

REPORT
OF THE
FRUIT GROWERS' ASSOCIATION
OF THE
PROVINCE OF ONTARIO,
FOR THE YEAR
1879.

Printed by Order of the Legislative Assembly.



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1880.

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ANNUAL REPORT

OF THE

FRUIT GROWERS' ASSOCIATION

OF THE

PROVINCE OF ONTARIO,

FOR THE YEAR 1879.

To the Honourable the Commissioner of Agriculture:—

SIR,—I have much pleasure in submitting the Report of the Fruit Growers' Association of Ontario, for the year 1879. The proceedings and discussions have been full of valuable information to all who take an interest in the pursuits embraced within the operations of the Association. The monthly publication of the *Canadian Horticulturist* has been continued, and the proceedings and discussions of each meeting have been speedily laid before the members. A copy of the monthly issues for the year 1879 accompanies this Report and is submitted herewith.

Thanking you for the encouragement you have always given to the efforts of the Association,

I have the honour to be,

Your most obedient servant,

D. W. BEADLE, *Secretary.*

PROCEEDINGS AT THE ANNUAL MEETING.

The Annual Meeting was held in the City Hall, Ottawa, on the evening of the 23rd of September, 1879.

The President took the chair, and the Secretary read the minutes of the last annual meeting.

The Directors submitted the following Report:—

DIRECTORS' REPORT.

To the members of the Fruit Growers' Association of Ontario:

GENTLEMEN,—The year of our official labour closes, and we now submit the customary Report with such suggestions as the experience of the year prompts.

Your Directors notice with pleasure that the winter meeting is growing in importance, the attendance upon it steadily increasing, and the subjects considered becoming more extensive and of greater general interest. At the last winter meeting it was resolved by the members, that the Directors be authorized to arrange the next winter meeting for a two days' session, thereby evincing a desire for fuller discussion and time to admit of the discussions taking a wider scope. It will therefore be important that the incoming board should take steps at an early day to ascertain what subjects will be of greatest interest, and to secure from competent sources papers to be read at the meeting, bearing upon these topics.

Your Directors are also able to state with much pleasure, that the representations made by this Association to the Dominion Government with regard to the necessity of a change in the customs dues upon fruit from an *ad valorem* to a specific duty, met with a favourable response.

The *Canadian Horticulturist* has been received with such evident satisfaction that your Directors have been encouraged to continue its publication during the present year; and it is very gratifying indeed to be able to state that our members are more generally making use of it as a means of communication with each other, and manifesting their interest in the objects of the Association by contributing of their experience to its pages.

The Treasurer's report will be submitted, from which it will be seen that our membership this year is not quite as large as it was last year. The continued severity of the financial depression has doubtless had much to do with this decrease. There is also another matter which causes some fluctuation in our membership. A number seem to become members merely for the sake of the tree or vine that is given to members, not from any desire to advance the interests of fruit culture, or of contributing towards the diffusion of knowledge of what best to grow and how best to grow it. When the article to be distributed happens to take in the public mind, there is a corresponding increase, for the time, in our membership, but which may fall off the next year if the article that is to be distributed happens to be less taking in the popular mind. We hope eventually that our membership will become more stable, and be largely composed of those who are seeking not so much personal gain as the diffusion of knowledge and the prosperity of our Province.

We are further persuaded that the time has come when steps should be taken to lay before our people personally the work of this Association, believing that many would become members, useful and active members, were they only made acquainted with the objects of this Association and the great good it is doing. It has occurred to us that the only effectual method of accomplishing this would be to send out some suitable and competent person to hold meetings and call public attention to the work of the Association, and in some measure to canvass the country and secure in all the important centres of each county, some person who will take an interest in maintaining and extending the work and membership of the Association.

R. BURNET, *President*,
D. W. BEADLE, *Secretary*.

The Treasurer submitted his Report, accompanied with the report of the auditors, which was received.

The President delivered his Annual Address which was listened to with marked attention throughout. It was received with thanks and ordered to be printed in the Annual Report.

The meeting proceeded to the election of officers with the following result :—

President—Rev. R. Burnet, Hamilton.

Vice President—Wm. Roy, Esq., Owen Sound.

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| Division No. 1, | John Croil, Aultsville. |
| " | 2, P. E. Bucke, Ottawa. |
| " | 3, R. J. Dunlop, Kingston. |
| " | 4, P. C. Dempsey, Albury. |
| " | 5, Thos. Beall, Lindsay. |
| " | 6, Geo. Leslie, jr., Leslie. |
| " | 7, Thomas Stock, Waterdown. |
| " | 8, A. M. Smith, Drummondville. |
| " | 9, Chas. Arnold, Paris. |
| " | 10, A. McD. Allan, Goderich. |
| " | 11, W. Saunders, London. |
| " | 12, B. Gott, Arkona. |
| " | 13, A. Hood, Barrie. |

Auditors.

| | |
|-------------------|-------------|
| Robert Roy, | } Hamilton. |
| Angus Sutherland, | |

TREASURER'S REPORT.

RECEIPTS.

| | |
|---|------------|
| Fees from members, 1878 | \$4 00 |
| Sale of two copies Vol. I. <i>Canadian Horticulturist</i> | 1 00 |
| From advertisements | 33 25 |
| From members' fees, 1879 | 1,065 00 |
| Government Grant | 1,300 00 |
| | \$2,403 25 |

DISBURSEMENTS.

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| Balance due Treasurer | \$126 58 |
| Auditors | 20 00 |
| Expenses, Directors and Committees | 329 19 |
| Commissions collecting fees | 30 80 |
| Postage | 33 17 |
| Guarantee premium | 20 00 |
| Express | 5 90 |
| Printing | 385 97 |
| Paper | 171 28 |
| Binding and mailing | 172 30 |
| Advertising | 93 55 |
| Discounts on loan | 61 90 |
| Burnet grape vines | 530 00 |
| Duties on foreign reports | 1 36 |
| Clerk | 50 00 |
| Secretary-Treasurer | 200 00 |
| Editor | 300 00 |
| Electrotypes | 3 00 |
| | \$2,537 80 |

AUDITORS' REPORT.

HAMILTON, 22nd September, 1879.

We have examined the foregoing receipts, and compared the disbursements with the vouchers, and have found them correct, which shews a balance due the Treasurer of \$134.55.

ROBERT ROY,
ANGUS SUTHERLAND, } *Auditors.*

Some discussion was had on the subject of fruit statistics, and their importance. On motion it was resolved, that the President, Vice President, and Secretary, be a Committee to wait upon the Hon. Mr Pope, and confer with him upon the subject, with a view to securing statistical returns of the fruit productions of the country.

Several members complained of the depredations of fruit thieves, and many suggestions were made as to the best ways of putting a stop to the stealing of fruit. It was at last resolved that the President and Secretary, be a Committee, to prepare a paper, on fruit stealing.

A vote of thanks was passed to the Mayor, and Aldermen, of the City of Ottawa, for the use of their commodious Council Chamber, and the meeting adjourned.

ANNUAL ADDRESS.

BY REV. R. BURNET, PRESIDENT.

Thirty-seven years ago I heard a minister discourse on the text, "For he hath founded it upon the seas and established it upon the floods." He gravely maintained that the solid earth was founded on the water, because the Word of God said it was so. It so happened that in coming down the Kirkgate my landlady inquired "How did you like the minister this morning?" "Not at all," was my reply, "I don't think his illustrations were true." This conversation so short and decisive, was duly reported to my clergyman, of course, without my cognizance. I taught the advanced Bible-class in the Sabbath school, and it not unfrequently happened that after duty I was asked to spend the evening and night at the Manse and return to my work on Monday morning, after enjoying a cool dip in the refreshing waters of the Firth. Walking together for this latter purpose down to the shore, and near the ruins of the old Kirk, and in the very shadow of the graveyard, the Parson addressed me thus, "So you did not like my sermon yesterday morning?" I was confounded, and could have wished that the earth would swallow me up, or that I was at the bottom of the sea. It was the first time ever my orthodoxy had been questioned, and indeed the first time I had ever entered upon the questionable in theology. I replied, "Mr. L—, I cannot tell a lie, I don't think the solid earth is founded on the water." "You see," said he, pointing to the tangle slightly moving on Turnpenny Rock, "You see that rock; I verily believe, as truly as I am speaking to you, that the earth is founded on the water, because the Word of God says so." The stripling answered, "But I don't know, now, that the Almighty taught by illusion. He never does." The interpretation remained a mystery to me for many long years, until I read a quotation from Lieutenant Maury's "Currents of the Ocean," in which he quotes the 33rd Psalm—"He layeth up the depth in storehouses," illustrating the Psalmist's statement by the interesting philosophic fact that the Disposer of all events employs the sun as a mighty hydraulic pump in the torrid zone, and thereby raises millions upon millions of tons of water, every day, causes them to pass over the region of the calms, descend in the shape of rain, dew, and hoar frost, and thus causes the fulness of the earth to be dependent on and built up

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by the influence of the water. Thales seems to have been pretty near the mark, when he said, "The origin of all things is water." Our friend P. E. Bucke smiles. We all know his *penchant* for water. Learned men, and men illustrious in more modern times, appreciated this great fact. The late Prince Consort, of honoured memory, seems to have been far ahead in theological knowledge of my worthy and godly minister in the North of Scotland. He had appropriately inserted as the inscription of the new Royal Exchange "The earth is the Lord's and the fulness thereof; the world and they that dwell therein, for He hath founded it upon the seas and established it upon the floods," thereby indicating that all agricultural and horticultural prosperity largely depends on the influence of water. Literally the statement is true, whether regarded in the sense in which it was uttered by the Psalmist, employed by the Prince Consort of Great Britain, or even as incorrectly stated by the worthy clergyman.

THE CROPS IN EUROPE.

The floods have been singularly disastrous in England, on the Continent of Europe, and, indeed, almost throughout the world this year. The London *Standard* says:—

"This is truly a year of disappointments. When after wet weather without parallel for duration, a brief period of fine weather sets in, and farmers begin to look a little less despondently upon the situation, a storm of tremendous severity occurs, and dashes all their hopes to the ground. Only a fortnight since, the 4th of August, a thunder and rain storm burst over the whole country. The swelling rivers flooded the low-lands, washed away crops, and committed terrible devastation. Now it is evident that the storm of Saturday and Sunday, the 16th and 17th of August, has been equally disastrous, if it has not surpassed its predecessor in widespread ruin. The West of England experienced the greatest violence of the storm. There the rain fell for thirty hours without intermission. Bridges were swept away and miles of railroad were washed up. Great tracts of country were flooded and the crops destroyed. Since the breaking up of the storm we have lapsed into comparatively cold weather. The thermometer has fallen greatly, and the sky is overcast, so that there is no sun to dry such crops as struggled thus far through unprecedented climatic difficulties. Under such circumstances the most sanguine may well despair. The prospects for agriculturists are more gloomy at present than we can ever remember them."

CANADA'S FAVOURED CLIMATE.

In wonderful contrast to the expressions of "desolation," "ruin," and the like, we have to compare our own favoured climate, and remarkable absence of climatic ravages and stormy destruction of crops, either of the agriculturist or horticulturist. We are reminded that the Disposer of all events "hath laid up the depths in storehouses," "hath founded the fulness of the earth upon the seas, and established it upon the floods," for our pleasure and profit. We rejoice in the bountiful return of another fruitful season and sure pledge of the promise, "While the earth remaineth, seed time and harvest, and cold and heat, and summer and winter, and day and night, shall not cease." We live in a highly favoured land, blessed with health, crops and plenty. "He has crowned the year with His goodness," and a bountiful crown it has been. Our barns are filled with plentiful stores, and our presses overflow with new wine. Our duty is fully to appreciate the manifold goodness of the Almighty. For some years, in making our annual address to the assembled fruit growers of the Province, we were necessitated to indulge in lugubrious strains. Cold and frost had committed sad ravages upon the products of the husbandman, and scanty crops had been the result. This season is, indeed, a fruitful one, and all hearts rejoice. I cannot but congratulate the producers here present on the late harvest. Our devout expressions of gratitude are justly due to the Almighty, the author of every good and perfect gift. We recognize His hand in the sunshine and shade, in the storm and calm, in the grave and gay, in the bounty which loads us with His mercies, in the needed lessons to be gathered when He sees meet either to withhold His gifts or when He permits the devastating rains and floods. The season has been one of unexampled profit to the husbandman.

SMALL FRUITS.

All sorts of fruits have done well in almost every section of our country. The crop of small fruit amply repaid the care and attention of husbandmen. Currants, red, white, and black, make good and remunerative returns. A growing taste is perceptible on the part of the public for blackberries. In some districts they have been highly prized. This is just as it should be. Few of the small fruits cook better than they do. In the neighbourhood of London, Saunders' blackberry has been in good request, and we augur will be in greater demand wherever its merits are known. Cherries were a most abundant crop, and as a consequence this fruit sold cheap. The Kentish variety which is so much esteemed for cooking, canning, and preserving, was sold at first for ten, in some cases fifteen cents, but during the end of the season only realized five cents per quart. The finer varieties were also very abundant, so much so that the ravages of voracious birds and insects have not attracted much attention. The Duke and Morellos, during the season have been singularly prolific, and the same may be said of the Bigarrean and Heart varieties. The new cherries that deserve notice are the "Toronto," raised by E. L. Cull, of Toronto, who says that the tree is a remarkably strong grower and seems to resist the slug better than other varieties. The "Olivet" is a large, globular, very shining deep red sort. It ripens in the beginning of June and continues till July, and possesses a rose-coloured juice, its flesh is tender, rich and vinous, with a very sweet sub-acidulous flavour. It possesses the fertility of the best of the Duke sort and is perhaps the largest of that class. The "Lieb," a Morello cherry of American origin, is said to ripen a week earlier than the Early Richmond and to be larger and hardier.

PLUMS

are an excellent crop, so plentiful that the Curculio has been unable to overtake the whole crop, which is all the better for his voluntary thinning out. The curculio is on the decrease; whether or not the cold, frosty season, damp and late, has had to do with this effect we know not. Certain it is, however, that they have appeared in diminished numbers during the past summer. Let us aid elemental nature in destroying the little lurk. Remarkably good care in jarring, and good culture, go a long way in getting rid of this inveterate spoiler. The black knot is diminishing. We fear not from attention and good cultivation, but from the disease having killed outright a large number of trees, both of the common blue and the finer sorts. Ellwanger and Barry declare that their preventatives and remedies are good, clean culture, and prompt amputation. We heartily recommend, besides those usually grown by plum cultivators, the Guthries' Apricot, and Topaz, Huling's Superb, and Ickworth Imperatrice. B. Gott, of Arkona, no mean judge of fine fruit, lays great stress on Huling's Superb. The Ickworth Imperatrice is of high, delicious flavour, but not a robust or vigorous grower. The new plum of Mr. James Dougall, Windsor, is of superior excellence and of great beauty. We long for the time, which assuredly will come, when through the munificence of our Government and the patriotic efforts of the members of our Fruit Growers' Association, we shall possess in either the Hamilton or Toronto districts a test or experimental garden for these new fruits. The benefits to accrue to the country would far outweigh the paltry expense. Year after year elapses, the Province, and indeed the world of fruit producers lose the wealth and pleasures that are yet to follow in the general dissemination of important and valuable new fruits. Our Association has done, and is now doing, much in this direction, but a good deal is yet to be done, and we know of no way in which this could be better done than by the establishment of an experimental fruit garden. Now that our Association has committed itself to the development of forest and flower interests, in addition to those of fruit, perhaps this matter will appear a necessity in the minds of our legislators. We have heard of no new plum this season likely to take the fruit growing public by storm. Glass Seedling is favourably reported on from almost every district. In fruit catalogues, I see that this latter variety sells at \$1 per tree.

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A PEACH YEAR.

The year 1879 may be said to be the peach year. Peaches have been a most abundant crop. Notwithstanding the severity of the winter on some varieties of fruit trees the peach singularly escaped. While the Philadelphia raspberry and other varieties suffered much, the peach escaped the usual frosty ravages, and a most abundant crop has been the consequence. Mr. Allan Moyer, of Jordan station, G. W. R., Ont., sends samples of High's Early Canada. He writes me that it is earlier than Alexander's Early, and Amsden's June by a week at least. The first is delicious, it is earlier than River's "Early Beatrice," larger and of better quality. Recently we received from B. Gott, Arkona, a sample of Hale's Early. We can confidently recommend this variety for general cultivation in Western Ontario. It was raised in Ohio, from which we have so many excellent new fruits. The flesh is white, bursting with pleasant rich juice, of first quality, and ripens a full week before the Early York. *The Country Gentleman*, in its earliest August number, says of the Waterloo, a seedling which originated in Waterloo, N. Y., produced by Mr. Henry Fiske:—"That from its large size and extreme earliness, it must attract attention." Ellwanger and Barry, who introduced it, say that on the first of August, peaches on a tree of the Amsden were yet nearly green and quite hard, which shows the extreme earliness of this new variety. This comparison enables us to add, *Cela va sans dire*. We casually noticed in our address last year a seedling peach, shewn by Mr. Bliss, at the New York State Fair, Elmira. There has been no mention yet of its propagation and introduction. We are satisfied, however, that the time cannot be far distant when we shall hear of it. It was esteemed by Mr. Fuller, than whom there is not a more competent judge of fruit, superior in flesh and quality to the Early Crawford, a peach holding much the same relation to peaches that the Seckle does among pears. May Mr. Bliss' peach soon bless the world! Mention of the "Conkling" must not be omitted. It originated in the town of Parma, N. Y., in the garden of the Rev. Mr. Sawyer. It is a large, handsome yellow-fleshed, free-stoned peach, resembling Crawford's Early, but ripening a week or so later. It has received the commendation of Mr. Ellwanger, which of itself is a sufficient guarantee that it is all he claims it to be. Peach culture is again in vogue among fruit growers. The borer, frost, curculios, and yellows have not been potent enough to diminish its cultivation. The acreage under culture is gradually increasing. The Navy Island Association of Fruit Growers are pushing its cultivation on their grounds. We are led to understand that this season's yield will be amply remunerative to the company. The yellows however are in dangerous proximity. Mr. A. M. Smith, Drummondville, writes,

"Your favour was received and I should have replied before this, 20th August, but have been waiting to get all the information I could in regard to that terrible disease, which is threatening the destruction of our most luscious fruit, the peach, and I find that my fears of a year ago were only too well grounded. Whole orchards in western New York, where it first started five years ago, or at least where I first observed it, are totally destroyed, and it has spread over a radius of 15 or 20 miles, and there is scarcely an orchard but what is more or less affected, and that is not the worst. In this neighbourhood where I first noticed it, three years ago, it is almost as bad. There is hardly a sound tree in Lundy's Lane, which was once the famous peach garden of this section. To relate my own experience, I planted 200 trees on a place which I rent here, five years ago, and they made a remarkably rapid growth, and were in fine healthy condition till two years ago. There was one tree which ripened its fruit prematurely and I at once suspected yellows, and advised my landlord to let me cut it down or dig it out; but he declined, thinking it was too valuable to lose. The result was that last year there were twelve affected, and this year there are 150. So you can see the rapidity with which it is spreading.

LEGISLATION REQUIRED.

"In regard to the great peach section about Grimsby, I am happy to say there is but little of it as yet. In our own orchard of 3,000 trees, I have failed to see a well defined

specimen, though in a few orchards which I mentioned last year where trees were procured from the States, there has been a number of cases, and it is only by strict watching and the immediate removal of affected trees that they have been able to keep it in check: and some, I understand, who did not know the danger in time, and where the disease had spread considerably before they tried to check it, are about to give it up in despair. Here it seems to me comes the necessity for that law which, through the ignorance of our legislators upon the subject, was defeated in our Legislative Assembly. I sincerely hope that something may be done for us at the next meeting of our Local Parliament, not only to stop the spread of the disease, but to put an end to the importation of diseased trees and the immense amount of diseased fruit coming into our markets. Toronto, and many other of our markets, are now stocked with it, and people are not enough posted yet to distinguish it from really good fruit. It is so highly coloured that it is very attractive to the eye and will readily sell to the exclusion of better fruit. People are unacquainted with it, and the consequence is that it is ruining the market for our own fruits. I hope you will ventilate this matter, and if I can serve you in any way I shall be at your command."

The misfortune under which we, as an association, labour in this and kindred matters, so ably put by Mr. Smith, is that we do not get them put into execution. A prominent fruit grower and able member of our Fruit Growers' Association resisted with all his might, and that successfully, the introduction into Mr. Creighton's admirable bill on black knot in plums any clause indicating the necessity to put a stop to the importation of diseased peach trees. In our view, and, we trust, in the view of all enlightened fruit growers, all diseased trees should be legally prevented from entering our Province. It is a pity such a view did not guide the usually enlightened legislation of Ontario. So in regard to the important matter of securing the fruit statistics of the Dominion. The views of fruit-growers have been brought to the notice of the readers of our Annual Reports, but that is all. No means have been taken, that I am aware of, to press the procuring of answers on fruit statistics upon the Dominion Government, Oh! for a watchful executive committee of our members. Time flies; we are getting old and useless, and nothing is done. Forgive the ebullience. The little progress on fruit-growing is enough to give a man the "yellows," *i. e.*, the jaundice.

THE GADDING VINE.

Grapes have done well this season. They just escaped the frost on the 16th and 17th of June. The flowers were ready to burst. Fortunately the season was late, and little damage was done throughout Ontario. Here and there they were caught by the cold snap. B. Gott, of Arkona, writes that grapes are most abundant. Indeed the crop generally is very heavy, affording great encouragement to the grower. There is a larger acreage planted in Ontario this year than ever before. We were delighted to hear of the success attending the planting of vines in Toronto and neighbourhood. Mr. John Hoskin, of the Dale, has a considerable vineyard, and is a most successful cultivator of this noble and ancient fruit, and no novice in wine making. Mr. P. C. Dempsey, Albury P.O., Prince Edward county, says:—

"Grapes are not so large in bunch this year as in former years. I think the vines have not fully recovered from the effects of the frost in May, 1878, when they had grown from 12 to 15 inches, and were completely frozen off. I have several vines that have not one bunch, but all are making plenty of wood. My hybrids, No. 4, small black grape resembling the Burnet, is in form and flavour and ripening at the same time as No. 5, which is large, black, ripens with Isabella; No. 15, also black, medium in size of bunch and berry; No. 18, white, you have frequently seen; No. 19, or Burnet, requires no remarks from me; No. 20, white, resembles the exotic, the best of all my seedlings—a good grape; No. 25, you have frequently seen. If it was three weeks earlier I would not ask a better grape; No. 24, too late for our climate, black and large; No. 60, a cross between Delaware and Allan's Hybrid, is a white grape or rather light amber in colour, bunch about like Delaware, the berry a little larger, early and good, but has the fault of dropping the berry from the bunch as soon as ripe. These are all the varieties of my hybrids that have fruited and that are of any promise. I have many more of recent production and growth that have not fruited. All are crosses with hardy varieties."

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I am sure it would greatly gratify the fruit growers of Ontario to know that all of Mr. Dempsey's hybrids were in the market. I particularize Nos. 18 and 25. He is the Ricketts of our Province and deserves well of the country for the number of interesting hybridizations he has added to our fruit list. May he be long spared to be enriched and to enrich. We had hoped to announce to you this year that the hybrid grapes of Mr. W. H. Mills, my predecessor in this chair, had been put upon the market. This we are unable as yet to do; but when the announcement is made, I am sure we shall all rejoice. His seedlings are of great promise and value, and will show what advances hybridization is making among our fruit growers. Mr. Wm. Hoskin's grape, a hybrid with the same paternity as the Burnet, is being propagated, and will prove no unworthy rival to its compatriot. The hybrids of Mr. Wm. Saunders, of London, who has a legion of them, are fruiting, and some of them giving promise of marked excellence. One or two of his varieties are strikingly early. Some of them are foreign in their foliage, with a deep mauve colour in their stem, and many of them most vigorous in constitution and growth. Mr. Saunders moves slowly, constitutionally. His hybrid blackberries have dragged their long length and age behind. Were the members of our Association bold enough to give a recommendation to our enlightened and successful co-labourer we might say to him, Don't put too much stress on the old motto of "*Festina lente.*" Amongst our neighbours over the way there is first the Pocklington, a remarkable grape of promise; and, secondly the Rochester and the Monroe, both raised and introduced by Ellwanger & Barry. The Pocklington is a white grape, and bears the favourable imprimatur of Mr. M. B. Bateham, of Painsville, Ohio, and the two latter by the Messrs. Ellwanger and Barry. We have seen the Rochester, and highly esteem it. The habits of the vine are similar to those of the Diana. It requires ample room and rather longpruning. It is ripe in the first week in September, and has never failed to ripen well in the worst season since it first bore. Mr. Rickett's Highland and Lady Washington have been already noticed by me. Mr. Hubbard's new white grape, the Prentiss, is making a *furor* in Ohio, and doubtless will soon find its way among ourselves.

