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THE

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ANNE DIESBACH.

THE

Canadian Horticulturist.

Vol. XV.

1892.

No. 1.



THE ANNE DE DIESBACH ROSE.



MONG that valuable class of hardy roses for the climate of Ontario, the hybrid perpetuals, there is one which has given special satisfaction to the writer for two seasons past, and that is the Anne de Diesbach, shown in our colored plate for the present month. We have about two dozen roses in our rose walk, all varieties of great value, but for delicate tints of color,

grace of form, and large size, all combined in one rose, none surpasses this one. Some specimens cut last summer measured five inches in diameter, almost equalling in size its gigantic neighbor, Paul Neyron. This latter is rose colored, and is closely related to our favorite, being a cross between Anne de Diesbach and Victor Verdier, produced in 1869. It is a very desirable rose on account of its great size, but not as graceful, nor of so lovely a shade of color.

The Anne de Diesbach was raised by Lacharme, in 1858, a noted rosarian, who has the credit of sending out fewer poor varieties than any other large grower. Among a large list of varieties produced by him we may mention Victor Verdier, Alfred Colomb, Coquette des Alps, and Chas. Lefebvre, varieties of marked individuality.

The plant is hardy and grows freely. The flowers are not produced in abundance, and, when they do appear, they are half concealed by a wealth of foliage, but this is just the condition most favorable to show them off to the best advantage. They are fragrant, and of a most lovely shade of carmine. We consider this rose one worthy of a place in the amateur's garden, even if his collection be one quite limited in number.

2

ANNE DE DIESBACH.

In a garden quaint,
Filled with roses rare,
Grows the one I love the best
Of all the posies there;

Modest maid, with cheek now blushed, Cannot rival thee In sweet and pure simplicity, Thou art so dear to me.

The dew drops kiss thy cheeks
And love to linger there,—
Ah! words would fail me, should I try
Thy excellencies to declare;

Thy grace, thy beauty, fragrance, charm E'en those who heart do lack,
Thou art a work of Nature's own
My Anne de Diesbach.

Grimsby, Ont.

WILHELMINA BRODIE.

STORING ICE NOT EXPENSIVE.

No expensive structure is needed for an ice house, though where it is an object to have no wasting away, it should be made tighter than where this does not matter so much. Slabs from the saw-mill do very nicely for the roof, and the sides may also be of rough boards. Where desired, the ice-house may be one corner of the wood-shed partitioned off, in which ice will keep quite as well as in a more costly structure. Even stacking is often resorted to, by laying down rails for a floor, on which to stack the blocks compactly. Cover heavily with some material which is non-conducting, such as straw, hay, etc., finishing the top so as to shed rain, bracing the sides with boards and rails to keep covering in position. Care must be taken in getting at the ice, always to open at same place and cover up thoroughly, or some hot day will turn it to water. In putting in the ice no matter where it may be, always surround it with non-conducting material like sawdust.—W. F. Lake, in Country Gentleman.

The ice-house question can be summed as follows: any cheap structure with good drainage and no circulation below; good ventilation above; proper space between ice and sides, filled with non-conducting material. The bugbear of expense need deter no one from storing ice. By providing a proper bottom ice can be piled on it and a building put over it later.

PLUMS FOR CANNING, MARKET, ETC.



EING very diffident and mistrustful of being able to interest the readers of the Horticulturist in this subject, so much having been written heretofore respecting the Plum and its varieties, I have hesitated before making the attempt to write anything touching the matter. But having been especially requested to name from my experience the most profitable varieties thereof, for market and canning pur-

poses, etc., and those which will form a profitable succession for shipping, from the earliest to the latest, and the kind of stock on which they should be budded or grafted, I will with much pleasure name such varieties, and treat the above matter as follows.

The stocks on which I prefer to graft (I prefer grafting to budding), are those raised from seedlings of the common blue plum, selected from trees of rapid growth and large size. Having lost a number of trees purchased from nurserymen, which had been grafted or budded on the wild variety known as the Canada Plum (*Prunus Americana*), and commonly used by them for stocks, in consequence of their roots breaking during wind and rain, under a heavy load of fruit, I have substituted with advantage the common blue, as its roots prove much stronger and better, and the trees when grafted attain a larger size.

My experience in fruit canning has not been extensive, but such as I have had has been acquired by selecting for home use from the varieties I cultivate, of which, without hesitation, I would name Bavay's Green Gage, Monroe, and Imperial Gage, as the best three plums for canning; but as these, from their very fine quality, and especially in years of scarcity, often command a higher price than canners can afford to pay, they purchase at a lower price, largely of the blue damson, which they can sell as a much lower figure and make more money therefrom, and it might be judicious to add the damson to the list, although of much inferior quality.

As to the varieties for market purposes, extending in their time of ripening from the first to the last of the plum season, I would recommend of the varieties commonly grown, the Niagara, Bradshaw, Washington, Lombard, General Hand, Yellow Egg, Peach. Coe's Golden Drop, Bavay's Green Gage, Quackenbos and Glass, which ripen generally in the order named, as the best and most profitable. Of these I would select as the most remunerative, the Niagara and Bradshaw for earliest, and the Quackenbos and Glass for latest; and among the most latest, the Peach plum, as I have found that more money can be made, especially in years of plenty, from the very early and the very late, than from the medium ripening varieties, which come in competition with a very large number of others, which ripen at the same period; and that the dark colored sell at higher prices than the yellow. In the past plentiful season, the Niagara

and Bradshaw sold at from 95c. to \$1.10 per basket of twelve quarts; the Washington and Lombard at 50c.; the General Hand, Yellow Egg, Coe's Golden Drop, and Bavay's Green Gage at 65c.; the Peach plum at 75c. to 85c., and the Ouackenbos and Glass at from 95c. to \$1.15 per basket. the Glass seedling as our most valuable late market plum. The tree is very hardy and productive, and the fruit very large and attractive, showing to fine advantage in the basket. Here, by way of digression, I would say that it appears to me very remarkable that a plum possessing so many valuable qualities, should not have found a place on the Industrial Fair's Prize List, and thereby be recommended to the public as one of the profitable varieties to be propagated. It is also remarkable how valuable the Glass seedling is to many exhibitors, when they happen to be short of a dark-colored plum to supply the section to be represented; then this plum is often used with success, to carry off the prizes which should have been awarded to the varieties named in the particular sections of the prize list for which it was substituted. At the Industrial Fair held in 1890, I noticed that the Glass seedling took prizes in three or four sections allotted to other varieties.

In the above list of market plums, I have left out Pond's seedling, as I have not found it so productive as the varieties I have named, and because in late years it has become very subject to rot. When it is free from rot, its fine size and color cause it to sell at a good price.

The varieties I value most for preserves and dessert, are as follows:—For preserves, Niagara, General Hand, Coe's Golden Drop, and Bavay's Green Gage. For dessert, the Green Gage, Imperial Gage, and McLaughlin, the latter being the best of all. The tree is very hardy and productive of large, finely-colored, luscious fruit, and in localities where the peach fails to bear, is the most valuable substitute therefor. I have not included the McLaughlin among the market varieties, because it ripens with the great majority at mid-season, when the market is overstocked with fruit and when plums sell at a very low price.

Whithy, 21st Dec., 1891.

J. K. GORDON.

THE EXCELSIOR, or Hale's Hardy, peach, is highly spoken of in the American Garden. It was recommended at the recent meeting of the American Pomological Society, and specimens there exhibited were remarkable for their high color and beautiful appearance, although of medium size and fair quality. Mr. Hale says the tree makes a low, spreading head, and will bear a good crop when the buds on all other sorts are killed. This peach originated at Lowell, Mass. It is very hardy and prolific, having borne full crops annually for five years in Massachusetts, and in Greenville and Goftstown, N.H. It has stood 12° below zero and had a full crop, when all other varieties in the same locality were killed.

THE CANADIAN HORTICULTURIST.

FLORAL FIRE CRACKER.



HROUGH the courtesy of Mr. A. Blanc, of Philadelphia, we here show our readers another floral novelty in the Brodiæa Coccinea, or the Fire-Cracker plant. It is also called the Crimson Satin flower. The Brodiæas are named after Mr. J. J. Brodie, a Scotch botanist, and are of the genus Liliaceæ They are natives of California. There are about a dozen varieties, described in the Dictionary of Gardening, and they foam a pretty class of bulbs, though somewhat tender. They

are easily propagated by planting the offsets, which should be removed and replanted in the autumn.



