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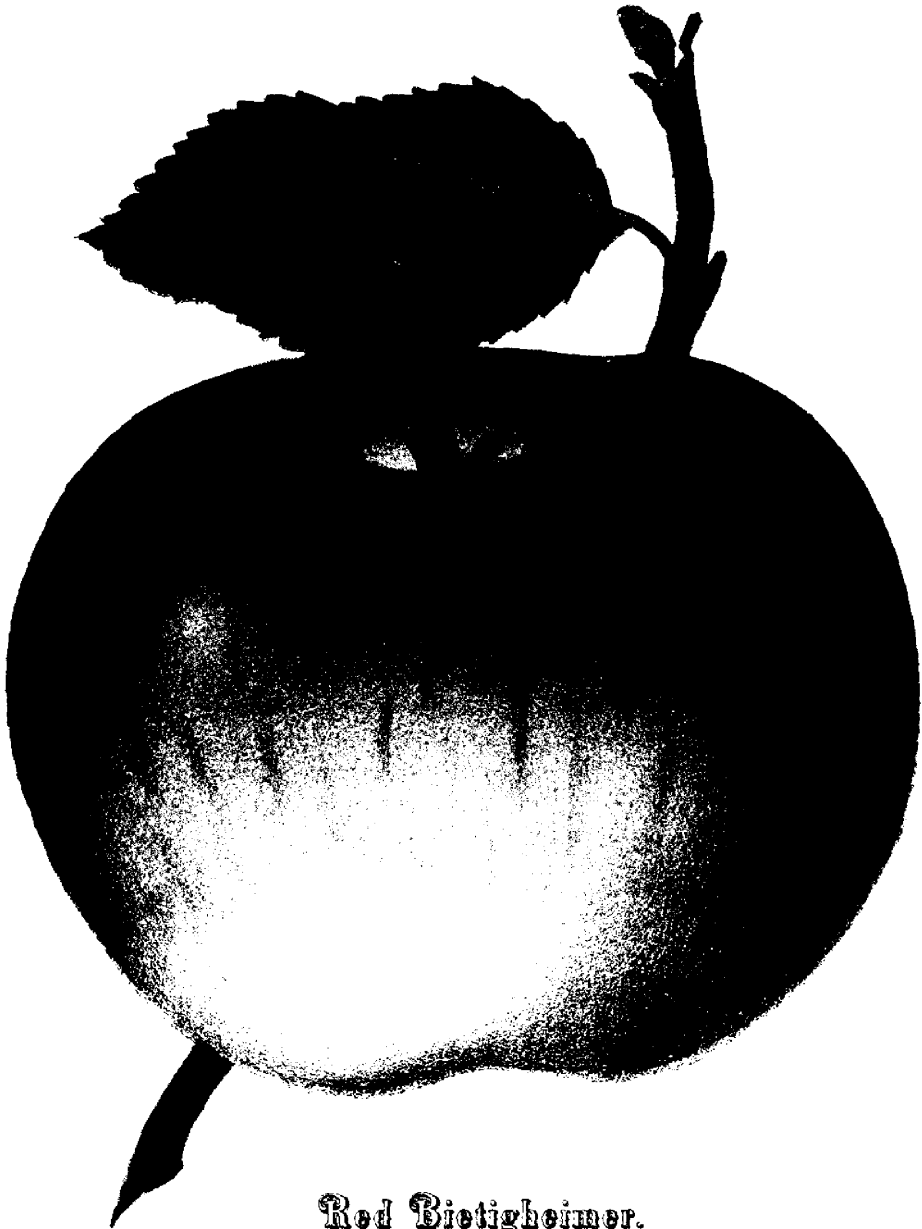
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### Red Bietigheimer.

A rare and valuable German variety. Fruit large to very large; roundish, inclining to conical; stalk short, stout, in deep cavity, calyx closed in large deep basin; skin pale green colored ground mostly covered with purplish crimson; flesh white, firm, sub-acid, with a brisk, pleasant flavor. Tree a strong grower and abundant bearer. This is one of the largest and handsomest apples, and worthy of cultivation. October to February.

"PRINTED FOR THE CANADIAN HORTICULTURIST."

THE  
**Canadian Horticulturist.**

VOL. VI.]

APRIL, 1883.

[No. 4.

APPLES.

Notwithstanding that for two years past the crop of apples in Ontario has been a failure, there never has been a time in the history of the Province when the orchardist could so confidently rely upon remunerative returns from his apple trees as the present. The recent failures in the apple crop are not owing to any permanent calamity which has befallen our orchards, nor to any blighting disease that has overtaken our apple trees, but to causes purely temporary, and that may not occur again in a long time to come.

The orchardist in Ontario, who exercises a wise discretion in selecting his soil and location, has advantages which are not possessed by many, if any, others. He has here a climate that experience has proven to be remarkably adapted to the production of apples such as are of the highest value for marketing, especially in the transatlantic markets. There are no apples grown that can surpass in richness and excellence of flavor those grown in this Province, nor in firmness, and ability, when properly handled, to endure carriage and keep well. They boast of the fine appearance of their western apples, and they do look well, but when

compared with ours in all the essentials of a good profitable fruit they are found wanting. Even for the purpose of evaporating it is found upon experiment that they will not yield as many pounds of dried apples to the bushel as our own, and that the difference is sufficient to make it an important item in the calculation.

And this process of evaporation which has lately come into use, and is extending so rapidly and widely, is one of the causes which gives to the apple orchard an increased value. In former days the apples that were from any cause not fit to be barreled were of no use, save for the manufacture of cider. Now, however, a very considerable portion of this fruit can be evaporated, and in this form be taken to market, and realize to the owner much more than when made into cider. The use and consequently the demand for evaporated apples is constantly increasing. It has been found that when properly cooked the evaporated can not be distinguished from the fresh fruit, that housekeepers find it much more convenient and less laborious to use evaporated apples, than to pare, core and slice the fresh, in order to prepare them.

for use. In the matter of transportation a great saving is effected also, for the water which constitutes so large a part, both of the bulk and weight, is driven off in the process of evaporation, and hence it is that this fruit is finding its way so rapidly to the front, following close after the pioneers of our new settlements, and becoming an item of daily consumption as much as other articles of food. Besides, this evaporated fruit can be kept for an indefinite length of time, so that the risk of decay is wholly removed. For all of these reasons, and because of its healthfulness as an article of diet it is becoming a regular part of ship stores, more especially for long voyages. It is also finding its way into the cities of continental Europe, where it is being gradually introduced upon the tables of those who feel that the fresh fruit is too expensive an article to be often enjoyed.

Thus it is that this invention is extending the use and thereby increasing the demand for apples. But there is yet another cause working continuously to enlarge the demand for apples, as indeed for fruit of every kind, and that is the growth of our towns and cities. These must ever be non-fruit producing, and in proportion to their size and wealth, fruit consuming centres, and the more abundantly they are supplied the greater in the end will be the demand for fruit. Hence whatever tends to enlarge our manufacturing and trading centres and build up and increase the population of our towns and cities, also tends to increase the demand for our fruits, and of none more than of apples.

It is within the memory of the writer when our towns were few in number, and our cities nothing more than small towns, that apples were accounted of little value, to be had by the waggon load for the gathering.

And now we have to add another factor in this matter of apple production and consumption. The settlement of Manitoba and the opening up of the great North-west is rapidly creating another market for our apples, in one form or the other or both. It will be a long time before that country will be able to supply its own population with fruit, and much less with apples. But very few apple trees have been found to be sufficiently hardy to endure the cold of that climate. If human beings do not feel the cold, as we are constantly and credibly told they do not, yet it is certain that most of the apple trees that have been planted there do feel it as much as it is possible for a vegetable to feel anything, at least they suffer so severely from the cold that they perish. They have first to clothe that country with forest trees that shall break the sweep of their fierce winds, and then seek out those varieties of apple that will endure the climate of Siberia where the mercury becomes solid, before they can begin to supply themselves. But the country is being largely settled by people who have been in the habit of using apples freely, and they will be eager to have them in their new homes, even if they have to be procured at some cost.

Hence we believe that a new and large market for our apples is being

constantly developed by all these changes that are going on in the methods of preserving the fruit, cheapening the transportation, introducing it to new consumers, and in the changes made by the increase in the number and size of our towns and villages, and the rapid settlement of large tracts of country quite unfavorable to any large production of apples. The demand seems to be likely to more than keep pace with the supply for many years to come, so that the owner of suitable land in Ontario need have no hesitation in planting apple trees, for the fruit is sure to be wanted and as sure as any other crop to yield a handsomely remunerative return.

Intelligent industry is important in this matter of apple raising as in everything else. The day has gone by when the easy-go-lucky style of cultivation will answer. Brains are needed to grow the fruit profitably, and brains are needed to sell it profitably after it is grown. The man who keeps abreast of the times by careful reading and observation, and who applies his information thus gained to his own circumstances by thoughtful consideration, is the only man who can hope to succeed. An orchard of apple trees will no more take care of itself, and yield a profitable return, nor do it if improperly cared for, than will a flock of Merino sheep or a herd of polled Angus cattle.