PESTS OF THE VINEYARD.

It will not comfort many of you to know that the grape-rot, so prevalent in Cincinnati twenty or thirty years ago, is beginning to make its appearance in Canadian vineyards. Wet seasons are most certain to bring rot. Vines on wet and moist soils are most liable to the disease. A crop of clover, rye or oats, covering the surface of the ground during the hottest part of the summer has been found to lessen the evil. W. W. Scarborough, of Cincinnati, protects his vines profitably, both from mildew and rot, by covering them with Manilla bags, and sometimes he uses bags of muslin for the same purpose, and that successfully. We are persuaded that similarity of climatic changes with those in the States is the real cause of rot in Canadian vines. It would be well for Canadian vine growers to be on the alert and use every available means to prevent its spreading generally over the Province. Good cultivation and watching are perhaps the best preventives. A few years ago I witnessed the rot ravages at Cincinnati, and have a very salutary dread of its dire effects. In this connection I may mention that there is no diminution of the Phylloxera. Secretary Bateham, of the Ohio State Horticultural Society, estimates the loss of vines by the ravages of Phylloxera to be at the rate of 1,000 acres annually in that State. This seriously diminishes the profits of the cultivator. G. A. Campbell, of Delaware, Ohio, a well-known adept in fruit matters, declares that the ravages of this pest are rapidly on the increase. Mr. John McLean, of Owen Sound, to whom I have been much indebted for news about fruit growing, sends me Australian newspapers, whose contributors bitterly complain of the inroads of the Phylloxera on Southern vineyards. The misfortune is that no good and sufficient remedy has yet been discovered. We fear that the only remedy is to deprive the destructive pest of his modicum of food. Unsparingly root up defective vines and carry the war into Africa against the determined ravager. Mr. Bucke, Ottawa, writes that his "Salem have badly mildewed this season, though no other variety has been injured. The Champion has coloured nicely, and Miller's Burgundy is following close after it." We need only say that a good dose of sulphur will greatly modify, if not

wholly prevent the mildew on grape vines. Mr. Paffard, of Niagara, grows beautiful Sweetwater in the open trellis in his garden, and treats the Black Hamburg as a hardy grape, and by means of large and frequent applications of sulphur. The subject of long pruning, applied to the vine, is receiving the utmost attention at present. The longer the subject is discussed, will it appear evident that we have been cutting the vine too closely, its nature, habit, abundance of sap, all indicate that it requires to run, though it may be an extreme illustration, yet it is a just and applicable one. The single Black Hamburg vine at Hampton Court Palace fills the whole house, *ex uno disce omnes*. A curious and fanciful gardener, and what gardener is not both curious and fanciful, employed in our ideal test garden would speedily put all these test questions to the proof, and furnish us with ocular demonstration that fruit growers have been too long trying to confine vines too much to narrow limits. Mr. Hoskins' Rogers' 15 is a notable example of the benefits accruing from long pruning, which many of you by inspection have been able to judge of for yourselves. A better, a newer, era is dawning on fruit growing, and the united experience of cultivators freely disseminated will yet work wonders to the profession.

APPLES AND PEARS

are plentiful, notwithstanding that this is not the fruiting year of the former. Mr. B. Gott says that the crop of apples and pears is very promising and will be very fine, and the former will be most abundant. In the neighbourhood of Strathroy there is a splendid show of fruit. Recently I travelled along a part of the 4th concession, Adelaide Township, and found some orchards groaning under an unusual weight of apples. At St. Thomas, too, there is the prospect of a remunerative yield. Altogether we have reason to express our gratitude with great thankfulness to the bountiful Giver of all good gifts for the ample supply of delicious fruits, and especially for the wholesomest of all fruits—the apple. It would gratify many fruit growers to know the extent of the season's apple crop, We trust that, while we meet as an association in our annual gathering at Ottawa, a committee will be appointed to wait upon the Hon. the Minister of Agriculture, and represent how easy it would be to embrace in the forthcoming statistical report questions adapted to call forth an accurate account of the yield of fruit, and especially of apples. I have no faith in the guesswork that is annually put forth by interested producers who know little or nothing about the extent of our fruit crop. Haphazard statements of so many hundred thousand barrels have had their day, we trust, and that now we can look forward to carefully prepared tables which will be unerring as a guide to our fruit growers. We notice, from a circular of Messrs. Woodall & Co., Liverpool, that the apple crop in England is almost a failure. It is a bad wind that blows nobody good. What is the extremity of English fruit growers will prove to be a rich harvest to Canadian horticulturists. Every barrel should be sent to the British market that can be spared from our own, care being taken that fair, hand-picked, good fruit is forwarded, not for a remunerative return, but for the credit and good repute of our Ontario fruit dealers. Let us all rejoice in the fruit prospects of this abundant fruit season. Of new apples we were favoured with a sample of Lord Suffield, forwarded to us by our indefatigable Director, Mr. A. McD. Allan, of Goderich. Alas for his Lordship's reputation, we mistook him for a sample of Willson's early harvest apple, and made a premature incision, which has thrown a favourable report of the excellent qualities of his Lordship's back to another season. The Jefferis has been on our show-tables for two years. We can strongly recommend its general cultivation. It is tender and delicious, of great beauty in its appearance, one of the finest dessert apples, and productive. We again call your attention to a remarkable crab-apple brought to our notice by Mr. Wood, of Guelph, now of Fergus. It is ironclad, delicious for dessert, and beautiful in shape and appearance. It would be well worth propagating by some of our go-ahead nurserymen. Hitherto nobody of our acquaintance has taken its dissemination in hand; the more's the pity. P. C. Dempsey, of Albury, writes, in regard to seedlings, that in the County of Hastings and neighbouring counties there are many orchards which have been planted from fifty to eighty years, containing fine samples of natural fruit. Our Association lags in not arising and securing these seedlings for more general propagation. An experimental or test garden would soon enhance valuable varieties in public estima-

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tion. We have waited long, and we think that we may wait in vain, for some public-spirited individual among our members to step forward and show the importance of this matter and push it to a practical conclusion. The Provincial benefits for such an institution are not far to seek, being apparent on the surface. The good results likely to accrue to our hybridists will present themselves to every thinker.

DISEASES IN PEARS.

I approach with some degree of caution the pear question. The drawbacks to its cultivation are so many and so formidable, that we shrink from saying aught that would lead pear-growers on the ice. It is true that the ravages of the blight have not been so destructive this season as we have seen it on former occasions. But it is still bad enough. We are persuaded that over-cultivation has a good deal to do with pear blight. Trees poorly fed, and worse cared for, seldom blight. The origin of the evil is as inscrutable today as it has ever been. Mr. John Pearce, of Toronto township, has written us largely on the origin of the disease, but, alas, for his learned lucubrations, we have a blighted pear tree, at this moment growing in a pot, which blighted on the trunk, was cut down to within an inch or two of the ground, and which is now, the 1st of September, sending up a vigorous shoot, indicating that at least the supposed origin of the disease, the root, is not at fault. Two years ago I cut off in the same way a badly blighted Glout Morceau, and we question if any pear grower among us has a prettier head than that which now graces our, about to be, discarded pear tree. The origin and cure of pear blight are yet to seek. Of new varieties within our knowledge, we can confidently speak of Andre Desportes, Beurre de l'Assomption, Bonne du Puits Ansault, Brockworth Park, Duchesse Precoce, Madame Baptiste Desportes, Madame Andre Leroy, Pitmaston Duchesse, Dr. Reeder, Mount Vernon, Frederick Clapp, and Madame Appert. This year throughout the Province there is an abundant crop rewarding the care, patience, and assiduity of the horticulturist. Such is the record of the season which we now present to you.

We trust that in the experience of every one interested in Horticulture, the recapitulation may prove its truthfulness and impartiality. We could wish that our annual address here ended, as we fear that our reflections and presentations of facts may be tedious to the practical horticulturists here present.

THE PROGRESS OF HORTICULTURE.

At the risk of wearying you, my duty calls upon me still further to notice the advances we have made in horticulture and kindred subjects during 1879. First in order comes the new fields of labour on which we have agreed to enter. At a recent meeting of your Directors, they unanimously agreed to recommend to the Government, that we be clothed with a new name indicating the new subjects sought to be taken under the auspices of this Association. The new name indicates the whole of our responsibility—Horticulture, Floriculture and Forestry; we miss the mention of the vegetables in our designation. Our worthy Secretary, ever fertile in suggestions, may have seen means for remedying this defect. Defect it is, no doubt, for a more important branch of horticultural interest, scarcely exists. There are few subjects under our care, that tend more to the comfort, health and happiness of our citizens than the vegetable garden; somehow, few businesses are more despised than that which furnishes such healthy contributions to our tables. In this department of horticulture, as in all its departments, vast progress is being made in hybridizing new varieties. Our efficient editor of the *Horticulturist* can do much in furthering this branch of our art in recording and bringing to public notice such triumphs of the hybridizer as are to be seen in Dempsey's hybrid tomato and Arnold's garden pea.

FLORICULTURE AND FORESTRY.

Some of our members speak of horticulture with bated breath, as if it were beneath the dignity of a fruit culturist to care for such evanescent creations, and as if it were some-

thing the general public cared little about. We have no sympathy with such views. The adornment of our lawns and gardens has become a fixed fact, and the passion for flowers is rapidly spreading among us. Our public parks are claiming careful attention. Volunteers are offering to contribute their quota for the public taste. In London our cemetery companies are vying with each other who are to make the last resting place outwardly the most attractive with floral decorations. I am glad to think that Mr. W. Saunders is leading the public taste largely in this matter. His leadership will at least secure correct taste. In forestry everything requires to be done. Canadian yeomanry have wonderfully succeeded in clearing the land of the noble monarchs of the forest—monarchs which, were the iconoclasts to live to ten generations, they could not replace. Questions of increased rainfall general health, grain and fruit crops, hang on the proper attention to be given to this interesting subject. Land capable of growing the black walnut, butternut, and red cedar is, and ought not to be, left to the production of the elm and ash. An English writer of note says: "The universal curse of an old civilization is the reckless destruction of the original forests." We Canadians unconcernedly stand by and witness the dire effects of fire and the axe without lifting one protesting and supplicating voice. We can never estimate aright the valuable timber that has been sacrificed to a hungry greed to clear the land. The Fruit Growers' Association need to put forth their best efforts to husband our provincial and Dominion resources in their timber limits—to carefully instruct the farming community how much depends on the judicious planting of forest trees, their presence producing abundant rainfalls, preserving and distributing moisture, and thereby forming a preventive against drought and devastating floods. Hamilton, which might have enjoyed a scene of beauty for generations yet to come, has allowed the face of her fair mountain to be barbarously shorn of the leafy covering, to the great detriment of the city and injury to the proprietors. We need protection from selfish and greedy men, protection from men, devoid of taste, by those who have taste and sense. Mr. Wilmot, our admirable President, I am sure, would indeed rejoice, for the sake of his special culture, that the woods were largely spared to afford "water privileges" to the valuable fish streams that enrich our country. In our forest city we are setting the denizens of other cities a good example in boulevarding our handsome, wide streets. There is much for our Association to do in this respect. The question has to be answered: What are the best trees, and when and how to plant them? Let us importune our Government to efficiently take this matter in hand, and speedily adopt measures introduced by legislation to meet the urgent demand for tree planting. What a wide field for such energetic efforts in the valley of the Saskatchewan! Who could object to a restricting clause in the sales to our highly favoured emigrants to the Lone Land, that yearly they are to plant and protect a certain number of trees. Tree planting has received a marvellous impetus in the Western States by the Timber Act of the United States Congress, by which 57,000,000 trees were set out during the current year. Verily, our cousins are an enterprising people. They seem to do to-day with all their might what their hands find to do, and thus present a noble example to us. I look forward with no trepidation to the consideration of our recommendation of this subject by our enlightened Commissioner of Agriculture, the Hon. S. C. Wood, who has always shown himself thoroughly alive to the furtherance of horticultural and kindred pursuits. His part will not be wanting in successfully carrying out the projected alterations in our Provincial Agricultural Act to enable us, as to the manor born, to take under our wing the subject of Canadian forestry. We turn to the effects of

THE NATIONAL POLICY

on our fruit growing. We confess that we are not indifferent to its results commercially and politically. Whatever benefits or depresses our country's interests cannot be viewed with indifference by the patriot. Last year we were met by the random assertion that the National Policy would enhance prices, and that only the rich could buy luxuries under its sway. Dr. T. H. Watt, of Niagara, who has greatly interested himself in these matters, writes me thus:—

"Again, with regard to peaches, who ever heard of them being sold on the 7th day of August at one dollar a basket, in the previous history of fruit-growing in Canada. We

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may account for this. The American and Canadian growers have been aiming at very early varieties. We have them now, and as they are only good from hand to mouth, and are flung on our markets at once, we see a decline in one day from two dollars to one dollar. They have no other market in the United States. Now to my thinking this is just where the National Policy steps in and aids us. They must sell, or have them rot on their hands, so sell they must. Peaches sold this day (8th Aug.) at \$1, deduct duty 20 cents, basket and cover 10 cents, freight to Toronto and Harbour dues, say 12½ cents, commission 10 cents or less, 52½c, value of the fruit, less expense of picking and teaming, 47½c. Now if this is the case with early ones, what will it be in full season? The shipper will be brought into debt. Thus probably the cultivation of the peach may be curtailed to a certain extent on their side and increased on this, and the same line of argument may hold good with all perishable fruits."

The Dr. further adds:—"The National Policy is only on its trial, and it would be unfair to expect any very immediate results. The whole money system of Canada is in the *balance*; may it not be found wanting."

We are satisfied that more fruit tree planting has been done during the past season than for years before. Our nurserymen have been pushing a good business—a sure indication that better times are looked for in the near future. B. Gott, a shrewd observer, writes me—"The market outlook (for fruit) is very encouraging. The effects of the National Policy, or protection, upon our fruit market seems to work well, and we are much more encouraged in getting the cream of our own market, and finding a ready demand for our rich fruit products. All this is very pleasing."

TREE AND PLANT DISTRIBUTION.

As a general thing, we have the most satisfactory reports from every part of the country where our trees reached their destination alive. We recently visited Strathroy and found in Mr. Geo. Orchard's garden the good effects of our tree and plant distribution. He has not only received, but cared for his associational free gifts. His Swayzie Pomme Grise, Grimes' Golden, Beure Clairgeau, Clapp's Favourite, are handsome trees, upright and healthy. Glass' seedling plum is a perfect beauty, and the Burnet grape is doing splendidly. Mr. Orchard is a model horticulturist, and exhibits the greatest interest in all matters horticultural connected with the efforts of our Association. A pleasant and delightful hour was spent on his place. The reports, indeed, from all quarters are satisfactory. The wonder is at the dissatisfaction consequent on disappointed hopes, where the distribution has been so extensive, was not larger. As to be expected, many of our members sometimes have received their trees in bad condition, which was the misfortune, not the fault, of our Association, the evil resting with those with whom we dealt outside our own borders. Of late the members must have noticed that the Board have been confining their distribution largely from the ranks of our own Canadian hybridists. This rule has, however, not been so rigidly enforced as to preclude what has seemed to the Board to be of superior excellence from abroad. The present policy is working well and Mr. Arnold's Ontario was recently sent over the length and breadth of the land, as, we trust, another feather in the cap of your direction for prudent forethought.

ILLUSTRATIONS IN THE ANNUAL REPORT.

You will doubtless miss the accustomed illustrations in your annual report. The omission has arisen from straightened means. A small debt hanging over the heads of your direction owing to the increased expenditure for the publication of the *Horticulturist* has dictated the propriety of curtailing our outlay to bring it into correspondence with our narrow income. They have determined to pinch along, and do the best they can for the advancement of our chosen culture. It is eminently due to Mr. Wm. Roy, of Royston Park, and Mr. Wm. Saunders, of London, to say that their liberality in a very practical way was manifested in our extremity, which bridged us over our financial difficulty. The Hon. Commissioner of Agriculture, Hon. S. C. Wood, also timely came to the rescue, and added an important addition to our grant. In a few months our financial matters will

stand as they never before have done, the balance in favour of the Association. From this statement I pass to the consideration of the best means of advancing our future usefulness.

POPULARIZING THE SOCIETY'S WORKS.

The operations of our Association are not sufficiently known. In too many sections our very name has not penetrated. Such an assertion is very humiliating, but it ought to be made, if true, and good will come out of it. Some time ago, I was in the county of Elgin, and found that prominent fruit-growers in their own locality had not seen nor read any of our fruit reports, and did not know of the Association at all. Two weeks ago I had an inquiry from a successful firm of nurserymen as to the mode in which they might become members of our Association. We require to take means to organize county branch societies, whose work would be identical with our own. Our worthy Secretary suggested some time ago that your President might undertake to give addresses on horticulture in different districts, being aided and abetted by leading local fruit-growers. This suggestion would probably have been acted on before this, if you believe me capable of such an effort, had it not been that a severe attack of sickness incapacitated me from entering on the discharge of such a duty. A more extensive circulation of our reports, and the increased distribution of the *Horticulturist* is urgently needed. Where known our reports are diligently sought after. Where read, our *Horticulturist* is a welcome monthly visitor. In regard to the latter, poetry, learned essays, spirited editorials, delightful horticultural gossip, spicy travelling accounts, contemplated botanical pursuits, all claim the attention of our members, and would be greatly relished by the portion of the community that the monthly never reaches. Let us devise some means to get readers, I might say subscribers, to the organ of our Society. It will never be much till it is made to pay—till people, in fact, pay for it. Gratuitous distribution does not pay, has not paid, will not pay. People estimate gifts very often according to the money value which they pay for them. In this connection, I may also state that our quarterly discussions are greatly lost as far as regards usefulness from a similar cause. They are not known. We have been struck with the little interest they excite even in the localities where our meetings are held. Often, were it not for the laudable attendance of our directors, the meetings would have to be dissolved for want of a quorum. A review of this nature just shows what a mighty work is before us, and how we ought to gird ourselves to the battle against indifference, ignorance and sometimes censoriousness. Of late we have remarked that no mention has been made of these meetings by the metropolitan press. An Assistant Secretary should be appointed at every meeting to help our Secretary and prepare paragraphs of our discussions for insertion in at least the leading newspapers of our growing towns and cities. The Peterboro' *Review*, under the able management of its editor, did our Association good service at our summer meeting. Like results ought to be made general. We require to make earnest solicitation for assistance. There are many persons, shall I say it, so affected with a common disease called laziness, that they are not aware what they can do till they are pushed to do something besides. If a thing is desirable in itself, it is worth asking for. It is true in soliciting assistance, and is equally true in urging attendance at these meetings of fruit growers; last winter we made a good beginning in securing essays and topical addresses from a number of our own members. It would be a pity to let this good practice drop. Skilful and talented individuals, even outside of the roll of membership, might be enlisted for these purposes. Not to mention the improvement to our meetings by such a course, these papers would prove an unfailling source of benefit in awarding suitable material for the preparation of the annual report to the Government. Efforts should be made to lengthen out our sessions to two days at least. We are too much in a hurry to get home. Longer sederunts would secure a deeper and wider public interest in the Society's sayings and doings. Important subjects are chosen for discussion. It frequently happens, however, that often several of them are left unconsidered. A determined exertion should be made to secure cheap railway fares. Other societies receive this benefit, which cannot be said to be so important, or which are doing so much gratuitous good as we are doing. A deputation should be appointed to wait upon the leading railway authorities. Our case should be strongly argued and convincingly put: exertions in this direction would largely increase

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our attendance. I have heretofore urged a closer connection with the maritime provinces. Last year I pointed out how truly beneficial our purposes and plans might be made in regard to Manitoba. This is a field for our exertions not to be despised nor overlooked.

A FRUIT LIST A NECESSITY.

It is very desirable, too, that we form and authorize a comprehensive and reliable fruit list suitable for the various sections of this country. Our labours in this respect have been very much lightened by the admirable lists of the American Pomological Society, under the leadership of that astute horticulturist and pomologist, Mr. P. Barry, of Rochester. The Canadian fruit grower owes a deep debt of gratitude to this gentleman. The difficulties attending a revision and publication of an extended fruit list can only be understood by those who have studied this most important subject connected with horticulture. I ought not, perhaps, though I may appear tedious to you, to overlook the model set us by the Michigan State fruit list. At no time, perhaps, in the history of fruit growing, was there ever a time when, in the prosecution of our legitimate labours, we could have got such valuable assistance from the arduous work of those who are and have been engaged in like pursuits. I know of few means that would more advance our national industry than just to take a new departure in this respect. We exist, in fact, to help our Provincial and national industries, and every advance made in forming a correct and, therefore, reliable nomenclature, would tend to immensely enhance the value of our fruit products.

THE MANAGEMENT.

Lastly, after the manner of a parson, I would strongly recommend that the honours and labour of the management of our Association be equally distributed. You have long honoured the policy of reappointing your officers. Perhaps this is a favourable time for your divergence from this custom, and to inject a little new blood into your Direction. A fitter President than your present Vice-President, Mr. Wm. Roy, could scarcely be found worthy of your suffrages. An ardent horticulturist with time and leisure on his hands, he would serve you well and prove an ornament to your Association. He would prove to be the right man in the right place.

THE AMERICAN POMOLOGICAL SOCIETY.

Mr. Beadle, Mr. P. C. Dempsey, and myself, attended the meetings of the American Pomological Society, which opened its session in Rochester on Wednesday last. Mr. P. Barry ably presided in the lamented absence of the Hon. Marshall P. Wilder, President of the Association. Many important discussions engaged the attention of the members which will be given to the world through the publication of the transactions. A grand reception was given to the members and their friends, by the citizens of Rochester. Mr. Power's picture gallery was considerably placed at the disposal of the Vice-President, Mr. Barry, for the occasion. Your President had the distinguished honour of replying to the toast "Success to the pomology of the Dominion." As usual every courtesy and kindness were extended to members of your deputation. The Hon. Marshall P. Wilder, of Boston, was again unanimously chosen President.

THE DOMINION EXHIBITION.

This brings me to notice our present Provincial, or rather, grand Dominion Exhibition at Ottawa. It will long be known as the red letter year of our Association. The presence of his Excellency the Governor-General of the Dominion, which we believe first suggested the idea of giving our Provincial exhibition a Dominion cast, will be long remembered in connection with its formal opening. His well-known interest in all matters referring to agriculture and arts, indeed in every branch of industry calculated to advance the Dominion in material prosperity; his personal liberality in the munificent gifts of gold, silver, and bronze medals, and his encouragement to the exhibition in the distribution of five hundred Dominion medals through the Government, will remain a lasting memorial of his devotion

to the welfare of our country. Not less courteous has been the condescension of her Royal Highness the Princess Louise, who has been pleased to take a particular interest in the exhibition of our fruits.

CLOSING REMARKS.

I have only space to make the briefest mention of an important matter connected with the future well-being and advancement of our fruit interests. I refer to the rights of our hybridists in the fruits of their industry. Why should not our hybridists be protected in their rights just in the mode that authors are protected? They should have a right to the name they give their products and have the privilege of selling their rights to individuals, townships, counties, states, or provinces. In short, they should have a copyright in their own property.

Another important matter claiming the efforts of fruit producers is the subject of drying fruits, canning and preserving them. Tomatoes, for instance, have been selling wholesale for fifteen cents. In the market they have brought twenty-five cents, leaving margin sufficient for a handsome profit to the preserver.

I have only another word to say and I have done. It is unusual that I should exhibit a grumbling mood in my annual address. This year, however, I cannot but remark that with regard to the Dominion prize medals for our fruit department, we seem to live in a bronze age. It may be a little brassy for your President to remark that in Class 36, with twenty-five sections, our quota of medals was two silver and five bronze medals. Class 1, with eleven sections, has had awarded to it one gold, two silver, and five bronze medals. The general fruit list, Class 38, with seventy sections has had five bronze medals awarded. Natural history, which in past exhibitions has been a mere bagatelle, any one being able to place in a small portmanteau the valuable contributions in its Class 44, with seventeen sections, has only obtained two gold, two silver, and two bronze medals. I wish to have it on record that I had neither act or part in this distribution, but simply that of protesting against our cherished culture being lowered to the bronze age.

OBITUARY NOTICE.