Fig. 1.—FLORAL FIRE-CRACKER.

The prevailing color of the flowers is blue, but the Brodiæa Coccinea, which we show in our illustration, is an exception to the rule. Its flowers are scarlet. No doubt it derives its common name from the resemblance which its peculiar flowers show to the boys' fire-crackers. The tall stems, of from one to two feet in height, bear umbels of pendant flowers, two to three inches long, of a rich crimson color, tipped with vivid green. There are tweve or fifteen flowers in each umbel, and the bloom appears in June and lasts for several weeks. This variety was discovered in California in the year 1870.

THE WINTER MEETING.

HE attendance at our winter meeting was large. Not only were there present, in addition to the directorate, a large number of members from the Niagara peninsula and the Burlington district, but there were also representatives from several local affiliated societies. The Peterboro' Fruit Growers' Association was represented by T. A. Grover, the Burlington Association by Messrs. G. E. Fisher, Wm. Fisher and A. W. Peart, and the Brant Association by Messrs. A. Dawson and J. R. Howell.*

These local societies became affiliated with the Ontario Association upon payment, through their secretary, of 80 cents per member, the 20 cents balance of the \$1 membership fee being retained by the society for their own work.

The Western New York Horticultural Society was represented by Mr. S. D. Willard, their vice-president, and the Michigan Horticultural Society by Mr. L. B. Rice, of Port Huron.

Few changes were made in the directorate. Mr. A. H. Pettit was elected president, and Mr. T. H. Race vice-president; Mr. J. R. Howell, of Brantford, succeeds Mr. McMichael, of Waterford, for District No. 9.

Prof. Wm. Saunders, Director of the Experimental Farm, Ottawa, on request, gave the meeting much information concerning the World's Fair, and it was unanimously resolved that the fruits of Canada should be exhibited in the Hor ticultural Hall there in competition with those of other countries, and that 3000 feet of table space, not including passages, would be none too little to accommodate the fruit exhibited from Ontario alone. The matter of details were referred to a committee, consisting of Messrs. Allan, Pettit, Wellington and Dempsey, who reported in progress that the Dominion Government should provide the transportation and care of exhibits, and the Provincial Government the cost of collecting the fruits and the representation. It was resolved that Mr. Allan be a delegate to Ottawa, to co-operate with the delegates from the Agricultural and Arts Association and the Stock Breeders' Association, with regard to this very important matter.

The importance of a systematic inspection, by the Dominion Government, of the fruit for export, was again debated and emphasized. The committee, Mr. A. H. Pettit, chairman, was continued, and asked to proceed with the agitation for the accomplishment of this work, even if such fees must be charged on barrels inspected and branded by the Government inspector, as would pay the expenses of his work.

The experiment station work in southern Ontario was also again considered. The Deputy Minister of Ontario, Mr. C. C. James, suggested that the work might be done by various experimenters, in different parts of Ontario, who

would report to a central officer, whose duty it would be to visit the various sections for taking notes, and tabulate all results for publication. The Association approved of the proposal, and re-appointed the old committee to co-operate with the Government. This committee consists of Messrs. A. M. Smith, A. McD. Allan, W. E. Wellington and L. Woolverton.

The programme was rather long, and necessitated too much reading and too little live discussion. The executive will endeavor to correct this error the next time.

The third evening was given up to Floriculture. The debates were led by members of the Florists' Clubs of Toronto and Hamilton. 'A project, urged alike by both, was the importance of a botanical garden for Ontario. Much is being done, both at the Ontario Agricultural College and the Central Experimental Farm, in this way, yet, notwithstanding this, the Province of Ontario is far behind other countries in this department. A committee was appointed to take the matter into further consideration, viz., Messrs. Morton, Webster and Gilchrist.

It is proposed to have a monster pic-nic of fruit growers and farmers in July next, at Grimsby Park. Very cheap excursion rates will be arranged, and a good programme provided. The management of this was left in the hands of a committee, consisting of the President, Secretary and M. Pettit.

The following committees were also appointed during the sessions:

New Fruits.-Messrs. Allan, Wellington and Secretary.

 $\it Grapes. --$ Messrs. M. Pettit, T. H. Carpenter, Geo. Cline, E. D. Smith, A. M. Smith and Wm. Orr.

Pears.—Messrs. E. Morris, D. W. Beadle, W. Holton and P. C. Dempsey. Experimental Union.—The President.

Central Farmers Institute. -- Mr. A. McD. Allan and the Secretary.

Audit.--Messrs. J. M. Denton and E. B. Edwards.

Industrial Exhibition. - Messrs. W. E. Wellington and Joseph Jacques.

Western Fair. -- Messrs. J. M. Denton and W. E. Saunders.

Central Fair. -- Messrs. R. B. White and John Craig.

Finance.-W. E. Wellington and A. M. Smith.

Farmers' Institutes. - President, Vice-President and Secretary.

Executive.—President, Vice-President and Secretary.

Western New York Horticultural Society.—The Secretary.

Michigan Horticultural Society .-- Mr. A. M. Smith.

It was decided that the next annual and winter meeting should be held in the city of Brantford, in response to an invitation from the local Association at that place, who will, no doubt, exert themselves to make the meeting a success in point of attendance.

At the Chrysanthemum Show.—Mother: "How do you like these, Dora?" Dora: "Wouldn't they look better, mamma, if they had their hair combed?"—Boston Transcript.

HOME ICE PACKING



HE method of building ice-houses without requiring packing of sawdust, charcoal or other substances, merely by leaving dead air spaces, is to-day considered fully equal, if not superior, to the oldtime way. Dead air spaces appear to have fully as much power as non-conductors as do solid packings, and, the method is a cheaper one. The system, however, must be carefully followed out for the best results. The air chambers must be distinct and

must not admit a draft up or down or around the ice. The air spaces must open into the upper portion of the house above the piate, that the cold air of evening may descend into them. This also allows air which may have become slightly heated to rise above the ice without reaching it. Partitions must be tight. To receive the full benefit of the system, pains should be taken when the final layer of ice is packed and the covering with sawdust is in process, not to clog these air chambers.

At least 2 ft. of space should be left for sawdust over the packed ice. Still higher in the side of the building, one or two windows should be placed, which should be left open in warm weather to allow of free ventilation above the ice, allowing the escape of heated air and ingress for any cool air which nights and storms may bring. When small quantities of ice, it is desirable, even with these air spaces, to

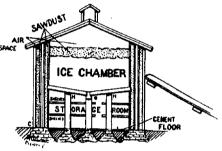


Fig. 2.—ICE CHAMBER.

leave a space of at least six inches between the inner ice-house wall and the ice, which must be filled with tramped sawdust. Six-inch studding will do for the outside chamber. Is certainly heavy enough, and even four or three inch lumber will do; it need not be more than two inches thick. To secure good drainage is easy in a side hill or on a very slight slope. If only a dead level is obtainable, the house should be well underpinned and perhaps one or two courses of tiles laid in the ground a rod or two from the house, if possible into gravel soil.

If the character of your land be sandy or gravelly, you need have no anxiety about drainage, as the melting ice will take care of itself. The main point is securing good drainage so as to prevent a draft of air under the ice chamber. It is well to have a stone underpinning well pointed with mortar. A current of air will melt many tons of ice in a week. An excellent plan in use under many ice-houses is a cold storage room. A bank is most convenient for this arrangement, though by elevating the floor for ice 4 to 6 ft a moderately good storage

room can be secured with little extra cost. The one objection to this convenience under the ice chamber is, that it is likely to allow drafts of air up through the ice-house unless great care is excerised. A tight, or nearly tight, and sloping floor should be made and the drainage carried into a trough and away from

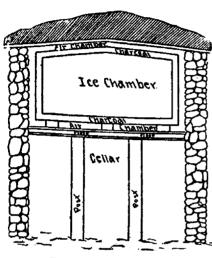


Fig. 3.-ICE CHAMBER.

the building, in a pipe. Of course the floor, which also forms the ceiling of the cold storage room, must be heavily propped, or underpinned, to support ice so the great weight above will not crush it in. Many find such a storage room extremely useful in holding, for a few days, small fruits, vegetables, meats, etc., for market, and for preserving the family supplies. For foundation walls probably nothing is cheaper or superior to concrete well laid below frost. The walls, if of wood, must be double or treble the same as for the ice-house proper. Double doors and windows must also be provided. Never overlook the rule, that the smaller the amount of ice stored, the greater is its proportionate waste. Farm and Home

ASPARAGUS.