We are often asked what varieties of apple shall I plant for profit, but it is not possible to give an answer to such a question that is satisfactory to ourselves, without first ascertaining much

that is not communicated by the enquirer. It is important that we know what varieties seem to do well in that particular locality and on that soil. Also to know where the planter expects to market his fruit and how. In some parts of the Province the Snow Apple is so liable to be covered with black spots as to be wholly unprofitable, while in others it is perfectly fair. The Baldwin is a profitable apple in many places, in others it is far outstripped by the Ben Davis or the Wealthy. In some markets one variety will yield a greater profit than another that perhaps in quality is much better. As a rule bright and high colored apples will bring higher prices than yellow or green colored sorts. We would therefore urge upon all planters the importance of keeping themselves well informed on all that pertains to their business, and passing that information through the crucible of their own brains.

There are many candidates continually coming into the field and urging their claims upon our attention. It is not well to ignore them as humbugs, nor on the other hand to rush hastily after them. Every apple we now value for its intrinsic worth was once a new comer. It is wise to consider well what are the claims put forth, and if these seem to be likely to meet our wants, plant a few trees and carefully test their merits in our hands. Among the varieties not yet extensively grown in Ontario, but which seem to possess qualities worthy of attention we name the Grimes Golden Pippin, the Wealthy, the Canada Baldwin, the Wolf River,

the Weyauwega, Cox's Orange Pippin, Stump. Our colored plate is a good representation of a new German apple of large size, handsome appearance, and good quality, the Red Bietigheimer. The tree is a free grower and abundant cropper, and said to be very hardy.

## CORRESPONDENCE.

### THE BURNET GRAPE.

I was sorry to see in your last issue a letter from a member questioning the good faith of Mr. Bucke regarding the Burnet Grape. From my experience of this variety, it is *not worthless* in any respect, it is a most vigorous grower, and the vine I received from the Association outstrips everything I have in the shape of a vine—fine, large, well ripened wood. Also having planted about fifty vines last spring, five of them being Burnets, it was remarked by all who saw them that they made the most vigorous growth out of thirty varieties. It has regularly borne good crops of fruit, fine large bunches and large berries. This last two years only a few of the bunches would be marred by a sprinkling of small berries about half the size of the others, yet this would be the exception, not the rule, there being lots of good, perfect fruit. I noticed that the small berries were generally on old spurs. This year, to try to remedy that defect, I will entirely cut away all the old wood, and fruit on the new or last season's growth. The flavor is splendid, just like the black Hamburg, and as another correspondent terms it, "a fine acid flavor." And further, it is a good keeper. In proof of this I send you a couple of small bunches (the larger and more

perfect ones having been eaten), they are hardly as good flavored as when fresh, yet it is near five months since they were cut from the vine, and I ask what better fruit can we have.

I have a Brighton Grape vine which I might condemn, and though a large, strong vine, I have never got more than about a quart of fruit from it. The show for fruit is always very good, but the flowers don't set well, and in consequence the number of berries on a bunch is from one to five. I would be thankful if you could inform me how to remedy this defect in the Brighton. I consider it is through some error of my own, as I hear of others fruiting it successfully. Now being just an amateur, I have no axe to grind, neither have I any interest in this or any other variety, yet fair play is bonnie play, and I trust other members who have fruited this variety will give their experience in our instructive little book, and hope you will pass an opinion upon the fruit I send.

I am yours, &c.,

THOMAS HEDLEY.

Hamilton, February 12th, 1883.

### GREEN PEAS.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST

SIR,—By the time this meets the eye of your readers, the time will have arrived when many will be thinking about what varieties of peas they will use this year. I have grown many kinds, and have no hesitation in recommending "Bliss' American Wonder" as the best in the market, taking all things into consideration. They are very early, ripening usually in seven or eight weeks from date of sowing; very prolific when liberally treated. Mr. Jackson of this town, jailer, dibbled some in rows about a foot apart, and two inches apart in the row, in very

rich soil. The product was something wonderful, from each plant he gathered from fifteen to twenty pods, and almost every pod contained six peas. Seventeen pods having five peas in each will be equal to eighty-five bushels for each bushel of seed. In quality they are equal to the best.

The reputation of this pea is likely however to suffer, as another variety of pea of the same name is being forced into this market, considerable quantities of which were imported last spring from England, and many respectable dealers are now handling them, believing them to be genuine, no doubt, because of the respectability of the house from which they were obtained. However cautious this wealthy and respectable firm may be, they have evidently been swindled this time. I grew some of these imported peas last spring side by side, and also in the same row, with the genuine peas obtained from my friend Mr. Arnold. The seed was very different in color, and those which grew (about one-half) produced leaf growth very different, both in color and shape. The peas were from eight to ten days later, and the product was less than one-third that of the genuine. I gave the person (the importer) from whom I obtained the peas, some of the genuine sort to experiment with in his own garden, and the result with him and also the conclusion to which he arrived from his own experiment, was identical with my own.

T. B.

Lindsay, March, 1883.

#### PRUNING.

Will the *Horticulturist* kindly answer the following questions?

Downing recommends the last of February for pruning in this latitude. How would that have suited this year, the weather then and later on being so severe? Do you think the trees and

vines would be damaged? What is the best time for cutting scions off pear trees for budding in August? May celery and potatoes be grown in the same ground for a succession of years?

ANSWER.—February is usually too early for Ontario. It is better to prune after severe cold has passed. The time for cutting pear scions for budding in August is on the day you do the budding. Celery may be grown on the same ground, but not potatoes.—ED.  
*Can. Horticulturist.*

#### CUTTING OFF SCIONS.

*Purdy's Recorder* recommends that scions should be cut off *early in spring*, and kept for budding until the proper time. Is this right?

ANSWER.—If you intend to bud in June it is right, not otherwise.—ED.  
*Can. Horticulturist.*

#### ON FRUIT GROWING.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

DEAR SIR,—I have been in the nursery pursuit for fifty years and have largely studied why many varieties of fruit trees will not stand our northern cold climate. I discover from your Association that many, yea, very many people are in the shade respecting the true cause why so many varieties of fruit trees will not live through our cold, changeable climate. I will here state, forty or fifty years ago the most part of our farms were surrounded with forest trees, and in the winter season but few thaws. The trees froze up hard in the fall, and generally remained so till spring. In those years all kinds of fruit trees seemed to be hardy alike. Now for the cause: Our orchards were surrounded by forest; there could be

no sudden change of air from warm to freezing. If, in the winter, there was rain and the limbs of some kinds were soaked with rain, and the wind changed suddenly from south to north-west, the forest trees prevented a sudden cold till the fruit trees had time to dry out the water; then, after that, when the trees froze they were not bursted, or swelled by the ice, to shivers. The above is why. If trees are protected on the north-west side they will stand now our changeable climate; but of late years the axeman and the fires have devastated our forests, and now the winds cause our country to have frequent changes. Now, all loose, open, soft, porous fruit trees will not live many years in Eastern Ontario. Some one may say, how do you know that one kind of apple wood is harder than another? I here tell you how to prove it. I am running a small nursery of trees. The greater part is what is called the McIntosh Reds. Without exception, they bear the best flavored winter apple, and are the hardiest trees to stand the climate known in Eastern Ontario, the crab trees not excepted. If planted on gravelly ground not one bud will perish with our hard winters. Now to instruct you how to know a hard wooded tree from a soft loose wooded tree: take your jackknife and cut off a limb of the McIntosh Red tree, then cut off a limb of the same size of any other kind or kinds of apple tree, you will find the McIntosh Red limb cut harder than beech or maple, and several of the varieties cut soft, or as easy as to cut basswood. Again, to prove that the McIntosh Reds are harder than any of the other kinds of fruit trees, stand under a McIntosh Red tree, take hold of the smallest limb that will hold you up without bending, then try to hang on a limb of the same size of any of the other kinds, and you will come to the ground in a moment. If you

prove the above and ascertain it to be true, will you not acknowledge that the McIntosh Reds are tougher and hardier than any of the other varieties that you tried. Furthermore, to show you why the McIntosh Reds do not freeze to death; the wood is so tight and hard, and the bark is smooth, fine, and looks tight enough to prevent rain from soaking in. The wood is so hard, although it rains all day, it will not take much water in. This is why the McIntosh Reds are not affected by our cold changeable winters; while, on the other hand, the loose soft wooded trees are like a sponge. In winter, on a rainy day, the limbs soak full of water, if towards night the wind shifts from south to north-west, the water that is soaked in the limbs of the trees will at once freeze to ice, which ice expands the wood and bark, the limbs are swelled and bursted to death, and when the ice is thawed out the tree, it carries the sap along with the water. This is why the loose wooded trees will not live in the Eastern Township of Ontario. Furthermore, to prove that the sudden change from warm to cold is the cause why the soft, loose wooded trees die. Along the bank of the river St. Lawrence most any variety lives several years, inland the same kinds would not live one-fifth the time; along the river, though the change is sudden, the fog or damp from the water keeps it from freezing for an hour or two, which gives the trees time to dry the rain water out of the wood, and there is no ice made in the wood to swell and burst the wood to death. The above shows you that there is no ice in the top of those trees along the river bank, and that is the cause the soft kinds are not killed outright along the river St. Lawrence, while those in the country of the same kind will only live a few years. The soil to plant fruit trees on to do well, to form hard