Our Association has lost a worthy member in the demise of the late Archibald MacCallum M.A., LL.B., Inspector of Public Schools, Hamilton. He was one of our quiet, but active members. Indeed, it may justly be said, that he was always ready to lend a helping hand to every cause that has for its object the welfare and happiness of his fellow creatures. Engaged, as he was, in the active discharge of the duties of a singularly busy life, he yet had time for recreation in the shape of a diligent cultivator of fruit trees. With honest pride he showed the results of his experiments in gardening, and exhibited good taste, both in the selection and cultivation of his fruits. He has gone, greatly lamented by a large circle of admiring friends. The death, however, of a good man ought not to be lamented. We ought to rejoice that he combined in a very eminent degree, the qualities, of the worthy citizen, and the humble disciple of our Lord and Master. His departure is fruitful in important lessons, to do with all our might those things that our hands find to do, ere the night of death cometh when we cannot work. He was a christian, and that embraces all of good that can be said of him. His end was peace. When our day of departure comes, may we die the death of the righteous, and may our latter end be like his. In such an hour as we know not the Son of man cometh. "Be ye also ready." May we so strive to discharge our duties that when the summons goes forth, "cut them down" we may hear the gladdening sentence, "Well done, good and faithful servant, enter into the joy of your Lord."

"So live, that when thy summons comes to join
The innumerable caravan, that travels on
To that mysterious realm, where each shall take
His chamber in the silent halls of death,
Thou go not, like the quarry-slave at night
Scourged to his dungeon; but sustained and soothed
By an unfaltering trust, approach thy grave,
Like one who wraps the drapery of his couch
Around him, and lies down to pleasant dreams"

ROBERT BURNET, *President.*

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REPORT OF DISCUSSIONS.

It does not seem to be wise, to burden this report with a reprint of these discussions. They have been so fully laid before the members in the pages of the CANADIAN HORTICULTURIST that it is only necessary to say that they will be found in the numbers for March, April, September and October, 1879.

YELLOWS IN THE PEACH.

READ AT THE WINTER MEETING, BY P. E. BUCKE, OTTAWA.

It is stated that yellows attacks only those trees that are worked on the peach stock, and that if worked on the plum or the almond this disease would be avoided. When once a tree is attacked this disease is regarded as incurable, and can only be got rid of by the total eradication of the trees infected. This dread epidemic is happily unknown in Europe, having made its appearance only on this continent in the United States. It is never seen in newly cleared districts, unless introduced by the importation of infected trees.

The South Haven Pomological Society appointed a committee to examine and report on the orchards in that locality in order that the trees if affected might be destroyed as the law of the state of Michigan requires. It appears that many parties neglected destroying the trees under the impression that the yellows only spread when the tree was in bloom, so that if the trees were made away with before the spring no damage would result, but it has been found that this impression is a wrong one, as the disease spreads at any time during the season. Resolutions were therefore passed by the above society recommending all persons to refrain from shipping diseased fruit, and calling upon public carriers to refuse such freight, and requesting commission men and other dealers to report to the society the names of persons shipping the same, that the society do prosecute such individuals, that commission men selling the fruit of members of the society be requested to quote the same as South Haven fruit, and that a copy of the above resolutions be furnished as far as possible to carriers and commission men and other parties interested.

Perhaps our society might take a leaf out of the book of the one above quoted and frame such rules as might protect its members from this dreadful scourge and if necessary obtain Parliamentary assistance in suppressing the disease.

WHICH ARE THE BEST TEN FLOWERING NATIVE TREES AND SHRUBS FOR ORNAMENTATION?

READ AT THE WINTER MEETING, BY W. SAUNDERS, LONDON.

It is without doubt very desirable that as far as possible our native ornamental shrubs and trees should be utilized. Their hardiness under favourable conditions is established, and in many instances they can be obtained either as small plants from the woods, or can be grown from seed without cost, and in any desired quantity, which places them within the reach of all. In most cases such shrubs grown from seed will give more satisfaction than those transplanted from their native haunts, for the reason that the change of soil, situation and surroundings is sometimes too great for the partially grown shrub to endure. It may have affected a swampy locality, where the soil has been damp and rich, and where it has been surrounded and sheltered by masses of luxuriant foliage which have maintained a large measure of shade as well as a moist atmosphere about it; while in its new location in the garden or shrubbery it may be exposed to bleak winds and the strength of the summer's sun in a drier and less rich soil. Such great changes will usually stunt a growing shrub and sometimes kill it outright, while young seedlings raised in a drier soil, and early hardened by exposure, will accommodate themselves to altered circumstances with much less risk. When we reflect on the many beautiful shrubs and trees which adorn our woods, it becomes a matter of some astonishment that they have not in the past claimed more of our attention; the number, then, to which we are confined in this discussion does not give a very wide field, particularly since we are limited, as I take it, to such as are known

to be native to Ontario; nevertheless, if the selection be a judicious one, it may still serve as profitable subject for thought, and future experiment.

1. *Pyrus Arbutifolia*—Chokeberry.

This is a very desirable shrub, an early and most prolific bloomer, botanically allied to the pear and apple. It is distributed over a large area, being found from Canada to Carolina, in low swampy grounds. Its height varies from two to eight or even ten feet. The leaves are small, oblong and finely serrate. The flowers are white, sometimes tinged with purple, and are arranged in compound cymes, terminating the branches; they are produced in May in the greatest profusion, so that at a little distance the shrub appears to be a mass of bloom. Following the flowers, the bush is ornamented by clusters of dark purple, nearly black pear shaped berries, about the size of a pea which when not eaten by birds, will hang on the bushes until the flowering period of the season following. It succeeds either as a bush, or grafted as a standard, on a thorn stock, and is highly ornamental. In spring, when covered with its profusion of white flowers, in autumn, when its foliage assumes tints of red and purple, and in winter, when the branches are tipped with clusters of fruit. It was introduced into England in 1700, and is said to be frequent there in collections, known under the name of *Mespilus arbutifolia*. In this country it has not received the attention it deserves.

2. *Cornus Stolonifera*—Red Osier Dogwood.

Among the shrubs belonging to the genus *Cornus*, there are several native to this province, well worthy of cultivation. *Stolonifera*, sometimes also known as *alba*, is interesting and desirable for several reasons: its young wood is of an intensely red or coral colour, which makes it attractive in winter; its fine large ovate leaves, and its flat clusters of white flowers make it an ornament in summer, and its bunches of bluish-white fruit in autumn. Its period of flowering is from May to July, but frequently there is a second crop of bloom in September, but much less abundant than that of early summer. This is a very common shrub throughout Ontario, growing on the margins of rivers and lakes, adapting itself to almost any sort of soil, although when growing in the pure sand along the lake shores it is often very much stunted. In height it varies from three to six feet, and it spreads itself by means of prostrate or subterranean running shoots, which root in the soil. It has been in cultivation in Europe for about fifty years. Among the other species of *cornus* which are native here and are desirable for cultivation are the following: *C. paniculata*, with flowers and fruit both white; *C. sericea*, with white flowers and bluish fruit, and *C. stricta*, with white flowers and pale blue fruit.

3. *Euonymus Atropurpureus*—The Burning Bush or Spindle Tree.

One of the common names of this shrub, "burning bush" has been given to it from the fact that in winter the bare branches are all ablaze with brilliant scarlet berries, showing to great advantage on a back-ground of snow, and which makes the bush a desirable one for the winter season. The branches are smooth, the leaves opposite-stalked, lanceolate, oblong in form and serrated. The flowers are not conspicuous, being small and flat, composed usually of four petals of a dull dark purple colour. The brilliant fruit is four-lobed and hangs on slender stalks.

Many beautiful varieties of *Euonymus* are now in cultivation, and are highly ornamental, especially the evergreen species from Japan, and their many variegated forms, but it is scarcely likely that any of these excepting the handsome *Euonymus radicans variegata* will be found permanently hardy in Ontario. Among the deciduous forms in cultivation, it is doubtful if any are more attractive than our native *atropurpureus*.

4. *Hypericum Kalmianum*.—Kalm's St. John's Wort.

This is one of the shrubby St. John's Worts, growing from two to three feet in height, forming a very neat and compact bush; it is probably the most ornamental of the hardy

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species of this genus. It is densely clothed with lanceolate leaves from one to two inches in length, and produces its bright yellow flowers in clusters freely, during the months of July and August. Found in damp rocky situations at Niagara Falls, and in the neighbourhood of the northern lakes, it succeeds best in shady situations. Has been in cultivation in Europe for about thirty years.

5. *Cephalanthus Occidentalis*—*Button Bush*.

The Button Bush is a bushy shrub, from three to six feet in height, growing in marshy places from Canada to Florida, and is abundant in Ontario. The leaves are large and handsome, nearly oval in form, and are either opposite or arranged three in a whorl. The individual flowers are small, of a white or yellowish-white colour, but they are arranged in dense globular heads which are quite showy; their heads are not unlike a large button in form, hence the common name, Button Bush. Its period of blooming is July and August. This is a very beautiful and interesting shrub and well worthy of a place in every collection; it has been cultivated to a limited extent in England for the past forty years, but is not much known in this country outside its native haunts.

6. *Ceanothus Americanus*—*New Jersey Tea*.

This shrub derives its common name from the fact that its leaves were used as tea during the American Revolution. It is low-growing, seldom exceeding two feet in height, but is very compact and is covered with its pretty white flowers in clusters during the month of July. It affects dry sandy situations, where it seems to thrive better than it does in heavier soil. The leaves are ovate, serrate, and downy beneath, the flowers in little umbel-like clusters, which are crowded in dense panicles at the summit of the flower branches.

7. *Vaccinium Corymbosum*—*Common or Swamp Blueberry*.

This is a tall and handsome deciduous shrub, growing from five to ten feet in height, and is common almost everywhere in swamps and low thickets. Its leaves are oval or oblong, from one and a half to two inches in length. The flowers which expand in May and June are very pretty, but small; they are bell-shaped, of a white or reddish white colour, growing in clusters or short racemes. This bush yields the common blueberry or blue huckleberry of the latter part of the season. It was introduced into England, and cultivated for ornament as early as 1765, where it is still regarded as a handsome shrub, of easy culture in sandy peat soils.

8. *Ilex Verticillata*. *Black Alder or Winterberry*.

A deciduous shrub common in swampy places, where it attains a height of from six to eight feet. The leaves are oval, pointed, finely toothed, and downy underneath; the flowers small, white, and arranged in clusters about the base of the leaves. The flowers are succeeded by very bright red berries, which are produced in profusion, giving the bush, a very handsome appearance in the autumn, especially brilliant after the fall of the leaves. Introduced into Europe in 1736, where it is still cultivated.

There is not much space left for flowering trees, there are two, however, which I should not like to omit.

Liriodendron Tulipifera. *The Tulip Tree*.

A large and most beautiful tree, handsome in form, and when mature, attaining a height sometimes of over one hundred feet, with a diameter of eight or nine feet. The leaves are very oddly shaped, being truncate at the top, four lobed, and resembling a saddle in form. As its roots are furnished with but few fibres it is more successfully transplanted while young, when it should be placed in the situation it is intended to occupy. The tree does not usually flower until it has attained a height of twenty feet or

more. The flowers are large, terminal, and solitary, of a greenish-yellow colour, with orange markings, they have an agreeable odour, and surrounded by the luxuriant foliage, produce a fine effect. Although not a common tree with us, yet it is found native in many parts of western Ontario, and in cultivation, when once established, grows rapidly, enduring our climate well. It was introduced into Europe, two hundred years ago, where it is very highly esteemed.

Prunus Serotina. Wild Black Cherry.

The luxuriant foliage of this tree, as well as its beautiful form, makes it also very desirable. The leaves are glossy, oblong or lanceolate-oblong, finely toothed and pointed, and of a rich green colour. The flowers are white and fragrant, borne on racemes, which terminate the leafy branches, and therefore appear after the leaves, late in the spring. The ripe fruit is purplish black and slightly bitter. This tree will deserve a place in every collection; was early introduced into Europe where it is much cultivated.

THE BEST TWELVE VARIETIES OF PEAR FOR CULTIVATION IN ONTARIO.

READ AT THE WINTER MEETING, BY REV. R. BURNET, HAMILTON.

For me to introduce to the assembled fruit growers of Ontario, the best twelve varieties of pears for cultivation, is like returning to the enjoyment of old associations, and to the exquisite delights of old horticultural pursuits. A veteran coachman likes to hear the crack of the whip, and an old teacher loves to see the successful career of his pupil, so do I take kindly to recount to you my efforts, failures, and successes in pear-growing. My first, and my present, impressions of the best pears, are widely apart. On my first entry upon pear culture, the beau ideal of all pears, was the Seckel. Like Mr. Arnold, I have lived to change my mind, and like him, I claim the privilege of changing my mind, or rather my experience. Undoubtedly the Seckel stands preeminent in flavour, but flavour is not the only good characteristic of a good pear. Adaptation, hardihood, general favour, are important characteristics, and not to be overlooked in the cultivation of a dozen varieties. I may be considered a Vandal when, with an unsparing knife, I excise the Seckel from the dozen varieties. Some one will say, but does not your very comparison, the very eminence, which you give to the Seckel, prove its unquestioned superiority. Perhaps it does, but I infinitely prefer the Bartlett to the Seckel. The late Mr. George Barnes, was once questioned in our winter meetings, if he had twenty acres to plant in pears, how many varieties he would plant, and he answered, One. Being pressed to name another variety, he replied, I would name the Bartlett. Its quality is of the best, buttery and melting, with a rich, musky flavour, peculiar to itself. The tree grows well, and is an abundant grower. No variety will reward thinning out more than the Bartlett for it is a prolific bearer. It carries the palm for popularity too; nineteen, out of every twenty, would prefer to purchase the Bartlett before any other variety. In regard to blight, my experience goes to show, that, while it is not blight proof, it is almost as little liable to blight as any other pear tree. One peculiarity of the tree is, when it does blight, you can often cut off the blighted limb, and no variety of pear tree is more apt to send out from the excision stronger or better shoots. In fact, sometimes there is a profusion of such shoots. For every reason, therefore, we can think of, we class the Bartlett first in our Twelve varieties for Canadian cultivation. The varieties described are placed in the order of estimation. Next in order is the

Beurre D'Anjou,

This pear is the favourite of the Hon. Marshall Pinckney Wilder, the venerable President of the American Pomological Society. It is the "Ne plus Meuri's" of the French, and is a pear of the highest excellence. I notice in the catalogue last issued by Messrs. Ellwanger & Barry, its value is emphasised by a brief sentence in *italics*, "One of the most valuable pears in the Catalogue." This variety reminds me much of the ex-

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cellence of the Rhode Island Greening, and holds much the same place among pears as that apple does among its kind. We were always singularly successful in the cultivation of this pear. It delights in a limestone soil, and succeeds admirably in stiff clay. No tree of this variety has ever blighted with me. I don't think I had ever occasion to cut off a blighted limb from any of my trees of this sort. One marked characteristic is, that it never overbears, the fruit is spread evenly over the tree, and if thinned a little, the size of the fruit becomes enormous. This quality, along with its long-keeping, marks it out as a pear of first excellence. Properly handled it will keep to midwinter, and prove delicious when several of the winter varieties are past. Its size is also in its favour. Some Burre D' Anjou which I have seen grown at Lockport were very large. When known it becomes highly esteemed, and will amply repay careful cultivation.

Beurre Superfin.

This variety is scarcely inferior to the Beurre D'Anjou. In the estimation of some, superior to it. It certainly is a most luscious pear. The tree is apt to blight. It does not overbear. In this respect it may well be classed with the Beurre D'Anjou. A striking peculiarity in its bearing, is, that one can gather three or four different, or distinct fruits off the same tree, and not unfrequently off the same branch—all unlike, as they can well be, to the normal shape of the pear. One is entirely russeted from stem to cup, and another wholly free from the appearance of russet. In shape, too, they vary. The peculiar insertion of the stem is a guide to a knowledge of this fruit. Mr. Holton, of Hamilton, was the first to point out to me the superior excellence of this fruit. In any collection, however small, it ought to form an important part.

The next variety is one of rare excellence, and universally a favourite. We mean

The Beurre Bosc.

No pear is more easily recognized. Its peary shape has always commended this variety to me. The fruit grows in strings along the boughs, and there are few finer sights than a tree thickly laden with this most delicious fruit. It is a large and russety pear; very distinct, or kenspeckle with a long neck, highly flavoured and melting. We have heard it affirmed that in the Hamilton district it is tender. Our experience does not lead us to this conclusion. We have never seen the least tenderness about the tree. Were the truth to be told, we would say that the fruit is apt to mark in the carriage. The skin is thin and fine, the flesh soft and melting, and requires the greatest care in the handling. I have some considerable difficulty to locate or place my next variety. Three or four cry out loudly for the fifth place. To be candid, I have a little misgiving. I venture, however, to mention,

Beurre Clairgeau.

This is one of our very best market varieties. I once heard the Archbishop of Bordeaux say in praise of a young man, that he had "un bon mien." The Clairgeau comes under this category. It looks well. Good looking people are always in repute, so with the Clairgeau. Its yellow and red attract the gaze of the passer by. Its huge size, and pyriform contour, incline the purchaser to invest. This fruit has many excellent properties, and not the least is that it keeps long after being gathered. The flesh, when ripe, is yellow, and nearly melting. Messrs Ellwanger & Barry say of it, "a magnificent market fruit; one of the finest acquisitions." I need not say to you, gentlemen, who are here present, that this fruit commands a long price in the New York market, and that the estimate in which this fruit is held is steadily on the increase. It may be well, however, to make this announcement for the sake of those who are about to invest in pear trees. Few will come up to expectation more than this variety.

Louise Bonne de Jersey.

Much has been said and written about the excellence of this pear. It is difficult to overestimate its value. It covers, perhaps, a greater area, than any other variety of pear.

Almost all soils agree with it. This fruit is better known, and more widely diffused than any other pear. In the Channel Islands it grows to an immense size. Paris is the great market for this fruit. We are persuaded that there are two varieties of this pear cultivated in Canada. I am conversant with two trees in the neighbourhood of Niagara, which produce enormously large fruit, having much the appearance of the Channel Island Louise Bonnes. Both fruits have the same characteristics, yellow, with dark red cheeks; melting, buttery, and rich. It is said to do best on the quince. I have seen it very fine on pear stock. A standard Louise Bonne de Jersey loaded with fruit is a rare sight indeed. It would cure one of atheism methinks. What better provision could there be in nature, for the delectation and refreshing of our frail humanity than that afforded by the delightful acidity of this melting fruit?

I am half-way through my list, and seem as if I were only entering on this loved and wide theme. It is odd, is it not, that the next pear to be described, is as near perfection as may be, and rejoices in the perfect place, *the seventh*.

Belle Lucrative.

To some tastes, this is the pear of pears. The French give it the appropriate name of *Fondante D'Automne*, "Autumn's Fountain." Singularly appropriate. There is no grit in this variety—all juice, melting, and of honied sweetness. It bears profusely, and requires thinning. The first time I tasted this pear was in Mr. W. H. Mills' garden. The remembrance is delightful at this moment. I remember how it fired me up to secure a few more varieties with such characteristics, and incited me to pear culture. Taking it all in all, the Belle Lucrative is hard to beat. To my taste, it is a little on the sweet side. I prefer a Louise, or a Beurre Superfin. I can eat more of them, though they are all *more-ish*. A limestone soil is that in which this variety delights. It never disappoints its cultivator. With me, I have had it blight quite a deal, and, unlike the Bartlett, when once it is touched you can scarcely recover it. No variety with which I am acquainted will better reward thinning out than this. The fruit then becomes very large and fine. This variety should have a place in all collections. In competition, it always marks A 1.

I now turn to the

Flemish Beauty.

Almost all that has been said of all the foregoing varieties is true of this sort. The Flemish Beauty is a first-class fruit in every respect. It, too, is well named—tree and fruit are alike beautiful. I have sometimes thought that the Flemish Beauty should be constituted the standard of perfection among pears. I think so yet, only I have seven equally good pears on the list before it. In fact it is a difficult matter for me to say which I like best. I like them all. In shape it is a perfect, large, melting, sweet pear. Tree vigorous, but largely subject to the blight. I could tell of my experience watching and caring for the tree for twelve or fourteen years, and then in a season the whole, tree and fruit, gone forever. It makes one feel bad, and inclines one to give up pear growing. This variety, like the Louise Bonne, is spread over a very wide area. It flourishes at Ottawa, and Mr. Roy grows superb specimens beyond Owen Sound. Somewhat after the fashion of other fair creatures, which shall be nameless, this fruit is often better looking than it really is, as it has a tendency to degenerate about the region of the heart, while not exactly like the apples of Sodom, the expression is often used with regard to it, "As rotten as the heart of a Flemish Beauty pear." They, like all pears, must be gathered a fortnight before they are ripe, and carefully watched during the whole of the ripening process. This sort verifies the Roman adage, "Our sweet flowers soon fade."

White Doyenne.

An old but unusually well-known pear, of the highest excellence. It, and its congener the Gray Doyenne, succeed well in almost every district of Ontario. I have seen it in some years spot and crack badly. Once only in my garden in Hamilton did it crack. To my liking it is a magnificent pear. Perfectly buttery, of delicate flavour, there are few

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pears to compare to it. I never thinned the White Doyenne, though I have seen when it would have been much the better of thinning. A beautiful consumptive blush gives this variety a rare attraction. The leaf marking, too, renders it a beautiful pear for dessert. As a market variety it has few equals. The tree is a good cropper, and the fruit has a ready sale. However small the collection, we are persuaded that no amateur should be without this variety.

We come now to the

Sheldon.

In our discussion, I am prepared to hear the Sheldon advanced to a higher place. For size, beauty and flavour, it is hard to beat. Its grittiness is almost in its favour. Its coarse flesh has a wonderful relish, and almost all the better for its coarseness. We have grown this variety for many years. It never loses in one's estimation. The longer it is cultivated, the better it is liked. An American pear, it finds its way wherever known. It needs no puff or introduction. It speaks for itself. Russeted pears, somehow, are taking to the eye. Almost all the russeted pears are of first quality. Let Beurre Bosc, Gray Doyenne, Beurre Hardy, Oswego Beurre, testify to the truthfulness of this assertion. Sheldon is highly esteemed in Britain, where it has become quite acclimatized. As a market variety it deservedly stands high. A great drawback to its value is that it is very subject to blight. Indeed, after the trees are fully grown, say from eighteen to twenty-five years old, the blight is almost sure to strike them. When the fruit of the husbandman is just about to be expected, the dire evil puts in appearance and robs the cultivator of his expected reward. Continuous planting is the only remedy that I know of to secure a supply of this luscious fruit. This list exhausts the Autumn varieties of pears best for cultivation in Ontario. We were greatly tempted to enlarge on some other varieties, but your time and patience would not permit, with a perfect remembrance of a savage remark once or twice made by our esteemed secretary, I continue my notice of a few winter varieties. He once declared in this room, that he did not know a winter variety worth eating, or so good as a turnip.

In the forefront I place the

Lawrence.

Of all winter pears to me this is the best. Whether this arises from its association with Christmas and New Year's Day dinners, I know not, but the fruit stands higher in my estimation. Add to this, that I never had a Lawrence tree blight, that it is an abundant bearer, fruit of fine shape, pleasant flavour, and easily ripened for a winter variety, and there is abundant reason to praise it. The secretary's sweeping conclusions in regard to winter pears has no place here. It is not an early bearer, does well on its own stock, and the fruit is all the better, if the stock is a rampant grower. There is money in the Lawrence. It will amply reward the cultivator. Its season of ripening is about the beginning to the middle of January. A noble pear it is, when fully ripened.

The Winter Nelis.

The Winter Nelis is second only to the Lawrence as a winter pear. It is a universal favourite. Perhaps, next to the Vicar, it is the best known of winter pears. For early winter it cannot be beat. Of late years we have thought that it approached a late autumn rather than a winter variety. With me it has been ripening prematurely. I remember the time when I kept it to a late Easter, and even then it required warmth to mature it. The drawbacks to the Winter Nelis, are that now and again the fruit becomes knarled with large gritty knots. Highly treated with wood ashes, the fruit is fair, and free from knots. The Winter Nelis delights in wood ashes. When leached ashes are used, the tree will bear the application of almost any quantity. The tree itself is a slim sparse grower, very fruitful, and constant in its bearing. I never knew the fruit the worse for carriage, if in any way carefully handled. It bears transport well, and is a valuable fruit. It needs little or no extra care in ripening it. I may add, that the tree is perfectly hardy, and I never knew it blight. Last, not least, is the

Josephine de Malines.