Mr. Perkins, of Madison Station, read a paper on Asparagus Culture in Mississippi. He has been cultivating this plant but a few years. For several years he obtained roots from high-priced northern nurseries. He has since found that by saving his own seed, and planting them in the early spring, he could have by the following fall finer roots in every respect than the two-year old roots from Illinois.

Land for asparagus should be heavily manured, deeply plowed, and completely pulverized; rows five feet apart, plants two feet, 4500 plants to the acre. He objects to deep plowing in cultivating this crop. Shallow cultivation, keeping plants free from weeds and grass, is all that is needed. Asparagus is a voracious feeder. He has used barnyard manure, cotton seed and ashes with good effect.

He commenced shipping last season 23rd of February, and continued till last of April. Mr. Perkins thinks asparagus will pay in Madison Co., Miss.; latitude about two degrees above New Orleans.

Dr. H. E. McKay thinks asparagus will pay. He has 60 rows, 100 yards long, on which he put 90 wagon loads of manure.—From proceedings of Miss. State Horticultural Society.

PEACHES IN ESSEX.

HIS locality is especially favorable for the cultivation of the peach. It consists of a high ridge of sandy loam, containing several thousand acres, suitable for that purpose, bordering on Lake Erie. About one mile from the lake, this ridge recedes slightly to the north. This northern slope is the most suitable for this fruit, as the buds do not start into growth so early in spring, and are, therefore, less liable

to injury from late frosts which occur nearly every spring. Large numbers of trees are being planted every year; at the present rate of planting but few years will elapse until most of the suitable land will be planted to peach trees. largest grower is Mr. E. Tyehurst. A late number of the Horticulturist contained a note from him regarding a seedling peach, also comments on samples of same. Mr. Tyehurst could, with propriety, have said much more in favor of his seedling, but he is a very modest man, and did not say nearly what its merits deserve. When I tell you that he has grown that seedling for about thirty years, that he has tried all of the leading named varieties offered by nurserymen, and that this season his crop of peaches were estimated to be worth ten thousand dollars, you will see that he has had some experience in peach growing. He loaded a car in one day (of 1,500 baskets) with peaches of his own growing This seedling has paid him better than any other kind, as the fruit buds appear to be more hardy and the trees will produce a crop of fruit when most other sorts fail. It has not yet been placed in the hands of any nurseryman for propagation.

The varieties mostly grown here are Alexander, Hale's Early, Early and Late, Crawford, Early Barnard, Tyehurst Seedling, Hill's Chili, Smock, Wager, and many seedlings. Alexander takes the lead in early peaches, although many others have been tried. Hale's Early rots badly and is not being planted to any extent now. Early Crawford does not bear regularly, the fruit buds appear to be more easily injured than are many other sorts; the trees also having to obtain greater age before beginning to bear. Late Crawford is better in this respect and will yield larger crops. Early Barnard is perhaps the best and most profitable named variety grown here. Hill's Chili, a later peach, is one of the most regular in bearing of any sort known here. It is not of the best quality, but its hardiness and regular bearing qualities make it the best paying and most reliable late kind to plant in this locality, yet fully tested.

Leamington, Ont.

W. W. HILLBORN.

ONE OF NATURE'S MYSTERIES.—Willie: Mamma, how do grapes grow? Mamma: From seeds planted in the ground. Willie: Well, if the seeds are planted in the ground, how do they get into the grapes again?



Mr. W. E. WELLINGTON.

SOME PROMINENT CANADIAN HORTICULTURISTS.—XIII.

MR. W. E. WELLINGTON.



HE name of our Association is too narrow to define the scope of our operations. We touch on forestry, floriculture and landscape gardening, as well as on fruit growing; all of them branches of the more comprehensive term, "horticulture," or cultivation of the garden. The agriculturist cultivates the broad acres of a horticulturist concentrates his time and labor upon the small plot

field, but the horticulturist concentrates his time and labor upon the small plot called a garden. The former is an extensive method, and the latter intensive.

The name, Ontario Horticultural Society, would, perhaps, better express the lines within which we operate, and yet, to an Old Country gardener, this would indicate professional floriculture, a division which, in this country, we leave to the florists' clubs of our cities and towns; ourselves dealing with it only as it is interesting to amateurs, and the general public.

The nursery is another department of horticulture. Methods of propagation of trees and plants are so essential to the best success of a fruit grower, that we welcome to our Board of Directors one or two nurserymen, in order that we may refer knotty questions on propagation to them at our meetings, and we find that they are, as a rule, quite ready to confide to us the secrets of their profession, for the general good. Not only so, but, to their credit be it said, those who have had a place on our Board have carefully avoided advocating their private interests, or, in common parlance, "talking shop."

Prominent among our Canadian nurserymen, is Mr. W. E. Wellington, of Toronto, a gentleman who has always taken a deep interest in the work of our Association, using his influence in every way possible to increase its usefulness. No one sends in larger club lists of new names, and no one is more ready to forward its projects, either with time or money.

Mr. W. E. Wellington is a Canadian, and his native place is Oshawa, Ontario, where he was born in 1849. There his boyhood days were spent among the orchards and gardens near Lake Ontario, surroundings which favored the development of his taste for horticultural pursuits. At the age of twenty-one, he resolved to enter the nursery business. He went to Rochester and engaged with Messrs. Chase Bros., afterwards entering their Toronto office, soon becoming a partner in charge of the New England States. Later, he voluntarily left them, to go into business in Canada with his brother-in-law, Mr. G. A. Stone.

In 1878, this firm purchased from Mr. Morris a two-thirds interest in the Fonthill nurseries, which had been established in the year 1842. These have since grown to such an extent that, in place of the original 100, the establishment now covers about 700 acres of land. On these grounds, in addition to the nursery proper, are extensive greenhouses, with over twelve thousand square

feet of glass, for the propagation of plants, more especially roses, clematises, and choice shrubs; a good-sized peach orchard consisting mainly of the Wager and Mountain Rose, varieties which have proved with them most profitable; and an experimental orchard of some 300 varieties of apples.

Some idea of the extent of their business may be had from the fact that they constantly employ at the Nurseries from 75 to a 100 men, and, in the busy season, nearly double that number, and that their sales average over \$200,000 per annum.

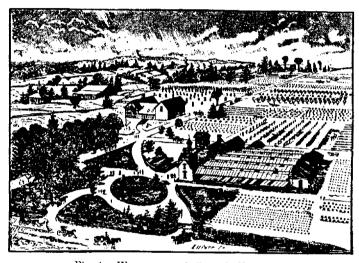


Fig. 4.—Wellington & Stone's Nursery.

Besides this, Mr. Wellington, in company with Mr. Morris, gives a great deal of attention to the breeding of Shire and roadster horses, having large buildings suitable for that purpose, and having on their premises somewhere about fifty head.

A large force of teamsters are employed, many of whom give their time to scouring the country for twenty miles around, gathering wood ashes and manure, ons of which are also brought from the City of Toronto.

In 1884, Mr. Wellington was elected Director of our Association, to represent Agricultural District No. 6, a post which he has held ever since, and during the year 1886 he occupied the Vice-President's chair. Three years ago Mr. Wellington was elected President of the St. George's Society in Toronto, defeating Prof. Goldwin Smith.

Among his contributions to our literature may be noticed an extended one on "The Clematis" in 1881, extensively copied by American horticultural

journals; one on "Ornamental Shrubs" which appeared in our report for 188£ page 95, and one on "Roses" which was published in our report for 1884, page 156.

For several years, Mr. Wellington has represented our Association on the Board of the Toronto Industrial Exhibition, and it was mainly through his influence that the magnificent horticultural hall was built last spring, for the better display of the fruits of Ontario; a building which is not only ornamental to the grounds, but is a great convenience to all fruit growers, whose productions certainly deserve as much consideration as those of our friends, the florists.

CITY MEN AS FRUIT GROWERS.