solid wood, should be ground well drained, mixed with gravel ridge soil, *clay, sand and muck* are not sufficient. In this kind of soil there is not the right kind of element for the growth and health of the tree. There is not the right kind of element to form hard wood. If your ground has no stone in it draw a cart load of gravelly ridge ground and spread it round about each tree, and add with it one peck of slacked lime. This do for three following years. This will answer as a substitute, where there is not enough stone quality to form hard, compact wood. Otherwise the wood will be loose and porous and soak with water in winter, which will freeze and kill the tree as stated above. Although the soft wooded trees are planted on gravelly ground, they will not live long. Their nature will not take up with the sap enough of the stone element to make wood hard. I own the farm on which the original McIntosh Red stands. I have lived all the years of my life within a few feet of it. To my knowledge it has borne annually for sixty years a crop of the best flavored winter apple known on the continent of America. The above is no exaggeration from the truth of what is said respecting the McIntosh Reds. I have a young orchard, and have in it 1,300 trees of the McIntosh Reds, the remainder is a few early kinds for summer use. I have a seedling summer apple, grown on my farm by my father about eighty years ago, sweet, very juicy, a good bearer, soft and of good size; the tree hardy; lives longer than any of the kind, except the McIntosh Reds. Any person wanting to know more than stated above, write.

I am, your obedient servant,

ALLAN MCINTOSH,

Dundela P.O., Ont., Nurseryman.  
Dundas Co., Feb. 6th, 1883.

## GRAPE VINES.

MR. EDITOR.—Nothing was said at our meeting of the proper spaces for vines. We have them from the standard occupying 4 feet as general in France, and I believe in the Beaconsfield vineyard, and on Trellis, 5 to 7 feet high, with 12 to 20 feet range. The vine at Hampton Court, England, which many of our members must have seen, planted in 1768, when I saw it about 10 years ago, covered a space of 2,000 square feet, was in full vigor, with a crop, if I remember right, of over 1,200 bunches, certainly average 1 lb. each. Which is best, *the narrow or wide gauge*. Wide limits seems not to curtail the life nor lessen the fruitfulness of the vine.

JOHN CROIL.

## WINTER MEETING OF THE FRUIT GROWERS' ASSOCIATION.

MR. EDITOR,—The attendance at our meeting was good and the subjects discussed interesting and useful.

The first taken up was, is the English sparrow an advantage to the fruit grower or otherwise.

After an interesting and lengthy discussion, it was almost unanimously agreed that Mr. Sparrow is a sure enemy to the fruit grower and agriculturist. While he satisfies his appetite at times with insects injurious to crops, the little benefit is far more than counter-balanced by his depredations, eating of the buds of fruit trees and shrubs, and pilfering the fruit. As an evil doer his total extermination was strongly recommended. So say we, but easier said than done.

The black spot, or fungus on the apple tree, can it be prevented and how? Here was a subject very much affecting ourselves. From different localities the reports were very conflicting. One grower spoke of having sold one hundred bushels of Fameuse entirely

free from spots, others said they had not a spotless apple. It was admitted on all hands that the disease was much more prevalent this year than formerly, but I am sorry to say that neither the cause nor the cure of the disease was discovered. One said the disease was mostly confined to old and ill pruned trees, another that it was from the want of shelter, while a third would have it from over crowding; neither of which theories met with support. That cold, wet or frosty weather coming when the trees were in blossom, and over manuring in some cases favored the disease was generally believed. The reason why some kinds, such as the Russets, were less injured by the disease last year, we don't think was satisfactorily accounted for, but it is quite evident that they and some others are much less liable to the disease than others. I am not prepared to give a full list of these, but from experience can recommend the American Golden Russet spotting none; the Talman Sweet, spotting little; the Wealthy promising well, hardy and free from spots. These three are all hardy and reliable in our district. Let readers remember I don't recommend but a few kinds, not more than a dozen as profitable in our cold north—the tree pedlar, much more accommodating, will give you them, hardy trees, he says, by the score. Pity that the Fameuse, our favorite and formerly best paying apple, should suffer so severely from the disease. I am afraid the McIntosh Red is not much better in this respect.

Another subject was grape growing. Can we make the cultivation of grapes profitable and with what varieties? That they are profitable for market use was agreed to on all sides, as well as that we should all sit under our vines if not our own fig tree. The kinds recommended as early, hardy and suitable to our location were, Concord, Delaware, Moore's Early, Brighton, Worden, Hart-

ford Prolific, and I think I may add the new grape Jessica, now offered by our enterprising secretary, Mr. Beadle, of St. Catharines. Some one said better have poor grapes than none, and put the Talman, *alias* the Beaconfield, on this list; it is hardy and will surely ripen. This is the best we would like to say of it.

Our association deals too with forestry, although not appearing in our title now, it will presently. A bill just passed entitled the Ontario Tree Planting Act, will much encourage tree planting. It authorizes the planting of trees on the highways adjoining our farms, as also on the boundary lines, and makes provision for a bonus of 25c for each tree so planted under certain restrictions, and providing for the preservation of the same by a fine not exceeding \$25 and costs, or imprisonment for 30 days, for any one injuring or allowing to be injured by his cattle any such tree.

Who is to be responsible now for the widow's cows, the great bugbear to no fences? We will have to find her less expensive pasture than the Queen's Highway.

To convince us that such societies as the Fruit Growers' Association are doing good, we have only to compare the fruits and flowers of to day with those of our boyhood. It is like comparing the apple with the crab.

Mr. Charles Arnold the celebrated agriculturist and hybridist of Canada, succeeded a few years ago in raising a new dwarf pea, a cross between the two favorite varieties, Champion of England and Little Gem. It is named Bliss' American Wonder. I would not ask space to describe it more than to say, that when introduced it was believed by competent judges to be the best dwarf pea in the world. He sold his right to the well known firm, B. K. Bliss & Sons New York. Last year I planted four and a half quarts of these peas for which

I paid at the rate of \$32 per bush. I can endorse the much said in its favor. My return crop was two bush., this spring sold at \$10 a bush by Messrs. Bliss. Friend Sallet will have a limited supply of these for sale next Spring, but the bulk of my supply I will plant, they will likely pay me better next year at \$5 than at \$10 this. But I have been dealing in small figures. Mr. Arnold has persevered and procured he says a pea far superior to the above. When asked at our meeting why he should give the Americans the benefit of his discoveries, he replied in his own quaint way, that he was always willing to sell in the best market, and to let the enterprising purchaser have the benefit, adding, "as soon as you are prepared to pay me as I have received for my last improvement, you, or a more enterprising neighbor, are welcome to stamp your name on it." I have received, he said, the second cheque of \$500 last week in payment for less than a bushel of these peas. These Mr. Editor are reliable figures—\$1000 for a scant bushel of peas. We should say peas are looking up. Such are some of the results of the work of such Associations. The merits of our association are not well known. To any one who has a garden patch or a few apple trees, and any taste for them, I will guarantee the one dollar subscription to the Fruit Growers' Association of Ontario, to be as good an investment as he ever made.

JOHN CROLL.

Aultsville, Feb., 1883.

#### GOOSEBERRIES—WORDEN GRAPE—ROSES.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST:

On page 33 of the last number of your esteemed journal you invite amateurs to use the columns of the *Horti-*

*culturist* to make known their experience in horticultural matters.

As an amateur, and as one who has always taken a deep interest in horticulture, I gladly accept the invitation and offer my mite.

I will begin with my experience with gooseberries, of which fruit I have quite a number of varieties. Although agreeing in the main with Mr. Wattson as regards the English gooseberry, that it can be successfully grown with care, still I think it best to rely chiefly on the Downing and Smith's Improved.

A year ago last spring I planted a number of bushes of these last named varieties, and the result of their first bearing last summer was really astonishing; some of the best bushes yielding as much as two imperial gallons of fine ripe berries to a single bush. Who can beat this? My experience with gooseberries is as follows: Ten bushes, well cultivated and heavily manured, are worth more than a hundred neglected ones. Plant English gooseberries, if possible, in a deep, cool, heavy soil, on the north side of a building or fence. If the soil is very light do not plant them at all.

My Worden grape bore last summer for the first time. It is both earlier and better flavored than the Concord, and is apparently quite as hardy.