This pear is gradually coming into notice. It is a medium-sized roundish pear, externally of a pale straw colour. The flesh is rose coloured, melting and delicately perfumed. It has the peculiarity of growing its fruit in clusters, very often three and as high as five together. It is one of the most delicious of long-keeping table pears. Our secretary's sweeping assertion has no place here either. It does not fit. I would like to present him with a finely ripened Josephine de Malines in April or May. It would do us all good to hear him retract, which he is honest enough to do, when he's convinced.

In conclusion, I have only to say, that you have my best knowledge on the twelve best varieties of pears for cultivation in Ontario. They are all good, and, with the addition of two or three early summer varieties, and one or two more winter varieties, would afford a family a nice variety from July to May. It will afford me much satisfaction to listen to the remarks and criticisms of the members present, and to give verbal explanations of the reasons for my preferences.

I would respectfully submit the following twelve varieties in their order of merit viz.: Bartlett, Beurre D'Anjou, Beurre Superfin, Beurre Bosc, Beurre Clairgeau, Louise Bonne de Jersey, Belle Lucrative, Flemish Beauty, White Doyenne, Sheldon, Lawrence, Winter Nelis, and Josephine de Malines.

THE FRUIT CROP OF JAMES C. TOLL.

OUVRY, Nov. 1879.

In reply to your quotations about my fruit crop of the present year, I would state that the first fruit of the season (Strawberries,) is one of which I cultivate but little more than enough for home use. The Wilson's Albany is the only kind I grow. I plant in rows $3\frac{1}{2}$ feet apart, plants 14 inches in the row, cultivate clean, and let the runners go, mulch when the ground is frozen hard in the winter, and remove mulch off the crown in spring.

Cherries.

The only kind of cherries I grow are the common red, set in the fence corners. They need no cultivation, and pay poorly, but are the most profitable and best for table use; other kinds are poor bearers and short lived.

Plums.

I think there is no man in the county of Kent who has taken as much interest in growing plums as myself, (and let me here state that a careless or lazy man cannot grow fruit profitably;) I got my directions from a small book written by Mr. James Dougall, of Windsor. I set the trees fourteen feet apart each way, build a high picket fence around one hundred trees; then build a henhouse so that when the hens came out of the house they would be in the yard among the trees. I also kept the hogs in the same yard, and when the fruit was about the size of peas, I jarred the trees catching the curculios on white sheets, and killing them. I find the curculio more plentiful in soft warm weather, at which time the trees need close attention. The jarring process should be continued about three weeks or more two or three times a day.

VARIETIES OF PLUMS.

Bradshaw—Lombard—Imperial Gage—Pond's seedling—Columbia, and several others.

Peaches.

About ten years ago I bought one hundred peach trees, from Delaware, U. S., but I have found that many of them are very poor bearers. I do not know the names of many of them. The Hales Early is bound to disappoint the fruit grower, as they blossom well, set well with fruit, but by the time the fruit is ripe, it is often two-thirds rotten.

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The curculio works on the better varieties of peaches the same as it does on the plums. I attended the Michigan State Fair, at Detroit this fall, and there I saw many fine peaches. Among them there was a beautiful peach called the Barnard. I think it the best coloured orange peach I have yet seen, and if I were going to plant I would give it a trial, as it is said to be a good bearer, good size and good colour. I find that nice orange peaches will bring much the best price. The Early Crawford is called the best peach we have, but with us it is a very shy bearer and often rots badly. I set my trees ten feet apart each way, but if I were going to plant again, I would give them sixteen or twenty feet each as it would give the trees a chance to spread and get the light of the sun.

It has been the custom here to market peaches in three peck boxes, but I think clean new baskets are much better. What fruit growers want is a cheap basket that they can afford to give away with the fruit; they should be made to hold eight and sixteen quarts.

Grapes.

After trying several kinds, I have settled on the Concord; it is good enough for me until there is something better, and when well attended yields well. I set my vines ten feet apart each way, set posts ten feet apart and five feet high. I trellis with No. 128, galvanized wire, put top wire four feet six inches high and the other two feet lower. I have only two wires to a row. About the first of June I turn the earth from the vines with a one-horse plough going about three or four inches deep (not deeper); then with a spade or hoe turn down the earth between the vines, and when the weeds start, put on the harrow and keep them down till the new growth gets about two or three feet long. I then take the plough and turn the earth back to the vines, and when the grass and weeds start keep down with the harrow, and when the grapes are fit to pick, no weeds should be seen. Very few persons understand pruning grape vines; it needs practice and patience, people often leave too much wood, experience teaches that close pruning is best, cutting out the old wood and leaving the new canes. I prune mostly in March or April, though I have pruned in the fall.

Soil.

My soil is a gravelly loam lying along the banks of Lake Erie, in the county of Kent, and is said to be one of Canada's best fruit-growing sections. I notice that my grapes are larger and the bunches more compact than many others I see in the market, owing, I think, to better cultivation. They have always been commended wherever shown.

Manure.

Barn-yard manure is said to be too strong for grapes; I have never used any manure but ashes, which I applied last spring for the first time, and my crop has been the largest I have ever grown. I do not attribute it to the ashes, as others in this neighbourhood have grown larger crops this year than before. The rot scarcely ever injures my grapes, but this season's crop has been slightly affected, many grapes having black spots on them which when ripe do not show.

Mildew sometimes makes its appearance, caused I think by the newly plowed ground. The rain and the heat when there is no wind makes the steam arising from the ground to settle on the thickest vines and fruit and causes the mildew. Where the vines are thin and open mildew never makes its appearance. Sulphur has been recommended, but I have never tried it.

Apples.

I think Mr. Douglas says that apples are the only fruit that a farmer can grow without neglecting his other work, or in other words, apples do not need that close attention that other fruit does.

Varieties.

The apples grown in this vicinity are principally winter varieties, and I think if the people were confined to one variety the Rhode Island Greening would be the choice.

The Northern Spy is a first class apple, but needs good soil and cultivation to get good fruit. It is an apple which is a long time coming into bearing. The Roxburgh Russet, Baldwin, Rhode Island Greening and Northern Spy are our principal varieties.

The crop this year has been very good, and the prices have ranged from \$1.25 to \$2.00, including barrel.

Apples are shipped from here to Montreal, Chicago, Omaha, Manitoba and Toronto.

PEACHES.

BY B. GOTT, ARKONA.

Now, in the pleasant lull after the pressure and hurry of the fruit season, it may be well to look back and review the work of the season, as relates especially to particular fruit. For the present we would like more closely to inspect the peaches, as they stand out in bold and prominent outlines as the fruit for the masses. This choice fruit is gaining fast its hold on the popular fancy and taste, as we have no fruit that will equally fill the bill or supply its place on the catalogue. We may safely say, even without the proper statistics to warrant us in doing so, that there has been more peaches grown and disposed of this season than in any previous year in the history of the country. The distinguishing characters of the fruit, the times of its maturity, and the various and desirable uses to which it may be put, all point to the peach as the fruit of the season, and most decidedly as the fruit for the people. The most favourable conditions for the easy and cheap production of this fruit exist on this continent, and even in this country, in the best possible proportions and in a marked and profitable degree. It is quite possible to have peaches produced immediately about our homes to the extent of thousands and even millions of bushels annually. In some favourable regions and localities it is now cultivated and grown on a very large scale to supply the great markets of the country, and even whole States are renowned for their superior peaches. For the Toronto and Hamilton markets thousands of bushels of delicious peaches are grown in what is called the Grimsby country, a low, level, flat belt, bordering the lake, and just below the mountain. It extends the whole distance from Hamilton to the Niagara River on the frontier. Another fertile peach region is that known as the Chatham country, a region bordering the river on both sides, and extending from that point across the country, southward, to Lake Erie. These Chatham peaches find their way into the country as far as London, where this season we saw them side by side with the Grimsby peaches, in greatest excellence and abundance. These fruits in this market were as large, beautiful, and as perfectly matured as ever we saw, and were not unworthy to be placed on any market in the world. Again, another excellent peach region is located on and near the River Aux Sauble, near the village of Arkona in the County of Lambton. Here some excellent fruit is being largely produced, and is yet bound to make its mark on the markets of this country.

THE PEACH CROP

this year has been unusually large, and we believe this condition of things has been quite general. For a few days we suffered a glut in our markets, caused not so much by our home crop as by the introduction of large quantities of American peaches being thrown upon us, notwithstanding our heavy protective duty. This caused a surfeit at those points, and prices fell very low, affecting more or less the markets of the whole country. This unhappy circumstance—the general stagnation of business, the lamentable scarcity of money, &c.—made it more difficult than usual to market our peaches satisfactorily. The buyer had all the advantage. Notwithstanding all difficulties, however, the returns for the crop are in general far better than could be expected. As to the

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VARIETIES,

the popular favourites are still about the same. The present rage among growers is for early peaches, but the margin of profits lies rather in the direction of later sorts. Crawford's Early and Late still hold their own as popular fruits, without the slightest abatement of favour. Amsden's June is said to be good and very early, followed closely by Early Louisa and Early Rivers, two well known English peaches of great merit. These are immediately followed by Hale's Early, a really fine peach, early and of good quality. This peach seems to be doing much better lately than it did a short time ago, as it then possessed the bad fault of being very liable to rot; however, this may have been merely climatic.

SEEDLING PEACHES

are produced very rapidly and in great numbers, and some of them are possessed of very good qualities, rendering them exceedingly profitable growing. Some very superb seedlings of peaches were shewn at the Western Fair in London this season. Mr. Jas. Macklin, of Strathroy, showed a seedling peach at the West Middlesex Fall Show that was really very fine and attracted much attention as a late peach, it being in season about Oct. 15th. Mr. George Ott, of Arkona, is propagating and growing very largely a handsome yellow-fleshed seedling peach, that comes true from seed from generation to generation. It is a medium sized, round, handsome looking fruit, has a beautiful red cheek and a solid, deep, yellow flesh, and parts readily from the stone; in season about Sept. 20th. On account of its internal value and continued solidity of flesh, it will be a valuable acquisition, and admirably suited for market purposes and distant shipment. Many other

NEW VARIETIES

are zealously trumpeted loudly over the length and breadth of the land as possessing new and most valuable qualities, and possibly some of them do. Among the two hundred and fifty varieties of peaches now collected and catalogued by our nurserymen and fruit writers, it will be found very difficult to produce a new one possessing qualities differing from any of them. We would not, however, disparage legitimate and real progress in any department of industry, much less in this. We say, let us have all the valuable qualities in a fruit it is possible to attain, but let us be cautious in running after novelties to our ultimate loss. Among the most successful originators of new peaches are H. M. Engle & Son, Marietta, Pa., who have tested and named Downing, Saunders and Wilder, which are gaining quite a reputation among growers of this fruit. But as we have before observed, the rage is for

VERY EARLY PEACHES.

These have been multiplied amazingly, the very earliest being supplanted until Mr. Rivers' Early Louisa is comparatively nowhere. Some of the most prominent of these very early peaches are those offered by Ellwanger & Barry, the great Rochester nurserymen. These are Brigg's Red May, Conkling, Mountain Rose, Wilder and Waterloo, the last said to be "one of the largest and finest of the very early peaches." We have a promising very early peach in this country, called High's Early Canada, and sent out by A. Moyer & Co. of Jordan Station, that is attracting some attention. Mr. Rivers, the great English nurseryman, of Sawbridgeworth, has lately added Early Silver to his before renowned list of excellent early peaches. This has been fruited in this country, and is said to be one of the best of the list. At a late meeting of the

AMERICAN POMOLOGICAL SOCIETY

at Rochester, N.Y., in Sept. last, many of those very early peaches were named and described by that large body of excellent fruit men, and much valuable discussion was had upon them. The very early peaches may be profitable, and no doubt are so, to the shrewd

Americans in their central, select markets, but they are not so much so to us. Our people are more chary and never readily spend their money before they have well considered what they are getting, and whether it would not be better to wait a while. We notice, too, that even the Americans are taking the alarm on the subject, and are now beginning to direct their attention to *excellence* rather than to so much *earliness*. This is a pleasant subject, its features are exceedingly encouraging, and it well deserves the attention and ability of the best men of our times.

FRUIT GROWERS' ASSOCIATION OF ABBOTSFORD, PROVINCE OF QUEBEC.

This Association held its Annual Exhibition on the 24th of Sept.

As to apples there were shown, inclusive of crab hybrids, 429 plates which was about equal to that of the past two years. These, however, included a large assortment from many different parts of the Province, also from the United States, making a grand total of over 100 varieties; a rare opportunity for the student in apple culture,—an opportunity, too, not neglected, for at a meeting held not long after, the promising among the newer varieties were examined, their strong and weak points weighed, and their propagation discussed. Of those which had never before appeared on exhibition in the Province, we would mention Scribner's Spitzenburg from Plattsburg, N.Y.,—an apple with much of the high flavour, texture and apparent keeping qualities of the true Esopus Spitzenburg, but borne upon a hardier tree.

OF THE NEWER APPLES,

first in promise of general usefulness stands the Wealthy, a Minnesota seedling of Fameuse form, size and season, and somewhat of Fameuse quality, but borne upon a tree whose hardiness almost equals Duchess, and therefore enabling a choice early winter fruit to be grown where hitherto we would deem it safe to plant but Crabs and Duchess. Next, new we may say even to Montreal, is that delicious little dessert apple the Fameuse Sucre, though its probable place of birth was on the Coteau St. Pierre. It is quite hardy, in nursery. Its bearing in orchard has been watched for the last three years at Hon. E. Prudhomme's, and it has shown itself to be a good, though not a profuse bearer. Its quality has been highly praised by Dr. Hoskins, of Newport in the American agricultural press.

Decarie, probably a native of the same Coteau, combines many points of merit. It is a fall fruit of which we have so many, yet its heavy bearing, its by no means poor quality, its invariable deep colour, with that bluish bloom, more suggestive of a Ponds Seedling plum than an apple, will go to show that this fruit must become a favourite, and one that must rank among the profitable, even if not among the favoured "five."

Winter St. Lawrence (so called), long ago imported into Montreal under the wrong name of Manks Codlin, and long propagated as such by Mr. Wm. Lunn, has been long and favourably known in Montreal, though new to the south of it. Scions of it were some years ago sent by mistake for Alexander to Abbotsford, and trees of it sold as such and planted into orchard. The mistake is one now not on the whole regretted by those whose trees have attained bearing age. The fruit is of good even size, attractive colour and good quality, ships well, and keeps till mid-winter, and the hardiness of the trees augurs well for a life of length and usefulness.

Canada Baldwin, though by no means new there, is yet a stranger to many parts where it might prove useful. No bright red, fine quality, good sized, long keeper, can anything like approach it in general satisfactoriness on the heavyish soils of North Shefford. Though the early rising of its sap on the warm quick soil of Abbotsford, tending to sunscald and to premature decay is that which prevents their being loud in their praises in its behalf. They cheerfully commend it for such soils as suit it.

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OF THE NEWER CRABS.

Hesper Blush and General Grant, both of Minnesota, the society intends to exhibit hereafter merely to show their worthlessness, and to prevent their propagation. Of the non-astringent edible crabs they speak well of Orange (of Minnesota). Its thin skin, its sprightliness of flavour and freedom from anything like astringency, fits it for a small dessert fruit. They like it but are not mad in its praises. Golden sweet, (of Wisconsin) is a very nice, thin skinned little crab that keeps till December. The tree is a model of hardness, but now and then, not always, the fruit has a tinge of astringency. Meeder's Winter (of Minnesota) is a really fine flavoured little crab that keeps till Christmas. It has been loudly praised by Dr. Hoskins. Aiken's Striped Winter is a nice long keeping little crab, but we hardly see its use. Soulard is the most villainously astringent acid compound ever named crab. In the West it was highly praised. It was said to cook like a quince, to be in fact the "Quince of the North." Oh how widely do human beings differ, even on the qualities of a crab.

OF OUT-DOOR GRAPES

there were fifty-two plates and thirty-three (!) different varieties, an assortment which has never before been anything like equalled in this province. Mr. John W. Bailey, of Plattsburg, carried off the first prize with a collection of 27 varieties, many of which had never been seen here before.

Of those entirely new to the Province of Quebec, Herbert (Roger's No. 44) and Essex (Roger's No. 41) attracted most attention. They are both purplish black grapes of the largest size for out-door growth, meaty, sweet and almost pulpless, and seemingly not any later in ripening than the Delaware. Barry (Roger's 43) is much of the same type but a little later and, therefore, of less value, and much like Roger's No. 19.

As to others more or less new :

Of Roger's large amber coloured Hybrids, Salem (Roger's No. 22), Wilder (Roger's No. 4) and Agawam (Roger's No. 15), named in apparent order of ripening, bear much general resemblance. They are large luscious grapes with a slight Muscat flavour, and very little later than Massasoit (Roger's No. 3) and Lindley (Roger's No. 9), which even this past wet season have proved so successful at Abbotsford.

Bailey No. 2. A seedling of Delaware and Adirondac, and suggestive of both, is sweet, pulpless, fine-flavoured and early. Eumelan, small, but sweet and pulpless; and last, but not least, that grape which for many years was bought near Rochester, N. Y., as Champion, and sold as such, and then later bought as Champion, but sold as Beaconsfield. It is essentially a pioneer grape. It was in flavour the poorest, with one exception, of the thirty-three varieties exhibited. It is, however, quite good enough to sell. The market does not demand quality, and it has the earliness, size and colour necessary for a commercial grape, and as such, and as a forerunner of finer fruits, it must prove of great service to our northern country.

Such was the collection gathered on the eve of the Exhibition, but next morning, alas, heavy drenching rain almost prevented the very office-bearers from being at their posts of duty. In fact, several who would have been among the chief prize-winners in fruits, in flowers, and in vegetables, and whose collections were packed and ready for shipment, were unable to attend, and reports now clearly show from localities from sixteen to twenty-five miles distant, and in one case from a village thirty miles distant, where large preparation of attendance had been made that, had weather permitted, the crowd gathered would have been very far in excess of the 2,000 assembled last year.

That such an interest should be manifested in the exhibit of a local society is a point that merits our closest attention. It shows a lively interest in horticulture that only needs to be organized to show its power for good. It points directly to a great, but as yet un-supplied want in this Province, that of a system of local horticultural societies, upon which we copy the following from the society's last report :

"Until 1877 no moneys were appropriated in this Province for purely horticultural purposes. The Montreal Horticultural Society up to that time was enabled to draw her

annual grant of \$328 only as the Montreal Agricultural and Horticultural Society, and by offering certain prizes for agricultural products.

"In 1877, however, Montreal Society became a Provincial Society, with a yearly grant of \$1,000 for horticultural purposes only, the Government also providing for the publication of its reports; and the action of the Council of Agriculture, since then, shows its earnest desire to advance horticulture in all possible localities.

"Let us see what has been done in this matter by our sister province, Ontario. In 1877 she had twenty-five local horticultural societies, beside the societies in the larger cities of Toronto, Hamilton and Kingston, eighteen of which local societies received from their provincial treasury the sum of \$1,750, besides certain municipal grants. There was paid in prizes in 1877 for fruits, \$491; for flowers, \$944; and for vegetables, \$544; making a total of \$1,979 paid in prizes by fifteen of these local societies for horticultural purposes, and the reason that there are not larger, and a still larger number of these horticultural societies is due to the fact that the Electoral Division and Township Agricultural Societies enter largely into the Horticultural field. These Agricultural Societies paid that year in prizes for fruits, \$3,669; for flowers, 1,651; for garden vegetables (field root crops not included), \$2,408, making a total of \$7,728 spent by these Agricultural Societies upon the fruits of Horticulture. To this let us add \$1,343 paid at the Provincial Agricultural Exhibition for like purposes, and we have the sum of \$9,071 expended by the Agricultural Societies, or the total sum of \$11,094 paid by the Agricultural and Horticultural Societies for Horticultural premiums.

"Let us see what has been done in our Province. First, the Montreal Agricultural and Horticultural Societies paid in 1877 for premiums for fruit, \$114; flowers, \$457; vegetables, \$82; making a total of \$653 expended for Horticultural purposes.

"Next as to local societies. Until the organization of the Missisquoi Horticultural Society, in April, 1879 we were alone, one of a system whose co-workers were as yet un-created. Our Association paid in prizes in 1877 but \$26 for our 132 entries, a mere crown of wild olive; 'It would have been gold had not Jupiter been so poor.' Yet with a prize list open to all, with exhibition free, and competition to non-members for the nominal sum of 50 cents, with large, but short-lived debts, this voluntary Association has drawn large and distant competition, and has gathered crowds of 2,000 persons, largely from distant counties, even with this paltry prize list, showing that it is not to ourselves only that we are a want supplied.

"Of Country Agricultural Societies, however, we have a complete organization. In 1874 we had eighty-one societies, with a membership then of 12,537, probably now much larger, subscribing over \$25,316, and receiving from our Provincial Government about \$38,775, or sixty-five per cent, of the amount received by the Electoral Division Societies in Ontario. But they do but to a very limited extent enter into the Horticultural field.

"In 1877 these county agricultural societies paid in prizes for fruits about \$104; orchards, \$116. In flowers, \$106 is all we find noted. Of this, the No. 1 Agricultural Society of Huntingdon paid in floral premiums the sum of \$95.45, an amount which reflects great credit upon the Society and also upon the long and valued services of its ex-President, Mr. Daniel Brims. As to vegetables, it is sometimes hard to define between the garden and field, let us say \$544, gardens, \$93, making a total of \$966 paid by these county agricultural societies for horticultural premiums. To this we can add nothing from our Provincial Agricultural Society, for, in making out the prize list, it was forgotten that Flora and Pomona were among our tutelary deities. To the County Agricultural Society expenditure add that of the Horticultural Societies, and we have as the total amount paid in 1877 by the Agricultural and Horticultural Societies of Quebec the sum of \$1,645 as compared with \$11,094 in Ontario.

"Our Horticultural needs are—

1. Hearty co-operation from the Country Agricultural Societies.
2. Distinct and independent organization of Local Horticultural Societies, for localities whose needs cannot be reached by Agricultural co-operation."

One other horticultural need we must draw attention to.

We find upon the tables at Abbotsford fruit from the counties of Hochelaga, Huntingdon, Vaudreuil, Stanstead, as well as from Vermont and New York; and among that

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grown at Abbotsford are new apples or crabs, natives of Minnesota, Illinois, Wisconsin, Iowa, N. Hampshire, Vermont, New York and (indirectly) Russia, introduced for the purpose of experimenting. Such work is not merely useful, it is necessary to fair progress. It, however, needs organization, and upon this we again quote from the Society's last report:—

"May we point to a yet further, because a pressing want? Our position in the "cold north" is a peculiar one, not favourable to horticulture. Our list of "tree fruits" is incomplete, and has many blanks. Whence are these blanks to be filled?

"(i)—From our seedling orchards, of which we have a large extent.

"(ii)—From our isothermic lines, both to the east and west, not excepting Russia.

"The Department of Agriculture at Washington (for our good, rather than their own, we should suppose), received about ten years ago, from St. Petersburg, scions of several hundred varieties of apples, though not all natives of Russia. Many of these are now being tested by Dr. Hoskins, of Newport, Vt., who will faithfully report upon their merits as they fruit.

"A. G. Tuttle, of Baraboo, Wis., a few years ago received from the United States Consul at Moscow, 150 varieties of Russian apples, and we believe, some Russian pears. Ellwanger & Barry have imported largely, we know not how many; at any rate, 31 kinds. The Iowa State Experimental Station, under Prof. Budd, at Ames, received not long ago 200 varieties of Apples from Russia, and were expecting 200 more.

"Now shall we profit by all this costly importation from the home of the Duchess, the Astrachan, and the Alexander, or shall we not? Let us decide. Let us clearly see our course. If our decision be in the negative, let us at least know the cost of our inaction. If otherwise, let us with least cost accomplish the greatest and speediest results.

"This importation from *our* isothermics is of far more relative value to us than to the United States. In fair play we should claim the right of paying our friends in the States half the cost of all this work, so directly is it to *our* advantage.

"There is a way, however, in which we can make a partial repayment—a northern testing ground. Such would be of use to their North as well as to ourselves.

"In Ontario, no such work has been done, because less necessary. The similarity of her climate to the adjoining States, whereby they all become unconscious workers in a common cause, the describing of new fruits in the monthly and in the yearly reports of her Provincial Fruit Growers' Association, and the distribution of certain trees and plants to her widely scattered members, as well as the healthy state of her nursery trade and the general leaven of experimenting that pervades her people, all go to make this, our great need, to her, but a minor want.

"This testing of new fruit trees, new timber and ornamental trees is to us a necessity to fair progress, on account of our peculiar position in the North. "It is a great work left undone," but a work not great in cost. The cost is but an investment in our own welfare. It is, however, a work that needs organization, organization having a controlling centre, and that centre a landowner. We need an experimental station."

