THE

PROFITS OF FRUIT CULTURE,

CONTAINING PLAIN AND PRACTICAL DIRECTIONS

FOR

PLANTING, GROWING AND MARKETING FRUIT,

FOLLOWED BY A LIST OF

HARDY ORNAMENTAL TREES AND VINES

FOR

HOME ADORNMENT, PARKS AND STREETS,

BY

AUGUSTE DUPUIS,
Corresponding Secretary County L'Islet Horticultural Society,
ST. ROCH DES AULNAIES,
PROVINCE OF QUEBEC.

QUEBEC:
Printed at the "Morning Chronicle" Office.
1880.
The EDITH and LORNE PIERCE COLLECTION of CANADIANA

Queen's University at Kingston
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INTRODUCTION.

These few pages are offered to the public to encourage the growing of fruit in the Province of Quebec.

What has been learned from years of practice and observations by successful fruit growers in Canada and the United States, is told in as few words as possible. My extensive correspondence with citizens, farmers and country gentlemen, for the last five years, the numerous enquiries I received from them on fruit growing, have convinced me of the necessity of preparing this little work. Why? Because our progressive men, of all classes, want to learn in one day the experiences of practical and successful men, of half a century. They do not care for theories or botanical terms, the formation of leaves, wood, &c.; they desire only, information on the most profitable plants and fruit trees to grow; on the best and hardiest trees for the parks, lawns, streets and cemetery lots. This I have endeavored to give in this little work, by borrowing from the best authors and Horticultural reports.

Purchase good hardy trees, grown as far north as possible. Before selecting the varieties offered by nurseries, inquire in your locality what are the most profitable varieties cultivated there; it will be easier for you then, to make a judicious selection.

Let the amateur try a great many varieties! he works not for profit, but for the satisfaction of benefitting his countrymen by introducing some good new varieties. Plant well known species and cultivate carefully. Sell
your fruit in clean, neat baskets. Serve your customers honestly and promptly. Have your name plainly written or printed on your boxes of fruit; and by following these suggestions you will make fruit culture immensely profitable.

Plant trees (deciduous and evergreen) for ornament, and plant them for the protection of your orchard trees, from the sudden extreme changes of temperature and from the great winds whilst covered with bloom in spring, and fruit in summer and autumn.

Farmers! beautify your homes, grow plenty of fruit for the family; interest your children in fruit growing; let them have a share in the profits of fruit grown, and they will stay at home, instead of going to a foreign country, which they enrich with the fruits of their labor, without ameliorating their condition.

AUGUSTE DUPUIS.
THE PROFITS OF FRUIT CULTURE.

APPLES.

The first fruit, both in importance and general culture, is the Apple. Its period, unlike that of other fruit, extends nearly or quite through the year. By planting judicious selections of Summer, Autumn and Winter sorts, a constant succession can easily be obtained of this indispensable fruit for family use.

There is no farm crop which, on the average, will produce one-fourth as much income per acre as will a good apple orchard. As it takes from six to eight years for an orchard to come into bearing, some people hesitate to plant, regarding the time and expense as in a great measure lost. In reply to this, we would quote the remarks made by O. C. Chapin, of East Bloomfield, N. Y., to J. J. Thomas. He said that he considered the yearly growth of each apple tree planted in his immense orchard of over one hundred and fifty acres, to be worth fully one dollar before they commenced bearing. He has had experience of nearly half a century, and he says that he considers this a low estimate. At forty trees per acre, this would make a yearly increase of value of forty dollars per acre, which no doubt is quite within the mark.

An acre of good orchard is worth, in nearly all parts of the country, from $200 to $300 dollars, and is the best kind of investment at those prices; one or two years crops frequently paying the whole amount. The price paid for the fruit is steadily on the increase, and there is no indication that it will ever be as low in the future as in the past.

If apples are planted at the rate of forty trees per acre, rows of plum trees can be planted between the apples, which protect them from the winds, and thus are a great benefit to them. After eight or ten years of productiveness, as the space is needed for apples, the plum trees may be removed, leaving the orchard better for the protection, and at the same time having yielded the grower a large return for his trouble.
Mr. Sydney Fisher writes from Knowlton, P. Q.:—

"The demand for apples in England is very great and has been increasing for the last five years. Over 36,000 barrels were exported from Montreal in September and October, 1880. A farmer sold $6,000 worth of apples from his orchards near Montreal."

"Twenty-one thousand barrels of apples were shipped from this port to England during the week, against thirteen thousand barrels in the corresponding week last year. The total amount shipped this season is one hundred and twenty-six thousand barrels, against seventy-six thousand barrels last season."—Quebec Morning Chronicle, 15th Nov., 1880.

Fruit List.—A vast deal of care has been bestowed by the Fruit Growers' Association, and particularly by its corresponding secretary, Mr. Charles Gibb, of Abbotsford, in the preparation of its fruit list, to which we devote four columns to-day. It is the work of many mouths and the result of a laborious collation of varied experiences, and will be valued by all who have enough of land to plant a tree or a vine or a raspberry bush upon. It is possible that new experience may alter some of the conclusions, but this may be regarded as a fair synopsis of the knowledge of the fruit culturists of this section of country, as far as it has at present advanced.—Montreal Witness, Oct. 14, 1875.

(Extract of Report, 1875.)

FRUIT LIST FOR PROVINCE OF QUEBEC.

(Published by Fruit Growers' Association, of Abbotsford.)

This association, feeling that a published fruit list was absolutely necessary for the advancement of fruit culture in this Province, issued a circular letter of enquiry to gather the varied experience in its different parts. Two hundred and ninety circulars were issued about 6th January last.

Replies were received from, or correspondence entered into with, or (which is better) discussions held with over a hundred persons exclusive of residents of Abbotsford.

The following list is recommended:—
APPLES.

PROFIT—BEST FIVE KINDS IN ORDER OF PREFERENCE.

Huntingdon County reports Fameuses and Red Astrachan a tie; next to them are Duchess or St. Lawrence.

