit ready for Boston, the names of the gentlemen contributing were forgotten to be copied. A. Rainey contribute .

James Dougall, Windsor, sent a large basket of pears, a large number of which are only cultivated by himself. A seedling grape, which was submitted to the Seedling Committee of the Pomological Society. A few varieties of apples not usually cultivated. The sum total was about 70 varieties of pears. Among the apples, Garden Royal, Fenouliet Beausoleli, and Scarlet Nonpareil.

W. Mackenzie Ross, New Rossford, Chatham, 25 varieties of apples, and a seedling of Mr. Ross's No. 1. Alex. McDougall, Kent, Geo. E. Tate, Alexander Dolson, James Higgins, David Wilsyn, E. Smith, Jas. Smith, Michael McGavin were his coadjutors.

Jonas Neff sent some splendid samples of apples. William Faris, South Wainfleet, sent two varieties of apples.

D. Hammond Sheridan sent 4 varieties of seedling apples, of large size and very fine samples.

William Saunders, London, sent some magnificent samples of plums, grapes, apples and pears. He took immense trouble, and contributed much to the successful issue at Boston.

Simon Roy, Berlin, sent 33 varieties of plums, and made every effort to make the Association's Exhibition at Boston a success.

A. W. Taylor, of Hamilton, sent 2 varieties of apples.

Warren Holton, of Hamilton, sent in pears and apples.

John Freed sent in pears and apples.

Rev. R. Burnet, 64 varieties of pears.

REPORT ON SEEDLING FRUITS FORWARDED TO PRESIDENT OF FRUIT GROWERS' ASSOCIATION.

The following members of the Association have sent in fruits for the purpose of being submitted to the Seedling Fruit Committee, viz:—

William Saunders, London, samples of his No. 55 hybrid raspberry (Doolittle Black Cap with Philadelphia) of his Nos. 34 and 39. These latter are both crosses between Philadelphia male and Brinckle's Orange female. 39 resembles Brinckle's Orange somewhat in shape. 34 is unlike either of the parents, but inclines to the conical form. They are both very heavy bearers.

Isaac Rattenbury, senior, Clinton, Huron, sent in three varieties of cherries, which were examined by Seedling Committee, and reported on. (See Report.) I. Rattenbury says the trees are perfectly hardy. The last variety sent was tough-skinned. Keeps for weeks after it is gathered. The tree is prolific; the fruit growing in handfuls. The winter does not injure a single bough.

A sample of seedling peach was also sent, but they were rather inferior fruit.

W. Haskins, of Hamilton, forwarded to the annual meeting a seedling grape, from the Hartford Prolific crossed with Black Hamburgh. This was the first fruit; four years from the seed. Is as early as the Hartford in a similar situation. (See Report.)

Also, a "Wine Seedling," from the Oporto, crossed with the Black Hamburgh. The vine on which this grape grew was six years old, and this was its second year of bearing.

D. Nicol, of Kingston Nurseries, sent in a sample of seedling apple, well adapted, he thinks, for central Canada. Ripe about middle of August, and beginning of September. This is a promising seedling.

J. H. Williams sent in a splendid specimen of accidental seedling grape. Owing to J. H. Williams not sending his post office, it has been found impossible to communicate with him.

J. D. Roberts, Cobourg, forwarded No. 1 and No. 2 seedling apples. No. 1 of poor quality, large core. No. 2 somewhat better, but not valuable.

P. Pennock, Elgin, Ont., sent in three winter varieties of seedling apples. They cannot

compare favourably with other samples sent to the committee. The small white apple has a good flavour.

G. G. Hamilton. Ailsa Craig, 3 seedling apples: No 1 Red, raised by John McEwan.
No 2 Yellow do do.
No 3 Red do Alex. Henderson.

These are fine, large, showy fruit, but not equal to well known varieties ripening at the same time with them.

Charles Arnold, Paris, sent Nos. 1, 2, 3, 4 and 5 seedling apples. No. 5 was fully ripe when received. It has been pronounced by competent judges a fine dessert apple. The other varieties are being kept for trial in their season.

Levi Turney, Colborne, forwarded a large, first class baking seedling apple. The tree, on which it grew, is over 70 years old.

Col. McGill, Oshawa, forwarded some seedling raspberries—highly flavoured, large berry, but a little soft.

From D. Hammond:

APPLE NO. ONE.

Fruit large, roundish, slightly conical; skin, thin, smooth, yellow, striped and splashed with pale and dark red on the sunny side; stalk 1½ inches long, slender, set in a deep rather broad, cavity; calyx small, closed, set in a basin of moderate depth; flesh white, tender, juicy, sprightly, subacid; very good, core small. Ripe middle of October.

APPLE NO. TWO.

Fruit large, globular, a little flattened; skin, yellow overspread with light and dark red stripes; stalk short; calyx small, closed, in a shallow corrugated basin; flesh pale yellow, mild, pleasant subacid; core large.

APPLE NO. THREE.

Fruit large, roundish, conical; skin yellow, splashed and dotted with red deepening in the sun; stalk short and stout in a narrow irregular cavity; flesh white, moderately juicy, very mild, subacid, almost sweet; core, medium or rather large.

To Revd. Mr. BURNET.

DEAR SIR,—Your note with the apples came to me when I was exceedingly busy with my fall delivery of trees. They were put aside and overlooked until to-day. I have just made the above short descriptions of each as they now appear to me. No. 2 was over ripe, and they all I believe were past their best state. No. 1 appears to me to be the best and well worthy of further notice. Hoping the above may be of some service and begging you to excuse the delay.

I am very truly, Yours,
W. HOLTON.

Saturday, 25th October, 1873.

FRUIT TREES *VERSUS* TREE AGENTS.

(Written for the Annual Report.)

We are strongly impressed with the conviction that a mine of wealth—a mine as yet but very imperfectly developed—lies at the door of almost every one of our Canadian farmers, in the cultivation of fruits, more especially apples and pears. We still find many timid and over-cautious people who are unwilling to set out orchards through a fear of the market getting overstocked; but the great majority of our farmers are now being awakened to a full sense of the importance attaching to this matter, and are taking immediate steps to remedy

the supineness which has only too long held possession of them. The danger to be apprehended from a "glut" in the market—especially of choice specimens—is very remote indeed, so long as our wealth and city populations continue to increase at their present ratio, and the Atlantic remains navigable to our steamers. The reception accorded the "Beaver-Brand" in the Mother Country should be enough to dispel all fears on this head, even were no other market open to us. Let our farmers produce a superior article—which can only be done by careful planting of the best varieties, and afterwards giving them generous treatment—and we vouch for it, that the demand will at all times be greater than the supply, and the prices realized be fifty per cent. more remunerative than from any other crop. Of course, bad varieties, and good varieties badly grown, will ever remain a "drug" in the market—home or foreign. We are pleased to find our Canadian farmers awakening to a full sense of the importance of fruit culture. Too long, and by too many, has it been looked upon as a luxury to be indulged in only by those farmers and others in the enjoyment of "easy circumstances," and altogether beyond the reach of the struggling farmer, or of those whose sole object is a pecuniary one. Every day is making it more apparent that this is an erroneous and very mistaken idea. It is urged that the land occupied by young fruit trees is practically lost for some four or five years, until they come into a bearing state, and that for two or three years more they will barely pay current expenses. This is another mistake, as there is no good reason why ground set out with fruit trees should not be employed to raise other crops until the trees come into full bearing, and be all the better for the cultivation necessary for their production; always provided that due care is taken to return to the soil, by proper fertilizers, what is being in the meantime abstracted from it.