With a system of Local Horticultural Societies, and with an organized system of experimenting, horticulture and fruit growing would gradually assume the commercial and æsthetic importance which it has in our sister States and Provinces.

REPORT ON TREES RECEIVED FROM THE ASSOCIATION.

DEAR SIR,—I send you an account of trees, &c., received by me from the F. G. Association since I became a member.

1872,—McLaughlin Plum, fruited 1875 a splendid dessert plum.

Othello grape, " " having transplanted it 2 years ago, I cannot say anything about it as yet.

1873,—Grimes' Golden Pippin died, only some 5 lived out of some 20 or 30 received here.

Clapp's Favourite Pear, fruited 1879, a splendid fall pear.

- 1874,—Dowing Gooseberry, fruited, 1877.
Salem Grape, “ “ a very good grape.
- 1875,—Swayzie P. Grise Apple, grew well, this and last year, not fruited yet.
Flemish Beauty Pear, fruited 1879, a very good pear, and does well here. At our Horticultural Show here, a Mr. Harris exhibited some 10½ inches in circumference.
- 1876,—Glass' Seedling plum doing well.
- 1877,—Diadem Raspberry died.
Strawberry plants did well, had a patch some 12 x 40, covered this summer, a good bearer. Berries in shape from round to flat, I have dug them all up, and planted the New Dominion, which is a very large berry, and perfect in form, had berries 4⅞ in circumference.
- 1878,—Burnet grape doing well, expect it to fruit next year.
- 1879,—Arnolds' Ontario Apple, showed no bud till some 10 weeks ago, when after cutting both head and part of the stem, some buds were forced out, which are now growing.
You will see by this that I have had very good luck with what I got, having only lost two of the whole.

Yours &c.
EBENEZER DAY.

REPORT OF FRUIT COMMITTEE ON FRUIT EXHIBITED AT PETERBORO'.

J. C. Dempsey, of Albury exhibits 6 varieties of Black Cap Raspberries, in good condition, viz:—Mammoth Cluster, Ontario, Seneca, Doolittle, American, and Davison's Thornless. The Ontario is a very fine berry, fully as large as the M. Cluster and a few days earlier.

A. M. Smith, Drummondville, shows 12 varieties raspberries, red, yellow and black, one of them a seedling named "Niagara," which Mr. Smith claims will be valuable on account of its lateness, the colour dark red, and of large size; also two of Saunders' Hybrid Seedlings, Nos 69. and 63, and Arnold's Diadem, showing a very curious sport in producing red and yellow berries from the same root; The Highland Hardy Amazon, a free-bearing sort, of good size, and the Ganargua.

Luke Bishop, St Thomas, shows a seedling Goosberry, very similiar to the Warrington Red, for which he claims that it is almost totally exempt from mildew, and a good bearer.

Also some preserved strawberries, marked Bishop's Seedling, No 2. It is not possible to judge of the qualities of this variety by the sample shown. Mrs. Sheffield of Peterboro' shows a very handsome dish of Gooseberries, large and free from mildew; the variety not named.

Mr. Wallis, of Peterboro' exhibits Goosberries, Currants, red, white and black, Cherries and Raspberries, a nice collection, not named.

Thos. Beall, of Lindsay, exhibits a fine dish of Whitesmith's Gooseberries, free from mildew and well grown.

P. E. Bucke, of Ottawa, shows a branch of one of Saunders' Hybrids loaded with fruit. We would judge from this that the canes of this sort are very hardy. Mr. Bucke also shows four varieties of Currants, and one of Gooseberries.

Capt. Wallace of Peterborough, shows a plate of very large and well grown Early Rose Potatoes.

GEO. LESLIE, JUN.
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REPORT OF THE COMMITTEE ON FRUIT EXHIBITED AT THE WINTER MEETING IN HAMILTON.

L. Wolverton displayed four varieties, a very fine sample of Cranberry Pippin, King of Tompkins County, and a very fine sample of seedling. The last named was past its season, a little above the medium size, yellow, with a fine, bright blushed cheek, oblong, marked with a light raised streak descending from the calyx, somewhat similar to the mark on the Talman Sweet; said to be crisp and juicy, resembling the Snow Apple in season, from which tree it is probably a seedling. The committee suggest, from its beautiful clear appearance, that it be named "Princess Louise." This exhibitor also showed a handsome sample of the Westfield Seek-no-further.

Charles Arnold, Paris, showed several of his hybrid, Ontario. It more than bears out the former description as a fine-sized, juicy, crisp apple, suitable both for the table and cooking, and will no doubt prove one of the best for shipping to foreign markets. His other apples have been often described before. The Moyle bears much of the appearance of the Bourassau, but the flavour is strongly that of the Spitzenburg, of which it is a sprout. Mr. Arnold also shows a plate of the Lady Apple, Swayzie Pomme Grise, Swaar and Wagner.

Mr. William Roy exhibited a very fine plate of Baldwins, grown in Owen Sound, and are specimens which will compare favourably with any we have seen. Mr. Roy also exhibited two seedlings—one somewhat resembling Yellow Belle-Flower in form, very mild in flavour, but too far past its season to enable us to form a proper conception of its real value. The other gives promise of rating well, of fine pleasant flavour, bright, lively, heavy-blushed.

Mr. John Croil exhibited a Fameuse almost as highly coloured as the Black Detroit, and of very much the same shape, fully equal in keeping and in fineness of flavour to any we have seen. Mackintosh Red, of almost perfect form, smooth skin spotted to deep blush, but while the flavour is somewhat peculiar, we do not feel inclined to recommend it better than to place it in the third-class. Also a Winter variety, said to be a graft, extra solid, sweet, rather lacking in juice, deep eye, splashed and flattish.

Wm. Brown exhibited a fine looking, but a poor, woody-flavoured apple, supposed to be the 20 oz. apple.

Mr. C. M. Honsberger exhibited a large, heavy, full-blushed, well formed apple, of mild flavour, fine grain, bearing many characteristics of the Fallwater.

Mr. Isaac W. Reid, of Ops, exhibited two highly coloured seedlings, but being so far past season we could not pass judgment as to character.

Mr. A. M. Smith exhibited as fine a plate of King of Tompkins County as any grower could desire to look upon. A plate each of R. I. Greenings and Fall Pippins were on the table, also a Green Seedling, crisp, juicy and pleasant. A plate of apples, light coloured, covered with russet, solid but not possessing much character. Another plate of russeting apples, with blushed cheek, was too far past its season to enable us to speak decidedly of the value.

Mr. Samuel Woodley exhibited a plate of grapes in an excellent state of preservation.

We made an examination of the specimens on the table, of Beauty and Ella; judging them as we find them, we cannot come to a satisfactory conclusion.

REPORT OF THE COMMITTEE APPOINTED TO EXAMINE LUKE BISHOP'S SEEDLING STRAWBERRY, NO. 2.

Your Committee appointed to visit the grounds of Mr. Luke Bishop at St. Thomas and examine his new seedling strawberry, beg to submit the following report:—

Bishop's No. 2 seedling strawberry is of a large size, with form very similar to *Triumph de gand*, but scarcely so wedge-shaped. Flowers perfect, seeds rather large, imbedded somewhat deeper than in Wilson, with coarser indentations in the flesh. The flesh is soft with a hollow centre, sweet and high-flavoured; it ripens about a week later than Wilson.

The plants were vigorous, with leaves rather large and thick, which appear to stand the sun well; the length of the fruit stalk is about the same as that of Wilson.

This variety seems to be a very fair bearer, and may be very useful for amateur culture, but we think it is too soft in texture to serve a good purpose as a market fruit.

Mr. Bishop had a number of fine gooseberry bushes claimed to be a new seedling, heavily laden with rather large fruit, which in its then immature state, we could not form any opinion as to quality.

The blood-red peach on his grounds is a very attractive tree, and is fruiting for the first time.

WM. SAUNDERS,
E. WEST,
ROBERT BURNET.

REPORT ON LUKE BISHOP'S SEEDLING GOOSEBERRY.

Some fine seedling gooseberries were sent for report by Mr. Luke Bishop. These were raised from the seed of some English berries. They were of good size, larger than Smith's Improved, and if found impervious to mildew, will be of much value. Mr. Bishop uses salt in the cultivation of this berry and a very heavy mulch. He also sent a new seedling strawberry, which unfortunately were kept too long for a good trial. There was, however, a small jar of preserves which indicate a high and luscious flavour.

A committee was appointed to visit Mr. Bishop's grounds at St. Thomas, and their report will probably give full details.

AUTUMN MEETING.

HELD AT WALKERTON, SEPTEMBER 10TH, 1879.

The attendance was but small, but a pretty lively discussion took place in reference to the cultivation of fruit trees.

Mr. Roy, of Owen Sound, in the absence of the President, took the chair. He regretted the absence of the Secretary, who missed the train. The chairman stated that the object of the meeting was to learn the capabilities of this district, as a fruit-growing section.

Rev. Mr. Shortt, expressed the opinion that the Red Astrachan and the Snow apple succeed very well. He has been here only some four years.

Mr. Couch regretted not having planted early apples when he first came here, as the opinion then prevailed that early apples would not succeed. Northern Spy does well. The Baldwin will not succeed. Astrachan and Early Harvest will do well. His early Strawberry is just beginning to bear, has splendid fruit. Tried American Golden, knows them to succeed well. Mr. Arnold advised the planting of early apples, as they bring the best prices; he always makes more from his early apples than from the late. They are the best for shipping.

Mr. Tolton planted out his first tree some thirteen years ago. His trees have succeeded very well. Has Early Harvest, Red Astrachan and Keswick Codlin; has Russets and Rhode Island Greenings. No Baldwins. Not enough grown for exportation. Harvest apples sold readily from 80 cents to \$1 per bushel.

Mr. Mayor McLean did not raise many, has had trouble with worms. His trees were too much confined. Mr. Arnold says that the only remedy for the Codlin moth, is tying same paper or rag around the tree near the bottom. Mr. Couch expressed the opinion that the stinging of apples takes place after the blossoming.

Mr. Lamb said that in his opinion, the insect bores apples from the outside. He has found apples bored just a short way. Snow apples do very well. The Mann apple is the best winter apple. American Golden Russet bears well; good grower, likes it well.

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His opinion is that winter fruit is best for this district. His trees are planted twenty-two feet by thirty-two feet apart.

Mr. Allan of Goderich was here at the Exhibition last fall. Saw some very good fruit, but thought that fruit cultivation received very little attention. He thought winter apples best for general use in this district. He thinks that fruit trees want cultivating as well as wheat or other field produce.

Mr. Doberer, Hanover, thinks early apples do well. For flavour, recommends Spitzenberg. Thinks trees want more cultivating. Farmers pay little attention to their trees. Finds his trees want manuring every three years. Thinks trees should be washed and pruned every year, grubs should be taken off every year.

Dr. Bell does not personally grow fruit, but has observed that trees look healthy and vigorous. The country is new. Red Astrachan, Snow apples, King of Tomkins County, few Spitzenberg, Russets, and Northern Spy do well. The county, in his opinion, is very suitable for the cultivation of fruit.

Mr. Faulds considered the county very suitable for fruit growing. Cherries do not succeed very well, pears do well. The Ben Davis apple does very well.

Mr. Clendenning spoke of the Codlin moth; thought it worked from the outside inwardly. Has been very successful in catching the moth by surrounding the trees with paper. Did three trees that way, and the apples were not nearly as bad as the others. Believes in manuring his trees; believes that spreading straw around trees kills June grass. Has had trouble with borers.

Mr. Couch asked for information about the Yellow Bell Flower, which he found to shed its fruit after it is set. Mr. Arnold thought very little of it. Mr. Roy said he succeeded best with the Yellow Belle Flower, by allowing it to droop on the ground.

Mr. Doberer thought that standard trees are generally preferred, but he thought low trees were the better. They are not so much liable to be shaken by the wind. The fruit can be better taken off.

Mr. Tolton has many varieties of pears but very few bearing, finds the standard the best trees, had no trouble with blight. His trees do well, thinks pears do well, has had trouble with the Codlin moth.

Mr. Clendenning has seen the pear slug; found ashes will remove them.

Mr. Couch found pears do well in this district. No blight. Plums do well, Green Gage, June Purple, Yellow Egg, found some to rot on trees, most on yellow plums. Thinks this a good plum country.

Mr. Clendenning has the Washington Plum, but found it to rot this year.

Dr. Bell, expressed his admiration of the magnificence of the plums in this district, saw some sixteen varieties fully matured in the garden of Dr. Douglass of Port Elgin. He expressed the idea that the Indian Peninsula will prove a valuable fruit district, especially so for apples and plums.

Mr. Tolton had black knot on one tree, but cut it off and destroyed it, and has not been troubled with it since.

Mr. Shortt saw some curculio in an orchard near Invermay.

Mr. Gowanlock, living five miles from Walkerton, has black knot this year, on his Blue plums. Mr. Arnold advised the cutting down of every Blue plum tree.

Mr. Doberer found black knot on Blue plum trees, and advised their destruction.

Mr. Tolton has grown out-door grapes, had them fruit, protects them with long straw manure in the winter. The Salem has not done well. The Burnet grape has grown well this year. The president advised cutting it down to two or three eyes. Mr. Couch has not much experience in grape growing. Has a Clinton which prospers very well. Saw trouble from the Thrip.

Dr. Bell said his Burnet grape grew very little last year, but did well this year. Advised the planting of the early kinds. Thinks the Champion will do well in this district, which is fully ripe now. The Concord should be planted, he thinks nothing later than this will ripen here.

Mr. Roy said that he laid down the vines under the snow, but did not cover them with anything.

Mr. Faulds thinks the introduction of the Isabella has done injury to grape growing, because it generally failed.

English Cherries cannot be profitably cultivated in this district.

Dr. Bell, on behalf of the fruit-growers in this district, presented the chairman with the following address:—

To the Fruit Growers' Association of Ontario:

GENTLEMEN,—The Town Council, Horticultural Society, and inhabitants of Walkerton, extend to you a cordial welcome, at this your first visit to the County of Bruce.

Our County is so new, that we have as yet made little progress in the noble Art and Science of which your Association are the patrons; but we believe that it possesses very important natural adaptations for fruit cultivation. We trust that your meeting among us, may result in making the Association better acquainted with the natural capabilities of this section of the Province, and also in developing a deeper interest in fruit growing among ourselves.

We hope that your deliberations may be pleasant and profitable, and that we may soon again have the happiness of enjoying your presence among us.

On behalf of the parties above named.

M. MACLEAN, *Mayor.*

WALKERTON, September 10th, 1879,

Mr. Roy thanked the meeting for the address.

A vote of thanks to the Warden for the use of the hall, was moved by Dr. Eby, seconded by Mr. Sproat.—Carried.

The meeting concluded by a vote of thanks to the chairman, Mr. Roy.

MONTREAL APPLES.

AN EXHIBIT AT THE DOMINION EXHIBITION THAT DIDN'T TAKE A PRIZE.

The exhibit, by the Montreal Horticultural Society, of forty varieties of apples, at the Dominion Exhibition at Ottawa, was very much admired, and though not fortunate enough to secure one of the prizes offered, was "highly commended" for its excellence, by the judges. If the Association had known the basis on which the award was made the result might have been more favourable. The fruit chosen by the Society was selected on account of the excellence of the specimens. The award was, however, made by the judges by the standard of their commercial value. Owing to this fact the number of points given some of the varieties were not as high as might have been obtained had other named sorts been chosen. The judges were gentlemen from Ontario, and they performed a rather difficult and arduous task in a very thorough and painstaking manner, carefully examining every kind to see that it was properly named, and cutting into the fruit where it was at all doubtful. Any variety that was improperly named secured no points whatever, and in this way the Montreal collection lost points on four varieties. Some of the varieties shewn being known only locally also contributed to lessen the number of marks obtained by the Society for their exhibits. It is a matter of regret that some of the gentlemen from this Province who had been asked to act as judges in this class were not able to accept, as the information a grower of fruit in this section would have been able to give the Ontario judges would have been a material help, as none of them were very familiar with the apples grown in this Province. The Society is greatly indebted to President Burnet, Vice-President Roy, and other gentlemen of the Ontario Fruit Growers' Association, for the courtesy shewn them in having, by special resolution, allowed the Montreal Association to compete with only five apples of each kind, instead of six, as should have been shewn. Such friendly encouragement of the Society in their first efforts should

stimulate them to go on in their work, and judging by the position obtained by the first lot of fruit shewn, a still higher position might be obtained in the near future. One thing is sure, namely, that it is hopeless to attempt to compete successfully against the experienced fruit growers of Ontario, unless the greatest pains are taken in selecting the varieties sent, and the utmost care taken in having them properly named. Fruit growers here do not seem aware of how important a matter this is, and they have much to learn from their brethren in the sister province.

YELLOW S IN THE PEACH.

Below is the full text of the law of Michigan, entitled "A bill to prevent the spread of the yellows, a contagious disease among peach, nectarine and other trees, and to extirpate the same:"

Section 1. The people of the State of Michigan enact: That it shall be unlawful for any person to keep any peach, nectarine, or other trees infected with the contagious disease known as the yellows; or to offer for sale or shipment, or to sell or ship to others, any of the fruit thereof; and no damages shall be awarded in any court of this state for the destruction of such diseased trees or fruit, as hereinafter provided; and it shall be the duty of every citizen, as soon as he becomes aware of the existence of such disease in any tree or fruit owned by him, to forthwith destroy or cause the same to be destroyed.

Section 2. In any township in this state in which such contagious disease exists, or in which there is good reason to believe it exists, or danger may be apprehended of its introduction and spread, it shall be lawful for any five or more resident freeholders of the same place or any adjoining townships to set forth such fact, belief or apprehension in a petition addressed to the board of such township, requesting them to appoint three commissioners, as hereinafter provided, to prevent the spread or introduction of said disease, and to eradicate the same, which petition shall be filed with, and become a part of the records of the township to which such application is made.

Section 3. It shall be the duty of the township clerk on receipt of the petition specified in Section 2 of this act, to call a meeting of the township board within ten days thereafter, and upon the assembling of said board to lay such petition before them; whereupon it shall be the duty of said board, upon the hearing of said petition, to appoint three competent resident freeholders of such township as commissioners, who shall hold their office during the pleasure of said board; and such order of appointment and of revocation, when revoked, shall be entered at large upon the records of the township.

Section 4. It shall be the duty of said commissioners, within ten days of appointment as aforesaid, to file their acceptance of the same with the clerk of said township, and said clerk shall be *ex officio* clerk of said board of commissioners, and he shall keep a correct record of the proceedings in a book to be provided for the purpose, and shall file and preserve all papers pertaining to the duties of said commissioners or either of them, which shall be a part of the records of said township.

Section 5. Any one or more residents of the same or adjoining township may make complaint in writing and on oath, addressed to said commissioners, delivering the same to either of them, setting forth that said disease exists, or that he has good reason to believe it exists upon lands within the township in which said commissioners reside, designating the same with reasonable certainty, or that trees or fruit infected with such disease are offered for sale or shipment, or have been introduced therein, designating the person in whose possession, or under whose control such trees or fruit are believed to be.

Section 6. It shall be the duty of the commissioners to whom such complaint is delivered to proceed without unnecessary delay to examine the trees or fruit so designated, and if he shall become satisfied that the contagious disease actually infects such trees or fruit, he shall, without injuring the same, fix a distinguishing mark upon each of the trees so infected, and immediately notify the person to whom such trees belong, personally or

by leaving a written notice at his usual place of residence if he be a resident of the same county, and if such owner be a non-resident of such county, then by leaving the same with the person in possession of such trees requiring him within five days, Sundays excepted, from the date of said notice, to effectually remove and destroy, by fire or other means, the trees so marked, and in case of fruit so infected, such notice shall require the person in whose possession or control it is found, to immediately destroy the same or cause it to be done.

Section 7. If any person neglects to destroy or cause to be destroyed, such diseased fruit, after such examination and notification, but sells, ships or disposes of the same to others, such person shall be deemed guilty of misdemeanor, and punished by a fine not exceeding \$100, or by imprisonment in the county jail not exceeding three months, or both, in the discretion of the court, and any justice of the peace of the township where such fruit is sold, shipped or disposed of, as aforesaid, shall have jurisdiction thereof.

Section 8. Whenever any person shall refuse or neglect to comply with the notice to remove and destroy the trees marked by the commissioners as aforesaid, it shall be the duty of said commissioner forthwith to notify the other commissioners to assemble with himself on the premises on which said trees shall be, on the fifth day, Sundays excepted, after he shall have made service of such notice, and then and there personally to examine the trees in question, and the evidence bearing upon the existence of said disease, and if said commissioners or a majority of them shall, after a proper examination of the matter, decide that said trees are infected with such disease, they shall in case such trees so infected do not exceed six in number, order the same to be removed or destroyed forthwith, or cause it to be done, employing all necessary aid for that purpose, if the person in charge thereof refuses or neglects to do so, and in case the trees found to be infected, shall exceed six in number, and the owner thereof shall upon the service of said notice, refuse or neglect to remove the same in accordance with the provisions of the act and the terms of such notice, then and in that case said commissioners shall petition the circuit court for the county for an order directing and empowering said commissioners to remove or cause to be removed such infected trees, and the court shall direct the defendant to be summoned, and an issue joined therein, and the cause to be tried in a summary manner; and if it shall appear on said trial that said trees are so infected, he shall grant the order prayed for, with costs of prosecution against the owner of said trees, but in case such trees are found not to be infected, he shall dismiss said proceeding with costs to be taxed against the township in which such commissioners reside.

Section 9. Every person who shall willfully refuse or neglect to comply with the notice of the commissioners, as hereinafter provided, to remove and destroy said diseased trees, shall be liable for all the costs, charges and disbursements made upon the proceedings of said commissioners and of the board of commissioners, to effect such removal and destruction, together with a penalty of five dollars for each and every day, but not exceeding one hundred dollars in all, such trees remain undestroyed, which costs, charges, disbursements and penalty shall be recovered of him in action of trespass upon the case, in the form of assumpsit, brought and prosecuted by the supervisor, in the name and for the benefit of the township, and before any justice of the peace therein, in the same manner and with like proceedings as are applicable in civil cases before such courts, and upon judgment being rendered in favour of said township, the said justice of the peace shall issue execution against the defendant in said action, which may be stayed, as in other cases, but when collected he shall pay the amount thereof, forthwith, to the treasurer of said township, to the credit of the general fund.

Section 10. The form of the declaration in any suit instituted as aforesaid, may be as follows, to wit: In justice court, before AB, justice of—township,—county, the township of—, said county, complains of CD, in an action of trespass upon the case, and says that CD justly owes the township—dollars, being the amount of the expenses incurred by said township in the removal and destruction of trees infected with the yellows, from (designating the premises with reasonable certainty), and the penalty incurred by said CD for not removing and destroying said trees pursuant to an act entitled "An act to prevent the spread of the yellows, a contagious disease, among peach, nectarine and other trees, and to extirpate the same," wherefore the said township brings suit. AB, Supervisor.

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Section 11. The commissioners shall be allowed, for services under this act, two dollars for each full day, and one dollar for each half-day, and their other charges and disbursements, hereunder to be audited, as well as any other charges and disbursements under this act, by the township board.

Section 12. In all suits and prosecutions under any of the provisions of this act it shall be necessary to prove that such trees or fruit were diseased or infected.

NEW AND RARE FRUITS IN 1878.

A Paper read before the Western N. Y. Horticultural Society, January 23rd, 1879.

BY WILLIAM C. BARRY.

The year 1878 has been rendered memorable in the annals of American pomology by reason of the large number of new native fruits which have been originated or introduced during that time. The list of peaches especially has been wonderfully augmented. Descriptions of about thirty seedlings never before described have come to our notice, and we may safely estimate that as many more have fruited, but have not as yet been made known to the public. In connection with this remarkable array of peach novelties their places of origin are interesting. The State of New York offers several candidates for popular favour which appear unusually promising. From the great metropolis even come two new varieties which apparently possess many valuable qualities. In Western New York there are several seedlings which will undoubtedly prove very desirable. One of them is believed to be the largest and earliest of all the very early peaches. In the neighbouring State of Ohio several excellent early and late varieties have originated. Passing over a vast extent of country we find a large number of new kinds in Missouri, Kansas and Nebraska, and a correspondent of the *Gardener's Monthly*, writing from Kansas, says "that the whole list of early peaches known to the public so far as fruited in Kansas this year, is surpassed both in earliness and size by at least fifty new seedlings of Kansas origin, many of which have borne their first fruit this year." At the South, too, some promising new sorts are spoken of. Thus, as if by magic, the same year, and in various portions of the country new peaches have sprung up in such numbers as to astonish and almost perplex the fruit-culturist. Of the progress made and the success achieved no more convincing proof could be desired than the fact that on the 19th of July, 1878, we had upon our table large, ripe, luscious peaches, grown in the open air in the vicinity of Rochester. This is indeed a remarkable fact and indicates wonderful progress. Our Society and all similar organizations are to be congratulated upon the successful issue of their efforts in creating and fostering a taste for the beautiful and useful in nature, and the extraordinary improvements effected in the past should encourage renewed efforts and greater exertions in the future. It is to be regretted, however, that while we must in justice award great credit to the originators of valuable new fruits for the energy, zeal and industry displayed in the production of the same, it becomes our duty to criticize severely those who would offer to the public, knowingly, a new fruit of inferior quality or intentionally disseminate an old or discarded variety under a new name. Too much carelessness has been evinced in this regard in the past, and it seems to me that this is a proper time for this Society to consider the matter, and to adopt some measures to remedy this evil.