Lacolle and vicinity: Fameuses first, unanimously; next, St. Lawrence, Red Astrachan, and, possibly, Canada Baldwin.

District of Bedford: Fameuses or Red Astrachan, followed by some winter apple.

Belœil: unanimously, Fameuses.

Abbotsford: Fameuses, White Calville, St, Lawrence, Duchess, Alexander.

Rougemont: Red Astrachan, Fameuses, St. Lawrence, Alexander.

L'Islet Co.: Red Astrachan, Fameuses, Duchess. (Two reports only from this County, and no replies to our enquiries upon them.)

Ottawa Valley: Fameuses and Duchess equal, Red Astrachan, St. Lawrence.

Montreal: Red Astrachan, Alexander, Fameuses, Duchess and Peach. Montreal reports strongly for Fameuses. It is a heavy and reliable bearer, and always has fetched and will fetch a good price; viz., a dollar a bushel, at the very least. Red Astrachan brings now about $2 a bushel, as the supply hardly equals the demand. Ontario sends us a certain quantity and may ship largely, and, though her Red Astrachan commands but a small price compared with that from the orchards in the neighborhood of Montreal, this will undoubtedly affect the price; and to what extent, is a question for those to consider who would plant very largely of what, to-day, is the most profitable apple in the Montreal market.

Alexander, if fine, brings $6 per barrel.

Duchess and Peach bring high prices, but must be handled more carefully.

Of winter apples, the Golden Russet is reported, from Montreal, as less fruitful than Fameuses, and lower priced, because of the competition from Ontario. In Huntingdon Co. it is being planted for profit, so also are Ben Davis and Jonathan, and even Northern Spy.
CRABS.

Our statistics gives us in order of preference:

1. Montreal Beauty is most grown, it bears freely even when old, and is profitable for a near market.

2. Transcendent is a strong grower, yields very heavy crops of a large fruit, somewhat astringent in taste. Like the former, it must be marketed carefully and quickly.

3. Queen's Choice: a great favorite in Stanstead and St. Francis Valley, being more reliable than the above in unfavorable places;—bears young and heavily, sells readily there and, being firm in texture, keeps and ships better than the above.


The market orchardist in the vicinity of cities and towns will make more profit by cultivating Summer and Early Fall Apples, Cherries, and the finest varieties of Plums, too tender for long transportation; he need not fear competition from growers at long distances.

The market grower of the interior will find his most profitable culture to be principally Autumn and Winter Apples, the Blue and Yellow Plums, (the good old varieties grown below Quebec.)

All these can be packed and transported to a great distance with safety, and the comparative cheapness of his lands enables him to compete advantageously with those more favourably situated in regard to market.

PLUMS.

The Plum, as all are aware, is wonderfully productive, producing heavy crops for a long series of years, with scarcely an exception. No fruit with which we are acquainted seems more promising than the Plum. The superior excellence of the fruit causes it to be in great demand, and it brings readily in market from $4 to $6 per barrel. Single trees often yield over $5 worth of fruit. An acre of Plums would produce, without doubt, 150 to 200 bushels on the average. I most confidently recommend for extensive planting, the well known varieties of
French origin, "White" and "Blue," growing extensively along the shores of the St. Lawrence, below Quebec, and reproduced from suckers.

**Blue Orleans and Blue Imperial.**

Thousands of these trees are grown along the north shore of the St. Lawrence, just below Quebec, and on the Island of Orleans, on all kinds of soil, from light gravel to a rather stiff clay. They should be tried here.

Fruit: Medium size—Color: Blue, with a bloom.—Flesh: Greenish yellow, firm—of decided merit. It may be shipped in barrels.—Season: October.

**Yellow Orleans.**

Also largely grown near Quebec, is larger, but has much the same character as the Blue.

Try these when the other imported varieties fail. Have the suckers from the farmers owning old plum orchards in the Counties of Montmagny and L'Islet, or purchase the plants at A. Dupuis', Village des Aulnais.

He is the only nurseryman propagating these well known productive, hardy varieties, and without doubt, the only profitable in the Province. Over 100 years of experience proves the above statement of hardiness and productiveness.

### CHERRIES.

The old French variety cultivated here, is so hardy and so well known to produce heavy crops, that details of its profitable culture is unnecessary.

### SMALL FRUIT.

The small Fruit, such as Strawberries, Raspberries, Blackberries, Gooseberries, Currants, etc., ripening from the first of June till Fall, are everywhere capable of successful cultivation, and yield large returns at comparatively small expense. They should have a place in every garden. Since the introduction of the self-sealing jars and cans, they can be had throughout the year almost as fresh as when gathered.
PROFITS OF SMALL FRUIT BY A. M. PURDY.

When properly attended to, and care taken to raise first-class fruit and send it into market in fine order, (which is required of any horticultural or agricultural products, to make them profitable,) there is no branch of business that pays better than the growing of Small Fruit for market, and as to overstocking the market with such, it cannot be done. More profits can be realized from ten acres of Small Fruit, than from any one hundred acre farm in the country, and that too, with less hard labor.

We are aware, however, that there have been seasons when ordinary fruit has sold low in certain markets. Yet in these very markets and seasons, first-class fruit has always sold at high and most profitable rates,—thus showing the great importance of thorough culture. By "thorough culture," we mean deep, subsoil ploughing, liberal manuring, clean and oft-repeated cultivation, and plenty of mulching, and last, but not least, with the strawberry, growing them in hills—that is, keeping off all runners. And to this the great importance of growing the best sorts, even if the first cost is considerably higher, and the grower may rely on a ready market, at the highest rates, for all he can raise.

Don't try experiments too largely, especially if your means are small, and instead of building air castles, go right to work with a will and build up a permanent business. Don't let a little drawback discourage you,—such as low prices some seasons, or a late spring frost or hard winter. Remember, these things will drive many out of the business, and that those that keep right along, year after year, will have the benefit of the seasons of high prices.