There are indirect ways in which the cultivation of fruits pay, although in a manner not generally recognized. The influence exerted by fruit culture upon the youth of our rural districts—who, unfortunately, are only too much dissatisfied with the routine and monotony of ordinary farm life—cannot be over-estimated. It is an influence not to be determined by dollars and cents, but which is, nevertheless, inestimable. And when some of our agricultural friends wish to part with their farms, either by letting or selling, the advantage of having a well stocked fruit garden on them will soon become apparent. Of course, a great deal will depend upon the judicious selection of varieties and the health and vigour of the trees. And as thrifty young trees of the best varieties cost no more when obtained from the proper source than do indifferent varieties of forced, unripe stuff, we cannot help asking how much longer will men, men who are intelligent and shrewd business men in every other respect, allow themselves to be made the dupes of Yankee speculators, whose only object is to obtain their "dimes," irrespective of the value rendered, who are totally irresponsible, having no stake or interest in the country which can be affected by their dealings, and who most probably will never be seen or heard of after once the purchase is completed. What prospect can there be of obtaining a really genuine article from such parties, and what remedy is there for the victim when such is not obtained? The very fact of their being absolutely irresponsible renders them utterly negligent, while the absence of any remedy or protection simply offers an inducement to unscrupulous characters to defraud many of our too confiding farmers. We do not by any means include *all* the so-called "tree agents" in this category. Far from it; as it is well known there are many upright, honourable men amongst them, men who would scorn to do a mean or dishonourable act; and we quite mistake if these very men will not be the first to join us in denouncing those *confrères* whose sole desire is to take advantage of the carelessness or ignorance of purchasers. Nor are these remarks intended to apply to parties directly representing particular "firms," who assume, or are more or less responsible for their acts—and who, of course, have the same right to send out their representatives as any other branch of commerce—but are intended solely to apply to those unprincipled men who do not obtain their trees from the parties they pretend to represent, but furnish inferior trees, or what is worse still, inferior varieties, or varieties not true to name, the prices charged being the same—often more—as the best trees, of the very best sorts, could be had for, if procured from some respectable Canadian nursery. While the after consequences can scarcely be put down as peculiarly agreeable; when, after years of patient care and good culture, the trees arriving at the bearing state are found to be utterly worthless, not only is there the incalculable pecuniary loss, but the chagrin and disappointment of finding that, after years of watchfulness, your trees are at best but fit for grafting other and better sorts upon. It is claimed for these parties that they have been productive of good, that, by sheer *importunity*

and *effrontery*, they have induced many to make purchases who, it is more than probable, would not have done so. Granted; but the good done is entirely of a negative character; and it is a question if they have in those very cases not done more harm by supplying indifferent and worthless stuff, thereby causing many to desist from planting who otherwise would have done so had their friend's or neighbour's venture turned out successful.

In selecting and purchasing fruit trees of any description, it is of the first importance to get the best, and the sorts most suitable to the peculiar locality. We don't believe the best results are likely to be obtained from young trees which have been raised in some mild section of the United States and transferred from thence to the cold, bleak regions of some of our own northerly counties. We would rather not be responsible for the results—more especially when sorts are employed which, through climatic reasons, are wholly unsuitable. And yet this is what is taking place continuously. Every section of the country is being overrun twice a-year by gentry whose constitutional element is evidently "brass," and whose educational training has been so shaped as to render them wholly incapable of understanding a simple answer when it assumes the form of "no," but who are sufficiently conversant with that portion of natural history known as human nature, as to have at all times on hand a ready and an inexhaustible supply of "soft sawder;" and so high is their appreciation of this, that it is generally applied *ad libitum*. The successful results arising from this application is seen each spring and fall in the dissemination all over the country of thousands of fruit trees which could be had equally cheap, and immeasurably superior, almost at their own door. In almost every town of any pretension all over the Dominion, the leading sorts of apples and pears are raised, and can readily be obtained, with the incalculable advantage of having been tried and found suitable to the particular locality, while, dotted over the country, within easy access, are many eminent nurseries, at which everything adapted to our climate which is worthy of cultivation may be obtained, at prices which will compare favourably with our smart cousins across the line. With the agents under notice, it is a favourite, and to many, unanswerable argument, that the bulk of fruit trees sold as Canadian have in reality been raised in the United States. That, in the ordinary course of business, any nursery establishment may have an unprecedented "run" on a particular age or variety of tree, and that to fill existing orders they may be obliged to obtain them whence they can, is no more than is daily happening in every other branch of business. When such and similar cases do arise, we may rest assured that every necessary precaution will be taken to obtain the very best to be had from the proper source, the "trade," in all cases, having facilities quite unknown to private individuals. To say that this occurs frequently, and as a matter of course, is simply to state what is manifestly untrue; and to prove this, we have only to remind our readers of the difference in the cost of labour in the United States as compared with Canada, besides the additional expense of freight and duty, which amounts to no inconsiderable item. With the increasing interest now taken in fruit culture, we hope this portion—the foundation upon which all success or failure depends—will receive a degree of attention from intending purchasers commensurate with its merits. To those purchasers our advice is to deal only with some one of our respectable Canadian nurserymen—there is plenty of choice—who have a name and character to lose, and whose future prospects are dependent upon their supplying a genuine article, instead of patronizing strangers, whose commodities have been frequently found to be dear as a gift—a form, bye-the-bye, they are never found to take. In our opinion, Canadian nurserymen are far from blameless in this matter; to us there is an evident supineness, a want of "push," anything but creditable to them. While we are being pestered bi-annually by agents who hail from all parts of "Yankeedom," such a thing as the representative of a Canadian firm is a *rara avis*.

JOHN M. BOTHWELL.

REPORT OF THE DELEGATION TO BOSTON.

To the Directors of the Fruit Growers' Association of Ontario.

GENTLEMEN,—By your appointment we were delegated from your Asosciation to the meeting of the Pomological Society of the United States, at Boston, on the 10th, 11th, and 12th September. It is befitting that we should give you an epitome of what was seen, said, and done for the furtherance of your views as Canadian fruit growers. The members of your

delegation were appointed a Committee to collect samples of the fruits of our Province. A large amount of correspondence, some travel, and a deal of trouble and work were involved in the undertaking; pains and labour which were cheerfully undertaken by a large number of your Society's members, and by which alone could the objects contemplated have been accomplished. Elsewhere the names of prominent collectors and contributors are fully acknowledged. The entire collection reached Boston in good condition, and, what was unexpected, in good time, the express agency doing everything within their power to forward the packages.

Our Secretary took considerable trouble in announcing the objects of the Pomological Society, and issued the following circular to prominent members, soliciting their assistance and co-operation:—

"DEAR SIR.—The American Pomological Society—an Association formed by fruit growers from the United States and Canada, and therefore an International Society—proposes to celebrate the twenty-fifth anniversary of its existence, by an unusually attractive meeting, and large display of fruits. The Fruit Growers' Association of Ontario at its last meeting voted the sum of one hundred dollars, which has been increased by a grant of two hundred dollars from the Lieutenant Governor in Council, on the recommendation of the Hon. Commissioner of Agriculture, for the purpose of defraying the expense of sending a collection of fruits of Ontario to that meeting. The meeting will be held at the City of Boston, in the Hall of the Massachusetts Horticultural Society, on *Wednesday, September 10th*, 1873, at 10 o'clock A. M., and continue for three days.

