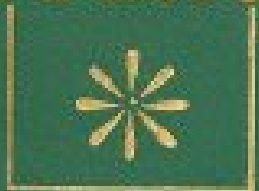


THE
CANADIAN
Horticulturist.



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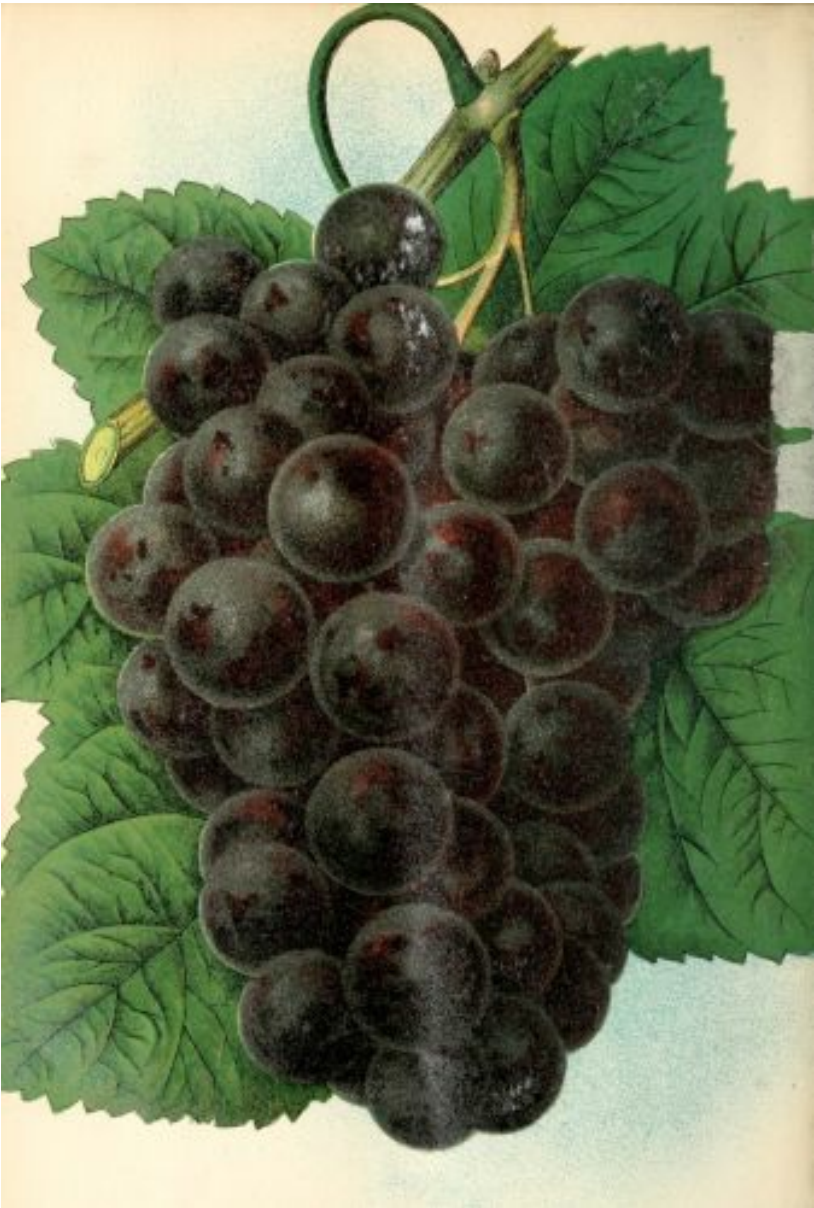
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WORDEN GRAPE.

THE
Canadian Horticulturist.

VOL. VII.]

SEPTEMBER, 1884.

[No. 9.

THE WORDEN GRAPE.

This is one of the many seedlings that have been raised from the Concord. It partakes largely of the peculiar characteristics of its parent in foliage, hardiness, and general appearance of the fruit. It was grown by Mr. S. Worden of Minetta, State of New York, from seed of the Concord. The bunch is large and shouldered, and the berries are large, black, and the skin is thin. The flesh is sweet, resembling the Concord in flavor, but considered by most persons better. It ripens about a week earlier than the Concord. Mr. Bush, of Missouri, says that it does not succeed in the South but is desirable at the North, where it is growing in popular favor.

Mr. Dempsey, of Trenton, Ontario, stated at the winter meeting of the Fruit Growers' Association, held in January, 1882, that the Worden is in the market two weeks before the Concord; that he did not know as it would yield as many tons of fruit to the acre as the Concord, from the fact that it is not as rapid a grower, and yet he considered it one of the most profitable black grapes that we have. Col. John McGill of Oshawa, finds the Worden to ripen some ten days earlier than the Concord, and on that account valuable for a cold climate.

Mr. Wellington, of Toronto, stated at the winter meeting held in that city in January, 1883, that he had found the Worden to be at least a week earlier than the Concord; he considered it to be of better quality, a little smaller, but fully as productive.

In order more fully to test the value of this grape in Ontario the Fruit Growers' Association made a present of a vine to those of its members who wished to give it a trial, so that it has now been very widely disseminated throughout the country, and we may in a very few years learn how it is succeeding in nearly every part of the Province. We shall be disappointed if it does not prove to be a very valuable grape in our climate.

**MEETING OF THE FRUIT GROWERS' ASSOCIATION OF
ONTARIO.**

The annual meeting of this Association will be held in the Town Hall, Barrie, on Wednesday and Thursday, October 1st and 2nd, 1884. The meetings will commence at ten o'clock a.m. of

Wednesday, the first of October, and will be conducted as far as practicable in accordance with the following

PROGRAMME.

Wednesday, October 1st.

A. M. MORNING SESSION.

- 10.00—Reading of minutes of last annual meeting.
- 10.15—Discussion on the most desirable new varieties of strawberries, and their particular merits.
- 11.15—What varieties of apples, pears, and of small fruits succeed on clay soils.
- 12.15—What insect is destroying the foliage of the maple trees on the grounds of Mr. C. H. Ross? Are its depredations confined to that locality? What application can be used or means adopted to destroy the insect or prevent its ravages.

P. M. AFTERNOON SESSION.

- 2.00—Question Drawer will be opened, and any questions found therein will be answered by some person indicated by the President.
- 2.30—The benefits of mulching in summer and winter, and the most suitable material.
- 3.15—Paper by Mr. A. Hood; subject to be announced at the meeting.
- 3.30—Discussion on Mr. Hood's paper.
- 4.00—Discussion on the varieties of apples best adapted to the climate and soil of the County of Simcoe.
- 4.45—What varieties of pears can be successfully grown in the County of Simcoe? On what soils should they be planted? What cultivation should they receive? What fertilizers should be employed?
- 5.00—Discussion on the best plants for hedges in the County of Simcoe and their management.

EVENING SESSION.

- 7.30—Question Drawer opened.
- 8.00—Address of welcome by the Mayor of Barrie, and response by the President of the Association.
- 8.30—Discussion on the desirability of interesting our children in floriculture by the cultivation of flowering plants and trees in the school grounds? Can the study of botany be introduced with advantage into our public schools?
- 9.30—How can purchasers of trees and plants be protected against the impositions of dishonest agents?

Thursday, October 2nd.

A. M. MORNING SESSION.

- 9.30—Question Drawer opened.

- 10.00—Annual address by the President.
- 10.30—Directors' and Treasurer's reports.
- 10.45—Election of officers for ensuing year.
- 11.15—Discussion on roadside tree planting; what benefits are to be expected therefrom; which are the best kinds of trees to plant; when is the best time to plant them?
- 12.00—Would a canning factory be likely to pay in this part of the country?

P. M. AFTERNOON SESSION.

- 2.00—Question Drawer opened.
- 2.30—Discussion on the marketing of small fruits; what are the best packages; best methods of packing; means of transportation; and best markets.
- 3.15—Discussion on the cultivation of celery; methods of growing; of storing for winter use; most desirable varieties; is it a profitable vegetable to grow for market?
- 4.00—Grapes, what varieties can be successfully grown and ripened in the County of Simcoe; on what soil should they be planted; what aspect is to be preferred; what cultivation should they receive; should they be protected in winter?
- 4.45—Asparagus—can it be profitably grown for market in the County of Simcoe; how should the ground be prepared; at what distance apart should the plants be set; how cultivated?
- 5.15—Flowering shrubs, what varieties succeed best in the County of Simcoe?

EVENING SESSION.

- 7.30—Question Drawer opened.
- 8.00—Peas for table use, which are the best varieties; can they be profitably grown for market?
- 8.30—Roses, can they be grown in the County of Simcoe; what soils are best for roses; what cultivation should they receive; and how should they be pruned?
- 9.00—Currants, which are the best varieties in cultivation; the best modes of cultivation; can they be profitably grown for market?
- 9.30—Closing address by the President.