To succeed in most kinds of business, some study and some practical training is necessary. All men, and especially all city men, are born fruit growers, according to themselves. So long as they remain in the city and nurse this delusion, no particular harm results. If the city man is a capitalist and wishes some healthy employment, that may at the same time effectually check the growth of that capital, fruit growing will meet the requirements. If the city man is short of capital, and without experience, he can decrease his capital and increase his experience, and reap some bitter fruit (figuratively).

These men come; they plant, they fail, they leave. They carry wiser heads back to the city. Would the city man, who expects to increase his capital by fruit growing, advise a farmer to undertake his city business? He who undertakes business in either city or country, must compete with men who understand the business, and are surrounded by all the conditions of success.

The farmer, who finds himself with a suitable soil, within easy reach of manure and markets, and who is of course already possessed of mechanical dexterity in the use of implements, may study fruit growing and succeed, if he is a plucky and persistent worker. Many farmers fail as fruit growers. They do not care to fight weeds, and to cultivate and care for their trees, bushes, vines and plants for seven months in the year.

Fruit growing is an attractive business. It attracts too many. Many of these make nothing, while they hinder others who migh make a fair profit. We advise city men to stay in the city and eat all the fruit they can, with a view of helping those who are striving to make fruit growing pay.

Niagara Falls South, Ont.

E. MORDEN.

To kill the rose bugs on bushes or vines, shake them off by the hand into a basin of water, or spray them with an alcoholic solution Bubach diluted with water.

HORTICULTURE AN ANCIENT INDUSTRY.

"Thus far of tillage and of heavenly signs,
Now sing, my Muse, the growth of generous vines,

Some trees their birth to bounteous Nature owe: For some without the pains of planting grow. These ways of planting Nature did ordain: For trees and shrubs and all the sylvan reign. But various are the ways to change the state Of plants: to bud, to graft, and to inoculate. Tis usual now an inmate graft to see, With insolence invade a foreign tree. Thus pears and quinces from the crab-tree come, And thus the ruddy cornel bears the plum. Then let the learned gardner mark with care, The kinds of stock and what each kind will bear: Explore the nature of each several tree, And, known, improve the artful Industry."



HUS wrote Virgil almost two thousand years ago. And what Virgil enjoined the ancients to do, in the two last lines quoted, is just what the Canadian Horticulturist and the Ontario Fruit Growers' Association are endeavoring to instruct the people of this age and of this land in doing. To explore the nature of each several tree and with the know-

ledge gained to improve the artful—and we hope profitable as well—industry of fruit culture. In perusing Virgil, especially through his second Georgie, one is amazed at the knowledge the ancients had of the arts of horticulture. It is enough to take some of the nineteenth century conceit out of us when we come to contemplate that without the advantage of our-day literature, or the fruit growers' associations, there was no art in horticulture unknown to the ancients that we know and practice in this age. In some respects it would seem that they were more successful in their arts than we are on this continent of America, for Virgil, after describing all the methods and minutiæ of cutting, tipping, layering, budding, grafting, etc., he says:

"The mastful beech the bristling chestnut bears."
And the wild ash is white with blooming pears."

Though often tried, the efforts to make the mountain ash produce a crop of blooming pears have not met with much success in this age and climate. The ancients were no less skilled in the value and application of fertilizers than in the arts of hybridizing, for we hear them recommended to

"Sprinkle sordid ashes all around,
And load with fattening dung the fallow ground."

In vineyardism, and all that pertains to the cuttivation of the grape and the production of wine, the ancients of Italy and Scieily were unquestionably in advance of the inhabitants of this continent of America to day. But whatever those two countries mentioned may do in the grape in this age, it is quite certain they cannot compete with America, and especially this part of it which we call our Canada, in that king of staple fruits, the apple. Virgil speaks of the varieties of the apple ripened and mellowed by the frost of winter, but the winter varieties of these Mediterranean countries are very inferior to the winter lists now given in the catalogues of this country. And even their summer varieties are menaced by blights and ravished by insect pests beyond remedy. They have no Baldwin, no Northern Spy, no King, nor many other of the choice winter varieties we pride ourselves as Canadians in possessing. The pear which, according to Virgil, flourished in profusion and splendor before the Christian era, has likewise deteriorated, though in that delicious fruit the Mediterranean coasts have excelled in all ages.

But I am now reminded that in my last contribution I promised to tell you about the native home of the Saunders plum, which I believe I discovered during my summer visit east of Toronto. If I am correct in my belief, I will take back all that I have said about there being no plum tree proof against black-About mid-way between the towns of Port Hope and Cobourg, there is a farm, owned twenty-five or thirty years ago by a Mr. Jeckel, conjointly with Mr. John Wade, father of the present Secretary of the Ontario Agricultural and Arts Association. Mr. Jeckel was an English gentleman, advanced in agricultural and horticultural science, and giving his attention chiefly to the latter. The farm, being situated in the Township of Hamilton, was commonly known as the Hamilton Gardens. On this farm the plum now known as the Saunders, came into existence nearly thirty years ago. The parent tree suckered freely, and Mr. Jeckel gave the young shoots to friends both east and west, some of them going down near Belleville, but none going west farther than Port Hope, that I could get trace of. I saw trees in September at least twenty years old, and ate fruit In one place there were old cherry trees growing among them full of and partly dying from black-knot, but the plum trees grew and bore on without a sign of black-knot on them. The trees grow to a large size and bear when quite young, but do not bear regularly. If this one defect could be overcome. the Saunders plum-or at least the plum which I believe to be the Saundersis the plum for this country, and cannot be too extensively desseminated. It is of good size, yellow in color and excellent in flavor.

Mitchell, Ont. T. H. RACE.

Cabbages can be kept nicely in a barrel, packed in cut straw or even hay well dampened. Trim the heads all ready for cooking, and pack in a layer of straw, one of cabbage, and so on, until the barrel is full. Remember, the straw must be wet when the cabbage is put in, but no water is needed afterward. Keep in the kitchen or outhouse. They may freeze, but that will not hurt them in the least.— Weekly Star.

KEEPING APPLES.

preparing the ground for some cuttings a week ago, I turned up a small pear, which, evidently, had fallen from a Brurre Clairgeau tree near by: it was about 2½ inches long by 1 inch in diameter at the thickest part, and of the most orthodox pear shape. On removing from it the soil with which it was nearly covered, it presented a beautiful appearance, indeed, a friend to whom I showed it, thought it had

been a "porcelain pear," it was most natural in color, being a rich, greenish yellow, with a handsome brownish crimson cheek, and when I cut it open, it had an agreeable, acid smell, I did not taste it, and the seeds were well formed and dark-colored, showing they were ripe. In all respects it was a perfect Beurre Clairgeau in miniature.

The discovery of this pear and its extraordinary condition struck me as being very remarkable; because it must have fallen from its parent tree as long ago as early July, it had, therefore, laid entombed in moist soil five months, and yet when exhumed it was as fresh as if fresh gathered, and in a sense more so, as it had actually ripened in the earth, which it would not have done, in its then immature condition, on the tree; indeed, in forty-eight hours exposure to the air and light, it blackened and shrank, decay had commenced.

The following day I showed the pear to an experienced nurseryman, explaining the circumstances under which I found it. It surprised him very much, and his comment was: "if that pear had been kept in the house or even cellar, so long, it would have rotted months ago," and so it would.

Is there any recorded instance of an immature fruit, buried in the earth for five months, being, when brought to the surface, perfectly sound and unchanged in any respect except that which the ripening process had caused? Surely there must be in earth something more than a merely antiseptic property, there must be a ripening and preservative property also, hitherto latent and unsuspected—perhaps I speak unadvisedly in this,—but which, if common to all soils, may be utilized in various ways, notably in prolonging the season of pears and apples, and possibly of other desirable fruits!

It is certainly my intention, if I live, to experiment in preserving pears in the soil, which, if successful, will unable us to have this most delicious of fruits on our tables about as many months as we now have them weeks, and what a 'consummation devoutly to be wished' this is.

Is this something new. Mr. Editor, or is it a "chestnut?"

Toronto.

J. L. THOMPSON.

An English gardener, who has had great success in raising radishes, makes his radish beds with nearly or quite one-half soft coal ashes and soot. Under this plan his beds are not infested with worms.—*Michigan Farmer*.