"The members of this Association who were present at the last meeting, were very desirous that Ontario should be represented at this Exhibition, not only by her men who take an interest in fruit culture, but also by a full display of her fruits. They felt that the fruits of Ontario ought to be placed side by side with the best that North America can produce, believing that they can hold an honourable place even in such a great Fruit Exposition.

"In carrying out the trust thus committed to them, the Directors have instructed me to ask you if you are willing to visit the principal fruit growers of your vicinity, and ascertain what specimens of fruit can be obtained of Apples, Pears, Plums, Peaches, and Grapes; also of Seedling Apples, Pears, Plums, Peaches and Grapes; and induce the growers of the fruit to care for it, by proper thinning out where it is needed, &c., so that the fruit samples may be well developed, and communicate the result of your enquiries to the Secretary. Also if you will be willing to undertake the trouble of having these specimens gathered, three of each variety, each one carefully wrapped in paper, and then all carefully packed, so that they cannot shake in the box or barrel, and sent to our President, Rev. R. Burnet, Hamilton, by express, in time to reach him not later than the second day of September next. The funds at the disposal of the Directors for this purpose do not admit of any compensation being given you for this trouble, but the express charges on the fruit will be paid by the President on its arrival in Hamilton, and any necessary disbursements made by you will be refunded.

"Each person so contributing fruit should be named by you, with a list of the samples sent from him, so that due credit may be given to each contributor in the Report which the Directors will make, and both the person furnishing the samples, and the section of the Province from which they came, will in this way receive full acknowledgment for whatever they send.

"You will not need to send more than three specimens of each variety of Apple, Pear, Plum, Grape, etc., but you should obtain specimens from different persons, and send the three best you can select from all that are offered you.

"Please to have the kindness to reply to this circular as soon as possible, and if you cannot spare the time to attend to it, have the goodness to mention the name of some one in your locality who can devote the requisite time, and who would feel an interest in this matter.

"The silver medal of the American Pomological Society and fifty dollars are offered to the State, Province, or Society, which shall exhibit the largest and best collection of Apples, correctly named: and a like prize for a similar collection both of Pears, Plums, Peaches and Grapes.

"We believe Ontario ought to carry off one or more of these prizes, and that such a result would do much towards turning attention to the fruit products of this Province.

"Please give the Association then such help as you can, and if we fail—we fail. But let us each do what we can, and we will not fail. Try then; please stir up the fruit men to thin

out their fruit at once, and prepare for the contest. Send at the above mentioned time, to the President, the best you can select—from these the cream will be chosen, and Ontario will win.

"Your obedient servant,

"D. W. BEADLE,

"St. Catharines, July 25th, 1873. "*Secretary.*"

The response was a noble one—from Goderich, Chatham, London, Paris, Guelph, Hamilton, St. Catharines, Niagara, Port Credit, and Kingston, contributions poured in, and were duly contributed.

At Boston the expectations of your delegates were more than realized. It was the grandest exhibition of fruits ever seen, and the greatest gathering of eminent horticulturists ever held in the United States. It was the fourteenth session, and the quarter centennial celebration of the American Pomological Society. In connection with the fruit exhibition of the American Pomological Society, the Massachusetts Horticultural Society held its annual Floral Exhibition in the Music Hall, of most rare and beautiful exotics.

The chief contributors of the London district were as follows:—W. Saunders, pears, plums, apples, crabs; Dr. W. Woodruff magnificent specimens of plums, of many of the leading varieties; Dr. V. A. Brown, some very choice pears and plums; W. Birrell, many varieties of apples, also some pears; E. West, a number of very fine pears and apples. Henry Taylor, some excellent pears and a few apples; Wm. Barker, pears, plums and apples; including Grimes' Golden; ——Waddel, very fine specimens of Belle Lucrative and Flemish Beauty pears. Dr. Francis, of Delaware, pears and apples; John Williams, of London, good specimens of Flemish Beauty; G. Watson, apples and pears. George Birrell; some very fine apples.

All those called upon contributed most willingly, and with many good wishes for our success. Many other members of the Society and lovers of fruit, would have aided us just as willingly, had there been time to call upon them. As it was, the fruit brought together filled five half-barrels in which they were carefully packed, each wrapped separately in paper, and with paper shavings between the different layers. On the day appointed, these packages were forwarded to our worthy President, and by him forwarded with the other contributions by express to Boston. The large number of packages got together, some thirty-eight in all, taxed the carrying powers of the express company, and grave doubts were entertained of their ability to deliver them all in Boston in good time. It gave us much pleasure and no little relief, to find when we reached the place of meeting on Tuesday morning, that all our barrels, boxes, &c., were on hand in the building awaiting our disposal. The only thing which in any way marred our pleasure, was an intimation to the the effect that our esteemed friend and fellow delegate, Mr. James Dougall, would be prevented, in consequence of illness in his family, from being present with us. These untoward circumstances at home did not, however, prevent him from doing his utmost to aid us in the undertaking, by contributing from his own and neighbouring collections, a number of very choice pears, &c., &c.

Now began the tug of war. On every hand we were surrounded by competitors in all departments—all most good-naturedly greeting and welcoming us to this great gathering, while, at the same time, each one was anxious for the success of his own particular State.

Nebraska had spent a large sum of money and much labour in bringing her collection to its greatest possible state of perfection, and every precaution had been taken to preserve the fruit from injury during the long journey from the so-called "Great American Desert" to Boston. A special car had been built for this purpose, and some of her leading agriculturists, along with the Governor of the State, sent to represent her interests. Kansas, also, had made great efforts to hold the position she had so well won at the previous meeting (two years before) in Richmond, where she carried the palm over all others. California and Utah were also represented, as well as nearly all the Middle, Western and Northern States, as well as some of the Southern ones.

The Committee of Arrangements treated us very handsomely, giving us what we considered as *the place of honour* in the Hall, viz., the head and forward half of the large centre table, which was about 60 feet long, by 12 or 14 feet wide, Nebraska occupying the lower half; so here, on entering the main hall, the first thing that struck the visitors' eye was the display from Canada—of the Ontari Fruit Growers' Association. By dint of many hours

of toilsome and unremitting labour, in which we were ably assisted by the ladies and other helpers in our party, and also by Mr. — Gibb, of Abbotsford, Quebec, who very kindly placed his time entirely at our disposal until our arrangements were completed. Some of our choicest specimens had been too much damaged in transit to admit of their being shown; still, when we overlooked our entire stock, we had so much to select from—thanks to our many kind contributors—that our display, when completed, was truly magnificent. At the head of our table, as visitors entered the room, fifty varieties of the choicest plums first greeted the eye. In this department no other collection came near us. Our plums astonished almost every one. Next, fifty varieties of grapes, arranged on plates stretching across the whole width of the table. Next, the peaches, which were very fine, and most of which had been contributed by our esteemed friend and former Director, A. M. Smith, of Grimsby—fifteen varieties in all. Then followed a truly superb collection of pears, embracing one hundred and twenty-two sorts, together with a beautiful private collection of our President's, including one hundred and ten varieties; and last, but not least, our valuable and most creditable collection of apples, numbering, in all, one hundred and forty kinds.