I cannot close this without mentioning my Roses, which have given me more pleasure than anything else that I have grown. Last fall I took the first prize at our County show, the only place at which I exhibited Roses. The coming season I intend exhibiting at the Provincial and other large shows.

My favorite Roses are Alfred Colomb, La France, and Marie Bauman, and in the order named.

FREDERICK MITCHELL.

Innerkip, Ont.

## STRAWBERRIES.

I have never cultivated but for family use. I thought of setting out an acre 3 feet apart and 18 inches in the row, keep the runners cut off, and two years afterwards planting between the rows and digging out the first planted, and so save the inconvenience of changing the ground. Do you think my selection good with Early Canada, Wilson's Albany and New Dominion. If I should try a few of the new kinds by the way of experiment, which two kinds would you recommend for our cold north?

Yours truly,

JOHN CROIL.

The new varieties of strawberry have not yet been tested in your climate. Suppose you plant Crescent Seedling, Manchester and Bidwell, and tell the *Canadian Horticulturist* how they succeed.—(Ed. *Can. Hort.*)

## BARRIE AND STRATFORD.

BY AN OCCASIONAL CONTRIBUTOR.

In the January number of the *Horticulturist* for 1880, at page 7, may be found a very interesting article from the pen of Mr. A. Hood, of Barrie, in the latter part of which he compares the mean temperature of Barrie, Stratford and Toronto for the months of July, August and September, shewing that it is lowest at Stratford. Mr. Hood might have extended his comparisons to all the other months of the year, and having brought them down to the date of his writing, they would still have shown the same result; and the reason in all probability is that suggested by Mr. Hood, namely, that while Stratford is 1,182 feet above the sea level, Barrie is only 779. It is true Barrie is a degree farther north; but the difference in the level above the sea quite counterbalances this. It

is not likely that the beautiful Kempenfeldt Bay, lovely in itself, and rendering the pretty little town on its shores more attractive, exercises any appreciable influence on the climate; perhaps it may save the fruit blossoms from injury by the May and June frosts. Certain it is that any person who may have the good fortune to visit Barrie in July or August, as the writer did last summer, must be convinced that its soil, climate, and situation, is very favorable for fruit growing. Nevertheless the man who said that Stratford may or will become a great fruit growing centre was quite correct. The samples of apples, pears, grapes and seedling peaches shewn yearly at our horticultural exhibitions, compare favourably with those produced in any part of Ontario; and all that is needed to make fruit growing a remunerative business in this neighbourhood is a wise selection of hardy and suitable varieties, and care and skill in their cultivation.

The situation is peculiar - almost on the height of land at the centre of the peninsula between the great lakes, outside the salt and oil bearing strata—an hundred feet at least (perhaps much more) to the rock below—soil generally somewhat heavy. Fruit and other trees which flourish here should, so far as climate is concerned, flourish also in almost any part of Ontario; and on that account it is to be regretted that we have not in this neighbourhood an experimental plantation of fruit and forest trees similar to the one at the Model Farm, near Guelph.

The winter of 1880-1 was, as every one interested in fruit culture knows, a very disastrous one to fruit trees. It is argued by some that the damage is to be attributed to the *warm* autumn followed by the severe winter; by others, that the long continued and

steady extreme cold of January, 1881, is alone sufficient to account for it. It may not be uninteresting not only to those in this neighborhood, but to others residing in the colder parts of the Province, to learn the writer's experience—limited though it is—of the effects of that winter on his own comparatively few trees.

The aspect is sloping S. and S.E. ; soil good clay loam ; good natural drainage, and all spring or surface water cut off by a deep tile drain along the brow of the slope ; trees planted (most of them) in 1876, and cultivated with roots each year ; manured fairly, but not heavily, with stable manure and ashes.

*Dwarf Pears.* — 1. Ananas D'ete, Graslín, Beurre D'Anjou, Flemish Beauty, Supreme de Quimper, Louise B. de Jersey, Duchesse and Josephine de Malines, came through uninjured. 2. Eliot's Early, Seckel, Beurre Clairgeau, Onadaga, Vicar and Bartlett, all more or less injured, the two last named very badly. 3. Doyenne D'Ete killed outright.

*Standard Pears.* — 1. Flemish Beauties came through triumphantly. 2. Elliot's Early and Clapp's Favorite both injured, but recovering. 3. Bartletts, Seckel, Rostiezer and Doyenne D'Ete killed (these on lightest soil on the grounds).

*Peaches.* — Eight or ten standard varieties (splendid crop preceding year) all killed, roots included.

*Plums.* — Some killed ; all more or less injured, except Glass' Seedling.

*Apples.* — Early Harvest, Red Astrachan, Maiden's Blush, Am. Golden Russet, St. Lawrence, Keswick Codlin, Fameuse, Tetofsky, Fall Pippin, D. of Oldenburg, Plumb's Cider, N. Spy, Hawthornden, all stood well. R. I. Greening, almost killed and wont survive. E. Spitzenburg and Wagener

killed, the last named like the peaches to the root. The Wageners (three) were like the Keswick Codlins, Hawthorndens and Tetofsky, planted half-way between the larger growing varieties in a situation precisely similar, and while the Codlins and others not only came through and bore well, the Wageners suffered as above. They are generally regarded as hardy. If others have had the same experience as the writer's it should be made known.

*Grapes* are perfectly hardy here, if laid down and covered lightly with corn stalks or other such like covering. In 1881 crops of Concord, Delaware, Clinton, Roger's 4, 19 and 15, Salem, Eumelan, Hartford, Croton, &c., were all excellent. The only danger is from the frosts of May and June, from which of late years we have not suffered. Last year, however, there was a good deal of injury from mildew ; Concord, Croton, Delaware, Clinton and Roger's 4 and 19 were free.

*Walnuts, Butternuts and Sweet Chestnuts*, planted here in 1876, are all doing well and seem perfectly hardy—the Chestnuts making the slowest growth. They have, however, borne two or three nuts the past year. The Butternut is indigenous here ; the Walnut and Chestnut are not. A number of young Walnuts procured by the writer from, and by the kindness of, Chief Johnston, two years ago, have, where properly planted and cared for, grown without a single failure. There is no reason why the Walnut should not be planted and flourish over large portions of the Province to which it is not indigenous. There are about a dozen trees in a neighbor's grounds in this town planted about 1854-5, which are 12 to 16 inches in diameter, beautiful, perfectly healthy, and bearing heavy crops of nuts every year. This growth does not equal that of similar trees in other parts of the Province as shewn in the Report

of the Association for 1882, but as these trees have not continuously received the best of attention it is perhaps satisfactory.

Stratford, Ont., 12th February, 1883.

### THE WHITE PINE AS A FOREST TREE.

BY JAC B W. MANNING, READING, MASS.

Our native White Pine (*pinus strobus*), which was introduced into England by Lord Weymouth in 1702, and is there called the Weymouth Pine, extends to the 50th degree north latitude, west to Lake Winnipeg, south from Minnesota to the New England coast and along the Alleghanies to Northern Georgia.

It is one of the most profitable of all the pine family as fuel or as a timber-tree. A piece as long as a stave for a pail, that can be cut from between the knots measuring a year's growth, is valuable, as well as the longest clear board plank or framing timber. It is always reliable, does not warp or crack as spruce or hemlock, and is light and durable as a building material.

Many open lands and forests abound in trees that will transplant safely, if six to twenty-four-inch trees, and even larger, are taken up with a ball of earth, which should be retained when the trees are planted, thus allowing the roots to be undisturbed; and I find after ample experience, if the holes are opened in the fall and allowed to remain open over winter, especially in hard land that is not to be cultivated, the frost will mellow the earth and put it in much better condition for the growth of trees when planted the next spring.

On rough land, where stumps and rocks abound, the distance apart would be regulated by the lay of the land; they should be planted from three to seven feet apart. It is best to keep all cattle from a young forest.

This work could be done as the ordinary farm work with the usual force of men.

Thus many broken lots of land now treeless and so rocky and worn out that they would not afford a paying crop of rye or even buckwheat, and when used as a pasture would not pay the interest of \$500 per acre for any number of years, could be made to increase in value year after year, with a small outlay at first and little care after, so that it would be an investment from which a young man would realize a great gain, and no better legacy could be left by an old man to his sons; or if he wished to realize on it he could sell it at a much advanced price over the original value of the land and the labor put on it in planting the trees.

The growth of a pine in good soil in ten years after transplanting is ten to twenty feet in height, with a spread of branches six to fifteen feet, and a diameter of three to eight inches where they stand alone.

Allowing trees to grow in an open situation, with a wide spread of branches from the base up, gives the tree great vital force but makes knotty lumber; but in growing timber it is most desirable if free from knots, and this must be attained by close planting.