The Queen's Hotel and the Mansion House will entertain members during the meeting at one dollar per day.

The Directors' meeting will be held at the Queen's Hotel on Tuesday evening, September 30th, at eight o'clock.

The Grand Trunk Railway will grant tickets to Toronto and return for a fare and a third from any station in Ontario, on presentation of certificate signed by the Secretary.

The Northern and North-Western will grant tickets to Barrie from any station on the line of that Railway on the same conditions.

The Canada Pacific will grant the same reduction.

All tickets will be good to go on the 29th and 30th September, and good to return up to 6th of October inclusive.

Members wishing to attend will apply to the Secretary at St. Catharines for certificates, stating over what road or roads they will have to travel, in time to have them received, so that

they can be presented on purchasing their ticket.

It is intended to hold an exhibition of fruit in connection with this annual meeting, to which all are invited to contribute. Persons residing at a distance can send their fruit for exhibition to the care of Mr. Charles Hickling, Barrie.

The room under the hall will be used for the exhibition of fruits. Gentlemen are requested to send samples of fruit for exhibition, and a committee will be appointed to examine them and make a report thereon.

These meetings of the Association are open to the public, and all, both ladies and gentlemen, are cordially invited to attend.

AMERICAN FORESTRY CONGRESS. ANNUAL MEETING.

The annual meeting of the Association will be held at Saratoga, New York, on Tuesday, September 16th, 1884. All interested in the Forestry movement are cordially invited to participate.

INDIANA STATE FAIR.

TO BE HELD AT INDIANAPOLIS.

The Fair will commence on Monday, September 29th, and continue to October 4th. It will be a strictly agricultural fair and farmers' annual gathering.

It is an acknowledged fact that any intelligent person may learn more by attending a State Fair, as to the improvement in live stock and machinery and progressive agriculture, than by months of travel for that purpose.

RASPBERRY NOTES.

The *Rural New Yorker* gives the results of some observations made at the Rural Experiment Grounds upon the time of ripening, and the quality of the Hansell, Superb and Marlboro' raspberries. There the Hansell was the first to ripen of any variety in the grounds. This was not the case in the grounds of your Editor, ripe berries were gathered from Highland Hardy before Hansell was ripe. The *Rural* adds, that Hansell has not been very prolific, and the growth of the canes is less vigorous than that of either Superb or Marlboro'. This corresponds with the writer's experience this year; indeed the Hansell *seems* to be a poor grower and a poor cropper, judging from the experience of this season. Nor is there any superiority in the quality of the Hansell to atone for its defects in vigor and productiveness. Mr. P. C. Dempsey, of Trenton, Ont., stated last year (see Fruit Growers' Association report for 1883, page 140), that he was disappointed in the Hansell, that he was able to gather in a patch of wild raspberries as good Hansells as from the

plants in his garden, being unable to see any difference either in appearance, quality or time of ripening.

THE SUPERB

is stated by the *Rural New Yorker* to have ripened soon after the Hansell, but not quite as early as the Marlboro'. The berries, the *Rural* adds, are often imperfect, the drupes pulling apart easily; the later berries are all imperfect, and the drupes of unequal size; the color dark, and the quality acid without the rich raspberry flavor which some acid berries possess. This is very nearly the experience of your Editor with this variety. He found the berries that first ripened to be very imperfect, crumbling apart on being gathered; those ripening later were more perfectly formed, of better size, and some of them could be gathered whole. But they are very sour and thin flavored at best, and too dark in color to be popular in market.

On looking into the report of the American Pomological Society for 1883 we find that J. T. Lovett, of New Jersey, and C. A. Green, of New York, both say that the berries of the Superb crumble badly.

THE MARLBORO',

says the *Rural New Yorker*, "is valuable for fruitfulness; for the large size and firmness of the berries, and for vigor of plant." The writer has not fruited this variety, and consequently is unable to speak of its qualities. In the American Pomological Society's report for 1883, page 52, C. A. Green is reported as saying that the fruit is large, bright red, firm, of good quality, and ripens very early; and that the plant is a vigorous grower and heavy yielder. Also, J. H. Hale, of Connecticut, is stated as saying that it is a strong, vigorous plant, and that the fruit is of largest size, bright color and very firm, ripening extremely early. He considers the flavor much like that of the Brandywine.

SHAFFER'S COLOSSAL

is reported by the *Rural New Yorker* as beginning to ripen July 5th, the berries continuing to grow to the largest size, the quality intensely raspberry flavor, having considerable acidity, yet tempered with sugar enough to make it sprightly rather than sour. The writer has fruited this variety for two years and is much pleased with it for cooking purposes, preferring it for that use to any of the red varieties. It is the most vigorous grower of any sort that he has yet seen, yields well, and has never suffered from the winters in his grounds. The berries are by far the largest of any of the cap varieties, and would sell in market at sight were they of some brighter color than the dark maroon which makes them so unattractive in appearance. When our canning establishments shall have learned the excellence of the flavor of these berries when properly put up, there will be a great demand for this fruit. In the report of the American Pomological Society for 1883, at page 52, will be found the opinions of several who have fruited this variety. Dr. S. Hape, of Georgia, says it is "superior for canning, very productive;" J. H. Hale, "fruit of largest size, valuable for canning;" Parker Earle, of Illinois, one of the most extensive berry growers of the United States, says the fruit is of excellent quality for the table for those who prefer an acid raspberry, being taken at his own table in preference to the Turner, which he esteems the richest and sweetest of all raspberries, and that for canning it has very great merit. J. T. Lovett said, "it is the strongest growing and the most prolific of any raspberry that I have yet grown. The fruit is of colossal size, and although rather tart to suit most tastes, yet it is sprightly and to my liking. I have found it the best of all berries for canning." Chas. W. Garfield, Michigan, reports that it is universally popular, that it went through last winter, 1882-83, under very trying circumstances and came out in good condition, and that in his own case it has borne one-third more fruit than any other variety of raspberry grown in his vicinity (Grand Rapids), and everybody wants it for

canning purposes. G. B. Brackett, of Iowa, reports it as being very hardy, productive, and surpassing all other varieties in size.

THE SOUHEGAN

is dismissed by the *Rural New Yorker* with the remark that it ripened scarcely earlier than the Doolittle, and was crowded with small berries of poor quality. This is scarcely what your Editor would say of this black raspberry. It is crowded with berries truly, which are not as large as those of the Gregg or Mammoth Cluster, but fully as large as Davidson's Thornless and ripening at same time with it, and of as good a flavor. The Doolittle began to ripen before the crop of the Souhegan was gathered, so that the last picking of Souhegan and the first picking of Doolittle came in together. The Hopkins and Tyler are much like the Souhegan, and ripen at about the same time. Where it is important to get an early ripening black raspberry these varieties will be considered valuable, but which of the three is the best the writer's experience does not yet enable him to say. Differences in soil may cause difference of opinion on this point.

QUESTION DRAWER.

FUNGOID SPOTS ON APPLES.

DEAR SIR,—I have about fifteen acres of apple orchard all told, some old, some in their prime, and some bearing for the first time this year, and the apples, one and all, with hardly an exception (except the Duchess of Oldenburg) are covered with blotches and cracks. My trees are all well tended and pruned, and the soil is in a first-rate condition for crops, but the apples are dreadful. What can I do? I am myself inclined to heavily manure them with bone dust and wood ashes. I did mulch them all heavily this year with barn-yard manure.

I am going to put down some dwarf pears and Duchess apples, would you recommend planting in the fall or spring?

The apple trees are all well loaded with apples, but such apples!! If this is to happen in a good year, what will they do in a bad? Can you suggest any probable cause or any possible remedy?

I am, yours faithfully,

GEORGE BUNBURY.

Oakville, Ont.

REPLY.—The report of the committee on those scabs on the apple is anxiously expected. You will probably do best to plant in spring.

INSECTS.

DEAR EDITOR,—I send you a leaf of a St. Lawrence apple tree, on the reverse side of which

you will notice a number of animaculæ which are perfect strangers to me. The ants drew my attention to them. I attempted to kill the ants before I noticed these customers. I hope they will survive the journey. They cannot be the production of the ant, and therefore I conclude that the latter is as useful in the garden as the *ant* is (sometimes) in the household. I may add that the ants survived an application of coal oil and carbolic acid (one ounce to the pail).

Yours truly,
THOMAS P. FORAN.

Aylmer, Que., Aug. 13th, 1884.

ANSWER.—The animaculæ are the black aphid. They are easily kept in check by syringing with tobacco water. Steep some tobacco stems or leaves for a few hours in warm water, and apply the water with a garden syringe. The ants feed on an exudation from the aphid, not on the aphid themselves.

PROPAGATION OF CLEMATIS.

Please let the readers of the *Horticulturist* know how the Clematis, Jackmanni, &c., may be propagated. I fancy by layers, and if so, when should they be put down. If by layers, would “serpentine” layering be the best?