We know that there are years when the winter preceding and the season following, are universally favorable to the full fruiting of all kinds of fruit, and that in such seasons the amount marketed is so large as to cause prices to drop to a low figure; but let it be remembered that such seasons are exceptions and not the rule, and that most seasons one locality is favored and another not, and other times vice versa. In our long experience in growing fruits, we have found that our crops of Small Fruit net us just about the same every year; for when the crop is large prices are lower, and when small higher. We have, however, some years had large, full crops, when the crop in other localities would be light, and in such seasons our
profits would be enormous. The summer of 1865, we believe, we sold over four hundred bushels of strawberries, that averaged, in the Chicago market, $10 per bushel. This was owing to the crops being cut short in other localities.

ADVICE TO PARTIES WISHING TO GROW PLANTS FOR SALE, BY A. M. PURDY.

First.—Don’t go into the business thinking you can play up “gentleman,” (we mean of the lazy sort), paying but little attention to or having but little love for the business. You must have a taste for it—yes, love it—so that you will be found working yourselves. Show your help that you may know what work is, and how much a man can or ought to do, by the example you set him. Don’t let your ideas up too high and build to many castles. “Cut the garment according to the cloth.” Just as soon as you sit down and figure up what an acre would come to at the high price and the largest yields you have seen given, you are getting above your business. Not long since a young man entered our office who was going into the fruit-growing business, and he wanted every sort we had. Our enquiry was, “Why do you set such a large assortment?” “Oh, I shall make just as much reliance on selling the plants as the fruit, and shall want a full assortment to supply the demand.” “But how do you know that you can sell plants so easily?” “Why I can’t see why I don’t stand as good a chance as you, for I see you are sending off plants by the wagon load.” “Hold a moment, friend, and prick that bubble. Some fourteen or fifteen years ago we commenced selling plants. We advertised and paid out large sums of money, but for the first two or three years got but few orders. The people were shy of us; we were strangers, and how did they know but what we were at an old trick that was, and is to-day, quite common, to sell any kind called for, and if we did not have it, put up something else. For years we say we worked and advertised, until finally our large shipments of fruit and their unmixed character commenced to tell in our favor. People visited our grounds, scrutinized and inspected our plants closely and reported the result, and these reports gave our plants a character and reputation, and then, by advertising, we soon worked into a business that paid us back for our long...
years of hard labor and expensive advertising. No, we would advise you to set your grounds out mainly to five or six varieties of strawberries—standard sorts—that are raised in all parts of the country, and an equal proportion of other reliable fruits. Soon your shipments will commence, your business will first attract attention near home. Your neighbors will see the success you are having and they will buy plants of you. Gradually your reputation will widen and extend, until by patience and perseverance, and a determination to establish a character for honesty and uprightness, by selling no plant for another sort and keeping your plantations pure and unmixed, you will soon work into the plant trade, and then it will be time for you to keep an assortment that will supply all demands.”

Such was our advice to him, and such it is to all who have an idea that they will go right into a flourishing business in selling plants. We admit that part of our success for the past few years has been in selling plants, as well as fruit; and we say to all, now, first be sure and set pure and unmixed plants, and when you trim your grapes, currants and gooseberries, save the cuttings and set them out, and as your neighbors and others see your fruits they will want some of them, and learning that you have plants for sale, will buy of you, and gradually, as you learn the secret of selling, advertising judiciously, &c., &c., your business will increase. Another point, when you find a fruit is of no value—no matter what it cost you—discard it and don’t attempt to sell it, for such a course will surely work against you in the end.

The second point is—Don’t plant too much at first, but what ground you do plant, make it count. If your means are small and you have but little land, sow among blackberries, raspberries, &c., plant out early potatoes, tomatoes, cabbages, &c.

Third—Don’t experiment too largely with new high-priced sorts; but leave that for those who have the money to lose.

Fourth—Plant pure unmixed sorts. No person, who has not had the experience, can imagine the loss that will accrue from planting mixed varieties; hence, it is of great importance if such have to buy their plants, to get them of parties who not only have a reputation at stake, but who have had such experience with small fruit that
they can tell one sort from another at a glance. We know of a prominent nurseryman, who is known to be a reliable man and who stands very high in the horticultural world, that has sold a large quantity of "Wilson's Albany" in with his stock. These plants were obtained from two or three parties whom he believed to be and are honest men. We have seen these plants in fruit that were from the same beds, and found fully two-thirds of them spurious, worthless sorts. Now these men had bought them from another party in good faith for Wilson's, and not being judges of that variety, sold the fruit and plants for such.

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STRAWBERRIES.

First of the Small Fruit, in the month of June, comes the beautiful, wholesome and appetizing Strawberry. The profits which may result from its cultivation, when properly conducted, are enough to satisfy the highest expectations. On a sandy gravelly loam, the well-known author of the "Fruit Garden," Mr. P. Barry, of Rochester, planted Wilson's Albany, and picked at the rate of almost 300 bushels per acre, averaging about one thousand dollars. This is enormous, but shows what can be done under favorable circumstances. Mr. Adam Waters, of Quebec, paid in 1880, $750 for strawberries grown on one single acre.

Colonel Rhodes, Quebec, writes, 1st January, 1877:—
"I have been cultivating the strawberry for some years, selling on an average about five thousand quarts per annum, which nets us over twenty cents a quart. We generally sell at 25 cents the quart, on account of the Quebec market being overstocked early in the season with the refuse fruit from Rochester, and the local wild fruit."

HAVE STRAWBERRIES CEASED TO BE PROFITABLE?