A LIST OF THE NEW PEACHES OF 1878.

In the following list I have endeavoured so far as possible to include all of the new peaches which have been noticed during the year. I am aware that this list is far from being complete, but I trust that the information herein afforded will enable those who are interested to prosecute their inquiries with greater facility the coming season. Nearly all are such descriptions as I have received, some few have been described from personal observation.

Beckwith's Early—Raised by Mr. Beckwith, Olathe, Kansas, in 1877. It is a clingstone peach, large, showy, firm, and it is thought will make a fine market variety. Ripened at Olathe, June 20th, 1878.

Wyandotte Chief—Originated by George Krop, Wyandotte, Kansas. It is large, handsome and a clingstone. Ripened June 22nd, 1878, at Wyandotte.

Bledsoe's Early Cling—Ira L. Wood, of Pleasant Hill, Mo., is the originator of this seedling. It is claimed to be five days earlier than Amsden, in the same locality, and of better quality.

Seedling No. 1—Raised by James A. Storm, Mo. A very handsome freestone, measuring eight inches in circumference. The originator says it possesses more fine qualities than any peach he has seen, and that it is at least ten or fifteen days earlier than the Amsden, and superior in size, flavour, colour and durability.

Seedling No. 2—Raised by the originator of the above. This variety is said to ripen about the same time as Amsden, is eight inches in circumference, and the flavour is good.

Brice's Early June—Dr. S. M. Brice, of Kansas, is the originator of this variety, which fruited for the first time in 1874, and ripened on the 20th of June of that year. Frost and grasshoppers prevented any further fruitage until 1877, when it ripened again from the 20th to the 25th of June. In 1878 it ripened June 18th. Dr. Brice says that in a test in 1877 with the Amsden, Alexander, Early Louise, Early Rivers, and several others of the earliest and best varieties known, Brice's Early June proved its superiority in size, flavour, beauty and early maturity.

Hynes's Surprise—Originated by E. F. Hynes, West Plains, Mo., 1877; said to be large, highly coloured, very fragrant, a prolific bearer and a good keeper. Ripened in 1877, June 28th; in 1878, June 14th.

Hape's Early—A Georgia seedling, raised by Dr. Samuel Hape, of Atlanta. It is said to equal if not surpass any early peach now known, in flavour, size, hardiness, capacity for shipping, and beauty.

Ashby—Discovered in Texas among a lot of seedlings in 1877. It is said to be a large, handsome peach, with firm flesh, of excellent quality, and ripens about ten days before the Amsden.

Baker's Early May—A seedling which made its first appearance in 1872 in Texas; resembles Hale's Early. It is a freestone, and its originator claims that it ripens six to ten days before Amsden.

Seedlings Nos. 1, 2, 3, 4, 5, from Ohio, fruited for the first time in 1878.

No. 1—is a handsome peach, of about the size of Hale's Early, measuring seven inches in circumference, colour creamy white, nearly covered with dark purplish red, adheres to the stone; said to be two weeks earlier than any other variety.

No. 2—Similar to No. 1, but ripens a week later.

No. 3—Large, measuring eight inches in circumference and weighing $5\frac{1}{2}$ oz.; skin creamy white, streaked and mottled with light red, deepening into dark crimson, flesh juicy, sweet, vinous and of first quality; ripe in August.

No. 4—Yellow and red, flesh yellow, small; ripens in September.

No. 5—A white peach, of medium size; late.

Bower's Early—Raised in Frederick, Md., in 1876. It is a freestone, of good size, measuring nine inches in circumference, and considered earlier than the Amsden.

Seedling—Originated in Rochester, N.Y. A fine peach, of medium size, round, with a dark red cheek; of excellent quality; ripe Sep. 4th, 1878.

Seedling—Another Rochester seedling. Large, handsome, white fleshed peach, of first-rate quality; skin creamy white, tinted with pale rose; matured Sept. 4th, 1878.

Seedling—From New Brighton, S.I. Another large, round peach, with pale creamy white skin, flesh free, white to the stone, like Morris' White.

Seedling—Raised in New York. Very large, measuring nine inches around; skin yellowish white, flesh white, red at the stone, and a cling like Heath Cling. A splendid peach; ripe Oct. 5th, 1878.

Gov. Garland—Raised in Arkansas, and said to be the largest and best very early peach.

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Harper's Early—Originated in Missouri. The originators claim that it is the earliest of all peaches.

Waterloo—The first very early peach ever raised in Western New York. It was originated in Waterloo, by Mr. Henry Lisk, and fruited for the first time in 1877, when it ripened several days earlier than the Alexander or Amsden. In 1878 the first specimen ripened July 14th, and all the fruit was gathered July 19th, about a week in advance of the Alexander and Amsden. The fruit is medium to large size, good specimens measuring nine inches in circumference and weighing five ounces. The skin is whitish green in the shade, marbled red, deepening into dark purple crimson in the sun. Flesh greenish white, with an abundance of sweet vinous juice, adheres considerably to the stone like Hale's, Amsden, etc. It is a remarkable keeper, and will undoubtedly be of great value for distant as well as home markets.

Conkling—Among fifty varieties which we had the pleasure of seeing in fruit the past season, I think this might be justly regarded as the most attractive of them all. The fruit is large, good specimens measuring $9\frac{1}{4}$ and $9\frac{1}{2}$ inches in circumference, and weighing $6\frac{1}{2}$ and $6\frac{3}{4}$ ounces. Skin beautiful golden yellow, very juicy, vinous, and of very good quality. It succeeds Crawford's Early. This is another Western New York peach, having been raised in the town of Parma, N. Y., and fruited for the first time in 1873.

Kinnaman's Seedling—Originated with Samuel Kinnaman, of Delaware, ripened 20th of June, 1878. Fruit of medium size, roundish, skin pale brownish red on a pale greenish ground, flesh greenish white to the stone, juicy, sweet and of a very good flavour. Adheres partially to the pit. It is said to be some days earlier than the Alexander or Amsden.

Burns' Peach—Raised by Thomas F. Burns, Mt. Palaski, Ill., who claims that it is the earliest peach known, being a month earlier than the Alexander.

Callie Scalf Peach—A seedling of Early York raised in Water Valley, Ky., said to be earlier and better than Amsden.

Sallie Worrell—Was found on the ground of Mrs. Worrell, near Wilson, N. C. It is regarded by good judges as the finest flavoured peach in the Carolinas.

Thompson's Orange—Raised at Wilson, N. C., and said to be one of the earliest yellow peaches. It has a beautiful colour, somewhat like a yellow apricot, is a freestone and has a good sub-acid flavour.

The above list comprises thirty varieties all more or less new. How many of them will prove real acquisitions it is impossible to predict. We intend to watch them closely the coming season, and trust at our next annual meeting to be able to furnish much valuable information about them. Our notes on this subject would hardly be complete without a few remarks on the newer peaches which have been tested the past season.

Alexander's Early and *Amsden's June*, in which a great deal of interest has been manifested, have proved so nearly identical as to make it impossible to distinguish one from the other. They are the largest and earliest of the very early sorts, not taking into consideration the introductions of 1878, of which the "Waterloo" is thought to be nearly a week earlier. The time of ripening of the newer sorts has also been satisfactorily determined. *Alexander*, *Amsden*, *Honeywell* and *High's Early Canada* bear such a striking resemblance to each other as to be considered almost identical, and all ripen at about the same time. Then follow in the order named, *Brigg's Red May*, *Early Beatrice*, *Early Louise*, *Early Rivers*, *Rivers' Early York*, *Early Silver*, *Magdala*, *Dr. Hogg*, etc.

Rivers' Seedling Peaches—Of these Rivers' Early is now recognized as one of the finest peaches, and particularly deserving the attention of the amateur. Its delicious flavour places it at once at the head of the list. For distant markets, however, it is doubtful whether it will be of value, as both skin and flesh are tender, and it will, therefore, not bear much handling. (This remark may apply to all of Mr. Rivers' seedlings.) Another handsome and excellent peach is the

Early Silver, which, although introduced about the same time as *Beatrice*, *Louise* and *Rivers*, has not been widely disseminated, and therefore is comparatively unknown. The fruit is large, larger than the Rivers, of a beautiful silvery colour, flesh melting, rich, vinous and white, to the stone, like Morris' White. It ripens about the 1st of September, and is well worth the attention of fruit-growers.

Large Early Mignon is another which bids fair to rank high in popular estimation so soon as known. It is large, skin of a pale, straw colour, marbled with red, flesh melting and very good. This fine peach was raised from the Belle Beauce, and ripens latter part of August.

Dr. Hogg is a handsome freestone, of medium size, skin pale white, with crimson cheek, flesh with red around the stone, and very good.

Early Albert is a clingstone, of medium size, skin white, mostly covered with light red, flesh white, melting and very juicy.

Crimson Galande is a large peach, freestone, flesh tender, melting, rich and of a delicious flavour; ripens in the latter part of August, and should never be omitted in a collection for the garden.

Magdala.—Of medium size, colour creamy white, marbled and blotched with crimson, flavour quite original, being a combination of peach and nectarine.

Princess of Wales.—Very large and one of the most beautiful of peaches; colour creamy white, with a rosy cheek, melting, rich and excellent; is justly entitled to be numbered among the best.

Rivers' Early York is of medium size, skin marbled with red, flesh melting and juicy; ripens after Early Rivers.

Several choice peaches, about which there seems to be little known, may be named as follows:

Belle de la Croix.—A large variety, remarkable for its rich, sweet flavour.

Belle Beauce.—Large and handsome, skin pale white with crimson cheek and marbled with light red; flesh white, red near the stone, free, melting and of first quality.

Belle Doue.—Medium, or rather small; flesh white, red at stone and very good.

Royal George.—Large, melting and delicious.

Walburton Admirable.—Large, skin creamy white, with delicate marbling of red around base; flesh greenish white to the stone, free, juicy, sweet, delicious; ripe end of September. One of the finest late varieties.

Royal Kensington.—Of medium size and the finest quality.

Malta.—A fine peach, though rather small.

Belle de la Croix, *Royal George*, *Royal Kensington* and *Early Rivers* are peaches of the highest flavour, and cannot fail to satisfy the most delicate tastes.

Among the older sorts raised in this country, *Atlanta*, of the style of Hales, and one of Dr. Sylvester's Seedling is a delicious fruit and ought to be extensively cultivated. *Foster* is another which should not be overlooked. It resembles *Crawford's Early*, but is superior in texture and flavour. *Coolidge's Favourite*, although rather small, is a fine peach, and deserves to be better known.

NEW APPLES.

But few really new apples have been brought to notice the past year. Of the Russian apples which we have had under trial for some time, several have given evidence of value, and while they can hardly be compared in quality to our best apples, still they are fair and will undoubtedly prove valuable in those localities where only hardy varieties succeed. The following are worthy of particular notice:

(Season of ripening, August and September.)

Titouka or Titus Apple.—A large handsome fruit, resembling Twenty Ounce. Skin smooth, greenish yellow, striped and splashed with red; flesh a little coarse, sub-acid; ripens middle to last of August. This is the largest and showiest of the newer Russian varieties which we have thus far tested.

Arabskoe (Arabian apple)—Another beautiful fruit of moderate size, roundish oblate form, with dark red skin, covered with a rich purple bloom; flesh white and juicy.

Belborodooskoe.—Of medium to large size, rather flat, tapering slightly to stalk, skin yellowish green, with light dots and a brown tint on sunny side; flesh a little coarse, juicy, sub-acid. A good apple.

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Groskoe Selenke Gruner.—Of medium size, roundish, conical form, skin smooth yellowish green, colour of Sweet Bough; ripens early in August. Promises to be one of the most valuable.

Ostrowskoe.—Of medium size, round, regular, skin smooth, greenish yellow, with red cheek, and covered with white dots. Very distinct and handsome.

Repka.—Size medium; roundish, oblate form, regular and smooth; skin pale straw colour, transparent; flesh fine-grained, crisp, juicy, sub-acid, good; ripe early in August; tree a free grower and very prolific. For this variety we predict great popularity.

Roschdestwenskoe, or Christ Birth Apple.—Large, roundish, stalk short, stout; skin green, mostly covered with purplish red. A handsome apple.

Tschernoe Drewo.—Of medium to large size, roundish; skin yellow, with a beautifully mottled red cheek. Very attractive.

Waskaroe.—Size medium, roundish, slightly conical; skin yellow, striped and marbled with crimson, about the colour of Duchesse of Oldenburg; flesh crisp; ripens in August.

Grand Duke Constantine.—Although we have had this variety in our collection for several years, we have not as yet had an opportunity to test it entirely to our satisfaction, owing to the imperfect condition of the fruit when examined. The conclusion we came to, however, was that it would prove identical with the well-known Alexander. The following description is Mr. Scott's, the celebrated English Pomologist, and we quote it because, if correct, this variety deserves to be placed in the front rank among the Russian varieties. Mr. Scott says: "This is a noble fruit in size and appearance. It is, perhaps, as handsome and beautiful as any existing variety, not excepting Alexander and Northern Spy. It is of the largest size, roundish, somewhat flattened; skin clear, bright yellow, almost entirely covered with streaks of dark crimson on the side exposed to the sun; flesh white, tender, juicy, sweet, slightly sub-acid; ripens in August."

Grand Sultan.—Another variety represented to be of first size and quality; skin whitish yellow, covered with a beautiful bloom and striped and shaded with red on the sunny side; flesh white, and, when ripe, transparent. A very fine fruit, rich and juicy; ripens in August and September.

NEW PEARS.

The year has not been prolific in new pears. An American variety, one of the Messrs. Clapp's seedlings, has been introduced, and gives promise of great excellence. It is called the

Frederick Clapp, or Clapp's No. 22.—We are indebted to the Hon. Marshall P. Wilder for the following description: "Form generally obovate, but somewhat variable, size above medium; skin thin, smooth and fair, clear lemon yellow; flesh fine-grained, very juicy and melting; flavour sprightly acidulous, rich and aromatic; season October 15th to November 1st, remaining sound at core to the last; quality *very good to best*, and will be highly esteemed by those who like acidulous pears. It has been exhibited for many years by the originators, Messrs. F. & L. Clapp, of Dorchester, Mass. Of this pear the Committee of the Massachusetts Horticultural Society have reported favourably for years. Of its quality they state in 1873: "It was pronounced decidedly superior to Beurre Superfin, and is regarded by all who have seen it as the highest bred and most refined of all the many seedlings shown by Messrs. Clapp." It is probably a cross between Beurre Superfin and Urbaniste, the tree resembling in habit the latter variety, and may safely be commended as worthy of trial by all cultivators of the pear.

Kieffer's Hybrid Pear is another novelty, raised from the Chinese sand pear, crossed with a cultivated variety supposed to be Bartlett. The fruit is large and very uniform in size; skin greenish yellow; flesh white, buttery, juicy; quality good. It ripens in October, when pears are scarce and high. The tree is a strong grower, and is claimed to be blight-proof.

CHAMPION QUINCE.

Champion Quince.—A new variety, which originated in Georgetown, Conn., in 1865. It is described as being superior to all other varieties now known. The fruit is said to be

larger than the Orange, fair, smooth and of fine quality, and a late keeper. Tree bears large crops, early and regularly. We will look toward this variety with a great deal of interest.

NEW STRAWBERRIES.

During the past few years a very large number of varieties have been introduced to public notice and are now offered for sale. For the purpose of reference I have prepared the following list, which is still incomplete. The name of the variety is given first, then the name of the originator and date of introduction. As a record it will be found convenient and useful. I am indebted to Mr. William Parry, of Cinnaminson, N.J., for information regarding the origin of several varieties.

Belle, Moore, Mass., 1876.
 Black Defiance.
 Caroline, Moore, Mass., 1876.
 Centennial, Durand, N.J., 1876.
 Crescent Seedling, Parmelee, Conn., 1870.
 Champion, Reisig & Hexamer, N.Y. 1872.
 Capt. Jack, S. Miller, Mo., 1874.
 Continental, Felton, N.J., 1876.
 Cumberland Triumph, Miller, Pa., 1874.
 Damask Beauty.
 Duncan, Lucas, N.J., 1875.
 Duchesse, Hexamer, N.Y., 1874.
 Essex Beauty, Durand, N.J.
 Forest Rose, Fetters, Ohio, 1877.
 Gen. Sherman, Moore, Mass., 1877.
 Great American, Durand, N.J., 1875.
 Golden Defiance, Miller, Pa., 1874.
 Gertrude Miller, Mo., 1873.
 Hervey Davis, Moore, Mass., 1878.
 Kerr's Late Prolific, Kerr, N.Y., 1875.
 Matilda, Tillson, N.Y., 1873.
 Miner's Great Prolific, Miner, N.J., 1877.
 Maud Miller, Miller, Mo., 1873.
 Mary Stewart, Miller, Mo., 1873.
 Monarch of the West, Brady, Ills., 1871.
 New Dominion, Biggar, Ont., 1873.
 Panic, Peck, N.Y.
 Pres. Lincoln, Smith, N.Y., 1875.
 Photo, Crawford, Ohio, 1876.
 Pioneer, Durand, N.Y.
 Patuxent, Washington, D.C., 1876.
 Rappahannock, Washington, D.C., 1876.
 Springdale, Miller, Pa., 1874.
 Success, White, Mass., 1876.
 Susquehanna, Washington, D.C., 1876.
 Seneca Chief, Merrill & Son., Mich, 1874.
 Seth Boyden, Jr., Crawford, Ohio, 1876.
 Sharpless, Sharpless, Pa., 1877.
 Turner, —, N.J., 1872.

What portion of these varieties will prove worthy of general cultivation it is as yet difficult to say. Another season's trial, we hope, will enable us to give more definite and reliable information concerning many of them. Of the large number of kinds which we have personally examined and tested the past summer, the *Sharpless* claims the first place. It first gave evidence of value in Mr. Barry's private garden in 1877; Mr.

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Sharpless having kindly sent a few plants for testing. At the last annual meeting of this Society your President referred to the Sharpless as very promising. This was the first public mention made of it. In June last we had ample opportunity to give it a thorough trial, and it pleased us exceedingly. Its vigorous habit of growth is one of its distinguishing characteristics. No other variety that we are acquainted with produces such strong, thrifty plants, or has such large and handsome foliage. It is very productive and yields immense crops, even under ordinary treatment. The trusses are remarkably strong and well-proportioned for the burden they are intended to support, although in many cases the fruit is so large as to bend them to the ground. The berries average large to very large, are generally oblong in shape, narrowing to the apex, but sometimes irregular and flattened. The colour is a clear light red, with smooth shining surface. The flesh is moderately firm, with a fine aroma, and may be rated as first in quality. A bed of this variety, when the plants are loaded with fruit, is well worth visiting. The rich, dark green foliage at once arrests attention, even from a distance, and if we will take the trouble to approach and examine the fruit, it will not be possible to repress our surprise and admiration. If it proves as great a success generally as at Rochester, Catawissa and Cinnamison, we predict for it great popularity.

Among the other varieties *Cumberland Triumph* promises to be an acquisition for the garden. *Crescent Seedling* is becoming a general favourite, and bids fair soon to be recognized as a standard variety.

NEW GRAPES.

Rochester and *Monroe*, offered for sale for the first time the past year, have been received with great favour on all sides. *Moore's Early*, *Burnet*, *Prentiss*, *Pocklington*, *Amber Queen*, *Early Dawn*, *Lady Washington*, *Highland*, *Duchesse* and *Niagara* are now on trial, and we hope to be able to report favourably upon them at the next meeting.

NEW RASPBERRIES.

Gregg—During the season we were the recipients of several boxes of fruit of this new raspberry. Judging from the samples, we would not hesitate to pronounce it a decided improvement on the older varieties of Black Caps.

Reliance and *Early Prolific* gave us their first crop of fruit the past summer. Both varieties appear to be wonderfully productive, but the fruit is soft and hardly of first quality. They will probably be esteemed for home markets.

Pride of the Hudson, *Henrietta*, *Cuthbert*, *Florence*, *Caroline*, *Queen of the Market*—have not been sufficiently tested to report upon.

WACHUSETT THORNLESS BLACKBERRY.

Although an old variety there seems to be considerable interest manifested in it. A sample was sent us during the summer, and although three days en route the fruit was in perfect order when it arrived. It seems to possess several qualities which recommend it. It ripens thoroughly, the fruit is sweet and good and less acid than any other blackberry we have seen; the plant is very hardy, free from thorns, and is said to do equally well on light and heavy soils.

THE BEST HARDY ROSES FOR GENERAL CULTIVATION AND HOW TO GROW THEM.

A Paper read before the Western N.Y. Horticultural Society.

BY HENRY B. ELLWANGER.

This is a query put by many interested devotees of rose culture, annually, and one in which all who love floriculture in any of its many forms have a never-failing interest.

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As we are each year adding new sorts to our list of varieties, and are also making some occasional discoveries and improvements in propagation and cultivation, it follows that our selection of kinds and our treatment in culture will vary somewhat from year to year, as new varieties appear to take the places of old favourites, and we have knowledge of improved methods for the care of them. Reversing the order of our heading, we will first offer a few brief suggestions regarding the general culture suitable for hardy Roses, and afterwards at some greater length consider what varieties can most satisfactorily be grown by the general public.

The first requisite is the selection and preparation of a suitable place for planting. This is very important, as all that follows depends upon the care used in this first step.

To begin with, then, choose the best place you have in the garden, a place where you can offer sufficient protection by means of hedges or board fences from bleak sweeping winds. When fences are used, their general ugliness can be most appropriately clothed by roses themselves. A warm, sunny position is also requisite; if so situated that there is an exposure to the morning sun and the hot rays during the afternoon are in part or wholly shaded, all the better, but a certain amount of sunlight is as essential to a rose's welfare as to our own, though many of us do not shew our appreciation of the blessings of sunlight as gratefully as do our roses. Besides scattering them through our gardens, roses may be made very effective planted in borders about our lawns either individually or in groups, and also planted in beds on the lawn. When the latter is done we may with great advantage depart from the usual custom of growing the plants in bush form, and resort to what is termed the pegging down system.

In this case the mode of procedure is quite simple. Having planted our roses—for this purpose those on their own roots are preferable—we allow them to grow the first season in the usual way, the following autumn or spring the short and weak shoots are entirely cut away and the long ones carefully bent down and fastened to the ground by means of pegs, or where more convenient or preferred they may be tied to stakes. Occasionally it happens there is a hard stiff shoot which will crack or break near the ground, but if the bark on the under side continues whole this is generally of no consequence as flowers will be produced as well as though the shoot were uninjured.

Every year the pegging down must be repeated, the old shoots being cut away and the new ones which have come up during the summer, laid down in their place. The great advantage of this system over the ordinary practice of growing in bush form, is the immense quantity of flowers produced, thus giving a magnificent appearance on the lawn, and affording all the cut flowers desired for household use.

Soil—Roses will do well in any ordinary garden soil that is free from standing water and well drained. Where there is too much clay the soil can easily be made sufficiently friable by the application of wood and coal ashes, lime, stable manure, etc. Where, on the other hand, a soil is sandy or too light, we need to bring clay, muck, leaf mould, etc., to obtain sufficient body.

Pruning is best done during November or March, though to secure a good second crop of flowers in the autumn, it is also necessary to prune immediately after the first flowering is over with.

Manures—In regard to this important portion of cultural operations, we would say that there must be a generous application if we expect a generous yield of flowers. When roses are planted in the spring, if the soil is ordinarily rich, it will be better not to dig in much manure about the roots, but rather apply it as a surface dressing. This will at once be nourishing, keeping the roots cool and prevent suffering from the drouths of summer. The following autumn, say in November, after the roses have been planted, there should again be applied as a mulching a free application of stable manure, which may be dug in the next March. We find cow manure the best fertilizer, on the whole, that we have tried, though all kinds of stable manure are excellent, as are also bonedust, soot, guano, etc. For full directions regarding this and kindred objects, we refer to the several excellent works on Roses.