Yours, ROBERT STARK.

Woodstock, August 13th.

ANSWER.—They are usually propagated by grafting on seedlings of *C. lanuginosa*, growing them under glass. They can be more slowly propagated by layering after the wood has become sufficiently ripened, so that the layers will not damp off. The manner of layering, so long as the emission of roots is facilitated, is of no moment.

RIGHT TO THE WATER.

MY DEAR SIR,—In your August number is a short article on irrigation. I have about twenty acres of fruit trees in a favorable position for irrigation from a spring creek that crosses my place on higher grounds. The question has been under discussion in my own mind for several years, in fact, has been tried in a very rude manner for a year or two. But there are several questions that have been preventing my expending more in a more permanent arrangement.

1st. Have I a right (legal) to use all the water I require or wish from a stream crossing my place without reference to owners of land on banks of stream lower down, provided I use the water upon my place (50 acres) exclusively?

2nd. If not, what proportion of the water may I use?

3rd. Have I any legal right to use any of the water for irrigation purposes?

I am very much interested in the above, and have failed, so far, to get clear and satisfactory answers. Perhaps you can help me.

GEO. M. AYLSWORTH.

Collingwood, Aug. 8th, 1884.

[Will some of our legal readers reply.—ED.]

WEEDS.

DEAR SIR,—What is the best work on “weeds,” giving the names and descriptions of our Canadian weeds, more especially noxious weeds? Kindly answer in next number of *Canadian Horticulturist*.

G.

Berlin.

REPLY.—We do not know of any work on Canadian weeds. The nearest to such a book is H. B. Spotten’s *Canadian Botany*, Part II., which is a most valuable and reliable guide to the study of our native plants.

CELERY CULTURE.

How to Grow Fine Celery—A new method by Mrs. H. M. Crider, published by H. M. Crider, York, Pa., price 25 cents, is the title of a pamphlet of fourteen pages received by us, which we have read with care in the hope of being profited by the perusal. This treatise commences with some general remarks on the difficulties that hitherto had been supposed to attend the cultivation of celery and the sudden awakening of the writer to the recollection that celery was a semi-aquatic plant, and then on page seven gives instructions for raising the plants from the seed. The method here given is that usually pursued in the raising of plants from seed, for which no novelty is claimed. On the next page is given instructions for planting out, in which we are told to open trenches two feet deep, leaving one foot of fine soil in the bottom, and set the plants in the trenches in single rows, six inches apart. Now, there is nothing new in this. Corbett, who wrote long ago, gave directions for making trenches twelve to fifteen inches deep, putting rich compost in the bottom, digging it in and planting six or eight inches apart in the bottom of the trenches. We thought that we had got out of these trenches in celery-growing. The writer has grown celery successfully for many years without planting in trenches at all. Indeed this trench-making is a useless expenditure. Our method is to open furrows with the plough about four feet apart, then drive along them with the team hitched to a waggon loaded with fine compost, and half fill the furrows with the compost, then with the plough throw the earth back and cover the compost; follow with the roller to level off the ridges, and plant with the dibble over the compost. The trouble and expense of opening trenches two feet deep and working up the bottom so as to leave a foot of fine soil, will certainly be many times more than working with the plough and planting on the level surface. Our author then directs us to tie each plant to a stake three feet high, and keep them upright by frequent tyings during the whole period of their growth. Well, this is something new; at least we do not remember to have read or heard of such a procedure in celery culture. If the object be to make celery-growing as troublesome and expensive as possible, then this is good advice. Fancy a market gardener tying up a couple of acres of celery plants in this way. An acre will contain fifty-five rows, four feet apart, and one hundred and ninety-eight feet

long. If set six inches apart in the row, each acre will contain twenty-one thousand seven hundred plants. What would the gardener's crop cost him if he were to follow this advice? We are further advised that green corn husks are excellent for tying the plants to these stakes, because it is soft, flexible, never cuts the plant, and decays readily when the celery has been earthed up. We cannot say how many ears of green corn must be husked to supply husks for the tying of an acre of celery, but this involves the growing of an acre or so of corn to supply the husks, and as it is not usual for the market gardener to husk the corn before sending it to market, he will probably have to feed this green corn to his pigs in order to supply himself with the requisite husks.

Then our author advises to depend on water to keep the celery fresh and growing. From first to last the measure of water you give will be the measure of your success, is the axiom given. But this is no new idea. The readers of the report of the Fruit Growers' Association for the year 1882, will remember that on page 33 the advantage of having a plentiful supply of water is fully set forth. But great as that advantage may be, it would be a great mistake to conclude that celery can not be grown and well grown without an artificial supply of water. Our market gardeners, who grow celery by the acre, depend upon the clouds for their supply, and seldom fail of raising excellent crops.

The plan usually pursued by them is substantially the following:—The ground having been prepared by previous ploughing and harrowing, furrows are opened at about four feet apart; these are filled with compost from the compost heap, which has been made fine by repeated turnings. With the plough the earth is thrown over the compost, the ridges formed by this operation are then flattened with the roller, and the plants set out in straight lines over the compost. The space between the rows is frequently stirred with the cultivator, and the ground about the plants kept loose by hoeing. By this means the whole surface is kept loose and friable all the time and the celery rarely suffers for want of water. When the plants have attained sufficient size they are carefully handled, and the earth drawn about each plant sufficiently to hold the stalks together. The earth is then thrown up to the plants with the plough and firmed about them with the hand. One earthing up towards the end of the season is quite sufficient.

THE WHEAT CROP.

The report of the Bureau of Industries for August gives a cheering account of the wheat crop of the Province. The fall wheat appears to have made steady improvement throughout the season, and in localities where it was regarded as hardly worth saving in May, good harvests have been reaped. The moderately cool weather and occasional rain showers favored continuous growth and healthy maturity, and the grain is an excellent sample, being plump, hard and bright.

CORRESPONDENCE.

DOES FRUIT GROWING PAY.

DEAR SIR,—With pleasure I purpose writing a series of contributions to the *Horticulturist*, embracing my observations and my experience in the culture of wheat and that of small fruits, shewing their relative cash returns per acre to the culturist. First I will take wheat vs. strawberries, the ground to be rich and in good heart. Very well, take wheat, rent per acre, \$12; fallow, ploughing twice, \$5; rolling, cultivating and harrowing, \$3; seed and drilling, \$3; harvesting and threshing, \$5; total cost per acre, \$28; product per acre, 40 bushels, \$40; net proceeds, \$12. Strawberries, rent per acre, \$12; fallow, ploughing twice, \$5; rolling, cultivating and harrowing, \$3; marking and planting, \$4; plants, 5,000 at \$4, \$20; cultivating and hoeing, \$7; baskets, 6,000 at \$5, \$30; crates, \$30; picking, \$60; freight to Toronto, \$30; commission on sales at 8 cents per quart, \$48; total cost per acre, \$250; product per acre, 6,000 baskets at 8 cents, \$480; net proceeds per acre, \$230. Then I have the next year less the cost of production, save baskets and picking. If some deem this too high, leave production of wheat at 40 bushels, and cut strawberries to 5,000 baskets, I still net \$150 per acre. I may say strawberries yielded in this neighborhood, in several instances, 8,000 quarts per acre.

Yours respectfully,

GEO. WALKER.

Beamsville, Ont., 21st July, 1884.

DISCOLORING OF THE GREENING APPLE.

For many years we were troubled with the skin on our Greening apples turning black, and the whole apple assuming the appearance of having been either badly bruised, or being affected with a sort of dry rot. They were invariably kept in barrels properly headed up and along side of Baldwin's, Russets, &c., but none of these varieties were ever affected in this way. They invariably preserved their natural color until about the beginning of February, when the discoloring would begin, and their sale would be very materially affected. The fruit, although badly discolored, was not rotten, for on cutting it, it would open up perfectly sound and fresh. Its appearance, however, was such as to materially affect its sale, and consequently we invariably endeavored to dispose of our Greening's early in the season, and retain our other varieties for selling later on. This season we left one of the barrels open to see what effect it would have, and we find, as a result, that the fruit has largely retained its original color, and is consequently much more saleable than those left enclosed in the original packages. From this we infer that Greenings should invariably be kept in a cool place, either on shelves or in an open bin, where they may be subjected to the free action of the air.

A. A. WRIGHT.

Renfrew.

POULTRY.