A. M. PURDY ANSWERS:

We have read many articles, and had the question often asked us, "Have strawberries ceased to be profitable? Will they pay at eight cents per quart? To the first, we answer most emphatically, no; to the last, yes. In taking this position, we do not wish to be understood as writing
from a stand-point where land is worth $500 to $1,000 per acre (and badly "run" at that), manure at two dollars per cord, and other things in proportion; but rather on land near any of our vilages, that can be bought for $80 to $150 per acre, manure from swamp muck, leaf mould, leached ashes, sods from the roadsides and from the villages, to be had for almost the drawing. Still, we wish to be understood that strawberries can be grown on the first named ground at even six cents per quart, and pay better than the best crop of potatoes to be found about such cities. And if this is so, one can see at a glance how profitable they will prove on rich virgin soil, or, in fact, on any soil that will grow good corn or potatoes; such soil requiring but little, if any manure, providing the plants are thoroughly worked and well mulched. Some of the most successful cultivators claim that they can raise large and fine crops and vines on poor soil, if it is only kept well worked and mulched, thus showing that it need not necessarily follow that strawberries cannot be made profitable because land is poor.

We admit that if strawberries are grown on the "slip-shod" plan, they will not really prove profitable. Cannot the same be said of any crop, especially if grown on very high priced land? We claim that we can get a far better crop of fruit from strawberry plants than from pig-weeds, chick-weeds, and the like, and the more the ground is occupied by the first, and the less by the last, the better the crop, and vice versa. We cannot "gather grapes of thorns, or figs of thistles."

One very important fact to be taken into consideration is that it costs no more to grow good and pure varieties than inferior and mixed up sorts; and second, that it costs no more (except in the original plants) to cultivate a row that has been thickly set with plants, than one where the plants were set too far apart—the consequence being that the first form perfect rows, with the ground fully occupied, with no vacancies, while the last are very imperfect and the ground not half occupied—the crop on the first being double to triple of the last.

We have found how true this latter fact is from bitter experience. We have had rows sixteen rods long that had been set thickly, plants ten to twelve inches apart in the row, and as these run they formed fine wide matted rows all through, with no vacancies, and yielded through the season three to four bushels of fruit, while other rows near
them, that were set late in the Spring, or on new sod ground and that died out badly, leaving long vacancies, yielded but half a bushel to a bushel of fruit, or really only about one fourth as much—both costing the same to prepare the ground, cultivation and labor, the same tax and interest on land, and the same, if not more, work in mulching and mulching material. It is right here that many make a failure in the business. They set any way almost, and very late in the season, and then if plants die out badly and the rows are full of vacancies, they get a small crop, and the cry is heard, "It don't pay." Another important point is to

**SET OUT THE LARGEST AND FINEST SORTS,**

even if they do not yield over half to two-thirds of the smaller kind. Such varieties as Sharpless, *Triomphe de Gand,* and Jucunda, always command the highest prices, and if there is a glut in the market, such will *always* sell at *paying* rates. Let us illustrate this more clearly by a few figures, taking the average prices in New York market on the Wilson’s Albany and the largest sorts, and an *average* crop on a well kept acre. We got 100 bushels of Wilson’s, which sell in New York at $25, and we have an aggregate of $193. Now take an average crop of the larger sorts named—60 bushels, and the average price in New York the past season, 25 cents per bushel, or $8 per bushel, and we have $480. Deduct picking, 1½ cents per quart, $38.40; commission, 10 per cent., $48; express charges, 60 cents per bushel, $48; loss and wear and tear of crates and baskets one season to ship 100 bushels that distance, $25, and we have an aggregate of $149.40. Now the first figures $193, from $400, and we have $207; and the last, $149.40, from $480, and we have $330.60—thus shewing what is gained by growing the larger sorts for such a market. We would say, however, that there will not be this difference in prices in the smaller towns, and that near such, the Wilson’s pay much the best, as the consumer cares less for the *appearance* and more for the *reality.* Then again, there are times in the large cities
when the smaller fruits have scarcely any sale, while the larger bring good paying prices, and when such is the case, the first hardly pay expense of shipping, picking and commission, while the last return good profits. It will be seen we have not figured in the cost of plants, raising and cultivation, or interest or taxes on land, &c., as these would be the same in raising both the small and large sorts. Now, these same prices hold as good on the raspberry, in comparison to the large or firmer sorts, and the smaller or softer kinds, and also with all other fruit; therefore, it is advisable, if one intends to rely on such large cities for shipping most of our fruits, to plant out largely of the largest, finest appearing varieties, and give them the best culture, and their profits will be large, while those sending in the smaller sorts will hardly pay expenses.

We could fill this little book with facts that have come under our notice, of persons in all parts of the country that have been successful, and made enormous sums of money from their strawberries—even in markets where the price was very low; the secret being that they grew the best varieties and large crops from small pieces of ground. We consider what one has done, hundreds of others can do.

But to return to the first question—"Have strawberries ceased to be profitable?" They have, and so has any other crop, provided the raiser does not take enough care or interest in them to make them profitable. Suppose a merchant fills his store full of goods, and then leaves them to Tom, Dick and Harry to sell and take care of—he being around a billiard saloon or tavern half the time. Will he find his business profitable? Or suppose he pays prodigious rents, expenses, &c., and then has a lot of poor unsaleable goods; will he make it pay?

All that is necessary to make strawberries profitable, is to have your soil in good order, well manured, deeply ploughed, well harrowed, plants well and thickly set in the row, and of pure, unmixed sorts. Then keep the ground well stirred with the cultivator and hoe, no matter whether they are weeds or not, (and, by the way, we believe it is well for us that weeds do grow, for in working the soil to eradicate them we keep it mellow and pulverized, so that plants are not destroyed by the drouth), and last, but not least, ship them in clean, neat baskets or boxes, and our word for it, you will find them profitable at even six cents per quart, if sold near home, or eight cents if sold at a distance—far
more so than the best crop of potatoes that can be grown at the highest rates. "Take an interest in the business, hate weeds, be up with the lark, and free with elbow grease," is our motto.

Plant in May, September, October, on good ground, deeply worked and well manured. Vegetable manure (muck, rotted turf, wood soil, ashes, etc.), is best. Bone dust is excellent.