On Wednesday morning, before we had fully completed our arrangements, the hall was thrown open to the public, and soon the passages were crowded with deeply-interested spectators. Notwithstanding the fact that we had large placards, on which Canada's fair name was duly displayed throughout our collection, as well as that of "The Ontario Fruit Growers' Association," here, there and everywhere, still we met with many such remarks as the following:—"Is this the California table?" "These fruits are from California, aren't they?" And when told that they were all from Canada, eyes were opened wider than before, and the greatest astonishment expressed, and sometimes doubts expressed as to their being grown in the open air.

Nebraska had the *best* display of apples, consisting of 190 named varieties, besides a number unnamed. Nebraska also exhibited a few varieties of pears.

Kansas brought a *very fine* collection of apples, second only to Nebraska, also 20 varieties of pears, 5 varieties grapes, and specimens of the fruit of the Osage orange.

Connecticut had less than half the display which Canada produced. About 100 varieties pears, 80 or 90 apples, 10 varieties of grapes, and several sorts of cranberries.

Ohio's display consisted of 100 varieties of apples.

Georgia exhibited 12 or 14 varieties of pears, among which we noticed some unusually fine Seckel, and very large specimens of Duchess d' Angouleme.

Virginia, 12 to 15 varieties of apples, among which were immense samples of Mammoth Pippin, 25 pears, including enormous Seckel and Duchess, also five varieties of figs grown in open air.

District of Columbia, from 70 to 80 varieties of pears, and 3 sorts of peaches.

California exhibited 12 varieties of grapes grown in the open air, among which we observed five bunches of Black Hamburgh and Muscat of Alexandria, one dish of sweet green oranges, one plate green olives, about 22 varieties of pears of immense size, among them were Seckel, Vicar, Duchess, Easter Beurre, Beurre Clairgeau and Belle Angevine; 44 varieties apples, among which were very fine specimens of Spitzenburgh, Wagener, Greening, and Northern Spy, also several varieties of lemons of enormous size, and specimens of Shaddocks, an immensely large variety of the orange, but of inferior quality, with a plate of Pomegranates.

Mr. Clapp, of Dorchester, Mass., exhibited a magnificent plate of his Clapp's favourite pear, with samples of 86 other varieties of seedling pears. His No. 83 was a very handsome pear—No. 37, a seedling of Beurre Bosc, was not unlike the Beurre Clairgeau in form and colour, but his No. 33, as far as appearance goes, carries the palm. It is of a lovely pear shape, a bright colour, and ripens with the Clapp's Favourite; it seemed to be inclined, however, to rot at the core. No. 117 was also a handsome pear, not unlike the Vicar in form. No. 22 was a large and very beautiful pear. No. 111 not so handsome in form, but ruddy and of good size. No. 55 resembled Marie Louise in form and size. Besides those mentioned there were many others of promise. We anticipate with great interest the appearance of the report of the Committee appointed to examine these seedling fruits.

John B. Mann, or Moore (I don't know which), of Massachusetts, had on exhibition 55 new seedling grapes, many of them much resembling the Concord, and some of them very handsome. No. 1 is a large black grape, which claims to be 10 days earlier than the Hartford Prolific. If it is as good as it looks it will be a valuable acquisition.

Missisippi exhibited 8 varieties of green oranges attached to the branches on which they had grown.

Utah had about 40 varieties of apples and about 20 of pears; none, however, of any special interest; some plates of peaches and plums were also shown from that distant region, but they were both in a very bad state of preservation.

Iowa had 125 varieties of apples.

Delaware was *first* in peaches, having about 30 varieties, some of which were very large and handsome; also about 40 varieties of pears, among which we observed very large Sheldon, Bartlett, Duchess, Beurre d' Anjou and Seckel.

Indiana had rather a meagre display; about 14 kinds of apples, 10 of pears and 6 of peaches.

Wisconsin—about 75 varieties of apples and 13 varieties of pears.

Michigan showed some bottled fruits, plums, peaches, red and white raspberries, strawberries and figs, also 9 plates of peaches, consisting of not more than two or three varieties, and two large plates of Delaware grapes. Besides this, Michigan had 16 varieties grapes, 11 of plums, and about 25 of pears, and 75 of apples.

Illinois was very poorly represented in one corner by about half-a-dozen varieties of pears and one variety of apple.

Vermont made a very good display, consisting of 117 varieties of apples, 26 of pears, and 20 of crabs.

New Hampshire showed only 8 varieties of apples, 22 of pears, and 16 of grapes.

Connecticut had on exhibition from 70 to 80 varieties of pears.

Among the private collections entered for competition, that of Ellwanger & Barry, of Rochester, demands first notice. It consisted of varieties of pears, being a most complete collection of the rarer as well as the standard sorts, and attracted general attention from their great beauty. Almost every specimen was perfect in form, well coloured, and in an admirable state of preservation. It was in all respects a first-class collection, and well deserved the award made to it of a silver medal and $50. Among the newer varieties which, as far as appearance went, impressed our minds most favourably, were the following:—*St. Crispin*, a magnificent-looking pear; *Adams*, very handsome; *General Canrobert*, large, and much like Vicar; *Black Worcester*, a large Winter sort; *Horton*, a beautiful-looking Fall pear; *Lieutenant Poiderin*, a late Fall pear, not unlike Duchess, *Niles*, a handsome pear, something like the Sheldon; *Therese Appert*, very like Beurre Clairgeau; *Hericarte de Thury*, a handsome Winter variety, and of fair size; *Loriol de Ramay*, of Vicar shape, a fine Fall pear; *Madame Andre Leroy*, a handsome Winter pear; *Hebe*, ripens in early Winter—resembles Beurre Clairgeau; *Schenck*, a beautiful Fall pear; *Souvenir de Congres*, a very large early Fall fruit; *Lodge*, a handsome russetty Fall fruit; *Beurre d'Assomption*, a large Summer pear.

Mr. Moody, of Lockport, had a very fine display of pears, consisting of over a hundred varieties. Among them we observed a magnificent plate of *Beurre d'Anjou*, also extremely fine *Sheldon*, *Flemish Beauty*, *Bartlett* and *Kirtland*.

Messrs Hoag & Clark, of Lockport, showed twenty-two varieties of hardy grapes, some of them very fine.

Messrs. Smith & Powell, of New York, about sixty-seven varieties of pears and one of grape. Besides these, there were several other smaller collections of seedling and other fruits, consisting of apples, pears and grapes.

The Massachusetts fruit growers did not enter their fruits for competition, but merely for display, and were shown in a large room below. Here that enterprising and worthy veteran, President Wilder, filled an entire table with pears of his own growing, comprising 404 varieties. Messrs. Hovey & Co. were not far behind the President, having on exhibition no less than 325 varieties of pears. N. Durfee, of Fall River, showed one variety of nectarine, nineteen of peaches, and twenty-two of grapes grown under glass. There were also quite a number of other smaller contributors to the Massachusetts department.

First Day.

Everything done in Boston, in connection with the gathering of Pomologists, was done in good taste and with exquisite unanimity and forethought. The members of the Pomologi-

cal Society were considered the guests of the Massachusetts Horticultural Society. President Strong welcomed the members in the Wesleyan Hall, where the business meetings were held. The welcome was responded to by the Hon. Marshall P. Wilder, than whom no man can better discharge the duties devolving upon him.