I have seen a White Pine come up from seed in an old worn-out pasture, full of rocks and running briars, that grew in forty to forty-two years to more than two feet in diameter, affording two ample board-logs and a heavy horse-load of fuel, and all about it was a little forest of seedlings that required thinning out or transplanting, and all this from one seed that must have been carried many rods by the wind forty years before. Now these suggestions will apply to many almost useless pieces of land on which our New England farmers

are paying taxes but receiving no corresponding income. But on many pieces of barren plain land too poor to grow crops, but on which trees can be grown and cultivated, tree-growing can be made more profitable if carried on systematically. The land should be thoroughly ploughed, the trees planted four feet apart each way, the cultivator run about four times a year until the trees shake the ground sufficiently to keep the weeds down. Wherever plantings are made the trees should be thinned often enough to allow their full development.

In all parts of New England, by taking away or planting the trees indigenous to the several sections, great changes are made in the landscape. This change is in the hands of land-owners, and all should have an eye to effect some improvement in their day.

Little is said about aid from Government to renew the forest growth, although it is a giant task, but there is talk and even delay in tree-planting, in hope of aid and bounties or reduction of taxes to encourage it, also hesitation about what trees to plant. We say what grows well and sells well is safe to plant more of.

The most successful and praiseworthy of street, shelter-belt or forest planting that have been made, and, I might say, ever will be made, were by individual effort and purpose, and single-handed labor of one man here and there often in a very obscure way.

This work is greatly to be praised, and if any outside encouragement can assist to plant a few thousand acres with millions of trees each year, it will help to make more extended plantings appear easier to accomplish.

#### THE PHYLLOXERA IN FRANCE.

The Phylloxera is making serious havoc with the vineyards in France.

The *Vigne Francaise* (*French vine*) announces that the year 1882 will be remarkable for the increase of the ravages of phylloxera. The scourge has destroyed from 50,000 to 60,000 hectares of French vineyard every year, but this year the average will be surpassed. From all parts are signaled new spots of the disease, and in the vineyards already affected, but not properly attended to, the plague is spreading rapidly. In the departments of Gironde, Haute Garonne, Tarn, Oude, Oriental Pyrennees, and in the vineyards left in Herault, people are more than before alarmed by the progress of the terrible insect.

Indeed, such is the discouragement among vineyardists and wine makers, that they are turning their attention to the manufacture of wine from beets. It is said that the red sugar beet produces by fermentation an excellent wine, and it is seriously proposed to abandon the cultivation of the vine altogether.

M. Auguste Deleuil, agriculturist, member of the Agricultural Society of France, &c., writes to the *Field*:—  
 "Everyone has heard of the great losses our national agriculture has sustained during the last twenty years from the ravages of the phylloxera; more than half of the French vines have already disappeared, and none can foretell the extent of the devastation to come. Vainly have all kinds of remedies been tried, but without success. In spite of the thousand and one recipes employed in turn to combat and to destroy it, the phylloxera continues to ravage at will our splendid and luxuriant vineyards. In the face of such a disaster, an energetic agriculturist, whose labors have already received the sanction and encouragement of our learned societies, after many fruitless efforts to remove the evil, has succeeded, not in destroying the effects of the phylloxera, but in bringing forward an-

other wine-producing plant. Thus, leaving the vine to its fate, he turned his attention to find out if possible another plant to supply the elements of prosperity which we are losing by the disappearance of the precious vine. At last this plant has been found. It is a variety of red beetroot, unrivalled in the whole world for its incomparable qualities, which will in time replace all that we have lost in the vine. Beetroot produces alcohol of superior quality; why, then, should not its pulp, treated like the must of the grape, produce an equally luscious beverage? In fact, this has been done; the very sweet red beetroot produces by fermentation a wine quite as good as many of the *soi-disant* wines of our southern vineyards. It possesses the additional advantage of accommodating itself to all soils, and flourishes in most climates. We wish, then, to make this fact known, if it be only to stimulate new discoveries or develop further resources in wine growing. With the view of popularising this plant, the propagator places himself gratuitously at the disposition of agriculturists, to furnish them with the seeds they may require. Application can be made to M. Auguste Deleuil, Agronome, à Gardanne, près Marseille, France."

#### POTATOES FOR GENERAL CULTURE.

BY C. W. YOUNG, STRATFORD, ONT.

For several years I have experimented more or less in potato culture, and last year I grew a patch of twenty-six varieties, choosing such kinds as recommended themselves to me in the seed catalogues, or were in general cultivation in the neighbourhood of Stratford.

The soil in which they were grown could hardly be called fair garden soil, it was of the hardest clay, and had been badly used for several years, turning up in large clods, and difficult of drainage,

owing to want of fall. In the fall of 1881, I manured it at the rate of ten or twelve loads to the acre, and spaded it into ridges. In the spring I gave it a good dose of leached ashes in something like the same proportion. The potatoes, a pound of each, by weight, were cut into single eyes as nearly as possible, and planted about six inches apart in drills three feet apart, lightly covered. For convenience they were cut just as they were put into the ground. The object was not the obtaining of a large yield, which was hardly to be expected under the circumstances, but the testing of the merits of the various kinds under similar circumstances. The result will be found below.

VARIETY.	SETS.	LES.	
Beauty of Hebron .....	38	28½	No Rot.
Grange .....	35	30	"
Irish Cluster .....	41	20	"
Ontario .....	37	33	"
Rennie .....	44	33	"
Surprise .....	48	29	"
White Star .....	42	25	Slight Rot.
Chicago Market .....	53	43½	"
Dunmore .....	29	30	"
Early Vermont .....	53	38½	"
Farina .....	44	24	"
Fluke .....	89	17½	"
Magnum Bonum .....	27	18½	"
Pride of America .....	31	21	"
St. Lawrence .....	38	16	"
St. Patrick .....	53	31	"
Vick's Prize .....	32	18	"
White Elephant .....	43	42	"
Early Rose .....	37	30	Badly Rotted
Late Rose .....	35	18	"
Eureka .....	46	21½	"
Munmoth Pearl .....	36	18	"
Peerless .....	44	15	"
Ruby .....	44	21	"
Snowflake .....	42	24	"
Watson .....	47	22	"

I do not attach any very great importance to the result as to rot, as the experience of other growers in the neighborhood didn't agree with it, but I give it just as it was.

It will be seen that Chicago Market gave the largest yield with me, which was somewhat of a surprise, as the vines were so badly eaten away by the bugs that I looked for almost a failure. I don't think, however, that this variety



has more charms for doryphora than any other, but from their location they happened not to be looked after so strictly, that was all. The tubers are oblong, of a light flesh color, slightly russet skin, few and shallow eyes, flesh dry and mealy, and altogether a most desirable variety. I notice that in his latest catalogue, James Vick, from whom I got the seed, speaks of the Chicago as earlier than the Early Rose, of this I cannot speak, as my potatoes were all dug about the same time, and were not tested for earliness. It is said to do well on all kinds of soil. A faithful representation of this variety will be found in Vick's Floral Guide, for 1883.

Beauty of Hebron is so well known, that little need be said about it, it is early, prolific, a good keeper, excellent flavor, grows close together in the hill, and is as general a favorite as it deserves to be.

White Elephant is a veritable Jumbo among the Murphies. It yielded almost as largely as Chicago Market with me last year, and some of the tubers were immense. There were very few small ones. It is among the late varieties, keeps very well, is dry and floury, and not at all coarse as would be expected from its size. The only objection I can find to it is the deep set eyes, which cause considerable waste at the hands of careless kitchen maids when preparing them for the table.

White Star is an elegant looking potato, and was very highly recommended by its introducers last year as the coming potato. Its quality and appearance leave nothing to be desired, but I have not seen that its yield came up to what was expected.

Mammoth Pearl is a very handsome shaped tuber, and I notice in a late rural that it stood at the head of the

list with an Ohio grower; with me it did not do so well.

Early Vermont I could place among the good early varieties, the tubers are generally large, and the quality very fair.

Dunmore is the prettiest sound potato I ever saw, smooth and white, with few, shallow eyes, as shapely as an apple, and a good yielder. For evaporating, where peeling machines are used, there could be nothing better.

St. Patrick is decidedly a good looking fellow, not especially large, but uniform in size, smooth and white, eyes shallow, dry and mealy.

Farina is an oddly shaped tuber, long, thin and pointed. It is very mealy and fine for baking, but would be no use as a market variety.

Pride of America is a decided acquisition, very shapely, and quality excellent. As to shape and general excellence, however, I must undoubtedly give the preference to the Ontario or Dempsey as it is sometimes called, which was sent out by the Association in 1881, I believe. The Rennie looks to me to be the same potato with a different name. It is red, slightly rough skin, oval, and unusually regular in size and shape. I never saw any kind which varied as little in size. The eyes are on the surface, what there are of them, and the tubers are as solid as a brick, in July. It is of rather more than average prolificness, and any judge of a potato would put it down as first-class without a second look. The Association did a good day's work when it presented the Ontario to its members.