MR. EDITOR,—Although many months have passed since I left your county I still have interest there, and write to tell your readers how to make poultry raising a profitable business. The demand for early chicks, when from 8 to 10 weeks old, is very great, and in large cities like New York, New Orleans, Chicago, St. Louis and Denver, they find a ready market, at from 50c. to

60c. per lb., but to obtain these high prices they must be hatched early, February, March and April being the best months. As hens are not setting by instinct that early, you must use incubators. They will hatch a larger per cent. of chicks than hens, and the chicks are very healthy, being entirely free from lice. I have two incubators that I made myself. They cost me \$5 each, and hold 480 eggs. Any one can get directions for making an incubator like mine by writing to J. Bave, New Concord, Ohio, inclosing stamps for postage. My incubators are a complete success, and being so cheap are within the reach of all, and any lady can run them. I have 212 hens, and since March I have sold from these 212 hens and my two incubators \$1,427 worth of chicks and eggs. Now is the time to prepare for the winter and spring trade. Make your incubators at once and give them one trial this fall. Then you will be ready to go to work intelligently. I run my incubators the year round, and think there is no business requiring so little capital that yields such large profits. I will soon write you an article on "Which are the most profitable varieties of poultry to raise," and on other poultry topics, if you wish.

POULTRYMAN.

W. G.

LETTER FROM NOVA SCOTIA.

MY DEAR SIR,—We are having a tropical rainy season. Rain nearly every day since the 1st July, and no prospect of any change. Hay makers are in despair; a great many have only began to cut their crops, and the quality will be greatly deteriorated, being long since past its prime. Fruit bloom was abundant and the season favorable for setting the fruit, but I observe a large proportion is falling during the protracted season of wet weather. The strawberry crop was much damaged by the rain, at least one-fourth of the fruit rotting or failing to mature. Local prices kept up well under the diminished supply, not falling below fifteen cents per pound at retail. Wilson is grown chiefly, but all varieties that succeed anywhere, do well here, except Sharpless, which is too large to ripen all through. It is like a very stout old Scotchwoman who replied to a question as to her health, "That there was ower muckle o' her to be a' well at ae time."

I am still in quest of a reliable Ontario fruit grower. I find there is a very great difference in the quality of apples from the different counties. A barrel of specimens from Meaford and another from Cobourg were no better in quality than Nova Scotia apples, and much inferior in size. From Galt came the best in quality I have had yet in *most* kinds. I have never seen a second lot of Ribston Pippins anywhere approaching in quality a lot of, I think, twenty barrels you shipped me from St. Catharines.

Last season the crop was poor everywhere. I got some pretty good from G. J. Miller, of Virgil, and from A. M. Pettit, of Grimsby; but a friend of mine dealing in fruit got a carload from Linus Woolverton, of Grimsby, whom I had supposed to be as reliable a shipper as could be found in Ontario, and a large proportion in the barrels contained utterly worthless fruit. I do not attribute the dishonesty to Mr. Woolverton, but to the grower who supplied him.

Mr. Miller generally sends me fine apples, but certain varieties do not succeed well with him; the N. Spy is always spotted and more or less misshapen, not ten perfect apples in a barrel; E. Spitzenburg from him is tough and too acid, from Galt this variety was fine, indeed most other kinds were better in quality, but I do not know any one at Galt except Thos. Todd, who shipped to me so late in November that the lot was badly frozen before they reached St. John even.

Yours very truly,

CHARLES E. BROWN.

CHAPTER ON CHERRIES.

The season for small fruits has come and gone, and most sorts have made a profitable return to the grower.

The crop of strawberries was very large. Prices were fair, but the hot weather during the latter part of June shortened the season. With but one or two exceptions the market was never glutted, and both buyers and sellers seemed satisfied.

Currants of all varieties were plentiful and very good prices were obtained. The same remark will apply to gooseberries. Good samples fetched from \$3 to \$4 a bushel.

Raspberries.—The supply was very fair, but I believe so large a crop as is generally raised was not forthcoming this year, but there were not many opportunities for the buyers to *bargain*. Those who had berries to sell asked a fair price and got it, those who waited till raspberries got cheaper had to go without.

Cherries.—This class of fruit seems to be a very uncertain crop to raise. When the cherry trees were in blossom there was every indication that a good crop of cherries would be had, but from some cause or other the supply of good fruit was very limited.

Many of the growers of this variety of fruit are very much discouraged by the continued failure to raise a crop of good cherries. I have been a large and successful grower of cherries for some years past, always obtaining good fruit and large prices. It is now twenty years ago when I first began to grow cherries. In getting the different varieties of trees I will say that it was not my own knowledge of which was the best to cultivate that enabled me to get such a good collection of cherries, but it is only fair to give the credit to a local well-known nurseryman who recommended them to me, and I commenced with the following varieties:—May Duke, Late Duke, Early Purple Guigne, Governor Wood, American Heart, Black Tartarian, Tradescant Black Heart, Black Eagle, Reine Hortense, Napoleon Biggarreau, Early Richmond, and Butner's Yellow. Yes, there was another—Knight's Early Black. The above lot you may consider as a splendid assortment, and I will give you my experience in cultivating them.

Early Purple Guigne.—This cherry is the earliest variety grown in this section of Ontario, and perhaps that is its great fault. The tree is hardy and a free grower, a good bearer, and fruit ripens about the middle of June. It comes in about the time that the strawberry crop is in the market, and sells well to the children in small quantities. This tree grew with me till it got 20 ft. high. The robins had been with me nearly three months, and, I suppose, subsisting on worms and grubs. This variety of cherry being the first in the season the birds go at them and devour them so rapidly that very few are left even of a good crop. It got to be so unsatisfactory to me that I decided to cut the tree down and get something more profitable to take its place. It is an excellent cherry, and indispensable among the early varieties; it's only fault was I could not get enough of them.

May Duke.—This is an invaluable cherry, and a very popular fruit. It ripens with me about the beginning of July, just as strawberries are over, thus bringing a good demand for it, with good prices—80c. to \$1.00 a peck, wholesale. With me this tree has a very peculiar habit of producing some branches which ripen much later, thus protracting for a long period the season in which its fruit is in use. I picked a large quantity about the beginning of July, and have picked fine fruit off the same tree on the 22nd and sold them for a larger price than what I got for the first crop. It is a splendid cooking and dessert cherry, and ought to be cultivated by any person who has room for

a tree.

American Heart.—This is a beautiful cherry, which comes in next. It is pink or red in color, and not so good a market cherry as the black varieties. This tree looks a handsome sight both in blossom and fruit, but of late years it has had a tendency to rot, which has been a great drawback in cultivating it. I shall speak further on in reference to the cherry rotting before it is ripe. This will apply to all varieties of that fruit, and I will suggest remedies.

Governor Wood is a fine light cherry, of the size and shape of the Napoleon Biggareau. Formerly it was one of the most useful trees I had. Last year the entire crop of some bushels all rotted—could not pick a quart of good ones off. This year there was scarcely a pint of bad ones; the whole crop was marketed very satisfactorily.

Black Tartarian—This cherry has been to me a fruit of great profit. It is undoubtedly a superb fruit, and in size, flavor and productiveness it has no superior. Year after year I have had enormous crops of excellent fruit. They commence to ripen with me about the first week in July, and, if the weather is not very hot, the picking will extend over three weeks, and the further you go the better they come. Of late years there has been a great drawback in cultivating this fruit by its having the rot. I would advise those who have a tree full of Black Tartarians to begin to pick early. Do not wait till the crop gets ripe, for then you may find as many rotten as otherwise. When the cherries are the color of the May Duke begin to thin them out; you can get good prices for them, and those that are left on the tree will be benefited by their removal.

I will give your readers the remaining varieties, and also will suggest remedies for their growth, in the next number of the *Horticulturist*.

E. C. F.

EXPERIENCE IN STARTING A FRUIT FARM.

DEAR SIR,—I beg to give my experience in trying to start a small fruit farm, and in doing so I suppose I had better start at the beginning, which is that last April twelvemonth I bought 25 acres of land, most of which was in sod, and of course should have been well summer-fallowed before planting fruit in it, but I was in too great a hurry to wait a year for that, and, as I was assured by the person I bought from that there was no scutch grass in the land, I ordered about \$100 worth of plants and trees. Of strawberries I set out the Wilson, Crescent Seedling, Bidwell, Charles Downing, Captain Jack, Sharpless, and the Early Canada, and a few each of the Manchester and Big Bob, and let me say that Little Bobbie would be a more appropriate name for the latter, if I got the true thing. The Manchester did so well both in standing the drought and the size, &c., of the fruit, that I let all the runners grow. The Early Canada set more fruit than any one I have, but a drought set in just as the fruit was changing color, and in consequence I did not get any fruit. In short, out of nearly 20,000 plants I set out the spring previous, I did not pick ten quarts of berries, and these were all from the Crescent Seedling and what came to me labeled Manchester, and I hope in future to plant largely of the two latter kinds with the Early Canada and the Sharpless to fertilize them.