Letters were read from Mayor Pierce, extending the hospitality of the city to the Society, and tendering a public reception at Faneuil Hall; from Mr. Gray, inviting the Society to breakfast, at his residence in the Highlands; and from H. H. Hunnewell, to visit his grounds. Your President was made Chairman of the Committee on Credentials, and appointed a vice-President of the Society.

The reception at Faneuil Hall was really magnificent. The surroundings, audience, speakers, and notabilities, were singularly impressive. Though no American, your President could appreciate the reminiscences and struggles of the pilgrim fathers. At every allusion to their achievements, and they were many, he felt himself more thoroughly a Briton, for the men who vindicated American liberty and stood by human rights, could only act as they did by themselves, being Britons. President Wilder's mention of Washington, Webster, and other heroes, called forth hearty plaudits.

The next meeting of the Pomological Society was fixed to be held at Chicago two years hence. In the afternoon President Wilder gave a long, eloquent, and thrilling address.

Second Day.

The proceedings of this day began very early, especially to those who had been diligently at work late the night before. The cars to take visitors to Mr. Gray's residence started promptly at 7 o'clock from the Temple. We were greatly struck with the public spirit and munificence of the proprietors of the beautiful private country residences in the neighbourhood of Boston. When one enquired for a ticket for the journey, the answer was, step in, nothing to pay. The street cars on this occasion were free, and in the afternoon, when proceeding to H. H. Hunnewell's, railway accommodation was again provided free of cost. The great wealth, and horticultural taste of the Boston princes, have made that section of the United States famous over the world for its horticultural products. The unselfishness of their wealth was surprising. Possessing large means, and spending their money freely on the beautifying of the face of the country, they desire to give to others the enjoyment of the beautiful creations of their wealth, as they themselves enjoy. Many of the grounds surrounding princely mansions are open to the public, who eagerly avail themselves of the privilege without any appearance of vandalism, either in wandering through the parks, flower gardens, conservatories or orchard houses. H. H. Hunnewell and William Gray, jr., are not only munificent patrons of horticultural art, but public educators, whose ennobling lessons characterize the splendid civilization of Boston society, and the reflex influence of which will sooner or later find its way to more western cities, and even penetrate, we trust, to western Canada.

Public recognition of Mr. Gray's munificence was made on assembling for business. In fact every thing seemed to be done in the right way, and at the right time.

At four o'clock, the members of the Society proceeded to the station of the Boston and Albany Railroad, where a special train took them to Wellesley, the country seat of H. H. Hunnewell, Esq., who had courteously invited the members to visit his grounds. On arrival at the villa, the party were not formally received, but were at liberty to stroll in such directions as they desired. The large assemblage, therefore, divided itself into several parties, and scattered over the extensive grounds. The wonderful perfection of the grounds, which combine the highest refinement of landscape gardening, elicited universal wonder and surprise, and many exclamations of delight were heard on every side. To give a description of these grounds, which are justly acknowledged to be the finest in America, would require volumes—a passing notice being inadequate to do them justice, or convey an idea of their transcendent beauty. The Italian garden, with its grand terraces and exquisite evergreens trimmed in fanciful shapes, and in the perfection of the topiary art, together with the granite balustrades of the parapet, and its vases and statues, reminded many of the visitors of the splendours of the Lake of Como, in Italy. Without question, this is the most successful attempt on this Continent of this unique feature of gardening. The flower garden, where exquisite combinations of ribbon bordering were in profusion, was not less admired; the magnificent lawns, with the grouping of the different trees, forming a most perfect instance of landscape garden-

ing, together with the very extensive ranges of green and orchard houses, were only successive displays of beauty which surprised the delighted guests at every step. To crown this feast for the eye, the doors of the mansion were thrown open, and a superb collation of the most elaborate productions of the culinary art was served. After enjoying the generous hospitalities of Mr. Hunnewell, the party returned to the city, highly pleased with the rare opportunity which was afforded them of seeing this earthly paradise—it being unanimously conceded that Providence, in allotting to Mr. Hunnewell a large share of this world's goods, had bestowed it with a discriminating hand, as he had wisely expended a portion of them in creating such a marvel of rural art and taste, from which the public were not excluded, thus giving to others a share of the pleasure derived from its possession.

The following Committee on Award of Premiums for fruits was announced. We give it just as it was passed, that our fruit growers may have a list of the eminent fruit judges of the United States.

Apples.—Messrs. Downing, of N.Y. ; Bateham, of Ohio ; Richmond, of Louisiana ; Bowditch, of Massachusetts ; Moore, of Rhode Island.

Pears.—Berckmans, of Louisiana ; Hooker, of New York ; Manning, of Massachusetts ; Earl, of Illinois ; Quinn, of New Jersey.

Grapes.—Hoag, of New York ; Shaw, of New Hampshire ; Hamilton, of Nova Scotia ; Sargent, of Massachusetts ; Thurber, of New York.

Seedling Fruits.—Messrs. Thomas and Ellwanger, of N. Y. ; Hovey, of Massachusetts ; Burnet, of Canada ; Meehan, of Pennsylvania.

Figs, etc.—Messrs. Leighton, Breckinridge and Swazey.

Peaches.—G. W. Campbell, of Ohio ; Edward Adair, of Michigan ; Judge Schley, of Georgia ; Dr. E. W. Sylvester, of New York ; H. Saltonstall, of Massachusetts ; Dr. Prettyman, of Delaware.

Plums.—P. T. Quinn, of New York ; W. M. Howsley, of Kansas ; F. M. Hexamer, of New York.

John J. Thomas, gave in a report on rejected fruits and synonyms. He said that catalogues had been long ago prepared, separating worthless varieties of fruit from the valuable ones, and now the really worthless kinds would pass away without a list.

Mr. Barry gave in the report of the Fruit Committee. The reports received from societies in the States, territories and the provinces, were ordered to be compiled for publication in the proceedings of the convention.

President Wilder introduced the subject of money premiums for fruit. Dr. Howsley hoped that hereafter medals only would be offered for new and specially meritorious productions. This opinion carried generally, and a resolution was brought in to give it effect.

The catalogue of fruits was then taken up. The discussion elicited the fact, that State reports from one individual do not give satisfactory information as to the excellence of a particular fruit over the whole area of the State. Examples were given, where at one point of New York State, Northern Spy was pronounced a failure, and at another point, as fine specimens as could be imagined were produced. The result comes to show evidently that certain peculiarities of soil, good culture and managemnnt, influence certain varieties more than the climate of a certain geographical zone.

Third Day.

President Wilder took the chair at the hour named in adjourning, and reports were presented by the Committee on foreign fruits, apples, peaches, figs and oranges, these were held as read, to save the time of the Society. They will all appear at full length in the published proceedings.

A Committee was appointed to investigate the origin of the Phylloxera Vastatrix, an insect which is devastating the best wine growing districts of France, and whose introduction there has by some French wine-growers been attributed to American nurserymen. The object of the Committee being to practically refute this accusation.

The President submitted an essay by Professor Asa Gray, entitled, "Were the Fruits made for Man, or did Man make the Fruits?"