With regard to the Early and Late Rose, the general impression seems to be that their usefulness has gone, and they will soon be classed with the Cup, Meshanock, Kidney, Merino, Chili,

Pinkeye and others, which were the favorites of our fathers and grand-fathers. The Roses I would not grow when there are so many better, and with them I would class the St. Lawrence, Peerless, Ruby, Snowflake, Eureka, &c.

I notice in a late Rural New Yorker that the Blush, which it sends out in its free distribution this year, yielded no less than 700 bushels last season to the acre. I have one or two tubers and shall grow them this year. The Rural gave its subscribers the Beauty of Hebron and White Elephant, introducing them to the public, and if the Blush is as good, it will do Carman plenty of credit.

For early varieties, I would say, grow Chicago Market, Beauty of Hebron and Early Vermont; for second early, White Star, Pride of America and St. Patrick; and for late, Ontario, White Elephant, and Dunnore; of course there are dozens of other varieties, many of which may be equal or superior to those I have mentioned, but I quote my own experience merely, those who grow any of the above kinds wont make any great mistake.

Just a word or two about seedlings. It used to be considered quite a difficult matter to raise potatoes from seed, but there is no trouble whatever about it. The hardest thing is to get the seed, which most people will have to buy, for there are few kinds nowadays which will produce and ripen seed balls. I had only one out of 26 varieties which set any fruit, and that didn't ripen. (I should like to correspond with any member who has any potato seed). The seed should be sown in a hot bed the same time as tomatoes. When a couple of inches high, transplant to a rich light spot in the garden, taking care not to disturb the rootlets, shelter from frost if it comes, keep a sharp look-

out for the bugs, and cultivate freely. The plants will be as large as any in the garden in the fall, and quite a number of the tubers will be of fair marketable size. They must be kept till spring, the same as ordinary potatoes. A trial of a year or two will show their quality, and any one may thus originate new kinds for himself, and give them any name he likes.

### PRESERVATION OF FRUIT.

LETTER FROM MR. B. GOTT, OF ARKONA.

I learn that a fruit canning establishment is likely to be started in our borough, with every prospect of success. This is timely and not without its significance. It is quite clear from our past experience that the capability of our section for fruit production is very extensive. Should the people attempt the culture of fruits to the extent of our capabilities, the question what we would do with our fruit would at once force itself upon us with unwonted pressure.

Fruit production is only limited by the extent of the market, and this question of market is at once determined by that of fruit preservation. If our luscious summer fruits can only be brought over the hurry and glut of their season of ripening, by means cheap and practical, the question of marketing them can be profitably settled at our leisure. In this way all the fruits we can produce can be readily and profitably disposed of, either in our home or distant markets, and if not at one moment they can be kept over until they can be sold. Fruit production thus stimulated would at once spring into renewed activity, and where there is now only a bushel produced, tons would be gathered, and all sure of finding a ready and a profitable disposal. In the State of New York, this subject is thoroughly and practically

settled. The fruit growers of that fertile region are fully alive to the importance of fruit preservation, and they practice it to the extent of millions of lbs. annually. At the late meeting of their Horticultural Society, at Rochester, this subject was thoroughly discussed and an Association formed to take charge of its interests. When the reports of their county fruit committees were read, we were struck with amazement at the extent and importance of their fruit preserving processes. During the whole winter their evaporated fruits are exposed for sale in the markets of the larger cities and towns, and find a ready and welcome demand in the homes of all classes of their people. There are at present but two popular methods of fruit preservation contended in this country, viz.: 1st. By canning. 2nd. By drying or evaporating. We much prefer the latter of these methods for the following reasons: 1st, the fruit is prepared for operation with less expense. In the case of small fruits they are at once placed in the dryer, and in a few minutes the fruit is taken out, and is ready for packing. In the case of large fruits they are simply pared and quartered, and rapidly evaporated to a dry state ready for shipment. No expense of cans or labels or other packing is needed, and the consumer gets the goods in their simplest form, ready by the addition of a little water, for preparation of the table or any domestic purpose. 2nd, it is easier and cheaper to pack and ship. For this purpose it is simply placed in boxes or barrels and sent direct to the dealer, be he ever so far away, and without any fear of breakage or loss. 3rd, it can be more readily handled, exposed and sold by the dealer, and with less risk of suspicion or delay. People soon learn that it is quite possible to place beautiful and tempting labels on packages that

contain goods very dissimilar in character and value. No suspicion of this kind can attach to evaporated fruits. It is freely exposed and the purchaser can be assured of its qualities, as he can see what he gets. 4th, it gives better satisfaction to the customer. He thus knows exactly what he has paid for, and there is no chagrin upon opening the package to find the goods are not as represented by the dealer. 5th, this fruit can be sold in smaller quantities to suit the desire of the smallest customer. In this way the area of consumption is much enlarged. Many a poor man could see his way clear to purchase a few pounds of dried fruit that could not lay out a large sum on tempting and expensive cans of fruit. 6th, there is no useless expense for cans and labels, &c., to be added to the expense of the fruit, and to be paid for by the poor man who buys. He gets exactly what he paid for and no more or less.

Many who are well acquainted with certain samples of dried fruit will be ready to object to evaporated fruits on the same grounds. This is not just, as well evaporated fruit bears no resemblance to that which is merely dried by the old processes. The evaporated fruit is cleaner, whiter, richer, sweeter and better in every quality.

I find a statement in one of our public horticultural documents of recent issue, giving a fair idea of the questions of costs and profits in connection with an evaporator in the State of New York. I think, perhaps, it would be well to transcribe this statement in this place for the benefit of my readers.

“Statement of the cost and profit of one season’s working of one of the No. 2 Pacific Evaporators :—

No. of bushels of apples bought . . . .	6,755
“ “ “ shrinkage . . . . .	337

Total evaporated . . . . .	6,418
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Average cost of apples per bush . . . .	17c.
Number of lbs. made from above . . . .	38,579
Total receipts for sale of fruit . . . .	\$4,598 00
Total expenses for storage, handling and manufacturing . . . . .	1,989 00
Net profit . . . . .	\$2,609 00

Average No. of lbs. per bushel . . . . 5 96-100  
 Average cost of preparing and drying per bushel . . . . . 11 cents

The skins and cores were utilized for vinegar for some time, and afterwards dried sold for that purpose, from this source \$200 additional were made to be added to the net profits, amounting to \$2,809 00.

[Signed] ROGERS & BUTLER,  
 Alden, Erie Co., N. Y., Feb. 10, 1880."

I have much pleasure in presenting this statement, as I believe it to be trustworthy in every respect. I also believe that as good a showing, or perhaps a better, could be as easily made amongst us, and for the simple reason that our raw fruit would not be likely to cost us near so much per bushel as it cost them. I should like to see it tried.

#### DIELYTRA SPECTABILIS.

The Dielytra or Dicentra spectabilis, or, as it is popularly called, Bleeding Heart, is a very fine and showy hardy herbaceous perennial plant belonging to the natural order Fumariaceæ. It was first introduced from the north of China



DICENTRA.

to the gardens of the London Horti-

cultural Society by Mr. Robert Fortune in 1846. Mr. Fortune first met with it in a grotto garden on the Island of Chusan, growing among the artificial rocks, near the beautiful Weigela rosea. Its Chinese name is "Hong pak Moutan Wha," or the red and white moutan flower. It is one of those plants of which the Chinese mandarins are so fond, and which they cultivate with so much care in their gardens. It is said that it was first made known to Europeans by the Russo-Siberian, Dr. Karmanyschew, who studying it at Upsal, communicated the fact to Linnæus. Be this as it may, it does not however appear to have been seen alive until it was discovered by Mr. Fortune, who brought it home with him.

In a rich, deep soil this beautiful species forms a plant growing from two and a half to three and a half feet in height, with recurving and branching stems, producing its flowers in spreading and axillary racemes, each raceme being from five to seven inches in length, and containing from twenty to thirty heart-shaped flowers, of a bright pink color. In autumn the stems die to the ground and the plant remains in a dormant state until spring, when it again appears above the ground. It flowers in May and June. In the garden it merely requires a light, deep, rich soil, and a yearly dressing of well-rotted manure or leaf mold. As a pot plant for the window garden, or as a plant for forcing, the Dielytra is almost without an equal on account of the ease with which it bears this treatment. For this purpose the plants should be taken about the end of October and placed in a box; cover the roots with earth and allow the box to remain exposed until it has been frozen thoroughly. When this has been done, the box can be brought inside, and the plants divided, if large, potted into suitable sized pots,

using ordinary potting soil, and giving good drainage. When potted, water thoroughly, and remove to a cellar, or place under the stage of the greenhouse. Allow them to remain there until the pots become filled with roots and the shoots begin to appear, when they should be removed to a light, sunny situation. As the plants increase in growth, water should be more freely given, and once a week they should have a watering of liquid manure. When the flowering season is over, place the plants under the greenhouse stage or remove them to the cellar, gradually decreasing the supply of water; plant them out in a well prepared border about the first of May. If necessary, divide the plants before planting out. This plant can also be propagated by cuttings of the young shoots, when they become sufficiently hardened; but for amateurs propagation by division is the simplest and easiest mode of increase.