In raspberries I ordered 1,000 Brandywine, 1,000 Turner, 500 Davidson's Thornless, 500 Gregg, and 100 each of two other varieties. I ordered the above except the Sharpless and Early Canada, from A. M. Purdy, of Palmyra, and with some other things my order amounted to nearly \$100, but instead of getting what I ordered, he sent me things I never ordered in the place of what I did order. He did not send me one cane of the Gregg Raspberry, but he sent me hundreds of Green Prolific, the same as to the Bidwell, and also hundreds of the Glendale Strawberry. The

latter strawberry, with Green Prolific, I never planted. This, I consider, extremely dishonest in any nurseryman. What would he (Purdy) think if he were to send \$20 to a grocer for that worth of tea, and he kept his \$20 and sent him soap instead. Why that would not be as bad, because soap is not a perishable article, but strawberry plants are. I also set out a few grape vines, a few plums and apples, of course, and I am trying the Flemish Beauty, Clapp's Favorite and the Sheldon Pears. The two first came out all right, but one of my Sheldon's was frozen down about 18 inches. This I expected, as it sent out a shoot about three ft. long. This I don't like in a fruit tree of any kind in our section. I want them to grow slow. I know the Flemish Beauty and Clapp's Favorite to be doing well in and near Perth. One Flemish I have had under my eye for ten years now. There are two seedling pear trees (Old Patriarchs) in the Township of Bathurst, that bear, I am told, large crops of fruit every year. I have seen the trees, but never when the fruit was in season. I hope to taste the fruit this coming fall. I boast of being successful at grafting, but I could not get a graft from one of these trees to grow for me. If the fruit suits me I will try again. At the time I found these pear trees in Bathurst I also found an apple I mistook for a Spitzenburg. It was in the month of March, as good a dessert apple as the Spitzenburg, a good cooker, and the person (a highly respectable farmer) in whose house I got them assured me they grew on an old tree in his orchard, and he expressed himself as exceedingly sorry that the tree being very old was showing signs of decay. He could not give me the history of the tree. It was on the place when he bought the farm over 40 years ago. I took some scions home with me, and in the spring I grafted them into seedlings; I try always to have some for such purposes, and I hope next year to see some of them bearing fruit. I found another old apple tree that bears a good crop every year of fruit larger than the snow apple, and I think a little better in quality. This tree, I am assured, is a seedling. I hope also to see this tree fruit on my place next year. I am trying several varieties of apples, and I have a plum I found with a farmer that bears large crops of plums every year of a quality if not equal to the old English Magnum Bonum, they are nevertheless very good and a good size, and I expected to have seen it growing on my own grounds this year, as one of the trees I have set bore quite a lot of fruit, and some I took off to make sure of some maturing, as I felt rather anxious about it. I visited the tree every day and I found the plums to be dropping off until there was only one left, and as this one stayed for some time all alone I thought I was to have one, but woe is me, one day I went to look at my poor lone plum and found an insect of some kind making a seat of it, and whilst I was looking at it, down went the plum, insect and all. (No sparrow near.) I looked on the ground to find the insect, but could not see a trace of him. I wished to know whether the weight of the insect brought it down or whether it ate the stem through. I picked the fruit up, but as my eyesight is not as it used to be, I could not tell, and my daughter had my microscope at school with her, so in the dark I concluded the insect ate the stem through, and as I could not find the insect I longed for a sparrow and a stone to throw at it, a gun to shoot it. We grow in this section abundance of wild plums, and I find that the crop is a fair one this season.

I must not forget to mention that amongst other things I got from Purdy was a Russian apricot, and I am delighted to be able to say for the encouragement of others that it is doing splendidly, but I am a little afraid it is growing too fast for the coming winter. Will you please tell me if I am wrong. I think of cutting 8 or 9 inches off the longest shoots, and this is a thing I had rather not do if it would do without it.

All the above varieties of fruit trees and grape vines (the Worden, Moore's Early, Champion, Brighton and others), were planted in sod and are doing well. When I say planted in sod, perhaps I had better explain that after ploughing I dug out the sod, broke it up, and in the hole I put a shovelful of sand. On this I spread out the roots of the vine or tree; I then covered the roots well with sand. On top of this I placed the broken-up sods; the soil is clay loam. My theory was if you take a man from a rich diet to a poor one he does not suffer from indigestion, but if you take him

from a low diet to a rich one there will be sickness sure, and we certainly kill a great many of our trees with the food we give; it makes them grow too fast, and they are then too tender to stand our winters.

My trees did not grow much last year, but they now are doing fine and are looking extremely healthy. I am only afraid of my apricot; it is doing too well to stand the winter. All my acquaintances tried to persuade me to summer-fallow, not to attempt to put my valuable trees into turned-up sod; passers by would look over the fence and laugh. I could not prevent this; they have had their laugh and I have gained a year with my trees. The ground, too, was uneven, and when I came to a hollow place where water would stand, I still planted a tree but did not dig a hole; I stood the tree up and built earth over the roots. I wheeled sand round it and rotten manure near the top, and then earth. By this means I had no blanks in the rows. If I had not taken my own plan of it I would have had to borrow a piece of ground to put the valuable trees into for a year that I picked up in the manner mentioned above. I did not lose a single tree. I have often made the boast that I never planted a deciduous tree that did not grow, but last year when I looked at the ground (sod and full of scutch) I thought, well, the boast will be taken out of me this time. The trees I got from Purdy had been a long time on the road, and some of them had grown and were blanched when I took them out of the boxes. A fellow traveller in amateur horticulture was present and said he would not give me 10 cents for the whole thing, and what would be the use of planting them.

I have written the above facts, Mr. Editor, for those of your readers who are very orthodox and think two or three years must be spent in preparing the ground before fruit trees can be planted in it. I have read a great deal about the ground being well manured the year previous, &c.

I beg now to state that I read the yearly report of the Association with a great deal of pleasure, and I consider I derive a great deal of profit from said reading, but when I tell your readers that this spring, besides planting 150 gooseberries, 150 red and white currants, I planted 150 black currant bushes, they will doubt the profit part, and I will tell you why I went against the advice of the Association in this. In the first place, my ground being clay loam, it will suit them, and another thing I boast of is that I can always insure a good paying crop, but neither clay loam nor any other loam will give you a crop if you do not give them lots of manure, and even with plenty of manure you will fail every time if you hoe round them, for the reason that the roots of black currants are like a door-mat, almost so thick together and close to the surface so that when you hoe you cut the roots up. I have sometimes put manure round them in the fall, and in the spring I have taken a spade and carefully put it about an inch under the surface and turned the manure under in that way. The only fault I have to black currants is they do not ripen all at once. I wish I could get the Champion for that reason, and when I am using the word Champion let me ask that the grape of that name be not exterminated like the poor sparrow, until we find out what kind of wine can be made from it, and if good, I would consider it the most valuable grape ever introduced, for it is early, hardy and productive; for what will we do in this eastern part of Canada when the Scott Act men take the whisky from us, if we cannot make ourselves a drop of wine. I often say that had this country been settled by some nation other than British we would be drinking our wine instead of this horrible stuff they choose to call whiskey.

Another time, with your permission, Mr. Editor, I will tell your readers a little of my experience amongst flowers, as I also boast a little about roses.

Yours truly,
GEO. MITCHELL.

PERTH, Aug. 18th, 1884.

NOTES ON SOME NEW FRUITS.

BY HON. M. P. WILDER.

I beg to state that your journal is carefully perused soon after its receipt. So it is with others as fast as possible, but yours is the Northern star, to which we look for information in your region. Our season has been very favorable for the small fruits, and has enabled me to test with some accuracy some of the newer kinds.

The Prince Strawberry is large, uniform, late, *very good* and prolific.

The Primo (of Berries) handsome, productive, and of high flavor.

The Mrs. Garfield, both in plant and fruit, seems to have good characteristics. We are on the high road in the improvement of the strawberry, and the time is not far distant when we shall have an abundance of varieties allotted to the market and home uses in all sections of our land.

Manchester is a good plant and when fertilized by Sharpless has produced abundantly, but I have not observed the changes referred to in the proceedings of the American Pomological Society by such impregnation. However, we must look into this matter, strange as it may seem, for I am not too old to believe that there is nothing new under the sun in vegetable physiology, and I can well remember the time when my first attempts in hybridization were considered as almost ridiculous. Now it is an acknowledged science, and its bounds for improvement are without limit.

Of raspberries, our old Franconia, which came to us more than forty years ago, still carries off the first prize at our exhibitions. Cuthbert has done well. Souchetii-blanc, or White Transparent, as we have it, is my most reliable variety for home use. Caroline serves us well, and is a remarkable illustration of the influence of cross fertilization, a true hybrid, its fruit having the color, texture, and flavor of and sending up suckers like the true raspberry, while the plant has the wood, foliage, and habit of the Caps, and like them also roots from the tips; but wonderful indeed as the effect of hybridization is, I am not prepared to believe that the raspberry has been crossed by the strawberry, as was represented at a late exhibition of the Horticultural Society of London.