With these few cultural hints we proceed to a consideration of what are the best hardy roses for general cultivation. We mean by this a list for beginners in rose culture and the general public, naming those varieties that are most certain to succeed and which

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will give the most generous return in profusion of flower, fragrance and beauty. A perfect rose, therefore, for general cultivation, should excel in the following particulars, and in the order named :

First—Beauty of colour—As that which first attracts us to a rose.

Second—Beauty of form—without which our eye cannot rest long, but wanders on seeking a combination of the two in one flower.

Third—Fragrance—Deprived of this no rose can be perfect. Who ever yet saw a beautiful rose without wishing to inhale its odours? Gratification in this matter is oftentimes far more pleasing to us than the mere sight of beauty.

Fourth—Profusion and continuity of bloom. We like our good things in abundance, poured out to us with generosity, that we may have to distribute and carry our pleasure to friends.

Fifth—Vigour and healthfulness of growth. That will produce strength of plant, thriving with a moderate degree of care and attention, and that will endure the extremes of summer's heat and winter's cold.

Let us consider at some greater length these several qualities essential to a perfect rose.

First—As regards colour, we like something decided and pronounced, or else of great delicacy and softness, and withal as durable as possible. The varieties differ very greatly in this respect. For example, Pius the IX., a well known old rose of splendid habit, very seldom is seen of a clear colour ; the sun fades it almost immediately after the flowers expand, and a dirty shade of rose is produced, anything but pleasing. La Reine, Giant of Battles, and others are likewise affected, though in less degree. Some, like Abel Grand and General Jacqueminot, are quite permanent, lasting oftentimes till the petals wilt and fall. Above all things, therefore, we want our colours pure and steadfast.

Form.—In form the rose shews almost as much diversity as in colour. We have globular, cup-shaped, imbricated and quartered roses, besides many modifications of these forms. The globular rose, as shown in Alfred Colomb, is the finest of them all, but the others are very pleasing in their variety, and we should not wish to be confined to the one type. The quartered or flat form is the most objectionable, though there are very many lovely roses of quartered or flat shape, such as Caroline de Sansal, Baronne Prevost, etc., which are large, full and even symmetrical. Shirley Hibberd, in his excellent work on roses, places form before colour. This may be right in an exhibition box of roses, but not as judged from our standpoint ; however, it shows the very great importance of excellence in form, without which a rose cannot stand very high in the scale.

Fragrance.—Did one ever think what we should lose were our roses deprived of their sweet odours? Why, there would at once be a vacant throne, with no rose to hold a queenly sceptre, and the strife of Dahlia, Camellia, Lily, Gladiolus, and Rhododendron for supremacy would have no check, no limitation. Among all the delightful perfumes exhaled by the Lily, Heliotrope, Daphne, Jasminum, etc., none yield such delicate, sweet-scented odours as La France and Louis Von Houtte give us ; they are alike suprême in beauty and fragrance.

Profusion and continuity of bloom.—This is also a very important feature, as is ably set forth by W. D. Prior in an article on "Autumn Roses," which appeared in the *Gardener's Chronicle*, September 21, 1878. He says :

"One of the most important points in which all roses of comparatively recent introduction should be carefully watched is that of the habit of free autumnal bloom. Until this has been well established, the title of even the finest varieties to rank as perpetuals is incomplete. There is the greater necessity for this vigilance because true perpetuity is the chief claim to superiority that our modern roses are able to advance over some of their summer predecessors, which in form, colour, vigour of growth and hardiness are quite their equals, being surpassed only in the valuable property of having more than one season of bloom. Another reason for impartial examination as to the quality is that so many novelties receiving certificates when exhibited at the meetings of societies, or which attract the commendations of adepts at exhibitions, ultimately turn out lamentably shy in autumn, mere summer roses in fact, yielding, it may be, under peculiar circumstances, a flower or two in the latter part of the year. It unfortunately happens that not a few even of the

established favourites are capricious and unreliable in the essential feature which gives a name to the class to which they are held to belong. Let any one walk through a large collection of roses from the end of August till the time for lifting arrives, and he will be struck at beholding row upon row of healthy looking trees utterly destitute of the vestige of a flower. In other cases a bloom here or there may be seen, but nothing in quantity to justify the title of perpetual, while others will be found yielding flowers till the frost cuts them off. These last are the kinds most valuable for the purposes of the general rose public, in contradistinction to the limited class concerned with exhibition; hence the necessity of ascertaining the trustworthy autumnal blooms every year."

There is no doubt we have altogether too many kinds of so-called Hybrid Perpetuals, which, though excelling in many other qualities, are lamentably deficient in this: they are perpetual in name only, and do not yield a sufficient number of flowers; they, therefore, should give place to true perpetual varieties.

Vigour and healthfulness of growth.—Last and scarcely least, we look for a strong constitution.

Varieties subject to mildew, like Caroline de Sansal, Prince Camille de Rohan, etc., have our commiseration as well as our regard; while weak or slow-growing varieties, like General Washington, Giant of Battles, La France, etc., we unfavorably contrast with the exuberant healthful growths of such sorts as John Hopper, General Jacqueminot, Baronne Prevost, etc.

With these preliminary remarks, we submit a table placing in order of merit the best hardy Roses for general cultivation. With the single exception of Climbing Jules Margottin, we have not contemplated the admission of new varieties of the past four years. Some of them, no doubt, will be worthy a place in the list, but it takes time to thoroughly test a Rose, and we wish to make this list as thoroughly reliable and as nearly perfect as it is possible for such a list to be.

We have selected the following means of determining the comparative merits of different varieties:—Taking the five qualities named in the order of their importance, we assigned the following number of points to each:—Colour, twenty-four; form, twenty-two; fragrance, twenty; freedom of bloom, eighteen; vigour and healthfulness of growth, sixteen; making a total of 100 points for each Rose.

Where two or more varieties resemble one another, we have only retained the superior sort as a contestant; thus Ferdinand de Lesseps and Maurice Bernardin are thrown out as being somewhat similar, but inferior to Charles Lefebvre.

This gives a list, therefore, of quite distinct sorts, those which are nearest alike being Alfred Colomb and Mme. Victor Verdier at the head, and they are sufficiently dissimilar to make both essential, even in a very limited collection.

We have given the shade of colour in case any one should desire to select from this list with reference to having but a few sorts quite distinct from each other in tint, but as already mentioned, Roses vary almost in form as in colour, and we may have two kinds, of precisely the same shade, yet strongly differing in every other respect, and therefore entirely distinct. The list runs as follows:—

Maximum n
Alfred Colomb
Mme. Victor
John Hopper
General Jacqueminot
Countess of Orléans
Abel Grand,
Marie Baum
Charles Lefebvre
Francois Michel
La France, si
Marguerite de
Climbing Jules
Duke of Edinburgh
Baronne Prevost
Louis Van Houtte
Paul Neyron,
Anne de Diesbach
Mme. Boll, ca
Prince Camille
Countess of Orléans
Caroline de Sansal
Mme. Alfred de
Peach Blossom
Coquette des B
General Washington
Marquise de Ca
Baroness Rothschild
La Reine, rose
Etienne Levet,
Mdlle. Eugénie

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| | Colour. | Form. | Fragrance. | Freedom and continuity of bloom. | Vigour and healthfulness of growth. | Total. |
|--|---------|-------|------------|----------------------------------|-------------------------------------|--------|
| Maximum number of points | 24 | 22 | 20 | 18 | 16 | 100 |
| Alfred Colomb, crimson | 24 | 22 | 19 | 15 | 13 | 92 |
| Mme. Victor Verdier, crimson | 24 | 22 | 19 | 14 | 11 | 90 |
| John Hopper, carmine rose | 24 | 20 | 14 | 16 | 16 | 90 |
| General Jacqueminot, velvety crimson | 24 | 16 | 17 | 17 | 16 | 90 |
| Countess Cecile de Chabrillant, pink | 23 | 22 | 17 | 13 | 14 | 89 |
| Abel Grand, glossy rose | 23 | 20 | 15 | 16 | 15 | 89 |
| Marie Baumann, carmine crimson | 24 | 22 | 18 | 14 | 10 | 88 |
| Charles Lefebvre, deep crimson | 24 | 21 | 16 | 14 | 13 | 88 |
| Francois Michelin, carmine rose | 24 | 11 | 15 | 15 | 13 | 88 |
| La France, silvery rose | 24 | 22 | 20 | 18 | 3 | 87 |
| Marguerite de St. Amande, bright rose | 24 | 20 | 12 | 16 | 15 | 87 |
| Climbing Jules Margottin, carmine pink | 24 | 19 | 14 | 14 | 16 | 87 |
| Duke of Edinburgh, bright crimson | 24 | 17 | 15 | 15 | 15 | 86 |
| Baronne Prevost, rose | 23 | 14 | 17 | 16 | 16 | 86 |
| Louis Van Houtte, maroon | 24 | 21 | 20 | 14 | 6 | 85 |
| Paul Neyron, rose | 22 | 19 | 13 | 15 | 16 | 85 |
| Anne de Diesbach, carmine | 24 | 16 | 12 | 14 | 15 | 81 |
| Mme. Boll, carmine rose | 24 | 21 | 12 | 8 | 15 | 80 |
| Prince Camille de Rohan, dark crimson | 24 | 18 | 14 | 12 | 10 | 78 |
| Countess of Oxford, carmine red | 24 | 22 | 4 | 14 | 13 | 77 |
| Caroline de Sansal, rosy flesh | 23 | 15 | 12 | 14 | 13 | 77 |
| Mme. Alfred de Rougemont, white | 20 | 16 | 14 | 18 | 9 | 77 |
| Peach Blossom, pink | 22 | 16 | 10 | 12 | 13 | 73 |
| Coquette des Blanches, white | 23 | 10 | 8 | 18 | 12 | 71 |
| General Washington, reddish crimson | 20 | 18 | 4 | 17 | 8 | 67 |
| Marquise de Castellane, carmine red | 24 | 19 | 2 | 9 | 10 | 64 |
| Baroness Rothschild, silvery pink | 24 | 21 | 2 | 12 | 4 | 63 |
| La Reine, rose | 15 | 12 | 10 | 12 | 14 | 63 |
| Etienne Levet, carmine red | 24 | 20 | 2 | 10 | 6 | 62 |
| Mdlle. Eugenie Verdier, silvery rose | 24 | 20 | 2 | 8 | 7 | 61 |

A list of this kind would not be complete without mention of some summer Roses. Though blossoming only once a year, some of them, notably the Mosses, are so beautiful

as to be essential to a Rose garden of any size or pretensions. We name the following as the best:—For climbers, Bennett's Seedling, Baltimore Belle and Queen of the Prairies. We have also a new race of climbing, Hybrid Perpetuals, which promise to be valuable but are not fully proved. Among non-climbers, the most desirable are Persian Yellow, Mme. Hardy, Mme. Plantier, and the following Moss Roses:—Crested, Common Moss, Countess of Murinais and Salet; the latter, though less beautiful than the others, blooms freely in autumn and would be quite valuable for that quality alone.

The selection or mode of electing varieties to a position in the above list is, of course, arbitrarily done, but it has been carefully, and we may say laboriously, compiled; and though judges would differ more or less in the relative estimation of the different qualities which go to make up a perfect Rose, and the number of points which should be variously assigned, we nevertheless think it will be a serviceable guide. As will be seen from the table, we have no rose which may be called perfect; our choicest sorts, excelling in some qualities, fall short in others; thus Alfred Colomb, which heads the list with ninety-two points out of a possible one hundred, is less fragrant than La France, more coy of its blooms than Coquette des Blanches, and does not have the lusty vigour of growth possessed by Baronne Prevost, but, for the five qualities combined, no sort altogether equals it, though Mme. Victor Verdier is a sister variety of nigh equal worth. Honest John Hopper, always steadfast and true, comes third. Victor Verdier bears him much resemblance in colour and general appearance, but has neither the fragrance nor vigour of constitution to be counted a rival.

General Jacqueminot, notwithstanding a lack of fulness and rotund form, is now one of our oldest, most generally known, and also best Roses for general cultivation. Clad in crimson livery he is still prepared to lead the van.

Countess Cecile de Chabrillant, possibly from the length of name, is a variety too much neglected and lost sight of. The flowers are not large but most beautiful, and are models of symmetry and grace. Let no one overlook her claims.

Abel Grand is another neglected, or at least not well-known, variety of the highest excellence, especially valuable in the fall of the year when compeers otherwise equally meritorious are devoid of even a semblance of bloom.

Marie Baumann! How difficult to depict her charms. Original and exquisite in all her features, she claims a choice position in every garden. There is no more beautiful variety than this in the entire list.

Charles Lefebvre is an improved Jacqueminot in form and possibly colour, though somewhat inferior in other qualities. Only within a year or two have we in this country learned to appreciate this noble Rose.

François Michelon, a comparatively new sort, is rapidly gaining favour. It is a seedling from La Reine, bearing some resemblance to that well-known sort, but decidedly superior in colour and form. Following this is La France, the sweetest of all Roses; compelled to choose one variety, this should be ours. It is not only the most fragrant, but, with the exception of those Hybrid Noisettes, Madame Alfred de Rougemont and Coquette des Blanches, will yield more flowers during the year than any other sort named. Its flowers so profusely that its growth is checked, every eye sending forth a flower-shoot; it is, alas, not very hardy, being the most tender on the list, but though the tops are killed, it will start out again in the spring from the roots, the same as the Hybrid Noisettes.

Marguerite de St. Amande is a worthy companion of Abel Grand, furnishing a generous supply of autumn flowers.

Climbing Jules Margottin, besides being of more vigorous growth, seems, if anything, more beautiful than the old sort, from which it is a sport. It is well worth growing for its buds alone.

Duke of Edinburgh is a bright coloured Jacqueminot, which is saying all that is necessary.

Baronne Prevost, one of the best of the flat type, is a worthy companion of General Jacqueminot, and a model of vigour and health. It is the oldest variety known, having been sent out in 1842.

Louis Van Houtte, like La France, is but half hardy, and is also worthy of extra care. No other sort so nearly approaches La France in fragrance, and when planted in a

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bed together, the deep velvety maroon of the one contrasts most beautifully with the delicate silvery rose of the other.

Paul Neyron is the largest variety known, and although its size detracts from our notions of a refined Rose, it is nevertheless a noble sort for any garden.

Anne de Diesbach, a true carmine, has its rivals of the same shade, but her pure, lovely colour has never yet been equalled by any of them.

Madame Boll is almost worth growing for its large, lustrous foliage, but the blooms correspond in size and quality, only are too seldom seen after the June blossoming is over.

Prince Camille de Rohan is a superb, very dark sort, very well known.

Countess of Oxford (a splendid carmine red, of the Victor Verdier type), like François Michelin, is rapidly becoming popular, its chief defect being a want of fragrance, which it lacks in common with all the Victor Verdier race, such as Captain Christy, Etienne Levet, Lyonnais, Madame George Schwartz, Madame Marie Finger, Mlle. Eugenie Verdier, President Thiers, etc.

Caroline de Sansal is a well-known, justly popular sort.

Madame Alfred de Rougemont and Coquette des Blanches are, all things considered, the best white perpetuals we have.

Peach Blossom, a comparatively new sort, seems to improve each year, and gives a new shade of colour very desirable.

General Washington is one of the most widely disseminated varieties in this country, but it does not reach the maximum number of points in any quality. In colour it is sometimes grand, but generally it has somewhat of a faded appearance, being quickly affected by the sun, and seldom is seen truly pure. The same may be said respecting form, sometimes superb, but generally seen with some defect, either a green centre, or irregular and not symmetrical. Of fragrance it is almost entirely devoid. It ranks very high as a free bloomer, but like La France, this is at the expense of growth.

Marquise de Castellane does not always open well, but gives many large carmine rose blooms of globular shape that are truly superb.

Baroness Rothschild has exquisite cup-shaped flowers entirely distinct from all others. It is, unfortunately, of stubby short-jointed growth, and can only be propagated by budding or grafting. This will always tend to make it somewhat scarce.

La Reine is another well-known old Rose which we cannot yet afford to discard, though now surpassed by so many finer varieties.

Etienne Levet, another of the newer sorts, somewhat resembling Countess of Oxford, is rapidly finding favour, and had it but fragrance, would be assigned a higher position.

Mlle. Eugenie Verdier, the last of the list, is certainly one of the most delicately beautiful coloured varieties we have, but here again the lack of fragrance deprives it of a higher position.

THE BEST LIST OF PEARS.

BY B. GOTT, ARKONA.

It will be admitted on all sides that the pear is one of the most delightful, valuable and enjoyable (or toothsome, as an old friend of ours has it,) fruits that can be desired or produced in any country. It will also be as readily admitted that it is very desirable and greatly to our advantage to exercise our best skill for its plentiful production for our own use and service, and to meet the demand of an eager and ever ready market. This we must do to keep our market, and to compete with those who are abundantly and successfully growing good pears just in neighbouring borders.

For these purposes it is very desirable to know something of successful culture, the conditions requisite to success, and the sorts or varieties that are known to give the best satisfaction to the greatest number of pear growers in this and other climates. It is at present needless for us to go into lengthy details of the modes of operation by pear growers, or of the selection of the aspect, the preparation and culture of the soil, etc.; these are all understood, at least by the most of planters. It may be at present sufficient to

state that we have in this part of Canada, or in Ontario as a whole, an abundance of fine and favourable locations on almost every farm, as can be found in any country. It may be further fearlessly stated that there is no physical or moral reason why we should not everywhere be well supplied both in our families and in our markets, with this most delicious, healthy, refined and profitable fruit. Our rains descend as plentifully and as gracefully, our sun shines as energetically and propitiously on us as on any land or people on this beautiful earth. The abundance of good fruit of any sort or description among us is only a question of our own personal activity, or simply a matter of national enterprise.

With respect, then, to the various sorts or varieties of good pears for planting in this attitude, for family or market purposes, there is not much difference of opinion among good judges in the matter. There are doubtless a few favourites among so many good sorts, and planters can have the benefit of their own selection and opinion in the matter. There are, however, a few sorts a little more run on than are others, but the list of those successfully grown in our conditions is by no means small or uncertain. Specimens of some of the best on the whole list of known varieties have been frequently produced of great excellence by our home growers.

At the recent winter meeting of the Fruit Growers' Association held in the city of Hamilton, the President, Rev. R. Burnet of London, was elected to select and name the best twelve varieties of pears of Ontario, and he selected the following, placing them in the order of their merit:

Bartlett, Beurre d'Anjou, Beurre Superfin, Beurre Bosc, Beurre Clairgeau, Louise Bonne de Jersey, Belle Lucrative, Flemish Beauty, White Doyenne, Sheldon, Lawrence, Winter Nelis and Josephine de Malines. These he pronounced to be a good baker's dozen and very hard to beat. John McGill, of Oshawa, submitted the following list; Bartlett, Clapps' Favourite, Tyson, Flemish Beauty, Belle Lucrative, Louise Bonne de Jersey, Beurre Bosc, Beurre Clairgeau, Duchess d'Angouleme, Mount Vernon, Winter Nelis, and Lawrence,—very good. Alex. McD. Allan, of Goderich, preferred the following for his district: Doyenne de Ete, Bartlett, Flemish Beauty, White Doyenne, Howell, Duchess d'Angouleme, Louise Bonne de Jersey, Stephen's Genessee, Seckel, Lawrence, Beurre Clairgeau—all very good. W. Roy, of Owen Sound, had the following; Flemish Beauty, Bartlett, Beurre Diel, Duchess d'Angouleme, Louise Bonne de Jersey, Beurre Clairgeau, Glout, Morceau, Graslin, Clapps' Favourite, Sheldon, Easter Beurre, Winter Nelis, Beurre Superfine and Beurre Bosc, also good.

Thus you see that the divergence of opinion for these outposts of our country is only very slight, simply adding a few varieties favourably entertained in these several sections, and the whole list only comprises about twenty-two varieties. Let us now for a moment look at the list of favourites among pears as entertained by others some distance away from home, simply for comparison and elucidation. In the catalogue of fruits by the American Pomological Society, the influence of which extends over the United States and British America, those varieties that are held in the greatest favour throughout this vast territory, are marked by two stars, and are said to be double-starred. These are, Bartlett, Belle Lucrative, Beurre Bosc, Beurre d'Anjou, Beurre Giffard, Bloodgood, Buffam, Clapps' Favourite, Doyenne d'Ete, Duchess d'Angouleme, Flemish Beauty, Howell, Lawrence, Louise Bonne de Jersey, Seckel, Sheldon, Vicar of Winkfield, Winter Nelis, only seventeen or eighteen varieties. This is a general index, and applicable North and South, and can positively be relied upon for real worth.

The State of Georgia has just issued an excellent and carefully got up catalogue of all her native and exotic fruits. This fine work is a credit to any person, and is used by her fruit-growers as a guide in their selections. In the long list of fine pears, we find the following double-starred: Bartlett, Belle Lucrative, Beurre d'Anjou, Beurre Clairgeau, Beurre Giffard, Beurre Superfin, Duchess d'Angouleme, Flemish Beauty, Howell, Beurre Bosc, Buffam, Doyenne d'Ete, Lawrence, Winter Nelis and La Coute. Now what difference do you observe in this fine list so prized by these fruit-growers in this far southern climate. Are not these, or at least the most of them, the same familiar names as we are accustomed to speak in our own native pear orchards?

Let us look to the North. In the State of Minnesota, a most rigorous climate, they have ventured to put only one variety of pear upon their fruit list, viz.:—Flemish Beauty.

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What volumes this speaks for this fine old standard fruit, but alas for fine fruits in such rigorous and unfriendly climates.

Just a little south-east, however, the promising State of Wisconsin, has an admirable list of pears, many of which are the old standard varieties, and many appear to do well. From a late list of their fruit-growers, compiled at a late meeting of the State Horticultural Society, we notice the following as specially prominent:—Flemish Beauty, Ananas d'Ete, Early Bergamot, Bartlett, Swan's Orange, Seckel, Clapps' Favourite, Winter Nelis. This is a good list, and it is a great pleasure to us to consider that such fine and valuable fruit can be successfully produced over so vast a territory, and enjoyed by so many millions of people living in such extreme sections of this vast continent.

The ingenious and model fruit-growers of the neighbouring State of Michigan have just issued a most laboured and exemplary catalogue of their native and exotic fruits, grown by the people of that wide-awake and leading State. Their list of pears comprises no less than sixty-two choice sorts of this popular fruit, all of which are cultivated to some extent in some or other of the varied regions of that State. But those most popular and double-starred for the most of these regions are: Bartlett (ever popular and ever foremost, double-starred for every region of this State), Beurre d'Anjou, Beurre Diel, Beurre Bosc, Buffam, Clapps' Favourite, Doyenne d'Ete, Beurre Easter, Flemish Beauty (in all lists double-starred for every region of the State), Fondante d'Automne, Josephine de Malines, Howell, Louise Bonne de Jersey, Lawrence, Onondaga, Seckel, Stephen's Genessee, Vicar of Winkfield, White Doyenne and Winter Nelis, just twenty varieties.

How near this excellent list comes to that of our own adopted at Hamilton last month. We might observe here that there are a few varieties common to all these lists, notwithstanding the wide diversity of climate, soil and surroundings; for example, Bartlett, Flemish Beauty, Louise Bonne de Jersey, Beurre Bosc, Howell and Winter Nelis. Now if we take only this noble half-dozen varieties, common to all lists both North and South, we certainly should have a good assortment, either for family or market use, and as good fruit as can possibly be produced. At our County Agricultural Shows last fall, there were many splendid specimens of fine pears, and these are widely on the increase, showing that our people are fast becoming more and more interested in the successful cultivation of good pears. Let all become so interested, and every land-owner plant of them, at least sufficient for his own personal and family use. It is only thus that the extreme fruitfulness of our promising country can be made fully to appear.

GRAPES.

By B. GOTT, ARKONA NURSERIES.