Awards were then submitted by the Committee as follows:

Apples.—The report of the Committee on apples stated that the collection was very large

and excellent, and embraced some 2000 plates, of which the best were from Nebraska, 190 varieties, to which was awarded the first premium of the Wilder Silver Medal and $50 for the largest and best collection of apples, correctly named, from any State or Society, three specimens of each variety. The second premium, the Wilder Bronze Medal and $25, to Kansas for 175 varieties. For the largest and best collection, correctly named, grown by one individual, the first premium of the Wilder Silver Medal and $50, to J. W. Ross, of Perrysburg, Ohio, for 100 varieties. The first and second premiums which follow, are the same as these above.

Pears.—First premium to the Cambridge Horticultural Society for 133 varieties; second, Connecticut State Board of Agriculture, 122 varieties. Best grown by one individual, Ellwanger and Barry, Rochester, N. Y., 317 varieties; second, Hovey & Co., Cambridge, 325 varieties.

Grapes.—Best collection of named varieties, Ontario Fruit Growers' Association; second, South Haven, Mich., Pomological Society. Best grown by one individual, J. H. Rickets, Newburgh, N.Y.; second, Hoag & Clark, Lockport, New York. Largest and best collection grown west of the Rocky Mountains, James Rutter, Florin, California. Best collection grown under glass, George B. Durfee, Fall River, Mass.

Peaches.—Largest and best collection from any State or Society, Central Delaware Fruit Growers' Association; second, Ontario Fruit Growers' Association. Best private collection, David F. Myers, of Bridgeville, Del.

Plums.—Best State or Society collection, Ontario Fruit Growers' Association; second, Deseret Agricultural and Manufacturing Society, Utah. Best private collection, C. H. Grierman, Milton, Wis.; second, C. P. Peffer, Pewaukee, Wis.

Nebraska, Connecticut and Ellwanger & Barry returned the money premiums awarded them to the treasury of the Society. There was also a large number of silver medals awarded as special premiums, and gratuities for fruits and seedlings.

The foregoing result will show well how Canada stood among the States of the Union; and the following synopsis, from the pen of Mr. Beadle, will give a fair view of the results accruing to Ontario as a whole.

GREAT INTERNATIONAL EXHIBITION OF FRUIT.

Most Gratifying Success of Ontario.

There has been the largest and most brilliant display of fruit at Boston, under the auspices of the American Pomological Society, the world has ever seen. Premiums were offered for the largest and best collection of apples; also of pears, plums, grapes, peaches, &c., shown by any State or Province. The Government of our Province, on the recommendation of the Hon. Commissioner of Agriculture, granted the sum of $200 to the Fruit Growers' Association of Ontario to aid in defraying the expense of sending a collection of the fruits of this Province to that exhibition. The officers of that Association, with a most commendable zeal, undertook the labour of gathering and exhibiting our fruits, and the results we announce to-day are surprising even to ourselves.

The State of Delaware, as might well be expected, received the first prize for peaches; but Ontario carried off the second prize, thus showing that in an unfavourable year, such as the present, we stand second to the greatest peach growing State, in the number and quality of the varieties of this most luscious fruit.

But in hardy, open-air grapes, Ontario took the lead, and carried off the FIRST PRIZE for the largest collection. Much has been said over the border about the peculiar advantages which one State possessed over the other for the cultivation of grapes, and we think it must have opened their eyes a bit to the *peculiar advantages* we enjoy in Ontario, to have us step in and carry off the Silver Medal.

And yet, again, Ontario bears the bell. Her collection of plums distanced all competition, and the FIRST PRIZE was again borne away, carrying with it another Silver Medal.

Nor were these all the honours. Although quite out-numbered by Massachusetts and Connecticut, in the number of varieties of pears exhibited, so that Ontario could not carry off either of the prizes offered; yet such was the excellence of the sample shown that the judges awarded a Silver Medal to Ontario for her collection of pears.

But we have not yet enumerated all. Her total collection of fruit was so large, and of such fine appearance, as to astonish every one; and the judges expressed their admiration of its beauty and excellence by bestowing another Silver Medal upon Ontario for the entire collection.

In addition to these awards for the Provincial collections, there was awarded to the President of the Fruit Growers' Association of Ontario a Bronze Medal, for his own fine and varied private collection of pears grown in his own grounds.

Thus it will be seen that Ontario comes off with flying colours, having been awarded Six Medals, four of them silver and two bronze, and of these two at least were won in earnest, downright competition with each and all of the States of the American Union.

These competitions have a value in bringing before the world the fruit productions of different States, and we doubt not many will be surprised to learn the high place we really hold among the fruit growing countries of this Continent.

A Delegate from Philadelphia made a statement relative to the coming Centennial, which is to take place in that City in 1876. He said that the Commissioners of Fairmount Park had assigned 300 acres for that purpose, some 39 of which would be devoted to the Horticultural Department. He sought the co-operation of the Pomological Society. It would be well for Canadian fruit growers to begin early to prepare for this grand display. I notice that Count Bismarck, of Germany, has promised the countenance and aid of his Government, and that of His Majesty the German Emperor, to forward the objects contemplated. Canada ought not to be behind, and now is the time to prepare.

A grand Banquet was given on Friday evening, in the Music Hall, by the Mass. Horticultural Society, to the Delegates of the American Pomological Society. The Hall was transformed into a scene of festivity and fairy-like splendour. "The fragrant offerings of Flora, and the luscious fruits of Pomona; the bright colours of the northern conservatories, and the dark, feather-like foliage of tropical growth; the brilliancy of flashing silver, relieved by delicate twining vines; the elegant costumes, bright faces, and sparkling eyes; the deep tones of the great organ, and the sweet strains of the Germanic orchestra, combined to please the eye and the ear, and gratify that finer taste in which cultured men and educated wome find the highest delight."

W. F. Strong presided; and after a speech of kindly welcome to the members of the American Pomological Society, and to the guests, he gracefully requested the Hon. Marshall P. Wilder to preside, which he did, giving universal satisfaction.

Sentiment, song, speech, and response followed in quick succession, after the viands and delicacies had been done ample justice to by all present. Your President and Secretary were honoured with a position near to the place of honour on the platform.

The main attraction of the hall was a large table, which ran lengthwise of the floor from the centre of the platform, and was covered with the most elaborate silver ware as an appropriate offering to the silver anniversary of the Society, in whose honour the banquet was given. Tall flower stands of solid silver, wrought into the most perfect semblance of the ferns and floral ornaments they upheld; brilliant candelabras of silver, and all of the necessary accessories of the table, made of the same precious metal, were festooned and linked together in the most graceful designs, with graceful cables of smilax, which sprang from the nicely arranged pyramids of flowers placed at regular intervals. Tall ferns and palms waved their delicate green foliage above the heads of the passing throng, and the sides of the hall were bordered with a variety of variegated plants and flowers.

Governor Washburn, Mr. Shaeffer, of Pennsylvania, Mayor Pierce, of Boston, Governor Furnass, of Nebraska, the Hon. Leverett Saltonstall, the Hon. M. Daniels, of Virginia, Dr. George B. Loring, your President, Judge Schley, Rev. Dr. Parker, London, England, Mr. Meehan, of Pennsylvania, and Mr. Rowe, of New York, took an active part in this glorious reunion of horticulturists.

The Hon. Marshall P. Wilder gave a brief address, and expressed his thanks for the various congratulations bestowed upon him and the Association.