The generic name, *Dielytra*, is derived from *dis*, double, and *elytron*, a sheath, in allusion to the two sheath like spurs at the base of the flowers; and the specific name in allusion to the showy and remarkable appearance of the plant when in bloom.—*Vick's Magazine*.

#### STONE'S HARDY BLACKBERRY.

B. F. Adams writes to the *Western Farmer* that he planted an acre of the Snyder and Stone's Hardy blackberries, and that about twenty per cent. of the Snyder were killed by the following winter, but not one of the Stone's Hardy.

J. S. Stickney says that he thinks he can safely recommend Stone's Hardy. He had visited Mr. Stone's grounds the past season, and saw the Snyder and Stone's Hardy growing side by side; both were loaded with fruit, but

the Hardy seemed to have the heaviest crop, the canes of plants over two and three years old were black with fruit. The wood of the Hardy was short jointed and quite stocky. He had more confidence in the Stone's Hardy than in the Snyder, and considered the quality of the fruit of the Stone's Hardy was better than that of the Snyder.

Mr. M. L. Tibbett, of Minnesota, says: "The Stone's Hardy Blackberry came through last winter without injury unprotected, though the mercury was down to *forty* degrees below zero several times; it is evidently an iron-clad."

#### KIEFFER'S HYBRID PEAR.

As the Kieffer has come to stay, and is sure to be extensively planted, a few words on its demands and characteristics may not be out of place. If grown in an indifferent situation, on poor soil, with little or no manure, and improperly gathered and ripened, it undoubtedly will disappoint the grower. On the other hand, give the Kieffer a fair situation, plenty of plant food, and it will yield an elegant fruit. Its tendency is to overbear, and often it should be effectively thinned. It may not possess the highest excellence of quality, neither does the Baldwin apple nor the Concord grape; but a pear like the Kieffer that comes into bearing young, and produces big crops of quick-selling fruit, is bound to be popular.

The past Fall, in our Philadelphia markets, the Kieffer wholesaled for from \$5 to \$10 a bushel, and retailed from 10 cents to 50 cents each. As Downing aptly says: "To have it in perfection, it should be gathered when fully grown, and ripened in the house." I can readily see how there may be differences of opinion regarding the quality of the Kieffer, for a poor Kieffer certainly is poor

eating. On the other hand, a good one is exceptionally good eating. It may be claimed that even when properly grown and properly ripened, the fruit is variable in quality. It doubtless is, but I think no more so than the Duchesse d'Angouleme. As a cooking and canning pear, to my taste it has no equal, surpassing even the Bartlett for this purpose.

While perfection in pear growing may not have been reached by the introduction of the Kieffer, it certainly must take front rank as a profitable market fruit. The most extensive and successful pear grower in this neighborhood stated to me last Summer that, judging by the way the Kieffer was doing for him, there was more money in it at fifty cents a bushel than in any other fruit that he could raise.—HOWARD A. CHASE, in *Rural New Yorker*.

#### DRIED FRUIT ABROAD.

It is a mistake among many farmers and fruit-raisers in the United States to think that the different varieties of fruit, such as apples, pears, peaches, plums, cherries, gooseberries, &c., are grown in greater perfection in Europe, than here. It is not the fact. We raise these as abundantly here and in as much perfection as they do in Europe and with not more than half the labor and expense. It is true, however, that more pains are taken there, and their modes are more thoroughly systematized; but the cost of producing a crop, we repeat, is very much greater there than here, but still the profit may be greater, as nearly all kinds of fruit sell at a much higher price there than here. For years we have been shipping enormous quantities of apples to Europe, and this exportation is steadily increasing and will continue to increase until the trade shall become of National import-

ance. In dried fruits, such as peaches and apples, the exportation has already acquired large proportions, and in ten years more it will go on multiplying in extent until fruit-raising will become a far greater and more profitable branch of industry than at present. With such a market open to us we can never grow an over-abundance of apples and peaches; while these, in addition to cranberries, in their natural condition, fresh from the trees and vines, ought to be and no doubt will be produced in sufficient quantities to meet any demand. The very cheapness that we can send them abroad for will open for us an unlimited market for all with which we can supply it.—*Germantown Telegraph*.

#### GRAPES FOR MARKET.

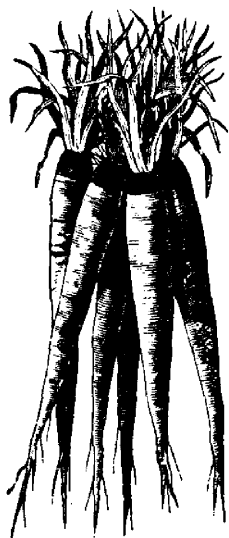
The question is often asked which is the more profitable grape to grow for the market, the Concord or the Delaware. Much will depend upon the market to be supplied, and much upon the character of the soil upon which the plantation is to be made; but when the soil is such that both will thrive well, and the market will pay twice as much for Delaware as for Concord, an answer to the inquiry seems to be given in the following paragraph taken from an exchange:—

His Concord average five tons to the acre, and sell in New York at an average of five cents a pound. That would be a gross income of \$500 a year. Probably it would net \$300 to \$350 an acre. His Delawares would sell for twice as much as the Concord, but the yield, one year with another would be but little more than half. Calling the yield of Delawares three tons per acre and the average price ten cents, the gross receipts per acre would be \$600. Allowing two cents a pound for express, commission, &c., and there would be a net result of \$480 an acre; a better showing than Concord.

## SALSIFY.

The Salsify or Vegetable Oyster is one of our winter and early spring vegetables, and one that should be cultivated in every garden, however small.

To those who are not acquainted with this delicious esculent, it may be described as having a long, white, tapering root, somewhat resembling a Parsnip in shape, and having the flavor of an oyster when prepared for the table. It is by some considered an excellent substitute for the oyster, and, in addition to this, the young flowerstalks, if cut in the spring of the second year, are prepared and used similar to Asparagus, which they somewhat resemble in taste.



SALSIFY.

In order to obtain a satisfactory crop of Salsify, with long, smooth roots, proper preparation of the soil is an essential point. This is best done by digging or plowing the soil to the depth of twelve or fourteen inches, and thoroughly working in an abundant supply of well-decomposed stable manure.

The ground should be prepared in the fall, and left in ridges during the winter season. As soon as the weather becomes settled in the spring, the ground should be neatly leveled off, and the seed sown in drills from twelve to eighteen inches apart, and covered to the depth of half an inch. When the young plants are about two or three inches in height they should be well thinned out, leaving them standing about six inches apart. During their season of growth they require to be deeply hoed, and the ground should be kept mellow and free from weeds at all times, until the crop is ready for use, which will be about the middle of October. The roots will continue good until spring; but those that are wanted for winter use should be taken up before cold weather sets in, and stored in sand in a cool, dry cellar. When lifting the roots, the leaf stalks should not be cut off closer to the crown than about an inch. Those wanted for spring use may be left in the ground until required; but care must be taken to dig the roots before they commence to grow. An ounce of seed will sow about fifty feet of row.

There is only one variety cultivated. The so-called Black Oyster Plant is not a Salsify at all, but a *Scorzonera*, which although its root resembles the former, belongs to another genus. Its cultivation does not differ from that of Salsify except that, as it has a tendency to run to seed, it should be sown later.—CHAS. E. PARNELL, in *American Garden*.

**THE BEN DAVIS APPLE.**—The Indiana Farmer says the Ben Davis apple is so poorly flavored that even the codlin moth generally passes it by for some better variety, and the consequence is that but few of these apples are wormy, and being of high color and handsome shape, they are a very popular apple at the city fruit stands, where they outsell other kinds about two to one on the average.

### THE IMPROVED STYLOGRAPHIC PEN.

A fountain pen that always writes and never "leaks," that makes a fair, plain line, and never blackens the fingers, and that, once filled, can be used for days without change, avoiding all the bother and interruption of reaching over to the inkstand for a fresh dip every two minutes, that can be carried in the pocket, and is as handy for use and as neat as a lead pencil, and that writes on any paper however thin or soft; such a pen is worth having. And such a pen is the "Livermore Stylographic Pen." This we know from personal use.—*Editor Chicago Advance.*

The Livermore Company, which originally introduced the Stylographic Pen, have recently made great improvements in their pen, and have reduced the price so that everybody can have a chance to purchase the best article of the kind. By sending \$2 to Louis E. Dunlap, Manager Stylographic Pen Co., 290 Washington St., Boston, you will receive by return mail one of these famous pens, and also a sufficient quantity of superior ink for six months' use. Full particulars as to different styles and prices can be obtained by sending for circular.