**RASPBERRIES.**

This fruit comes just after Strawberries, and when properly cultivated is quite profitable. Mr. H. White, of Waterloo, N. Y., says that he has an acre and a half of Seneca Black Caps, and has sold 3,500 quarts, none less than ten cents, and since the 31st of July, at 12 cents. Rev. H. H. Doolittle, of Oaks Corners, N. Y., a veteran in Raspberry culture, says that he averages 2,000 quarts to the acre, and no ordinary farm crops equal his profits, even when the price of Raspberries is the lowest. Messrs. Purdy & Johnson, who are devoted to small fruit culture, say: "Raspberries have also paid us well; the Doolittle, Miami, Seneca, Davidson's Thornless, and Golden Cap, yielding at the rate of sixty to seventy-five bushels per acre, while the Mammoth Cluster produces one hundred bushels to the acre. The fruit has averaged us 10 cents per quart, delivered at Palmyra.

Mr. Jas. Brown, of Montreal, writes:—"We believe no kind of fruit will yield a more prolific or better paying crop than the raspberry, especially in Canada, its being subject to so few enemies in the shape of insects or grub, and, after ten years' experience, the plants have never once been winter-killed with us."

**CURRANTS.**

This fruit comes partly with the Raspberry, but follows it for several weeks. Indeed, none of the small fruit will remain so long upon the bushes without injury as the Currant, and since the introduction of the newer varieties, and the easy methods of destroying the currant worm by the
use of powdered white Hellebore (Veratrum Album), the Currant is attracting more notice than ever before. If remuneration be the object with fruit growers, we certainly have it here. From recent minutes of the Geneva Horticultural Society, it appears that Rev. Dr. Cannon, of Geneva, from one-sixteenth of an acre, sold fifteen bushels besides what he appropriated for family use. Dr. Merrell thought that five tons, or 250 bushels per acre, would not be too large an estimate of Dr. Cannon's yield. The President of the Society, Mr. J. B. Jones, stated that a friend of his in Ulster county, had realized half a ton from an eighth of an acre, with bushes $\frac{3}{2}$ to 4 feet apart, a ratio of four tons or 200 bushels per acre. Dr. Cannon received from $4 to $5 per bushel, and they have brought much higher prices in New York market. But taking the lowest of the above estimates in quantity and price, and we get $800 per acre, a statement which may appear extravagant to those unacquainted with the new varieties—"Versaillaises" and "Cherry," so very large and profitable.

Mr. John Archbold, of Montreal, cultivated the Currant extensively for 45 years, and with great profit, (as well as the Gooseberry).

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**GOOSEBERRY.**

This is one of the most profitable of fruits, bringing 60c. per gallon, and easily picked.

Of the American Seedlings, Houghton flourishes everywhere, and bears enormous crops of a fine flavored but small berry, proof against mildew (there are instances known of its having mildewed, but these are indeed rare). One cultivator, at Ottawa, planting 4 ft. apart each way (2,500 to the acre) and selling at 60c. per gal, realized at the rate of $1,000 per acre.

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**Hardy American Grapes and Pears.**

The reports from different parts of the Province on the profits of Grape culture are so contradictory and so speculative, that I cannot induce my readers to make large investments in the culture of this delicious fruit. The same may be said of Pear culture.

They both may be cultivated, but on a very small scale.
I cannot attempt to give complete directions on all points connected with Tree Planting, but simply a few hints on the more important operations. Every man who purchases a bill of Trees, should put himself in possession of "The Fruit Garden," or some other treatise on Tree Culture, that will furnish him with full and reliable instructions on the routine of management. Transplanting is to be considered under the following heads:

1st. THE PREPARATION OF THE SOIL.—For Fruit Trees the soil should be dry, either naturally, or made so by thorough drainage, as they will not live or thrive on a soil constantly saturated with stagnant moisture. It should also be well prepared by twice ploughing, at least, beforehand, using the subsoil plough after the common one, at the second ploughing. On new fresh lands, manuring will be unnecessary; but on lands exhausted by cropping, fertilizers must be applied, either by turning in heavy crops of clover, or well decomposed manure or compost. To ensure a good growth of Fruit Trees, land should be in as good condition as for a crop of wheat, corn, or potatoes.

2nd. THE PREPARATION OF THE TREES.—In regard to this important operation, there are more fatal errors committed than in any other. As a general thing, trees are placed in the ground precisely as they are sent from the Nursery. In removing a tree, no matter how carefully it may be done, a portion of the roots are broken and destroyed, and consequently the balance that existed in the structure of the tree is deranged. This must be restored by a proper pruning, adapted to the size, form and condition of the tree, as follows:

**Standard Orchard Trees.**—These, as sent from the Nursery, vary from five to seven feet in height, with naked stems or trunks, and a number of branches at the top forming a head. These branches should be all cut back to within three or four buds of their base. This lessens the demand upon the roots, and enables the remaining buds to push with vigor. In the case of older trees of extra size, the
pruning must be in proportion; as a general thing, it will be safe to shorten all the previous year's shoots to three or four buds at their base, and where the branches are very numerous, some may be cut out entirely.

Dwarf Standard Trees and Dwarf Bushes—Must be pruned as recommended for standards, aiming at producing a round, well-proportioned head, with the main branches regularly distributed and far enough apart to admit air freely to all parts.

Cover all wounds, knife pruning, &c., with thick paint, shellac or common varnish.

3rd. PLANTING.—Dig holes in the first place, large enough to admit the roots of the tree to spread out in their natural position. Then, having the tree pruned as above directed, let one person hold it in an upright position, and the other shovel in the earth, carefully putting the finest and the best from the surface in among the roots, filling every interstice, and bringing every root in contact with the soil. When the earth is nearly filled in, a pail of water may be thrown on to settle and wash in the earth around the roots; then fill in the remainder, and tread gently with the foot. The use of water is seldom necessary, except in dry weather, early in fall or late in spring. Guard against planting too deep; the trees, after the ground settles, should stand in this respect as they did in the Nursery. Trees on dwarf stocks should stand so that all the stock be under the ground, and no more. In very dry, gravelly ground, the holes should be dug twice the usual size and depth, and filled in with good loamy soil.