Friendly farewell greetings having been indulged in, the Delegates and guests departed, carrying with them the most pleasant reminiscences of the Quarter Centennial celebration of the Pomological Society at Boston.

Miscellaneous Notes.

My note-book contains more memoranda than you would like to hear. There are a few, however, which might prove profitable and interesting, which, in conclusion, I crave your indulgence in submitting.

A dish of the most gorgeous fruit seen at Boston was one of Clapp's Favourite pear. Mr. Clapp, whose acquaintance I made, is a gentleman of great and varied attainments, and has successfully hybridized a vast number of splendid varieties of pears. It was something startling to see the size and beauty of Clapp's Favourite, a pear not unknown to Ontario. The flavour is as good as the appearance of the pear would indicate. There were exhibited on the same table a large number of seedling hybrids from "Clapp's Favourite." 83 equally handsome as the parent; 135 large and good; 114, 113, 78, 112, 117, and No. 37, a seedling from the Beurre Bosc; 13, 23, 105, a very large dark-green spotted pear; 93, a very large handsome dark-spotted pear; 44, bright gold, very large; 111, a remarkable red pear, and superb in flavour; 92, 2, 49, from Beurre Bosc; 78, large, green, 104, medium-sized, dark-green spotted pear; 10, beautiful shape; 25, 73, handsome, over medium; 34, a seedling from Beurre D'Anjou; 57, from Bartlett; 50, 71, large; 64, lovely shape; 26, from Clapp's Favourite; 31, from Beurre D'Anjou; and 55, peculiar shape, like Louise Bonne de Jersey. These all may be relied on as commanding both look and taste. When they are once in the market, a large number of superb pears will be added to present collections. Mr. Thomas, in speaking to me of them, said of the seedlings of Mr. Clapp, "that they were turned in Nature's finest lathe."

Dr. Sylvester showed a seedling early Fall apple, red cheek, white crisp flesh; an exquisite apple, cooks well, with sub-acid flavour.

Ellwanger and Barry's List

St. Marc, medium fair fruit. Beurre de Waterloo like Louise Bonne de Jersey in shape (*a*).

Louis Vilmorin, large, handsome, dark red pear (*w*).

Puebla, very large, rough green (*f*).

Duchess Precoce (*s*), Bartlett like.

Calabasse D'Octobre (*f*), very large, green fruit.

Bonne de Zees (*f*). Beurre D'Assomption (*s*), large yellow beautiful pear. Dr. Bouvier (*f*), large pear. Jackson (*f*), deep red, under medium.

Tarquin (*w*), bright green, large. Bonne Roi Rene (*f*), handsome, pale blush Edmond's, yellowish green (*s*), very large. Lodge (*f*), drab, yellow green, over medium, large. St. Francois Seigneur (*s*), Bergamotte shape.

Souvenir de Congres, monster size, handsome, remarkable pear, French origin (*s*).

Vanderpool (*f*), pale yellow, handsome shape. Cabot Golden (*f*), small. Coits' Beurre (*f*), small, pretty pear.

Henkel (*f*), stem singularly inserted, a very remarkable pear. Van Asche (*f*), round, dark red spots, marbled red and green.

Rouge D'Anjou (*f*), blush pear.

Hebe (*early w*), shaped like Beurre Bosc, warm red cheek.

Piccola (*f*), like peach; hence, I suppose, the name.

Beurre D'Anjou (*f*), lovely pear.

Doyenne Robin (*f*), pale, spotted, roundish pear, large.

Belle Williams (*w*), large pear.

Paternoster (*w*), large.

Marie Louise d' Uccles (*f*), large, dull yellow.

Madame Andre Leroy (*w*), large, handsome pear.

Hericart de Thurry (*w*), very superb pear.

St. Crispin (*f*), rough, very large, bright green blush.

Uvedale's St. Germain (*w*) pound, very large monster.

Lieutenant Poitevin (*late fall*), monster, green, handsome

Note.—(*a*) signifies ripening in autumn; (*s*) summer; (*f*) fall; (*w*) winter.

Newbury (*f*), large and handsome.
Ste. Therese (*w*), large and handsome.
Black Worcester (*w*), handsome.
Columbia (*w*), egg-shaped.
Horton (*f*).
Doyenne de Cercle (*f*).
Grand Mogul (*w*), large, roundish pear.
Therese Appert (*f*), large.
De Tongres, yellow, deep red, pretty pear.
Duchess D'Angoulême Panaché, a striped variety of the well-known Duchesse.
Beurre Gris D'Hiver Nouveau.

These varieties are first class in every respect. As regards to size, they are almost of the largest size. In point of flavour, some are of the highest excellence.

Messrs. Hoag and Clark, Lockport, showed some splendid grapes.
Rogers', No. 39, a very large, handsome, purple grape.
Rogers', No. 4, large, well ripened for the season.
Salem, good.
Walter, light purple,
Delaware and Eumelan, both good samples.
Rogers' 30, handsome, light grape.
Iona, good.
Rogers' No. 3.
Adirondac, ripe and good.
Wilder, good, dark grape.
Rogers' No. 19.
Creveling, good bunches.
Perkins, large and compact bunches—good sized berry.

Mr. Moodie, Lockport, had a table of beautiful fruit, very large; Sheldon, Winter Nelis, Easter Beurre, Beurre D'Anjou, Bartlett, and Hosenschenck.

Much to the regret of the members of the delegation present at Boston, Mr. James Dougall was absent, owing to the severe illness of his son. Many of the Pomologists on the other side made earnest enquiries after his wealfare, and the reasons for his absence. Mr. A. B. Bennett, of Brantford, ably supplied his place, paying his own expenses, and assisting your delegation in every way within his power. Mrs. Bennett accompanied her husband, and contributed much to the kindly feeling that existed in our Canadian company.

Mr. Gibb, of the Province of Quebec, was more than an assistant. He became to us an able coadjutor, and put to his hand in arranging the fruit with a hearty good will. His presence and worth were not overlooked by the American Pomological Society, which made him one of their vice-presidents, as representing the Lower Province.

We met more Canadians who took an active part in the discussions, viz: Dr. C. C. Hamilton, President of the Nova Scotia Horticultural Society, from Wolfville, N.S., and his co-labourer, Mr. Starr, another enthusiastic fruit grower. Dr. Hamilton took an important part in the discussions of the Society, and showed his experience in fruit culture, as that of a gentleman of no mean attainments. The ladies and young people of our party, gave every assistance in unpacking and arranging the fruit. But for their timely assistance, your delegation would have had great difficulty in coming up to time. As it happened, everything was ready for the Committee of Awards when they came round.

All which is respectfully submitted for the delegation, by

R. BURNET,
President.

EXPERIMENTS IN HYBRIDIZING.

BY P. C. DEMPSEY.

Previous to the year 1865, I was frequently trying to cross the Clinton Grape with the best exotic varieties we had, but was unsuccessful, having to keep the pollen in a phial for some time, on account of those under glass blossoming in advance of those in the open air.