The Marlborough raspberry promises well; plants sent me in May gave fruit July 10th to August 1st; a remarkable robust plant, having shoots four to six feet in height, and hardy; it will be an acquisition.

But I have written too much already, and will close by assuring you of my desire for the prosperity and usefulness of your journal and the cause to which it is devoted.

Dorchester, August 14, 1884.

THE WEALTHY APPLE.

BY T. H. HOSKINS, M.D.

This fine iron-clad fruit, which has proved such a "bonanza" to the fruit growers of the "cold north," has spread along our northern frontier and into the adjoining Provinces with wonderful rapidity, so that although it is only about fifteen years since the original tree bore its first apple, bearing trees and even orchards of it are to be found at short distances all the way from Washington Territory to the Gulf of St. Lawrence. The fruit itself has as few faults as any apple grown, being of good size, fine color, regular shape, a good shipper, "very good" to "best" in

quality for eating out of hand, and for cooking. In season, like the Baldwin, it varies from early fall to all winter, according to locality, but in the northern part of Maine, Vermont and New Hampshire and in Quebec and New Brunswick it will keep until March or April without serious loss. The tree is a rapid and erect grower while young, very much resembling in the habit of growth and early and profuse bearing the Russian apples of the type of the Duchess of Oldenburgh. If allowed to bear when young the growth is checked, and the tree sometimes injured. This should be avoided by removing all or nearly all the fruit, until the tree has reached two or three inches in diameter, which is usually about five years after setting.—*Rural New Yorker*.

PROSPECT PARK.

About two miles from the City Hall or true center of Brooklyn, Long Island, and a half hour's ride by the horse-cars from the principal ferries of that city, is situated a pleasure-ground which in some respects we may term the most noteworthy in America. Prospect Park with its five hundred acres is by no means the largest or most elaborate place of public resort in the country, but it has this one distinguishing characteristic above all other parks in that it realizes in the highest degree the true pastoral idea, the embodiment of which gives the old English lawn its special and peculiar charm.

The main approach to Prospect Park is perhaps the most artistic feature it possesses. A great oval paved space of ten acres, called the Plaza, and situated at the junction of Flatbush and Ninth avenues, introduces the visitor at once to the most agreeable and impressive portion of the park. Embracing from its high point of vantage a comprehensive view of Brooklyn for miles, the effect of this Plaza is greatly enhanced by the character of its boundary lines, which consist of several mounds twenty-five feet high, covered with choice Evergreens. It is curious to note how, with all their actual artifice, these mounds impress the observer as genuine bits of the natural formation of the region. In the centre of the Plaza is a colossal fountain and statue of President Lincoln.

Passing through this noble vestibule, distinguished alike for amplitude, symmetry, and dignity, we enter upon the area of the park itself. Our space does not, of course, permit us to describe in detail the many features of interest that meet one at every turn throughout the intricate maze of six miles of carriage drives and eleven miles of foot-paths, but we will consider briefly a few of the more important and attractive points.

As we enter and saunter along the west side of the park, we find ourselves completely shut out by trees and shrubs from Flatbush Avenue, a few yards away. The sense of the close neighborhood of the city is still farther eliminated by the natural woodland appearance of the system employed in arranging the trees and shrubs. A short distance from the Plaza, a glimpse through an archway under the main drive, evidently placed at precisely this point for a distinct purpose, reveals a great far-reaching sweep of undulating meadow fringed by remnants of an original forest of Oak, Elm, and Chestnut. This green or Long Meadow, as it is called, consists of not over twenty-five acres of open grass space; but its natural hills and hollows have been managed so as to give, through our peep-hole of archway, the impression of an unbroken perspective of miles. This feature is the most important in the park; for, without a single carriage road, a field of ample dimensions is offered for the illustration of the pastoral idea.

"Thousands of people," says the "Report" of the landscape architects, "without any sense of crowding, stroll about the level or undulating, sunny or shady turf spaces that are to be found in this strip of pasture or woodland." Here, as elsewhere, the original features are not only strictly

adhered to, but actually intensified by raising the hills with soil and trees and deepening the hollows. Old forest trees are generally throughout the park carefully preserved.

Passing on by a deep dell where a small pool and steep hill-side are beautifully ornamented with choice specimens of rare trees and shrubs, and where the water and open ground are arranged specially for the amusement of children, we come by devious ways past a deer paddock, protected by a sunken moat and fence, to an important region of the park.

Here we find, on the borders of a lake of sixty acres, an open space finely decorated with carved stone balustrades and vases. Within this space grow some of the best trees and shrubs of the park, choice Elms and Maples from Japan, America, and Europe, and on the hill-side, remarkable specimens of Rhododendrons and Conifers from all parts of the world. It may be truly said that some of these Conifers, Silver Firs, and Arbor Vitæ, are hardly equaled by those of any other lawn in America. The spot is, moreover, so fortunately protected from cold winds, by embowering hills, that Evergreens which usually fail north of Washington and Virginia are here found in perfect health and vigor. Cannas, Colocasias, and other tall-growing foliage plants, tastefully arranged, thrive vigorously and produce a rich tropical effect. A rich display of bedding plants, Coleus, Geraniums, Salvias, Alternantheras, etc., is presented at this point year after year in connection with the refectory and shelter, which are perhaps the most ambitious architectural structures of a park where the pastoral idea of wide-spreading turf and woodland is intended to be everywhere dominant.

Passing under an archway and down by a lovely pool where stands the skate-house in winter, we come to the grove where the band discourses sweet music in summer, and so on, past wide meadows and bold hill-sides clothed with fine Evergreens, to Lookout Hill, the highest point in the park. From this point the eye wanders over a distant view of the ocean on one side, and on the other over the great city of Brooklyn. The same sense of largeness of design accompanies this outlook that is felt in considering the general treatment of the park, whether the subject be meadows, trees, or water.

Turning our faces toward the main entrance and Plaza, we pass through a lovely ravine with picturesque masses of rock covered with Rhododendrons, Evergreens, and vines, and on by a quaint dairy-house and restaurant embowered in charming masses of the Japan Ivy or *Ampelopsis tricuspidata*. Not far from here, across the Long Meadow, we meet numerous groups of the grand old native forest trees that have here, as elsewhere, been carefully and judiciously preserved, and frame so beautifully the open grass spaces of Prospect Park.

We might ramble, indeed, for hours over the walks and drives of this noble pleasure-ground and find charming near and distant landscapes at every turn, but the longer we ramble, the more surely we arrive at the conclusion that, for attractive open spaces of greensward and valuable specimens of rare and choice trees, Prospect Park must bear the palm over all other parks in America.—S. PARSONS, jun. in *American Garden*.

THE EARLY CLUSTER BLACKBERRY.

The plant was discovered, about eleven years ago, on the farm of Mr. Charles W. Starn, in southern New Jersey, where it attracted attention for its early and profuse bearing, and was transplanted and propagated for market purposes. It is a vigorous, healthy grower, hardy and extremely productive. The berries are of medium to large size, and of best quality; sweet, without hard, bitter core—so objectionable in a Blackberry—and sufficiently firm for shipping. It ripens but little earlier than Wilson's Early; but, as the berries mature promptly, the entire crop is

harvested in a few days, before the bulk of the Wilson's Early is marketable. In this consists one of its main points of value, and also in that it is free from the abnormal habit of forming double flowers which has become so disastrous to some of the older varieties.

We have not seen the berry, but many experienced, practical fruit-growers who have given it careful examination are favorably impressed with its merits.—*American Garden*.

IMPROVED ONION CULTURE.

Onions are not a difficult crop to raise. They are no more perishable than potatoes. They do not require immediate marketing when harvested, but the grower can await a favorable opportunity in the market, if he is not satisfied with fall prices. In large markets an entire crop can be disposed of any day to shippers and dealers, as onions have their market value as firmly established as corn or potatoes. While quotations may vary somewhat, from day to day, a farmer can generally tell by them what he can get for his crop.

I started to give my own experience with onions as a farm crop. The methods of cultivation I advocate may perhaps conflict with the opinions of others engaged in the same business. Contrary to the accepted theories and practice of most onion growers, I do not believe it essential that onions should be grown on the same piece of land, year after year. I have invariably had better success with new ground each year. Now I do not wish it understood that this statement implies that any new ground is preferable. I insist that the land shall be as rich as it is possible to make it previous to taking it for onions. The reason why many think that old onion ground gives better results than can be expected with new land the first year, is because the continued cultivation and the high manuring which onions need have improved the land up to the necessary standard. But if one can start with this standard already established it is just as well. To insure this point, I take tobacco ground that has been manured with stable manure for a number of years, not less than ten cords to the acre each year. In the fall previous to growing an onion crop, I plow under a coat of tobacco stems (not stalks) at the rate of 2½ tons per acre, costing about \$30. I prefer these to stable manure as an immediate fertilizer, for they furnish a high rate of potash, which onions need, and besides bring in no weeds. The stems also have a tendency to keep off the maggot and other pests. The latter result is also assisted by plowing in the fall. The plowing should be done as early as the first of October, to insure the thorough rotting of the stems, and should be as light as possible, for deep plowing is at any time detrimental to an onion crop.