4th. STAKING.—If trees are tall and much exposed to winds, a stake should be planted with the tree, to which it should be tied in such a manner as to avoid chafing. A piece of matting or cloth may be put between the tree and the stake.

5th. MULCHING.—When the tree is planted, throw around it as far as the roots extend, and a foot beyond, five to six inches deep of rough manure or litter. This is particularly necessary in dry ground, and is highly advantageous everywhere, both in spring and fall planting. It prevents the ground from baking or cracking, and maintains an equal temperature about the roots.
6th. AFTER CULTURE.—The grass should not be allowed to grow around young trees after being planted, as it stunts their growth and utterly ruins them. The ground should be kept clean and loose around them, until, at least, they are of bearing size.

TREATMENT OF TREES WHEN RECEIVED.—If frozen place the packages, unopened, in a cellar or some such place, cool, but free from frost, until perfectly thawed, when they can be unpacked, and either planted or placed in a trench, until convenient to plant. Treated thus, they will not be injured by the freezing. Trees procured in the fall for spring planting, should be laid in trenches in a slanting position to avoid the winds; the situation should also be sheltered and the soil dry. A mulching on the roots and a few evergreen boughs over the tops, will afford good protection.

Should they arrive late in the spring, and in dry, shrivelled state, the entire tree should be buried in a deep and wide trench, and apply water freely to the soil that covers them and allow them to remain eight or ten days, or until they regain their former healthy condition.

DISTANCE BETWEEN TREES IN PLANTATIONS.

Standard Apples, 25 feet apart, each way. In poor soils, 20 feet may be enough.

Standard Pears and Cherries, 20 feet apart each way. Cherries will do at 18 feet, and the dwarf growing sorts, Dukes and Morellos, even at 16 feet.

Standard Plums, 16 to 18 feet apart each way.

Pyramidal Apples, Pears, Cherries and Plums, 10 to 12 feet apart each way. The greater distance is better where land is not scarce.

Dwarf Apples (bushes), 6 feet apart.

Currants, Gooseberries and Raspberries, 3 to 4 feet apart.

Blackberries, 6 to 7 feet apart.

Strawberries, 1 to 2 feet apart.
NUMBER OF TREES ON AN ACRE AT VARIOUS DISTANCES.

At 4 feet apart each way, 2,720
" 5 " " " 1,742
" 6 " " " 1,200
" 8 " " " 680
" 10 " " " 430
" 12 " " " 325
" 15 " " " 200
" 18 " " " 135
" 20 " " " 110
" 25 " " " 70
" 30 " " " 50

MULCHING MATERIAL.

A. M. Purdy, says: "The best for this purpose is clean rye straw, or hay of any kind, swale grass, corn stalks, or crushed sorghum stalks. If these are not to be had, well rotted tan bark, saw-dust, or planing-mill shavings will answer. If the latter could be thrown in heaps, and a little lime scattered through it, and remain thus for a few months before using, it makes one of the best mulching materials.

Many parties have tried, with good results, the practice of sowing oats among their vines, late enough in the Summer (say July) to prevent them from ripening. These fall down through the Winter, and make a fine mulch, evenly distributed over the entire surface.

There is no part of the cultivation of Small Fruit that pays better than mulching the vines, for by so doing they will yield fully double the crop, and double the size fruit, besides acting as a

WINTER PROTECTION.

This has become a necessary practice with those who are having the best success in growing Small Fruit. Any of the above material scattered thinly over the surface, late in the Fall, or early winter, will prevent the ground from "heaving," which is the ruination of many strawberry plantations that are almost perfection in the Fall. Let it be remembered, that the germ of the fruit-buds are formed in the Fall, and consequently, if plants are disturbed by
the action of the frost, the bud must be proportionally damaged; therefore the great importance of preventing this "heaving" of the soil. To do this, sudden freezings and thawings of the surface must be guarded against and prevented. This is easily accomplished by merely scattering enough mulching over the surface to shade it."

After Spring opens, it is a good plan to pass over the plantation and loosen up this mulching, especially if it be coarse; heavy material, so as to allow a free circulation of air to the soil; for we have become satisfied that soil is "soured" by allowing such to lay bound close to the surface, and the plantation damaged by such causes. Herein is the trouble why many propagators denounce sorghum bagassa. If they would stir it up after Spring opens, and draw it away from over the crowns of the plants, they would find it one of the best materials for mulching.

**MARKETING FRUIT.**

"A little practice is the best teacher." It is almost impossible to give minute instructions on this subject. A visit to the market and dealer you intend to ship to will give you a better insight into the details of shipping, selling, &c., than can be learned from all the books in the land. The question of supply and demand must be looked into. If the home market is small and your plantation large, you must acquaint yourself with a large market to ship to. If the large market is likely to be supplied with a large quantity of inferior "last run" fruit from a point further South, endeavor to make arrangements to ship your fruit to a market further North.

Ship clean, evenly ripened fruit, in clean, neat looking baskets or boxes, with your name on each box and case, and no trouble need be apprehended but what your fruit will sell for paying prices, even if the market is largely supplied.

Send each day by mail invoice of shipment, and require prompt returns and reports from the consignor.

Do not pick the fruit when wet by dew or rain, unless it is positively necessary, from frequent showers, to prevent too many ripening up. Take from the field to market or cars in a spring wagon, and have them handled carefully and kept "right side up."
GATHERING THE FRUIT.

We usually employ women, and large boys and girls—the former, however, preferred. Each takes a row, and picks it clean before being allowed to take another. One good, quick person takes charge of them, keeping each on their row, and passing occasionally behind them to see if they are picking them clean and properly. One person takes charge of the boxes as they are brought in, watching to see if stems, green fruit and leaves are among the berries, and if so, the picker is paid less for picking that case. Another person has an alphabetical tally book, with the names of all pickers alphabetically arranged, and as each picker comes in, their names are called out by the receiver, and repeated by the book-keeper, so that there will be no mistake made.