In 1864, I grew plants in pots, of Clinton, Creveling and Hartford Prolific. In the spring of 1865, I set those plants under glass, arranged so that I could retard or advance the blossoms, by raising or lowering the temperature of the house. When they were sufficiently advanced, I removed the stamens of about one third of the blossoms from about two bunches on each plant, the remaining were removed entirely. I fertilized the Hartford Prolific with pollen from Black Hamburgh, the Creveling with White Sweetwater, and Clinton with Golden Chasselas. (As I kept no record of the experiment, I must write from memory.) There was about equal success, they were almost full bunches. But unfortunately a hen got at the Creveling and Clinton and destroyed the most of them; from the Creveling I grew three plants, two of which were so tender in foliage as not to be worthy of trial; one being a very fine plant, I thought it almost perfect; it disappointed me, having imperfect blossoms. From the seeds of the Clinton I grew five plants. The Thrips lived on them as long as there was a leaf left.

From the seeds of the Hartford Prolific I grew over fifty plants; they had the greatest difference imaginable in foliage; many of them would not resist the mildew, while some would curl from the effects of the sun. A few, however, are promising to be worthy of trial or cultivation. Nos. 18, 20, and 25, are white, and Nos. 5, 19, and 26, are black; the above varieties are all large in bunch and berries, hold their fruit well, and appear to have good foliage.

In 1867, I crossed Allen's Hybrid with Delaware; got about twelve plants, only two of which had foliage that would justify me in continuing the cultivation of them. One has fruited this year; produces a white grape, or rather very light amber colour, with the flavour, foliage, and wood, resembling that of the Delaware.

I have frequently made efforts to cross the different varieties of pear, in the blossom, always using bags made of tarltan, to protect the blossoms being fertilized by natural means. I think it a very poor protection; I have several seedlings produced in this way in 1869; nearly, or quite all of them are perfectly thorny. The varieties used were Beurre Clairgeau, Beurre d' Anjou, Passe Colmar, Fondant de Noel, &c., but I kept no account of the experiment and which varieties were used as male, but have a record of the varieties of the fruits; that the seeds came from, the female. I budded from fifty-eight of the most promising of the plants the same year from seed (or in 1870), in a bearing tree, none of which have fruited or shown fruit buds as yet, but nearly all are thorny.

In 1870, I experimeted largely with the pear; as I had been gaining experience, I expected success. The pear blight took every branch, except one, that was operated on, and that was Osband's Summer, crossed with Duchess d'Angouleme. I only got one plant; that one is not thorny, it shows distinctly, in the foliage and wood, the habit of both parents.

In 1871, I planted some seeds of the Bartlett and Flemish Beauty (pear), intending to use them for stock; one plant resembled the former, and appeared to grow fine. I grafted the tops in a bearing tree. Last spring, one year from graft, it had one bunch of blossoms, that had so great weight, with the help of a little rain, the branch broke, it has now over forty blossom buds. I only mention this as an exception to the rule laid down by some authors: seventeen years from seed for a pear to fruit.

After so many years of failure, I adopted the theory laid down by Mr. Rivers, in his "Miniature Fruit Garden," to root prune some of my pear and apple trees. I differ with Mr. Rivers in the time to perform the job, he does it in the fall, I prefer the month of April, as soon as the frost is out, and the land sufficiently dry to work. I take the tree up, shorten all the roots that extend deep into the earth, and those side roots that are growing too strong, and plant in the same place, being careful to raise the roots as near the surface as possible. Manure on the surface. I prefer to commence with a tree one year from bud or graft, and transplant each alternate year.

By this process and summer pinching or pruning, we can bring a tree into fruit when three years from bud, and nearly two-and-a-half or three feet in height. I planted some trees in pots, tubs, boxes, &c., such as were convenient.

The advantage in having these small trees are: First, we can operate on the whole or a part of the blossoms, as we please, only remove those not required. Secondly, we protect them by making covers of newspapers or any refuse paper, by cutting them away the shape of the tree, and paste together, and place them over it. If there comes a rain, as it so often happens, these covers are supported by the ends of the branches, and the blossoms effectually protected. A strong wind will destroy them when wet; they must be carefully looked after, and replaced with others when anything happens; and the third advantage should not be lost sight of. We take the tree up, and plant by the tree bearing the variety of fruit we wish to use for the male. A large tree should always be chosen for this purpose, when it can be had. The east side of the tree should be chosen, where possible to plant; in this way we can operate without any protection, providing there are no other varieties very near. I had, last spring, twenty pear trees prepared as above. On some I used the protectors, and others were planted as described above. They ranged in height from two to five feet. I operated on the blossoms with great success, the results I give:

No. of trees in operation.	Female Blossoms.	Male Blossoms.	No. of fruit obtained.	No. of seeds obtained.
1	Seckel,	Beurre Clairgeau,	27	6
1	Bartlett,	" d' Anjou,	15	76
2	Beurre Clairgeau,	Duchess d'Angouleme,	23	139
1	" "	Flemish Beauty,	14	99
1	" "	Josephine de Malines,	2	16
1	" d' Anjou,	Duchess d'Angouleme,	7	45
1	Doyenne Boussock,	Duchess d'Angouleme,	11	44
1	Belle Lucrative,	" "	30	37
1	Seckel,	" "	2	2
1	Josephene de Malines,	Flemish Beauty,	3	19
1	Winter Nelis,	" "	1	5
1	Duchess de Bordeau,	Duchess d' Angouleme,	1	5
1	Madame Beauford,	" "	1	10
1	Osband's Summer,	" "	78	380
1	Flemish Beauty,	" "	1	5
1	" "	Beurre Clairgeau,	2	9
1	A new variety, imported 1871; Name Lost; a very fine December Pear, large.	Josephine de Malines,	1	1
1	Doyenne du Comice,	Flemish Beauty,	failed.	
1	Flemish Beauty,	Beurre Hardy,	failed.	
1	Belle Lucrative,	Louise Bonne,	had one pear, lost.	

As the trees were all exposed during the whole of the season, some of the fruit was blown off in September, they were all saved but not separated; there was nearly one hundred of them, with about five hundred seeds.

I have made several efforts to cross pear with the apple, and the apple with pear, but always failed till this year, 1873, and this remains still to be tested, the seeds being in the ground. In preparing for the experiment, I selected seven small apple trees, grown on pomme de paradis stock, planted in pots, boxes and tubs, every thing I had that would do. The varieties selected were Cellini, Lord Burghley, Lord Derby, Lord Duncan, Ecklenville Seedling, Margil and Cox's Orange Pippin, mostly new varieties and all imported. Pear trees on quince stock, treated and planted the same as the apples; had one tree Duchess de Bordeaux, and two trees of Josephine de Malines; the trees were all set under glass about the first of April; they came in blossom about three weeks sooner than those in the open air; so there was no chance for the blossoms to become fertilized from trees in the open air, or those growing out of the house.

I carefully removed all the male part or stamens from the blossoms on the apple trees, where there were too many blossoms I thinned them, and applied the pollen of the pear blossom, three or four times a day, as long as they remained fresh. If they were fertilized by any natural source, or with the aid of insects, it must have been with the pear. I applied the pollen with a fine camel hair brush part of the time, and sometimes by picking the blossom off, and gave it a sudden twist over the apple blossom, by taking the stem between the thumb and finger. I prefer the latter method, but they must both be in bloom at the same time.

The result of this experiment was four apples, all on one tree, variety Cellini, only seven seeds.

Cellini apple is large, striped and splashed with red, very pretty fruit, and matures about November to December. Those ripened in October, but they were about the size of a cent when those in the open ground were in blossom.