The chilling winds of cold November are now furiously sweeping over the landscape, disheveling the verdure and the beauty of the scenery, scattering the lifeless foliage of the trees, and spreading desolation everywhere. Where verdure supremely reigned, now only the seed remains of a once luxuriant foliage; where beauty and harmony dwelt, now confusion and scattering and decay. What a sad change has passed over all earthly things! Only one short month ago effulgent life and beauty were everywhere perceptible; now all is changed as by a magic wand, to nakedness and to the very image of death. Nor is the luxurious vineyard in any way exempt from this general and wide-spread disorder. Its abundant foliage, the very embodiment of life and vigour, and its luscious and tempting fruits have all disappeared, and are now among the things of the past; only lifelessness and scattering and decay are visible here. What pleasing memories cling around this plantation, how frequently we regaled ourselves on its rich and abundant fruits, and feasted our sight on its luxuriance and beauty! Frost, that life-extinguishing and destroying influence, that subtle, imperceptible force, whose power is irresistible and prevailing throughout this rigid month, has been here, and the evidences of its work are clearly perceptible. It requires on the part of the devoted cultivator a deep and intelligent insight into the essential reasons of things to readily exhibit any amount of submission here.

Stated cessation from activity, known as rest, is plainly a fixed and universal law of nature, originating in the Infinite wisdom of nature's great First Cause. Activity and then rest, rest and seasonable activity, is the undeviating method of accomplishing the great results in nature and in the business of the nations of the earth. We would, therefore be resigned; it is not death but sleep. Joyful thought! Vigour will here again assert itself; though the fair foliage is destroyed, life is not destroyed. There is a secret power lodging in the minutest extremities of every rootlet that will again enforce activity and reproduce the gorgeous scenes of the past summer. Let us then thankfully submit, and fall in with the unerring laws of nature.

THE PAST SEASON

has been a very remarkable one for the abundance of its general fruitfulness, at least in our midst, including the fruits of the field, as well as those of the vineyard and the orchard. The apple crop of this country was one of the most abundant and the best as regarding size and quality that has been known for many years past. Nor has the vineyard been at all spare in this matter, but the large, handsome, luscious, bursting berries have been freely gathered from the loaded canes in large, heavy, compact, perfect bunches. We have had lots of grapes to gratify the longing desires of all, even the most insatiable. From whatever point I have gained information this season's crop has been unusually large and well developed. Excepting a new attack of rot upon our Concords that is quite unusual, there has been no disease among them either in leaf or berry to seriously injure the crop. This new departure—the rot on the Concords—early apprised many of our grape-growers, and those on the Pelee Islands, in Lake Erie, first sounded the alarm, yet we are happy to state that no injurious decrease of the crop was visible. In my practice this season I applied a liberal dose of the flour of sulphur to my vines just as they blossomed for the disease known as "mildew," and with perfect satisfaction. Mr. Rogers' Hybrids are the most likely to be attacked by this dreaded disease. As far as my knowledge goes, our vines in leaf and fruit have been most remarkably clear of all insect ravages. Even the dreaded destroyer of European vineyards—the *Philoxera Vastatrix*—has shewn no perceptible marks of attack here. Beetles, nor thrips, nor mildew, nor rot have damaged us in our vineyards to discouragement and dismay; but health and beauty and fruitfulness and enjoyment have thus far marked our progress. It would appear, however, that many of our people yet in an elementary state of development, have not fully learned the true uses of the grape, and consequently it does not at present occupy a very prominent position in their daily economy. This is a source of some uneasiness among grape growers. When offered peaches, or pears, or apples upon our markets they are appreciated, and they say "Oh, yes; we will take some of those fine peaches," etc., as the case may be, as they can preserve them or can them for winter; but when offered grapes, they frequently demur and say, "They are very fine, but they are of no use to me, as we could only eat them up at once." This crude notion of the uses of grapes unfortunately prevails among a large class of our population. Many others look upon them only as an article of luxury and not, as we believe them to be, an article of necessity to health and happiness. The man of means buys them liberally for himself and family, but the economist says, "I would much like to have some, but I cannot afford it, these hard times it is as much as I can do to secure the necessaries of life," etc. These false and ill-founded notions often have a very damaging effect upon the market in lessening the area of consumption, and consequently lowering prices. There seems to be no remedy for this just at present. We must patiently wait until the general intelligence of the people, on this as well as many other matters, is better developed. When they will not say, "Oh, yes, they are very nice, but what are they for? How are they used?" etc., when shewn a basket of beautiful, perfect, blooming Concord grapes. Such ignorance is lamentable and ought to excite the pity of every well-meaning man. Although prices have ruled low this season yet we hope not so low as to discourage our earnest growers at future attempts at excellence. It would be well to remember that excellence will always command its face value, whether it be in peaches or in grapes, or in anything else. When we consider the thousands of pounds of grapes that have been imported into this country and thrown upon

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our market from growers over the border, added to the whole bulk of our home crop, it is really a matter of deepest wonder what has become of them. Their use is evidently annually increasing enormously in our midst.

THE VARIETIES.

Most popular at the present time in this latitude are still the old standard well-tested sorts which we have seen in our markets for many years past, viz.:—Hartford Prolific, Ives' Seedling, Clinton, Delaware, and Concord. Our people are slow of change in fruits, as well as in everything else, and when they once get hold of a good variety they don't easily let it go for an uncertainty. They want to be sure in all their movements. Though these grapes are not considered high in the points of excellence by many of our connoisseurs, if perhaps we except the Delaware, yet it is our settled opinion that, all things considered, it is difficult to surpass them in real service and genuine worth. Should insects or disease, or the over-sanguine claimants of new varieties, or any other dire calamity sweep the standard sorts from their trellises, dismay and despair would speedily take hold upon us, as we have nothing left to supply their places. We would not for one moment discourage efforts for improvement, and believe it quite possible, but let us be sure that we have an improvement before we cast away our standards for them. Ives' Seedlings and Concords were brought into this country during the past season in enormous quantities from the United States, and yet to the very last the Concords were by far the most plentiful and popular grapes in the market. At the exhibition of the Western Fair Association, held in London last September, the grape department of Horticultural Hall was by far the grandest and fullest, containing the most choice varieties of any previous display at this place. To use freedom, the varieties were endless, and all so beautifully and perfectly developed. As an exhibition of Canadian grapes, what could the lovers of the culture ask more, either in out-door or under glass production? The latter might have astonished and baffled the exhibitors of sunny France, and the former would verily arouse the serious apprehensions of the most bombastic American. We may gather from the face of this display, that among amateur growers of the grapes, Mr. Rogers' Hybrids are becoming greatly popular and welcome favourites. This is just what might have been expected, for the whole of this fortunate gentleman's Hybrids possess largely very uncommon excellence that will certainly recommend them to the public notice. We consider Dr. Grant's Iona is a reliable grape of the highest excellence, and in this locality it is a good cropper and does remarkably well. Of the many

NEW VARIETIES

of grapes that have been lately brought into notice, either Seedlings or Hybrids, we are compelled to acknowledge that we are not in a good position to comment much. Such things are generally kept scrupulously among the originators for at least some considerable time, and held at extremely high prices. We shall, therefore, simply content ourselves by referring to the experience and reports of others. Perhaps no originator among fruits is, at the present time, attracting so much notice among grape growers, and lovers of fruits, as the American Hybridist, James H. Ricketts, of Newburgh, N.Y. This, we think, is just, for this gentleman has succeeded in fairly surprising his American brethren, with the results of his long and patient labours. Such men ought to be honoured—for their work's sake. *The Rural New Yorker*, Nov. 15, 1879, in a fine illustrated leader, says: "If the introduction of new fruits is indicative of a growing taste for Pomology and Horticulture, among the people at large, a very wonderful advancement has been made in this direction, during the past few years. With the exception of the strawberry, no line of fruit has, of late, been increased by so many and excellent varieties as the grape. A desire for raising seedling grapes, seems to have seized upon a number of horticulturists at about the same time, and the results of their efforts are now becoming apparent." These remarks are timely and very applicable, and we may confidently expect still greater disclosures, resulting from the labours of the excellent class of men who are now

devotedly giving their attention to these matters. Only think of the talents of such men as Rogers, Ricketts, Wilder, Campbell, Anderhill, Rommel, Moore, and Miller, of American renown; and Arnold, Saunders, and Dempsey, for Canada, all employed in the same work, and for the same object. Surely, if advancement is possible, it must certainly be effected. Mr. Ricketts, with considerable enterprise, was present at our Provincial Exhibition, at Ottawa, last September, with a large and fine display of the results of his popular labours, his "Seedling Grapes;" they attracted much attention. Perhaps the most remarkable and the most promising of the grapes of this gentleman's introduction, is the one he has named "The Welcome;" it is a decidedly welcome addition to the list of hot-house grapes; it is a cross between Pope's Hamburg and Cannon Hall Muscat, like those famous sorts, it cannot be ripened out of doors in this climate, but it is suitable for both the hot and cold graperies. All good judges of fruit pronounce it superior not only to both of its parents, but to any foreign variety. This is high commendation, and will do much to introduce it to the notice of grape growers generally, over the continent. It is a fine large bunch, double shouldered and compact, very large berry, roundish oval; black, and covered with a greyish blue bloom; flesh tender, juicy and sweet. Others of this Hybridist's grapes have attained considerable notice, as Lady Washington, Bacchus, Jefferson, etc. Bacchus is a smallish black grape of great promise, and very highly recommended as most excellent for wine-making purposes. Jefferson is a fine large red grape of good character, and succeeds well for out-door growing; it is a cross between Iona and Concord, very healthy and is at present the property of Mr. J. G. Burrows, Fishkill, New York. A new sixty dollar prize grape, is largely advertised by John B. Moore, Concord, Mass., called "Moore's Early." We have received circulars of this new hardy grape, that is said to have the following desirable qualities: hardiness, size, beauty, quality, productiveness, and earliness. Surely this will fill the bill, and please even the most fastidious. We have not seen the fruit, and cannot pronounce upon it. Mr. George Campbell's new white grape, he has named "Lady" is steadily increasing in popularity, and is promising to be a valuable acquisition to our list of hardy grapes, especially in the east. Mr. Hooker's "Brighton," is perhaps one of the most promising of the lately introduced grapes, it is very popular and is doubtless a grape of much merit. It is very hardy and well suited to a wide range of cultivation, and marks high as a table and market fruit. We have fruited for the first time this season several (to us) new varieties, claimants of popular favour, as Walter, Martha, Alvey, Creveling, Adirondac, etc.; of these, the Walter is remarkable, both in bunch and berry, and is, perhaps, the highest flavoured grape in our collection; it is a cross between the Diana and the Delaware, and was raised and brought into notice by Mr. A. J. Caywood, of Poughkeepsie, N. Y. In general appearance and flesh, the characters of both parents are distinctly discernable. The bunch and berry are of medium size, of light colour; flesh tender, rich and sweet, with an agreeable spicy flavour, thoroughly reminding one of the Diana. As far as late Canadian originators are concerned, not much is said of them, or of their products. It may be in the course of time, however, more attention may be given to these matters amongst us, and our patient workers in this field become better appreciated. We are glad to notice that Mr. Charles Arnold's Hybrids are very popular, and well recommended on the other side of the line.

THE RAGE FOR WHITE GRAPES

is at present the distinguishing future of the age in horticulture. For some unaccountable reason there are great and prolonged efforts made for a better white grape than those we already have. When a good one is produced at an enormous expense of time and effort, for some reason or other its course is soon run. As far as quality is concerned it is found to be very difficult to produce a white grape superior to Allen's Hybrid (said to be the first of American Hybrid grapes), or in hardiness and healthiness of vine to get one more desirable than Rebecca. The *American Agriculturist* for November, 1879, page 468, says: "Every one who grows fruit for market would gladly welcome a white grape with all the good qualities of the Concord and as few of its defects as possible." At the late meeting of the American Pomological Society, held at Rochester, N. Y., last September, consider-

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able attention was given to the newer varieties of grapes and among those exhibited were several new white grapes of considerable promise and excellence. C. L. Hoag, of Lockport, New York, had one upon the table that is named the Niagara, that commanded much comment and considerable attention. It is said to be hardy and healthy, and was much admired for its beauty and fine qualities. It ripens about one week earlier than the Concord. Mr. T. S. Hubbard, Fredonia, N. Y., had one named the Prentiss, that is said to have much resembled Allen's Hybrid. It is further said to have some points of character that recommended it above that good old variety. Mr. Hubbard has full control of the wood, and says in his circular, "It was originated by J. W. Prentiss, Steuben Co., New York, as a seedling from Isabella." (?) It ripens about with the Concord, and among its many other good qualities it is an excellent keeper. Another very promising new white grape on exhibition was one named Pocklington, a seedling of Concord (?) raised by Mr. J. Pocklington, Sandy Hill, N. Y. This has also ascribed to it very high and desirable qualities as a fine, handsome, large white grape, every way desirable for extended cultivation. We believe Messrs. Stone & Wellington, of Toronto, Ont., have the sole control of this wood. J. H. Rickett's new seedling white grape, Lady Washington, was also on exhibition. This is doubtless a new white grape of the greatest merit and will command much respect. A late writer in the *Country Gentleman* thus gives his impressions: "The grape that is destined in my estimation to create the greatest favour among growers is the Lady Washington; the clusters are so large, the grapes in every way good and the plant so enduring. The fruit is yellow, tinged with pink in the sun, and was produced from Concord and Allen's Hybrid." In the language of the *Agriculturist*, page 469 "This is certainly a remarkable collection of new grapes, and we shall be much mistaken if more than one does not meet the demand for a white grape that will be as reliable as the Concord." And our devout ejaculations are "So let it be."

REPORT ON APPLES

sent by Seth C. Willson, Whitby, August 22nd 1878, to President Burnet for inspection.

Size large, form nearly round, slightly conical. Calyx rather shallow; colour of skin yellowish-green with numerous green dots. Stem slender, core large, flesh close grained, juicy, crisp, sub-acid, and of pleasant flavour. Skin thick and tough. Ripe early in September.

REPORT ON APPLES SENT BY MR. HOOVER.

HAMILTON, ONTARIO, 6TH DECEMBER, 1879.

147 John Street, south.

This day received from Mr. D. B. Hoover, Almira P.O., Ont., a box containing two varieties of seeding winter apples. No. 1, medium size, highly coloured, red, pale where protected by the leaf, flesh, fine and white, sub-acid, very sprightly, tender, crisp, and good flavour. This apple partakes very much of the character of the old "Ozlin Pippin." It is akin to the Fameuse, and of almost equal excellence. The tree is hardy, a profuse bearer in large clusters of from six to a dozen apples. The apple is ripe now, but all fruit has ripened early this season owing to the high temperature of October. Its usual time of ripening is from January onward.

We have no hesitation in recommending it for general cultivation.

PETER MURRAY,
ROBERT BURNET.

MR. D. B. HOOVER'S NO. 2.

No. 2 is a large apple, varying much in colour, some are nearly white, others yellow, and some with a rosy blush on one side, above medium size, obovate, coarse-fleshed, juicy, a good winter apple, partaking somewhat of the character and even of the appearance of the Fall Pippin. Fine flavour, fraiche, and likely to prove a good market apple. It cooks well. The tree is over thirty-five years old, hardy, and a profuse bearer.

Mr. Hoover has named it (Hoover's Favourite) or, Lady Washington.

PETER MURRAY,
ROBERT BURNET.

ECONOMIC FORESTRY.

It seems to us a wise determination on the part of the members of the Fruit Growers' Association of Ontario, to take forestry under their fostering wing. At a recent meeting of the Directors of the Society, it was unanimously agreed to extend their field of labour, and embrace in their beneficent efforts, the kindred study of forestry and arboriculture. The wanton depletion of our native forests by the inexorable axe of the emigrant renders an association of this sort almost imperative. The resolve of the fruit-growers has not come a moment too soon. Planting for shelter has become a necessity both for cereal and fruit crops. The advantages of planting for shelter are so universally admitted, that arguments are not needed to enforce the urgent duty. Besides, we have had more than one good paper on shelter both in the Annual Report, and in the *Canadian Horticulturist*. It has occurred to us that some valuable hints might be thrown out in an attempt to show the necessity and advantage of forest-tree planting as protection against storms of snow along the line of our extensive railways. This subject has been recently called to our attention by a pretty lengthy journey by rail from Ontario to Nova Scotia. What is true, however, of the Grand Trunk and Intercolonial Railways is equally true of Canadian railways in general, and more especially of roads running north and south.

The necessity of some sort of shelter different from the plans now adopted for the purposes of protection from snow blockades, will be apparent, if, for a moment, we consider the nature of the present means employed, and the perishable materials in use for the purpose. Both on the Grand Trunk, and Intercolonial Railways are erected storm fences, close-boarded, expensive, and subject to continual, almost annual repairs. Over the latter road there have been built large protective sheddings, of frequent occurrence in Rimouski and Restigouche districts, and more frequent still through several portions of New Brunswick and Nova Scotia. It is at once apparent, that any suggestions to lessen these and similar repairs and expenses on fencing and shedding, must be of immense importance to the commercial and travelling public, and to the Government of the Dominion. How is this best to be accomplished? We are strongly of opinion that the purpose of the defence against snow storms is best to be accomplished by the aid of forestry. Along the almost entire length of the railways already specified, the Canadian balsam grows luxuriantly. In New Brunswick and Nova Scotia, it is the predominant tree. This fact would seem to indicate that the Balsam should be employed for purposes of protection. A few considerations, however, will go to shew that the balsam is not particularly adapted for this purpose. As it grows old, it becomes scraggy at the base of the trunk, and this peculiarity renders it unfit for railway protection. The tree is also short-lived, and very inflammable by accidental fires. Though indigenous to the soil, therefore, we would give the Balsam an inferior place in railway protective economics, and would greatly prefer the common Canadian pine. The latter grows everywhere from Windsor, Ontario, to Pictou, Nova Scotia, and would be found an admirable protection against blinding snow storms. The intensest frosts have no effect upon the tree, and the roomier it is planted the spray becomes the closer and thicker. We are persuaded that the Canadian pine is to take an important place for purposes of defence, not only in the Provinces of the old Dominion, but what is more to the purpose, in Manitoba and the far west. A fortune would soon

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be realized by any one bold enough to grow it by the million in the neighbourhood of Winnipeg, and along the branches of the Saskatchewan. We know of no tree so well adapted for the purposes of protection, take it all in all, as the Canadian pine. There are other varieties of the pine family closer in the spray, and well adapted for shelter planting, such as the spruce, Norway larch, and tamarack, but after every consideration, the pine of our country seems to us better adapted than any other. Should this opinion be successfully controverted, we are satisfied, that a very suitable substitute for the present fencing and shedding on railways will commend the substitute for general application, and the same is true as applied to the necessity for tree shelter in the long and sweeping stretches of the prairies in the far west.

An important question arises, how best to bring such, or similar views, to bear on the authorities who preside over our railways. This can only be effectively done by shewing the pecuniary or commercial advantages likely to accrue to the country, and especially to the fiscal policy of the Dominion. For years, tree shelter would require no renewing, and less care and expense than are now spent on renewals for fencing and shedding. The permanency of the protection is greatly in its favour, and were suitable methods to be employed in planting, a most effectual windbreak would be the resultant. To do this, and to take the initiative, before land becomes dearer, would also lessen the expense in the long run. A belting in the more exposed situations would be also required, as trees only thrive well, when growing under the protection afforded by massing them. We would recommend a trial on a small scale of Canadian pine in the more exposed parts of the Intercolonial along the St. Lawrence coast, or along the ridges, Aulac to Touro. A brief period would suffice to show its adaptation for economic railway purposes, and would doubtless at no distant day, suffice to show its adaptation for general shelter purposes throughout the Dominion. Who is to make a beginning? We are satisfied that whenever the general public, and our Members of Parliament, have their attention directed to this interesting and important subject, through the pages of the *Canadian Horticulturist*, that great and good results will issue, not only to the railway interests of our country, but to the general public of the whole Dominion.

Doubtless, trees must be grown and prepared. I see no means so feasible to secure the preparation and outlay as the guarantee against loss to the tree producer by a powerful company like that of the Grand Trunk Railway, or by the authorities who direct the Intercolonial and Pacific Railways.

REPORT ON THE FRUIT CROP.

BY DANIEL B. HOOVER, ALMIRA.

I will again try to report to the Fruit-Growers' Association the condition of our fruit and fruit-trees for the summer of 1879.

The apple crop in our neighbourhood is rather light, though plenty for home use, and of good size in general, but got rather ripe on the trees to keep well for winter. They commenced dropping off themselves at picking time. I think that hot October weather hastened them on too fast.

The pear crop was very much according to what kind of trees they were; the old common seedling trees bore profusely. Amongst the finer kinds, come the F. Beauty and Clapp's Favourite best in bearing, but neither bore heavy. One of my neighbours had a fair show of Souvenir Du Congress pears on his young, small stunted-looking trees, which he got from some tree pedlar. I think they will be good bearers, judging by the yield these few scrubs have made this season.

Plums were nearly a failure in our neighbourhood this season.

Cherries, the early sweet kinds bore a large crop for me this season. I have three different kinds, which I have no name for. One kind is nearly as large as a greengage plum; the tree is a slow grower, bears nearly every year.

Grapes were a good crop, but rather slow in ripening. It was rather a fresh, moist

summer with us this season for grapes. Some kinds ripened well, such as Clinton, Delaware, &c.

Raspberries of black, red, and orange colours bore abundantly with us.

Strawberries were a very large crop, berries large, and kept up a long season.

Gooseberries and currants were also a good crop.

As we have now come to the winter apple season, I will notice that a great many of our winter apples turn black at the core, and some look splendid outside, but half the flesh will be brown inside. This is rather a rare, new trouble with us, for we generally have good, sound winter fruit.

No new disease noticed on any of our fruit-bearing trees or plants; all did well in the growing part, excepting the tame plum and grape vines. The plum trees by some cause or other, which I cannot account for, shed their leaves a month or six weeks before their ordinary time.

This year's growth of wood is rather feeble-looking in most cases; time will show what the consequence will be.

The grape-vines with me have this year been visited for the first time with an ugly-looking caterpillar, about one and one-quarter inches long when full grown. Its colour is dark drab, with red stripes crossing its back. These hungry animals will soon, if left alone, disfigure the whole vine by eating its leaves. They are noways particular where they take hold first; some will be sawing off the edge, while others are busy eating holes up through from underneath the leaves. Hand-picking is the best way to destroy these crooked-necked caterpillars.

December 11th, 1879.

REPORT OF THE COMMITTEE APPOINTED BY THE FRUIT GROWERS' ASSOCIATION TO VISIT THE PEAR ORCHARD OF FERGUS ANDERSON, ESQUIRE.

Your Committee visited Mr. Anderson on the 15th of September last, and beg leave to report as follows:

The pear orchard of Mr. Anderson is situate on the north part of lot two in the ninth concession of Blenheim, the soil clay loam, inclining to sandy, and about three feet deep, on clay sub-soil, and is sheltered on the north by an apple orchard and rising ground, on the east also by rising ground, but is open to the sweep of the winds on the west and south.

In 1875 Mr. Anderson planted 515 trees, all Flemish Beauties, which were procured from Canadian nurseries. There are at the present time 505 trees living, only ten having died during the last five seasons. Three died the second season, three the third, and four the fourth season, and none this season. The trees, at the time we inspected same, all appeared free from blight and disease, and were well grown, thrifty, bark clean and wood well ripened, but many of them nearly denuded of leaves, especially on the west, where the soil was lighter than on the east side. The loss of leaves Mr. Anderson attributes to the drought. The trees when planted were set out in a field of barley and well mulched; the second year corn and potatoes, the third year fallow, the fourth year corn and turnips, and this year seeded down to clover.

No barn-yard manure has been used, but the trees have been plentifully supplied with swamp muck, and Mr. Anderson is of opinion that the freedom of his trees from blight is owing in a great measure to his using swamp muck instead of barn-yard manure, and which your committee think may be correct, and well worthy the trial by other pear growers, if the splendid appearance of the trees, one and all, is any evidence of Mr. Anderson's proposition. The trees have not been much pruned, but only enough to try and keep the trees well balanced, as all the trees lean towards the northeast, and are twelve feet each way; and Mr. Anderson now regrets he did not plant them fifteen feet each way, which he thinks quite near enough. The trees, we were informed, blossomed

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heavily this season, but, owing to the late frosts, the crop was destroyed, and, at the time we saw them, had but a few bushels on the whole lot. Your committee refrain from expressing any opinion as to the ultimate success of Mr. Anderson's venture, but trust the orchard may always continue as healthy and free from blight as it is now, and that he may reap a well deserved reward.

Your committee cannot close their report without referring to an apple puller invented by Mr. Anderson, by which the apples are picked as carefully as by the hand, without the aid of that tree destroyer, a ladder. But as Mr. Anderson intends to take out a patent for the same, we refrain from giving a description, but suffice to say we thought it the most unique and practical tool for the purpose we had seen.

All of which we respectfully submit.

CHARLES ARNOLD, } Committee.
HENRY HART, }

Paris, December 11th, 1879.