In the spring, plow to the depth of five inches as soon as the land is in good condition to work. We usually plant beets and spinach first, as it is necessary that they should be as early as possible. Next peas and other of the earliest crops, and then onions. We plant the seed of the whole onion first, as this is the best for the early fall market.

As a top dressing any of the better grades of superphosphates will do, 600 pounds of this is sufficient for an acre, dragged or raked in. The ground should be made as fine as possible before sowing. Flat land is the best, and in order to prevent water—after heavy rains—from standing on the onions, I plow in ridges of one rod wide, leaving a shallow furrow and raking into it from both sides. This leaves the ridges slightly rounded and sloping a little each way toward the furrow, thus shedding the water, although the depression is but slight. These furrows necessitate leaving out one row of onions for each furrow, but it pays if heavy rains or sudden showers take place, as at certain stages of growth, onions are damaged if water stands upon them, if only for a short time.

The rows should be 14 inches apart, and six pounds of seed per acre is, I think, the best rule. Many plant only five pounds; should all come and grow to maturity this is quite sufficient, but as there are some drawbacks, that result is not always sure. I spat the rows after the planter with a hoe, as this packs the soil around the seed, prevents drying up, and gives an opportunity to cover any little place skipped by the follower. I think this pays, as the seed comes sooner and eveners.

The use of wood ashes is to be recommended, but I think they are best applied at the second weeding. I have known a crop ruined by their too profuse application, but if rightly used they are one of the best fertilizers for onions. It is never advisable to mix them with other fertilizers, especially those whose principal element is ammonia, or to apply them at the same time.

With regard to varieties, I have had the best success with the Southport stock, the White and Red Globe. The former is by far the best white variety; though not as early as the Tripoli, it is a better cropper and keeper. The Tripoli will not keep later than October, under ordinary management. The Wethersfield Large Red is a standard favorite with most growers and in most markets, owing to its keeping qualities; it is also a variety that yields well. The Danvers-Yellow I have never had the success with that other growers report; it is hardy and a long keeper. I raised the past season only the White and Red Globe of Southport seed. The "stand" was not a good one, owing to unpropitious weather after the onions had come up and while they were growing out of the double, but I had larger onions for it and the yield was 788 bushels per acre. The largest onion I weighed tipped the scale at 30 ounces, and pound specimens were common. I did not observe any difference in the yield of these varieties, and have always found them equal in that point to any other kind, if properly managed. Three others beside myself planted the same seed the past season, used the same fertilizers, and followed the same method throughout that I did, and having a better stand of onions beat me in the result; two of them had over 800 bushels per acre, and one upwards of 950. It is not necessary to state that these growers will continue in the business, as they have all marketed their crop at an average price of 75c. I began marketing onions this year in just 120 days from planting.—*N. Y. Homestead.*

PEAR BLIGHT.

Among the numerous experiments, relating to the diseases of plants, which have been performed at the Station, those on pear blight have excited the most interest. The first case of blight noticed in this vicinity was on a pear tree in a neighbor's yard, July 11, and on July 26 a small branch of quince in the Station garden was found blighted. These were both promptly destroyed. No other case of spontaneous occurrence of the disease has been observed within a mile or more of the Station. It has, however, appeared in considerable virulence among the pears and quinces in some localities in this region.

This seemed a most favorable opportunity of investigating the infectious nature of the disease, and accordingly on July 16, a pear orchard was visited and some of the diseased branches secured. Among these was one with viscid, yellowish drops exuding from the stem. With a needle a puncture was made about an inch from the extremity of several branches of a pear tree in the garden, and a very little of this excretion inserted. It was applied in the same manner to some terminal leaves, but a difficulty in manipulation rendered the result doubtful, for the excretion being very sticky and the leaf thin, it was not easy to remove it from the needle and insure its remaining in the wound. In from six to eight days every branch inoculated showed unmistakable signs of the blight. The bark turned brown and then blackish about the puncture, the color extending gradually through the stem, passing upwards toward the end of the branch

much faster than downwards or around the branch. On the ninth day most of the wounds exuded some of the same viscid fluid which was used in the first place. They were all removed on the thirteenth day to prevent the disease securing any permanent hold on the tree. Most of the infected branches were blackened for a foot or more, and all the tender young leaves as well, all being thoroughly dead. It was noticeable that the full-grown leaves were rarely affected, and mostly remained green up to the time of the removal of the branch. Only one of the inoculated leaves became infected, and this was a young, tender one. The disease spread to the stem, and worked the same as in the other cases.

At the same time, a portion of the same virus was applied to two young apple branches. Both showed the disease in eight days. It spread gradually until on the thirteenth day about two inches from the apex was quite dead and dry, and the branches were removed.

On July 24th an inch or so of diseased pear stem was sliced up in a watch glass half full of water, and, after stirring about, the chips were all removed, which left the water slightly milky. This was used to inoculate with, by making a puncture with a pin and adding a small drop from the watch glass. It was applied to the branches of several kinds of fruit, but sufficient time has not elapsed at this writing to show results, except in the case of a very young branch of June berry (*Amelanchier Canadensis*) about six inches long, which showed unmistakable signs of blight on the sixth day. But the most remarkable results yet secured were gotten by inoculating the fruit of Bartlett pear with this watery infusion. On the sixth day they were all blackened for some distance around the point of inoculation and exuding a copious flow of yellowish fluid which ran down the side and dropped on the ground. In fact, each was a great running sore. Upon cutting open the pears they were found to be discolored almost throughout their interior. Inoculation at the same time on quince fruits showed the disease in seven days, but without any exudation, and, upon cutting them open, only about one-fourth the interior was affected.

We may make the following general statements which the experiments so far tried (some sixty in all) fully sustain. The disease known as pear blight is infectious, and may be transmitted from one tree to another by inoculation. It is not confined to the pear but may attack other pomaceous fruits, as the apple, quince, English hawthorne, and June berry. It is more active, and progresses most rapidly upon young and succulent portions of the tree.

Under the microscope any bit of diseased tissue shows inconceivable myriads of minute bacteria which fill the water of the slide in which it is mounted, like a cloud. It is, therefore, not necessary to depend on external appearances in order to determine the progress of the disease in a branch, for the microscope will decide with absolute certainty. There can not be a rational doubt that the bacteria are the cause of the disease.

Experiments are now being tried to determine the mode by which the disease is naturally propagated.—E. LEWIS STURTEVANT, *Director N. Y. Agricultural Experiment Station.*

INSECT PESTS.

The striped cucumber beetle, *Diabrotica vittata*, is a pest well known to the garden. We have applied kerosene mixed with sand, an ounce to the pound, to the soil about the plants of cucumbers to prevent his ravages, but with little, if any, beneficial effect noted. We also tried soluble phenyle diluted with water at the rate of a tablespoonful of the former to a gallon of the latter; the application seemed but a partial remedy for the attacks of the insect, and proved injurious to the plants. Soluble phenyle mixed with sand in the proportion of one ounce to the pound proved almost instant death to the plants wherever it touched them.

In order to test the influence of noxious odors in repelling the striped bug, we placed among the plants of a hill of squashes a few corn-cobs that had been dipped in coal tar, placed a frame of mosquito netting over the hill and introduced a dozen or so of the bugs. The insects applied themselves to the leaves of the squash vines with their usual relish, and the following day we found that instead of the enclosed bugs attempting to make their escape through the netting, numerous visiting bugs were at the outside of the cover attempting to make their way in. The same result was noted as following the application of corn-cobs dipped in soluble phenyle, a liquid possessing a powerful odour resembling that of coal tar.

Paris green mixed with water, half a teaspoonful to two gallons, when carefully applied to both sides of the leaves of cucumber or melon vines, is nearly efficacious; when applied only to the upper side of the leaves, however, it is of less value, as the beetles remain much of the time during sunny weather upon the lower side of the leaves and upon the stems.

Kerosene emulsion, diluted with eight parts of water, did not keep away the beetles, while it was injurious to the foliage.

The cabbage caterpillar, the larva of *Pieris rapae*, was effectually mastered by the use of Buhach powder applied with a bellows. We are making further trials to determine what degree of dilution may answer for successful use.

The asparagus beetle, *Ciroceris asparagi*, has made its appearance in the Station garden. We find Paris green applied in water, sure death to the larvæ, although neither this nor the kerosene emulsion seems to have apparent effect upon the beetles themselves.