SMALL FRUITS.



NDER how many obligations we are to the Experiment Stations for their valuable experiments, and valuable notices on small fruits. Under the head of small fruits, we class first the strawberry. Special stress is placed on the ease and cheapness of growing this fruit by farmers, and thus allowing every family to be able to have strawberries for all purposes, with but little expense of money or time. We would urge more forcibly this matter of small fruit growing upon

the attention of the average farmer, and show the large profit both in health and money to be derived from a small fruit plantation of the several varieties of fruits that mature early, and in paying results, in from one to three years. objection usually raised by farmers when asked to grow small fruits is the lack of time and skill. These objections may be answered by saying that the time necessary to plant one-fourth of an acre of strawberries need not be more than to plant the same area of cabbage or potatoes; and, as to skill, any one who . has set cabbage, celery, or sweet potatoes, can set strawberry plants. knowledge of the fact that one must set perfect-flowering varieties, with imperfect varieties, is essential, but, further than that, clean tillage is the only very important point to be impressed on one's mind. The item of the cost of plants is also reckoned as one of the hindrances to the cultivation of this fruit, and, viewed in this way, it is a very large item; but, if plants of any of the older, well-tested varieties are selected, they can be bought by the thousand, cheaper than many of the newer varieties can be bought by the hundred. One can get any of the standard varieties at about four dollars per thousand, which, if set in rows three feet apart and the plants two feet apart in the rows, will take seven thousand two hundred and sixty plants per acre, making one-fourth of an acre cost from five to eight dollars for plants. The further cost depends on the amount of tillage given and the expense of help. While the returns will usually average from four to five hundred quarts to one-fourth of an acre, which, if calculated at ten cents a quart, will more than pay for plants and labor, leaving only the labor for the second year's crop, which often is the best, and at the same time gives runners to set a new plantation.

The New York State Bulletin says, if planting for a fancy market, use the following varieties: For early, Haverland, VanDeman; medium season, Bubach, Sharpless, Burt; for late, Crawford, Middlefield, Parker Earle, Gandy; if for distant market, VanDeman, Stayman No. 1, Burt; for near market, the last mentioned varieties with the addition of Beder Wood, Parker Earle, and, possibly, Mount Vernon; thus, having VanDeman to pollenize Haverland, Bubach between Sharpless and Burt; Middlefield between Parker Earle and Gandy. Most of these varieties have become so well known, and so extensively propagated, that they can be bought so very reasonably, and they will increase so rapidly, that,

starting with a few hundred plants, thousands can be had in a year's time, thus putting a beginning within the reach of anyone.

At the Station grounds, Ohio—owing to the two severe frosts of the 5th and 17th of May, no satisfactory report can be given on the strawberry. The varieties with perfect flowers suffered more than the pistillate, Parker Earle and Enhance being apparent exceptions.

It seems to be the rule, that the blossoms of some varieties are easily killed before the buds open; varieties, that give large crops in seasons of no frost, give comparatively good crops in frosty seasons. Pistillate varieties are more prolific than staminate, and are more hardy as well. They recommend, as formerly, Haverland, Crescent, Bubach, with Gandy, Pearl and Enhance as pollenizers.

Granton, 10th Dec., 1891.

JOHN LITTLE.

ORNAMENTING THE HOME GROUNDS.—Shrubs are valued for their bloom as well as for form and foliage. Each variety will serve some special end. As a rule, plant in irregular groups, as directed for trees. At projecting points in shrub masses, plant some hardy herbaceous perennials. Use vines for porches or for covering a half dead tree top or rubbish pile. Plant flowers mostly at the side of the house in irregular but gracefully-shaped beds, and about the trunks of trees when they are young, perhaps. No special paths are needed about flower or shrub groups. Rock work is seldom satisfactory, and is only appropriate in a retired portion of the grounds. A pile of shells, rocks and scoriæ in the front yard is sadly out of place. Heap them in some back and shady corner, and you will find great delight in transplanting from the woods and meadows an assortment of hepaticas, spring beauties, bloodroot, trilliums, bellworts, phloxes, and ferns. If you have a pond near by, introduce some waterlilies, cat-tail flags, pickerel weed, arrow-head, and near by set some weeping willows and birches and ashes. Do not despise flower, shrub or tree because it is native, or "common." As a rule, the best known is better than the imported variety. Give thought and attention to all the details of making a pleasant home. It is a worthy work. You will be surprised to find how much beauty can be attained at little cost, and how rapidly everything hastens forward to the completed plan in your own mind. You will have a constant comfort and a fresh hope realized every year as the trees grow, and transformation follows transformation toward the fulfilment of your original design.-Prof. W. J. Beal, Michigan Agricultural College.

Seeds which had been kept in the seed-vessels of plants belonging to the herbarium of Tonnefort, a French botanist, were found to have retained their fertility after the lapse of nearly a century.—Ph. Weekly Press.

PRINCESS LOUISE AND McINTOSH RED IN QUEBEC.

AM sorry to say that, so far, Princess Louise does not appear to be hardy enough for this vicinity. Of six trees planted out in the spring of 1890, four succumbed last winter—and it will be interesting to know if the two surviving will continue through the present winter unimpaired. Of course, I am quite convinced that trees transplanted from more southerly nurseries, such as those of the Niagara district, to this

province, have not the stamina to survive our winters here, as well as if grown in our Quebec nurseries, and I shall not be discouraged if the two trees of this most excellent variety should suffer injury this winter. But I shall persevere and raise the Princess Louise in my own nursery as well as make further tests by top-grafting on hardy stocks.

McINTOSH RED. ·

All varieties of apples were very fine this season, but, without exception, McIntosh Red, as grown this year, is the most beautiful, as well as the most delicious, apple we have seen. After some eight years' trial, I am convinced that McIntosh can be grown here as well, if not more successful, than Fameuse; I can recommend its cultivation in this province. I understand some eighty barrels of McIntosh Red were sold here this fall. They came from the vicinity of Aultsville, I believe, and were sold in one lot, at \$2.25, when Fameuse only brought \$1.75 per barrel. I have been informed by dealers that this particular variety was, without exception, the handsomest lot of apples ever offered for sale in this market, and that it is the first time the trade has ever met this apple. The party who secured the lot of McIntosh is now retailing them at \$4.00 per barrel, and to-day the finest Fameuse are only selling for \$2.75 per barrel, retail.

I believe there is money in McIntosh, not only for this market, but for export, as they promise to ship better than our Fameuse.

Yours truly,

Montreal, Que.

R. W. SHEPHERD, JR.

E. P. Roe says that the man with only one square rod of land can use it to best advantage by planting half to strawberries.

BLACK CURRANTS.



E use them for the table, with sugar, the same as red ones, but for this purpose they need to be thoroughly ripe; we make jam of them, and can them for winter. Jelly and cordial, which are highly esteemed for medicinal purposes, can also be made from The jelly is thought to be particularly beneficial in cases of sore throat, and the cordial in summer complaints.

It has always seemed strange to me that more attention has not been paid to them, for their cultivation is attended with very little trouble, and we have always found a ready sale for them in market. In fact, with us, the demand has always been greater than the supply, and the price obtained a little better than that paid for red ones.

The bushes are easily propagated from cuttings, which can b planted either in the fall or in the spring. With proper cultivation they make rapid growth and bear quite abundantly the second season after planting. long-lived, some on our premises being more than twelve years old to my certain knowledge, and they still bear fruit in great profusion. They are not troubled by the currant worm. Some think that by planting red currant bushes among the black ones the former escape the ravages of the currant worm, but I am not quite prepared to vouch for that. So far as I know, they are not troubled by any blight or disease.

Currants are so much more easily picked than strawberries or raspberries that they find favor in my sight. The stooping position necessary in picking strawberries is very tiresome, and one comes out of the raspberry season with hands scratched and full of thorns and garments as badly rent as if she had sojourned forty years in the wilderness.

To those who are raising small fruits for market, I would say try some black If you have any English customers you are sure of a market for them.

A writer in Vick's Magazine.

AMOUNT OF SEED FOR DIFFERENT AREAS.