Another method is to have tickets to hand out to the pickers each time they bring in a case of berries, those tickets being presented on pay day. We usually pay from one to two cents per quart for gathering, owing of course to the picking. About one and a half cents for strawberries, and two cents for raspberries and blackberries, is a fair average price.

SHIPPING FRUIT THAT PERISHES QUICKLY.

If trains that pass your station certain times in the day reach the city after the early morning market hours are over, it is better to keep the fruit standing in your cool sheds until they can be shipped on a train that will go in at the right time; as the close, hot streets of the large cities are bad places for fruit, as it spoils so quickly. It is better, too, to ship fruit in baskets than in boxes, as they are not so liable to heat and spoil. A quart basket with slat bottom, for strawberries, and a pint basket of same kind for raspberries and blackberries. The latter should always be shipped to distant markets in pint baskets, for having no stems or hulls, like strawberries, they press closer together, and are more likely to be heated or mouldy if in a quart basket. Another object in shipping in baskets is, that they have slanting sides and fit closely together only at top, (we refer to square baskets, as our experience the past season has demonstrated to us that we would not ship in round boxes or baskets if given to us,) the air thus pass-
ing all through the crate between and under the baskets, and preventing any heating. The objection to the square, tight, gift box is, that they fit so closely together that the air does not have a free circulation, and the fruit spoils quickly. We have had blackberries mould and spoil in a single night in these tight square boxes, and believe it our duty here to condemn them, although we had before thought favorably of them. They will not answer in hot, damp weather, while baskets packed in slatted crates, will carry fruit nicely and not heat it. As to the

SIZE OF SHIPPING CRATES, FOR CHERRIES AND SMALL FRUIT,

there is a difference of opinion. It has always been our experience, however, that a crate holding forty-five to sixty quarts was best, as such requires two persons to load and unload, and are therefore not so liable to be thrown about as a smaller one that one can handle. Another important point with cases is to have them made shallow—not so high as they are broad—for if not made so they are more likely to get placed on the side by careless express messengers, and the fruit nearly ruined thereby. Our cases for square quart baskets are made to hold five one way and three the other, making fifteen in each layer, and we make them to hold three layers, having the slat division between each layer.

PACKING OF TREES NECESSARY.

(REQUIRE IT FROM THE DEALER, "BY P. BARRY.")

Packing.—Persons who are ignorant of the structure of trees, never appreciate the importance of packing; and that is the reason why so many trees are every year destroyed by exposure. It is not uncommon, in this part of the country, to see apple trees loaded on hayracks, like so much brush, without a particle of covering on any part of them, to travel a journey of one or two weeks in this condition. Of course it is utterly impossible that such trees can live or thrive; and yet the persons who thus conduct their nursery operations, are doing the most profitable business. Such practices are not only dishonest, but highly injurious and disreputable to the trade; and it is by no means fair to class such people amongst respectable and honorable nurserymen.
Purchasers are often at fault in this matter. Nurserymen have to buy and pay for the material packing, as mats, straw, yarn, moss, and besides, the labor of packing, when well done, is very great. It is, therefore, not unreasonable that a charge be made; but some people, rather than pay twenty-five or fifty cents for packing fifty trees, would expose themselves to the risk of losing all. Purchasers should invariably charge the nurseryman to whom they send their orders, to pack in the best manner. Better pay one or even two cents per tree for packing, than loose it or injure it so much as to make it almost worthless.

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**Balcony, Gardening and Climbing Vines.**

(By H. T. Williams.)

What delicate taste and suggestive beauty seem gathered up in the association of Climbing Vines.

Helps to Home Adornment we have often called them, and the fairy fingers who twine them around their parlor windows, or along the piazza, or on the rustic trellis before the cottage door, will tell you how well they appreciate their value in making home so pleasant.

Climbing Vines afford us an opportunity of clothing not the outside of the window alone, but its inside also, with verdure and decorations of greenery.

Ideas of refinement, taste and beauty, are invariably suggested by the presence of Climbing Vines.

Let the corners of our houses, or the edges of our windows, be hid under the delicate foliage or brilliant flowers, and their natural festoons of mingled verdure and bloom will soften the most gloomy surroundings.

In the following list of vines you will find the most effective means of decoration. Most of these hardy garden favorites will grow from 30 to 50 feet in a season.

**The Honeysuckle.**—Its a vine for covering arbors, pillars, trellises, balconies, &c.; it is unsurpassed.

**The Wistaria** has the merit of permanency. Its stems do not die down yearly, but remain and grow even more luxuriant and profuse in bloom year after year. Flowers light blue color, and bloom almost constantly during the summer months.
The Virginia Creeper or American Ivy, requires to be planted in rich, cool, moist soil. When well started, it will grow with a rapidity unparalleled in native vines. Its foliage is of a beautiful green in summer. In autumn it changes to a most brilliant crimson, as if the vine were in a blaze of glory.

Plant in rich soil, and manure yearly.

ORNAMENTAL TREES.
(By M. Dawson, Montreal.)

The principal cause of the exclusion of many trees elsewhere well known in cultivation is found in the occasional great severity of winter temperature in this Province, and though it may be assumed that trees subject in their native regions to a winter similarly severe will, in most cases, thrive here, it is impossible to foresee in many instances which of the trees naturally inhabiting a warmer or more equable climate will bear the test of ours. This knowledge must in most cases be gained by actual experiment, and thanks to the enterprise of a few who have been working in the matter, we can already note a considerable number of valuable additions to our native arboretum.

Apart from the production of valuable timber and the formation of shelter-belts for houses and cultivated land and growth of shade trees, tree-planting deserves to be studied from the point of view of the landscape gardener, who endeavors to vary the monotony generally found in natural woodland by judicious mingling of trees differing in form or unlike in color or texture of branches and foliage. It is especially in this direction that the naturalization of the best varieties of exotic trees becomes important.