### RAISING POTATOES.

The methods of raising potatoes common here in Maine may be of interest. Sod land broken up in the fall previous or in the spring preceding the crop is preferred. It is a little more work to handle the crop on sod land, but the crop is generally better. It is broken not more than six inches deep on an average. This is thoroughly harrowed. The manure in some instances is spread on the sod before plowing, in others it is spread after plowing, and harrowed in. Some apply the manure in the hill or drill. The seed dropped

on this, and the whole covered three inches deep, with hand-hoes or horse-hoes. Some apply no barnyard manure, but use plaster (gypsum) and ashes, superphosphate, guano, or other concentrated manure in the hill. The seed is cut; a medium-sized potato being made from two to four pieces, and one piece dropped from one foot apart with some to two feet by others, in the row. The average distance apart of the rows is about three feet and a half. The crop is cultivated out when the potatoes are from four to six inches high, and this is followed by a hand or horsehoe, or both; and they are hilled medium height, but one hoeing being given. The weeds that have escaped first hoeing or grown since, are pulled or cut up in July and August before crop ripens.

The crop is for the most part harvested by hand. No potato digger has at present been brought out of sufficient merit and practical utility as to warrant general or hardly partial introduction. They are harvested any time after the tops die and before the ground freezes. They are generally harvested earlier now than in the past. A dry, cool, frost-proof cellar that is dark, furnishes the best storage.—*Farm and Garden.*

### POUGHKEEPSIE RED AND ULSTER PROLIFIC GRAPES.

The Poughkeepsie Red is a cross of Iona and Delaware; the vine is a strong grower; the leaf resembles that of Delaware more than any other. It has been proved perfectly hardy in the latitude of Toronto for the past 10 years. The clusters run in size from that of Delaware to twice as large, many of them having from three to four shoulders. Clusters have been grown that weighed a pound each. The crops are heavy. There have been but two seasons in the past 15 years when it has ripened as late as September 10th; it usually



ripens in August. It contains sugar enough to raisin if suspended in a paper bag and hung in a warm room. No foxy or offensive aroma, disagreeable or unpleasant taste of any kind, can be found in skin or flesh. Its saccharine matter has stood in different seasons at from 102 to 106 degrees, and the acid at from four to five degrees. The oldest wine-maker in the State ranks it "highest of all" for wine. Although not used before in the description of native grapes, we apply to it the term "Perfect."

#### THE ULSTER PROLIFIC

is a cross of Catawba and an edible variety of the wild *Æstivalis*, and minute thorns cover the wood, as in case of the latter. The growth of vine compares with that of the Catawba. During the eight years we have fruited it, it has proved as hardy as any of the wild varieties. Leaf of medium size and wild in appearance; it hangs on to the last and we have never known it to mildew. While the quality of the fruit is in one particular not as pure as that of Poughkeepsie Red, yet it is passed upon at the many fairs at which it has been exhibited and by all who have visited our grounds as the best seedling we have ever produced, owing to its peculiar luscious saccharine property. We know of no variety that will ripen so great a quantity of fruit to a given amount of wood. The joints are from one to three inches long. The clusters are of Catawba size; the berry is longer; compact, but not crowded. It ripens with the Concord, and will hang until the ground freezes. The old wine-maker spoken of above says it makes a wine of high character. Its unfermented juice is unusually sweet.

On correctness of these descriptions of these two seedlings we await the verdict of the country, and ask any of the numerous persons who have visited

them and know them to correct any error in the descriptions.—*Rural New Yorker*.

#### GRAPE GROWING IN THE UNITED STATES.

The following notice of the number of acres under cultivation to Grapes, and the quantity of wine manufactured therefrom, will give our readers some idea of the rapid growth which this industry has already made. The *Florida Dispatch* says:—

From statistics recently published by the Department of Agriculture at Washington, we learn that there are now 185,583 acres of grapes grown in the United States. Wine from the product of these vines, is made to the amount of 24,453,857 gallons, having a market value of \$13,436,174 87. California, of course, leads, having one-sixth of the area, yielding nearly two-thirds of the wine. New York comes next, having 12,643 acres, though but little is made into wine; the grapes find ready sale in the market; only 584,148 gallons are made. Rhode Island only returns 55 acres; while Illinois, from 3,810 acres, makes over a million gallons of wine. Missouri, Ohio, Georgia and New Mexico are leading wine-making sections. Colorado cuts no figure at all in the report, but the day is coming when grape culture will be one of their prominent industries.

#### BOOK NOTICES.

GEO. W. CAMPBELL'S PRICE-LIST of Hardy Grape Vines, Fruit Trees, Small Fruits, &c., Delaware, Ohio, 1883. Mr. Campbell has become an authority on grapes and grape culture in Ohio, and his opinions thereon are entitled to careful consideration.

THE NATIONAL FARMER is published weekly at Washington, D. C., U. S. A.; price \$2 per year. In addition to information upon agricultural topics, some space is given to cognate topics of general interest.

THE SEAT ON THE HILL TOP,  
BENEATH THE OLD TREE.

What man hath not found on this changeable earth,  
Some shelter'd retreat to emotion give birth;  
Where memory, pointing to things that once were,  
Imprints on our faces a smile and a tear?  
To pridge give her follies, to pomp her display,  
Give to beauty her charms, give wealth what you may;  
Give to each of them all, but spare, spare for me,  
The seat on the hill top, beneath the old tree.

How can I but love thee, thou sacred spot!  
And think of the loved ones, who were, but are not;  
When I view thy old trunk, draped o'er with the vine,  
The Woodbine and Pipevine, thy branches entwine.  
And could but those dear ones who planted them  
there,

Sit again by my side, these blessings to share,  
There's naught in this wide world I'd barter for thee.  
My seat on the hill top, beneath the old tree.

Since thou wert a sapling, thou noble old tree,  
Thy youthful comparisons have long ceased to be;  
And oft have I wished thou wouldst whisper and tell  
What shrubs and sweet flowers did then with thee  
dwell.

Did Hepatica's buds invite thee to spring?  
And little blue Hare-bell, the old year's knell ring?  
Or child of the forest, all brimful of glee,  
Flee away to hill top, beneath the old tree?

Did brave Indian warrior find rest in thy shade?  
Or thy branches e'er shelter forlorn Indian maid?  
And some betrayed mother, with babe at her breast,  
For surely 't was here that the weary night rest,  
For the woes of mankind do we watch and weep;  
And then, in our weariness, slumber and sleep;  
The spot on this green earth best suited must be  
The seat on the hill top, beneath the old tree.

CHARLES ARNOLD.

A correspondent wants to know why an ear of corn seldom if ever has an odd number of rows, and where do the red and speckled grains come from when nothing but white is planted. Perhaps some of the intelligent readers of the *Rural Record* can tell, through our columns.

**THE PUGET SOUND FIR.**—One of the wonders of the American forests is the fir tree of Puget Sound. The trees average 200 feet high, and some specimens have been cut that measured 320 feet in length and twelve feet in diameter at the base, with a straight and well proportioned log length of ninety feet to the first limb.

**THE CONKLING PEACH.**—From a yearling tree of this variety, obtained of Ellwanger and Barry, in the spring of 1880, we picked a number of ripe peaches of uncommon excellence. It is a beautiful yellow peach, smaller than the Early Crawford, of a fine, juicy, rich, exquisite flavor, and very desirable in a

family collection. It may prove a desirable market variety for aught we know, as the first product of a three-year-old tree is no test of productiveness.

**TO PUBLISHERS AND EDITORS.**—Many Newspapers and Magazines have been established in the United States and Canada within the last two years, the names of which do not appear in any Newspaper Directory or Catalogue. The publishers and editors of such are invited to send copies and a full description of their respective publications to the *Editor of Hubbard's Newspaper and Bank Directory of the World*, New Haven, Conn., U. S. A., that they may be properly catalogued and described in the forthcoming edition of that work for 1883. Editors who kindly give this notice an insertion in their columns will confer a favor upon the Press of America.

**LARGE CELERY.**—Probably the largest root of celery ever taken to Boston market, measuring 38 inches in length, 24 inches round, and weighing 7 pounds, was raised on the market farm of G. D. Moore, of Arlington, who is one of the largest growers of early produce for Boston market. He has this season about six acres of celery, nearly all of this mammoth variety. He began to market it Sept. 14th, receiving \$8 a box of 2½ dozen. This variety is said to be the best flavored and most tender of any known, and brings the highest price.

**WOOD ASHES FOR PEARS.**—The pear seems to be especially fond of wood ashes, and we ascribe much of our success in past years with pears to a liberal and annual use of it in our pear orchards. All that we could make or buy was thus used, by scattering around the trees, the cultivator working it into the soil. Only the fresh, unleached ashes were used, and not only did our trees produce heavy crops and fine fruit, and present in their foliage that dark green coloring of leaf which indicates vigor and healthfulness, but the hoed and cultivated crops which were raised between the trees each year did not fail to appreciate the food they gathered in from that not appropriated by the fruit trees.—*Farm and Garden.*