Asparagus, bed of 15 sq. yards Beans, broad, row 80 feet Beet, row 50 feet Broccoli, 4 square yards Brussels Sprouts, 4 square yards. Cabbage, bed of 8 square yards Carrots, drill of 120 feet Carrots, bed of 12 square yards. Cauliflower, 4 square yards. Celery, 4 square yards. Cress, 3 square yards. Endive, 4 square yards. Endive, 4 square yards.	2 1 1 1 2 2 1 1 1 1 1	pt. qt. oz.	Leek, 2 square yards. Lettuce, 4 square yards. Mushroom, 7 square yards. Onions, 9 square yards. Parsley, row 80 feet. Parsnip, drill of 200 feet. Peas, early, row 60 feet. Peas, large, late, row 80 feet. Potatoes, row 30 feet. Radishes, 4 square yards. Savoy, 4 square yards. Spinach, 10 square yards. Spinach, drill of 120 feet.	$\begin{array}{c} 1 \\ 1 \\ 2 \\ 1^{\frac{1}{2}} \\ 2 \\ 1^{\frac{1}{2}} \\ 1^{\frac{1}{2}} \\ 1 \\ 2 \\ 2 \\ 1 \end{array}$	oz. bus. oz. pt. oz.
Kale, 4 square yards Kidney Beans, row 80 feet	1	pt.	l m	1	

RASPBERRY CULTURE.



ITHIN a few years back a notable change has been introduced in the general management of the raspberry. The only pruning formerly given to this plant was confined to cutting out old stems which had fruited, thinning out the young stems which were to produce the next crop, and shortening them by cutting off a portion of their tops. These would then be fastened to a stake

or some similar support, and this completed the pruning for the season. the more modern system obviates the necessity of any kind of support and the plants are managed so that they are able to support themselves when full of fruit. This is accomplished by allowing the first year's growth of newly set-out plants to grow undisturbed; the second year two or more shoots will be produced, and when these have reached to a height of about two feet their tops are pinched off, so as to stop their further upright growth; they will then proceed to push out side shoots or laterals on all sides, balancing and supporting themselves very effectually and appearing like small, evenly headed trees. When growth has been completed for the season and the leaves have fallen these side shoots are pruned back so as to leave them from 12 to 16 inches in length, according to their strength. This pruning can be done quite rapidly with pruning shears. At the same time, if not before, all the old stems or canes which have fruited are also removed; but many cultivators prefer to remove these old stems immediately after the fruit has been gathered, claiming that by so doing the young canes have greater freedom of growth; also, that by promptly removing the old canes many kinds of insects which lodge in the old wood and have cocoons and nests upon it are thus destroyed by burning all the prunings as they are collected. This system is continued annually; no greater number of young shoots than is required are allowed to grow, all others being destroyed as they reach a few inches in height. The summer topping is attended to as previously stated, and the result of this routine treatment is a self-supporting plant and improved fruit.—Exchange.

In storing celery for market, it is dug and put in trenches or in store houses. The latter are made with four inch packing on all sides, of sawdust or leaves, and with provision or shedding rain and for ventilation. Trenching is preferable where the celery is to be kept a long time, but in severe weather the trenches are often controlled by the frost for weeks. For family use, it can be kept in the cellar or in boxes. The boxes should be as high as the celery, one foot, and any length. Four inches of sand or soil is then placed in the box, soaked with water. The plants should be packed closely in the box, straight up with their roots in the wet sand, but without any soil between the plants. Examine the soil occasionally, and saturate it with water if it has become dry, but do not wet the celery. It will keep in this way two or three months. The crop for storing should be dug only when perfectly dry, and even the dew should be allowed to dry off.—Farm and Home.

BULBS FOR WINTER BLOOMING.

HOW TO SELECT THEM AND THE BEST METHOD OF PREPARATION AND CULTURE.

NLESS one has had some experience, it is hard to select from a catalogue bulbs that will do well for the house. Many of the imported bulbs are dry and worthless, and what are advertised as home-grown are too old to do well in the hands of an amateur, but if your dealer is reliable and can assure you of the freshness of his stock, it will be safe to select the following as among the best for

winter blooming:—Single Tulips, Jonquil, Crocus and Lily of the Valley, Giant Oxalis, both yellow and pink, Fairy Lily, a species of Amaryllis, Hyacinths, Cyclamen, a Calla and Prince of Orange Amaryllis. The Tulips, Jonquil, Crocus, and Lily of the Valley must be potted in the autumn and

BURIED WHERE THEY WILL FREEZE

two or three times before they are brought indoors, then put them in the cellar where they will thaw and become well rooted. When they are well above the soil bring them up and put them in the window, not the most sunny one, but a north or west window, and as far from the stove as possible; keep quite moist and you will soon have Crocus, Tulips and Jonquil will follow, and Lily of the Valley for the last. Hyacinths should not be grown in glasses, they are unsatisfactory and the bulbs are worthless for further use. Pot them in good rich soil eight or ten weeks before you wish to put them in the window, and

BURY THEM IN THE CELLAR.

When they are rooted sufficiently the tops will push above the ground, and when an inch or two high bring up and give rather more light and heat than the first named bulbs. The Roman Hyacinth is easiest of culture, and each bulb will throw up two or three flower stalks.

The Fairy Lily, Oxalis, and Freesias need much the same treatment. Four or five bulbs of either kind may be allowed to a five inch pot; give them good soil, plenty of sun and a good degree of warmth and they bloom very soon. The Freesia is the finest thing I have ever grown for winter blooming, requiring little care, sure to blossom, and beautiful to look at, while nothing can compare with

ITS DELICIOUS FRAGRANCE.

Procure your Cyclamen of the florist, well started for winter growth; they are very fine and remain in blossom a long time. A Prince of Orange Amaryllis will blossom twice in the year, in August and again in December. After the summer blooming set it away in a somewhat cool and dark place, gizing little water until the new growth starts, then give plenty of water and a sunny corner and the bud stalk will soon appear. If your Calla does not show signs of blooming after a reasonable time, water quite freely with warm water, nearly as hot as you can bear your hand in.

There is a fascination about the growth of bulbous plants, the unfolding of leaf and bud under one's very eye, that nothing else can give, and I much prefer them to any other class of plants, both for out-door culture and for winter blooming.—Myra C. Durfee.

WINTERING APPLES.



THE RESERVE THE PROPERTY OF THE PARTY OF THE

labundance of fruit this season has caused prices to be extremely low, so much so that in many sections farmers declare that apples are not worth gathering. In many parts of the country six cents per bushel are only offered at the cider mills or distilleries. Of course this price refers to windfalls and fruit that insects have

caused to drop, but it is much better to haul them away and dispose of them even at such low prices, for the number of bushels that could be picked up in a day in an orchard would be sufficient to make the occupation pay quite well. Aside from this, removing the fruit gets rid of the insects they would produce another season. The low prices should stimulate farmers to store choice fruit awayi n as careful a manner as possible; as better prices may be realized in the winter or the spring. The following hints and suggestions from Stuart's Agriculturist on keeping fruit all the year round are of special interest just now:

"The comfort of a supply of apples the year round depends as much upon the keeping as the growing of them. The average house cellar is not the best place in which to store them, but attention to cleanliness, ventilation and temperature guided by a thermometer, will make it a fair success. Temperature is the strong point, and the nearer and more uniformly the air of any room in which apples are stored can be kept to the freezing point, but always above it. the longer and better they will keep. Carefully picked and assorted apples. packed in boxes or barrels in almost any fine, dry material that will aid in keep. ing them dry and the temperature about them uniform, may be kept in any convenient outhouse, or even the barn, covered with three or four feet of hay, straw, leaves, chaff or other material, to keep the frost from reaching them. the better if they can stand upon the ground, which will aid in maintaining an unchanging temperature. To those who have heretofore kept their apples in bins or on shelves in the house cellar without satisfactory success we suggest the following experiments, which have before appeared in print: Select fifty good sound apples from the shelf or exposed mass, wrap each in paper and replace them. Count out fifty more, the same in condition, and place them aside exposed. Place successive lots of fifty equal specimens in boxes of suitable Size and pack in each the following, viz.: fine shavings, fine chopped oat straw. coarse and fine chaff, bran, sifted coal ashes and plaster; put them in a cold, not freezing, apartment. Fill boxes large enough to hold half a bushel or a bushel, with apples in the more compact packing, as plaster or fine chaff, and place them in the barn, with a few feet of hay or a foot or two of chaff upon Leave them all undisturbed until after those kept in the usual way are gone and you get hungry for apples; then examine them all at the same time carefully, bearing in mind the differing conditions under which each lot has been kept and you will get a deal of information." -Husbandman.