Care should be taken in endeavoring to introduce new trees—and especially in the case of those naturally inhabiting more southern latitudes—to obtain the seed or young plants from the northern portion of their range, as these are often found to be much the hardiest. I recommend:

Basswood, American Linden. White-wood. Native.—A familiar tree of very rapid growth and fine foliage.
European Linden.—Mr. W. Brown states that this tree is hardy. Several fine varieties of this species are recognized by gardeners.

Sugar Maple, Rock Maple, Hard Maple. Native.—A large and fine tree, yielding a valuable wood.

White or Silver Maple, Soft Maple. Native.—Of rapid growth, and a fine ornamental tree. The several ornamental varieties of this tree distinguished by gardeners would probably also prove suitable to this climate.

Maple, Silver-leaved.—Leaves white underneath. Growth very rapid; a suitable street and park tree.

Mountain Ash, European.—A fine, hardy tree; head dense and regular, covered from July till winter with great clusters of bright scarlet berries.

Mountain Ash, American.—A tree of coarser growth and foliage, and larger and lighter colored berries.

Birch (Betula), Cut-leaved, Weeping.—A charming, drooping tree, after four or five years' growth. Erect when young. One of the handsomest trees. Very hardy.

Larch, (Larix.)—One of the most beautiful of all our deciduous lawn trees, with slender, drooping branches; for foliage of an agreeable light green hue, soft and graceful. Thrives well in any soil. It is sure to give satisfaction.

Elm (Ulmus), American, White.—A vigorous tree; when of large size assumes a weeping habit, making a picturesque and striking object; one of the most beautiful of American trees.

Horse Chestnut—White Flowering.—A well known hardy, healthy tree, free from all diseases, with large, rich foliage, and elegant erect spikes of flowers in June, tinged with red.

Horse Chestnut—Red Flowering, (Rubicunda.)—A beautiful tree, with splendid rosy red flowers.

Acacia, (Locust.)—A rapid growing tree, with formidable thorns and handsome foliage. Makes good strong hedges.

Kilmarnock Willow.—One of the best weeping trees with drooping branches and large leaves; very hardy and desirable. It cannot fail to please,
Try also our beautiful native

**EVERGREEN TREES.**

**White Cedar, (Arbor Vitae.)**—Excellent for screen and hedges.

**Pines, Red and White.**—The white is the most ornamental of our native Pines, flourishes in the poorest soil.

**Silver Fir, (Balsamea.)**—A very neat, pyramidal tree with dark green sombre foliage.

**Spruce Fir, White.**—A beautiful variety with blueish green foliage.

**Spruce Fir, Black.**—A pyramidal compact tree with smooth blackish bark and blueish leaves.

**Hemlock.**—A beautiful lawn tree, elegant and pyramidal, branches drooping, foliage delicate.

The Members of Western N. Y. Horticultural Society recommend as the

**Most Appropriate Trees for Small Cemetery Lots:**

- Kilmarnock Weeping Willow.
- Cut-leaved Birch.
- Horse Chestnut.
- *Arbor Vitae.*

**SHRUBS AND VINES.**

*Hydrangea P. Grandiflora.*

*Deutzia.*

*Weigelia.*

*Mahonia*—evergreen.

*Honeysuckle*—Vine.

*Virginia Creeper.*
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SHARPLESS' SEEDLING,
Which produce Strawberries of an immense size. Specimens exhibited at Rochester measuring seven inches in circumference.

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Send for Price List of

20,000 FRUIT TREES AND PLANTS.

AUGUSTE DUPUIS,
St. Roch, Village des Aulnais,
CO. L'ISLET.

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TESTIMONIALS.

SHARPLESS' SEEDLING.
The Largest Strawberry in Cultivation.

A Seedling raised in 1872, by J. K. Sharpless, Catawissa, Pa.

Size.—Large to very large; an average specimen measuring one and a-half inches in diameter, either way. A specimen exhibited at the Nurserymen's Convention, held in Rochester, June 20, 1878, weighed one and a-half ounces, and measured seven inches in circumference; and a berry this year (79) measured seven and three-quarter inches in circumference.

Form.—Generally oblong, narrowing to the apex, irregular, often flattened.

Color.—Clear light red, with a smooth, shining surface.

Flesh.—Firm, sweet, with a delicate aroma, excellent quality.

Plant.—Remarkably vigorous and luxuriant, hardy and prolific.

Season.—Medium to late.

What the Editor of the "Rural New Yorker" says:

The Editor of the "Rural New Yorker," Mr. Carman, who has on trial all of the newer strawberries, says: "All things considered, we place the Sharpless as first among the newer strawberries.

The Editor of the "Rural Home" says:

"Its size is very large, larger than any other variety now in cultivation. Messrs. Ellwanger & Barry had specimens this year measuring 7½ inches in circumference, and twenty-one filled a quart-box. The flesh is firm, sweet, excellent."

From the "Rochester Democrat and Chronicle."

The editor calls it the "Prince of Strawberries," and says, "Without any question whatever, so far as taste, sight and smell can judge, the Sharpless Seedling Strawberry is the very best berry we ever saw. The Almighty might possibly have made a better berry than the Strawberry, but undoubtedly He never did, and this berry seems to be the perfection of the species, the highest fruition of all successful experiments."
SHARPLESS' SEEDLING STRAWBERRY.
Engraved and Printed by Geo. Frauenberger, expressly for ELLWANGER & BARRY,
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VILLAGE DES AULNAIES
NURSERIES.

St. Roch des Aulnaies,  Province of Quebec,
COUNTY L'ISLET,  CANADA.

FRUIT AND ORNAMENTAL TREES
OF
MOST HARDY VARIETIES
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BY
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Send 3 cent postage stamp for my 12 page Instructive Catalogue and Price List of

TREES FOR COLD LATITUDES.

Selected Choice of Hardest Varieties.

I only offer trees of varieties growing well in this cold climate, (70 miles North-East of Quebec,) and maturing their wood perfectly here.

I have discarded all varieties that have been tested and proved worthless.

Trees delivered at St. Roch Station of Grand Trunk Railway, at prices named.

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