The currant worm, the larva of *Nematus ventricosus*, succumbs readily to hellebore powder, when the application is made while the dew is on the plants so as to cause the powder to adhere to the leaves. Applied so as to adhere the application lasts for several days; the dust of the hellebore kills, however, very rapidly, the caterpillars with which it comes into contact, and the substance may be applied dusted from a dredger, as soon as the young larvæ appear. The kerosene emulsion, as noted above, was but partially successful. Buhach powder in the dilution of a quarter of a pound to three gallons of water was but partially successful.

Buhach is the trade name for the pulverized flowers of *Pyrethrum cinerariæfolium*, now extensively cultivated in California. It is sold, put up in tin cans, and should be purchased in these original packages. Its use as an insecticide is highly recommended by our best entomologists, and it is certainly worthy of extended trial.—E. LEWIS STURTEVANT, *Director N. Y. Agricultural Experiment Station.*

THE OLEANDER.

This beautiful shrub belongs to the Dog-bane family, and is poisonous. It is found in the Levant, and some parts of Palestine. In Florida it is so common as to be little esteemed. It grows in hedges and groves, and often attains a height of twenty-five and thirty feet. Galveston is called the Oleander City because it grows there so abundantly. They are planted in rows on the outer edge of the sidewalk, and just inside of the fence of many residences, so that they form a perfect arch, and are laden with bloom for several months. The red is the most common variety, and is the hardiest, though the white is by no means rare. Galveston, Texas, is situated on an island of the same name. The soil is sand, with a mixture of decayed vegetable matter.

In starting Oleanders, after they have attained a height of eight or ten inches, it is best to pinch off the stalk above the second or third joint, and this will force it to branch; after these shoots are sufficiently grown, pinch them back, and thus a thick bushy plant will result, and

blossoms be much more abundant.

Here at the North we rarely find other than the red or rose color, but there are numerous beautiful varieties; of a few of these we will give the names. *Atropurpurea plenum* a double flower, of a rich, dark purple color; *Cardinale*, rich double vermilion, beautifully shaded; *Gloriosum*, large double flowers of a bright cherry crimson; *Prof. Durand*, pale yellow, semi-double; *Flavum duplex*, semi-double, pale sulphur; *Lilian Henderson*, the most prolific bloomer and finest of the white-flowered varieties: the flowers are double, full-petaled, rose-like in form, deliciously fragrant.

On small plants the double varieties frequently produce semi-double flowers, so one must not think they have been deceived, should this be their experience.

Oleanders require much moisture; that probably is why they are botanically termed *Nerium*, from the Greek *neros*, humid. I bed mine out in the summer, and think it is better than to keep them in pots. I find they root readily from cuttings placed in a bottle of soft water, and kept in a sunny window. All of the leaves, excepting two or three at the tip of the slip, should be removed.—MRS. M. D. WELLCOME, in *Ladies' Floral Cabinet*.

GRAFTING WAX.—Last spring, after considerable trouble, this recipe was obtained for grafting wax, and as it has proved satisfactory, it is given for the benefit of others: Take 1 lb of rosin, ½ lb. of beeswax, and a little less than ½ lb. of tallow. Melt together in a small iron kettle, and stir thoroughly that the ingredients may be well mixed. Pour into a dish of cold water, and when cool, break into three or four pieces, and pull like molasses candy until white and fine-grained. When the whole is properly worked, divide into eight pieces, form into rolls six inches long, and wrap in oiled paper. To clean the kettle, rub it while yet hot with a teaspoonful of lard or tallow, and wash out with soap and warm water; repeat this, and rinse, and it will be as clean as ever.—O. A. O., in *Country Gentleman*.

BOOKS, &c., RECEIVED.

REPORT OF OHIO STATE HORTICULTURAL SOCIETY, for the year 1883-84. G. W. Campbell, Delaware, Ohio, Secretary.

TORONTO WEEKLY NEWS, Vol. I., No. 1. E. E. Sheppard, Editor and Proprietor, 106 Yonge Street, Toronto. Subscription \$1 a year.

CANADIAN ENTOMOLOGIST, Volume XVI., No. 5, published by the Entomological Society of Ontario, at London, Ont., \$1 a year. E. Bayne Reed, Treasurer.

CANADIAN DAIRYMAN AND FARMER, Vol. I., No. 1, published at 162 St. James Street, Montreal, 50 cents a year. A monthly journal devoted to the dairy and allied interests of Canada.

THE LEVER, published weekly, at 87 Washington Street, Chicago, Illinois, devoted to the interests of prohibitory legislation, and opposed to the licensing system in any form or for any price.

BOX OF GOOSEBERRIES for a name, from Mr. Geo. Smith, Manilla, Ont. We think this is the American Red, but not having grown the variety we can not speak with confidence. Downing

describes the fruit as being of the size of Houghton, but darker in color when fully ripe; flesh tender, sweet, and very good. Mr. Smith says: about four years ago I ordered of some Yankee tree pedlars one hundred gooseberry plants, viz. fifty Houghton Seedling and fifty Downing's, but the result was I received about one-third each of Houghton, Smith's Improved, and the variety I send you per sample post today. The berry somewhat resembles the Houghton, it is of better quality, but not quite so productive. It makes about the same growth of wood per year as the Houghton, but is inclined to crawl along the ground.

LINES ADDRESSED TO A BED
OF PANSIES.

(Written a few years since.)

Bright eyed pansies opening wide
In the glory of your pride,
Who would think that fashion's hour
Over you could cast its power.

Yet you're now the reigning belle
Such at least the florists tell;
Well you merit all the fame
Which is thrown around your name.

Dare I now with you compare,
What by nature still you are,
Those tiny things the children bring
In the early days of spring.

True I love your happy face,
Though the smallest of your race,
And you love a quiet spot,
Well contented with your lot.

You, I call the laughing flower,
You enjoy a shining hour,
And you bear transplanting well;
To my heart repose you tell;
For I've not the calm content
Of my little favorite yet.

Would the meekness that you teach,
Every discontent could reach;
Would all hearts were free from guile,
As your playful winning smile;
Would each mind were daily taught
With the lessons you are fraught.

* * * *

Where is reason's boasted power
Which is baffled by a flower!

M. W. M.

A TREELESS COUNTRY.

“I had a dream which was not all a dream!”
A great State was a desert, and the land
Lay bare and lifeless under sun and storm,
Treeless and shelterless. Spring came and went,
And came, but brought no joy; but in its stead
The desolation of the ravine floods
That leaped like wolves or wildcats from the hills
And spread destruction over fruitful farms,
Devouring as they went the works of man.
And sweeping southward nature’s kindly soil
To choke the watercourses, worse than waste.

The forest trees that in the olden time—
The people’s glory and the poet’s pride—
Tempered the air and guarded well the earth,
And under spreading boughs for ages kept
Great reservoirs to hold the snow and rain,
From which the moisture through the teeming year
Flowed equably but freely—all were gone.
Their priceless boles exchanged for petty cash,
The cash had melted, and left no sign;
The logger and the lumberman were dead;
The axe had rusted out for lack of use;
But all the endless evil they had done
Was manifested upon the desert waste.

Dead springs no longer sparkled in the sun;
Lost and forgotten brooks no longer laughed;
Deserted mills mourned all their moveless wheels;
The snow no longer covered as with wool
Mountain and plain, but buried starving flocks
In Arctic drifts; in rivers and canals
The vessels rotted idly on the mud
Until the spring floods buried all their bones;
Great cities that had thriven wondrously,
Before the source of thrift was swept away,
Faded and perished, as a plant will die
With water banished from its roots and leaves;
And men sat starving in the treeless waste,
Beside their fruitless farms and empty marts,
And wondered at the ways of Providence!

New York Sun.

THE NEW ORLEANS WORLD’S EXPOSITION.—California expects to make a point at the World’s Fair next winter by sending to the Crescent City a wonderful collection of photographs of natural scenery. Photographers in various parts of the State are at work making views of the most noted mountain and valley scenes. “The glorious climate of California,” has heretofore been regarded as one of the chief promoters of the beauty of the photographs made on “the slope;” and now the matter will be brought to a test, for the photographs of all nations at the great Exposition will be placed side by side.

CURRENTS.—Currants are yearly growing in favor and the price of the fruit advancing; and now currant culture is profitable, and likely to continue so for a series of years. Ground can not well be made too rich for currants and gooseberries. Plant in rows four feet apart, and plants three feet apart in the rows; give thorough culture or deep mulch over the entire surface, cut out all wood of three years’ growth (or after first crop is often considered better), and a good crop is almost certain. Red Dutch, White Grape, Victoria, and Versailles are still the favorites.—*The*

Prairie Farmer.

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TRANSCRIBER NOTES

Misspelled words and printer errors have been corrected. Where multiple spellings occur, majority use has been employed.

Punctuation has been maintained except where obvious printer errors occur.

Some illustrations were moved to facilitate page layout.

A Table of Contents was created with links to the articles for easier use.

[The end of *The Canadian Horticulturist*, Volume 7, Issue 9 edited by D. W. (Delos White) Beadle]