CLIMATE AND FRUIT CULTURE.

PROPOSAL, the importance of which to the fruit growers of Ontario is not easily exaggerated, is set forth in the report recently published by Parliament, of the evidence given by Mr. Gordon Mowat, before the Agricultural Committee of the House of Commons, on the Relation of Climatology to Agriculture and Horticulture. A climatic survey of the Dominion—a careful study and mapping in detail of

the characteristics of our very many different local climates -seems scarcely second in economic value to the great work being done by our experimental To know the average temperature of the growing season in each locality, the average cold of winter, the ordinary and extra-ordinary extremes of the cold season, the rainfall, the average length of time between killing frosts of spring and autumn, and such other details of local climate as have a direct bearing on fruit culture, is to have at the command of the fruit growers and others, the means of determining at once, what kinds and varieties of fruit can or should be grown in any locality. The information, which would of course be mapped as accurately as possible, by lines winding and twisting with the varying climatic conditions, would be based upon the records accumulated by our Meteorological service, aided by the facts of altitude, slope and local topography supplied by our railway and geological surveys, facts, the bearing of which on climate, it is in the province of climatology to measure the influence of, even where meteorological records are scanty or absent. With the light thus brought to bear, the experience gained in Ontario and elsewhere, as to the fruits that grow or fail to grow in particular localities, could at once be applied to all localities, even where fruit culture has never been attempted, and this, too, with a certainty of conclusions otherwise to be attained only by a costly process of actual testing, requiring, in many cases, years of time, and involving an incalculable waste of money and effort.

Our experimental farms can never test the adaptability of certain fruits to local climate. They represent only a few varieties of our climate. There are but two farms—those at Nappan, N. S., and Guelph—that represent any of the points in the great range of climate between that of Niagara and that of Ottawa, a range as great as exists between Niagara and North Carolina. Such farms would have to be multiplied many-fold, to test the climatic capacity of this province for fruit growing, and spend many years' time to arrive at conclusions which may be immediately known by the means proposed.

As it is an axiom, that on similar soils and with like culture, any variety of plant that succeeds or fails in a given locality, will succeed or fail in all other localities having essentially the same conditions of climate and soil. The survey proposed would give the experimental farms and the fruit growers' associations valuable aid in deciding where to test Canadian, Russian and other fruits, etc.

In Ontario the climate varies so much within short distances, and owing to the influence of lakes great and small so independently of latitude, that hitherto the question of what varieties may be best suited to particular localities, has been puzzling indeed. Differences of fifty days of the frostless season occur even south of the main line of the Grand Trunk, in Western Ontario. Further north, where altitudes suddenly vary and small lakes abound, the contrasts are still sharper. Localities, especially on the eastern and southern sides of our little lakes, have frequently a frostless season a month longer than other localities scarcely a mile away. Some particular varieties of fruit can be grown in some localities a hundred miles further north than their general line.

A climatic survey would unravel these many characteristics of local climate, and greatly stimulate fruit growing, by suggesting a full use of our possibilities and assisting us in determining the most profitable varieties suitable to each locality, and would also enable the Fruit Growers' Association to give a wider scope and a more definite direction to the investigations which are being made by it from year to year.

Lindsay, Dec., 1891.

THOMAS BEALL.

New or Little Known Fruits. &

THE ROUND BORSDORFER APPLE.

SIR,—I see by the December number of the HORTICULTURIST that one of the trees you are sending out for trial for next season, is the Russian apple, Round Borsdorfer. I have had that variety bearing for a few years and like it very much. It is a smallish apple of very good quality and a long keeper. The tree is *perfectly* hardy, and a good bearer for the cold sections of Ontario and Quebec; where an iron-clad tree is required, it is very desirable.

Yours truly,

Grenville, P.O.

ROBT. HAMILTON.

Perennial Vegetables.—Asparagus, rhubarb, and horseradish are the principal representatives of this class. Asparagus, when once planted properly, will last almost forever. The principal condition for success with this plant is to give it plenty of room; a distance of four feet each way is found best for field culture. In the garden, we prefer a single row, with plants two feet apart, to planting in beds. Rhubarb will also yield a crop for many years, but in most cases it is better to take up the plants and make a new bed or row every six or eight years. To have large, crisp stalks, cover each clump with two or three forkfuls of stable manure after the ground freezes in the fall. Horseradish in the family garden is generally left to take care of itself, but if first-class roots are desired, it should be treated like an annual and re-planted every spring.—

American Agriculturist.

🛪 The Kitchen Garden.

ONION RAISING AND HOW TO OBTAIN THE BEST RESULTS, AND HOW TO CATCH THE HIGHEST MARKETS WITH THE CROP.



XPERIMENTS conducted at the station in 1889 and 1890, fully demonstrated that much is to be gained by sowing onion seed in the green-house or hot-bed in February or March and transplanting the young plants into the open ground in April or May. As compared with onions grown by the ordinary method, the transplanted ones were from

fifty to one hundred per cent. ahead in size and total marketable product. A marked difference has been observed in varieties, however, as to their adaptability to this method of treatment. An extended and careful study of varieties has been made the past season, with reference to their adaptability to transplanting. The following are some of the most important results of the investigation:

EARLY VARIETIES.

These require separate mention for the reason that as a class they are peculiarly adapted to transplanting. Nearly all are white and very much flattened. Some attain five inches in diameter and less than two inches in thickness. If sown in Feburary and transplanted into the open ground as early as it can be worked in the spring, the young onions may be pulled for bunching in May and June, or nearly as early as those grown from sets. By the first of July they are ripe enough to be pulled and sold in the dry state. Both in the green and dry state they are much superior to onions grown from sets and sell for a higher price.

In these early onions the greatest profit is found, as they not only bring fancy prices, but the crop can be cleared from the ground in time for celery, or other fall crops. The varieties best adapted to the purpose are Barletta, Marzajola, Pearl and Bermuda. The first named is sold under various names, such as Extra Early Barletta, Adriatic Barletta, New Early Adriatic, Bloomsdale Pearl, New Queen, Early Radish, etc. Barletta is the earliest of those named, but Marzajola is only two weeks later and much larger. These two are the best of the early sorts.

SECOND EARLY AND LATE VARIETIES.

These classes are not easily separated although there is considerable difference between the extreme in time of ripening. Some of the second early sorts, such as Danvers, Wethersfield, Michigan and White Globe do not respond so readily to this method of treatment as the extreme early and late sorts. They have, in every instance, given increased yields by transplanting, but the gain is less than with some of the early and late sorts.

On upland soil, however, where onion growing is somewhat precarious and uncertain, transplanting pays even with these varieties.

Of the second early and late sorts those that give the best results by this method are White Victoria, Prizetaker, Rocca and Pompeii. Prizetaker, is also known as Maule's Prizetaker, and the Spanish King of some dealers is the same, while with others it is quite different. Rocca is also known as Giant Red Rocca and New Giant Rocca. Pompeii comes under various names such as Giant Pompeii, Red Mammoth Pompeii and Mammoth Pompeii. Rocca and Pompeii possess considerable merit, but both are so badly mixed with other varieties as to make them quite unsatisfactory. White Victoria and Prizetaker are the best of all the varieties, for the general crop, thus far tested. Both attain a large size, frequently weighing more than a pound each. They have, at the station, in several instances yielded at the rate of fifteen hundred bushels per acre, and two thousand bushels per acre is quite within the bounds of possibility.—Bulletin Ohio Exper. Station.

BEST FERTILIZER FOR CABBAGE HILLS.



ITHER ashes or bone, separately, or phosphate, such as are to be found in the market, make excellent starters for cabbage, when well fixed in the hills. I have sometimes put these in the hills before planting. At other times, when I had reason to fear that they would not be sufficiently well mixed with the soil to prevent killing the young plants, I have had them scattered around the plants just before hoeing them, taking care to cover the fertilizer with the

earth drawn around the plants.

During the past season I have tried a new method, which has afforded me great satisfaction. I first spread a two inch layer of fine soil on the shed floor, which I moisten well with the sprinkler, and then add two inches of flour of bone, also well sprinkled, and then finally one to two inches of unleached wood ashes, which was also well moistened. In this order I formed a heap about three feet high. In about a fortnight this heap had heated sufficiently to dry the moisture, when it was cut down with a hoe, and all the dry lumps knocked up fine. I used a closed handful of the mixture in each cabbage hill before planting.

In all my experience in growing cabbage, for upwards of thirty years, I never saw more thrifty plants than grew over that manure. The leaves were broad and open, with that healthy green color that delights the farmer's eye, and without that naked stem connection of the leaves with the stem which characterizes feeble plants. The caustic potash of the ashes had so acted on the fine bone as to make it very much more valuable as a fertilizer. Though it was not made soluble, yet it readily became so when in contact with the soil.—American Cultivator.



SUBSCRIPTION PRICE, \$1.00 per year, entitling the subscriber to membership of the Fruit Growers' Association of Ontario and all its privileges, including a copy of its valuable Annual Report, and a share in its annual distribution of plants and trees.

REMITTANCES by Registered Letter are at our risk. Receipts will be acknowledged upon the address label.

NOTES AND COMMENTS.

SMALL FRUITS AT GENEVA.—Mr. C. E. Hunn, of that station, speaks very favorably of the Caroline as a fine yellow raspberry for the amateur's collection. He is right in saying that it is very productive, that it is hardy, and that, owing to the softness of its berries, the fruit is not suitable for shipping, but when he speaks of the superb flavor of the Caroline as entitling this variety to a place in every collection, we must differ with him very decidedly. The Caroline, in our opinion, is of exceedingly poor quality, and no more desirable for home use than for market.

Of the blackberries he highly commends the Agawam as being hardy and able to resist drought, maturing all its fruit. While this is true, we do not give it a very high place for market on account of its small size. Large berries like the Erie or the Kittatinny bring the most money in our markets. The Agawam, however, is of good quality and quite productive.

Of black currants, Mr. Hunn recommends Ogden's Black Grape and Champion Black as two of the best. He condemns the Crandell as utterly worthless.

Of red currants, Fay's, Cherry and Prince Albert are the leading varieties, the latter being especially valuable on account of its late fruiting. The Prince Albert, he says, begins to ripen its fruit when the other varieties are ready to pick, and can be left on the bushes for a long time, as the foliage completely covers the bunches and keeps them from being scalded by the sun.

Speaking of gooseberries, he places the Triumph at the head of the list of large-fruiting varieties.

Tested.—Mr. L. Pasche, of Bryson, Que., writes that the Princess Louise apple tree, which was sent him by the Association two years ago, has so far proved itself hardy with him.

GIPSY GIRL.—Our readers will notice on our premium list a hardy variety of apple of great promise, called Gipsy Girl. It is one among the new varieties introduced by the Experimental Farm from Russia. Prof. Craig says that it is an extremely handsome apple and that the tree is a strong, healthy grower. He counts it one of the very best in the trial orchard at Ottawa. It gave some samples of fruit the second year after planting, and is again bearing the third year.

The other varieties are also new importations of great promise, probably of equal merit, especially the Round Borsdorfer and Blushed Calville. Both are very excellent varieties for growing in the north, but are of such merit as to be well worth cultivation anywhere in Ontario. They will compare favorably with the very best varieties we grow, and possibly may be found superior to any of their season.

The SILKEN LEAF and LITTLE HAT are new importations by the Experimental Farm, which are thought to have special merit for the cold north.

We would particularly recommend a trial of these new Russian varieties by all our subscribers in the northern parts of Ontario, for we have great hopes that they will prove of special value.

ROYAL TABLE is a Russian apple which Prof Craig highly commends. In his examination, before a select standing committee of the Parliament of the Dominion last July, he stated that the tree was a compact grower, with round top and slender twigs, and medium sized leaves. It has borne abundant crops for three years past, at Abbotsford, Que. The fruit is medium to large, keeps well, even as late as the month of April.

The Longfield apple is a Russian variety of much value, according to Dr. Hoskins. It is an annual bearer, and keeps better into the winter than the Fameuse. The fruit is very handsome, very good, and of fair size, when not allowed to over-bear. It counted equally good for eating or for cooking.



🙀 Question Drawer. ⊱

FRUITS FOR THE NORTH.

SIR,—Which would be the two best kinds of cherries, plums and pears to plant in the north, say $45\frac{1}{2}$ north latitude?

L. PASCHE, Bryson, Que.

Of cherries, Mr. Craig, who has been testing these at Abbotsford, Que., recommends Early Richmond, English Morello, Dyehouse and Montmorency Ordinaire. Should these not succeed, we would recommend a trial of the Ostheim and Vladimir. Of plums, we would suggest a trial of the Weaver and Moore's Arctic. Of pears, the Flemish Beauty and Bessemianka.

HARDY CHERRIES.

SIR,—I am planting a number of cherry trees and would like to know whether I could get the Bohemian Queen. I see it highly recommended in Vol. 13, page 104. I have written to several nurseries and none of them have it. Do you think the Windsor cherry will stand our part of the country, twenty miles north of Guelph?

THOS. HANDLEY, Orton, Ont.

The Bohemian Queen is not propagated by any nursery in Ontario. Some pits were sent us by Mr. Jaroslav Niemetz, a Russian officer. Should we succeed in growing them, we shall in time have some trees to distribute among our members. We cannot say how far north the Windsor cherry would succeed, but we would like our correspondent to test it and report.

GOLDEN QUEEN vs. CUTHBERT.

Sir,—Does the Golden Queen raspberry produce and sell better than the Cuthbert?

A. Brown, Bethel, P. E. I.

Reply by E. Morden, Niagara Falls South.

The Golden Queen closely resembles its parent, the Cuthbert, except in color. Its color is a golden orange. It seems to be a somewhat better grower and equally productive. Its quality in the dark could not probably be distinguished from that of the Cuthbert. In size and texture of berry it does not differ appreciably from the Cuthbert. Although, in my opinion, it is attractive in appearance, I would not advise any one to plant it largely for market purposes. The Cuthbert is a safer variety in this respect.

* Open Letters. *

A REMARKABLE PLUM.

Sir, -I am not an aspirant for fame, present or posthumous, but I have the largest plum tree I ever saw in any country in which I have travelled. It is fifteen years old and has never had the black knot in the smallest degree, while many varieties surrounding it have been badly mutilated each year on account of the knot. The plum is a seedling. The have been badly muthated each year on account of the know. The plain is a settling. The fruit is like the Green Imperial in appearance and very excellent either for table or for canning. It was so loaded this year that it was a curiosity to all visitors. The crop was estimated at from six to ten bushels. The branches were very fine, mostly the size of a pipe stem and all weeping. Even the larger branches had to perform the same ceremony out of sympathy, so that the tree formed a perfect weeping tree. The curculio does not damage this variety as much as the others, indeed I failed to notice any ravages by this insect this year. The tree is a good bearer, though never before has done so well as this season. The chief defect is the quantity of sprouts which come up all about the trunk.

I would very much like to discover a Russian apple that would thrive in the North-West, besides the Siberians. The Duchess of Oldenburg will grow and flourish up to the

end of Lake Superior, but I think not beyond.

CHAS. JARVIS, Brantford, Ont.

NOTE. -Our friends who are desirous of discovering some hardy apple that will flourish in the North-West, should give a fair trial to the Gipsy Girl, and the other Russian kinds, which are upon our list for distribution for the spring of 1892.

FRUIT INSPECTION.

SIR,-I realized 50 cents more per barrel for Fameuse shipped to Scotland than I

could get in Montreal (\$2 25 net).

I am in hearty sympathy with Mr. A. H. Pettit, regarding a system of fruit inspec-tion, if a practicable plan could be devised. It would be a slow process to examine twenty, or thirty thousand barrels of apples that leave our port every week. I had occasion to be in one of our leading commission houses last season when a lady came in with some small wild apples she had found in the middle of a barrel of Kings! All the commission merchant could do was to hand her back 50 cents, with strong language against the fruit grower who sent the apples, who also was docked 50 cents on each barrel. I asked him why he did not write the fruit grower about the matter. He answered, "I cannot kick, he sends me such lots of berries."

I always make a practice of branding my name upon the barrels, but we do not get the credit. For instance, I had occasion to load a car of onions for one of our leading commission houses. They had their man scraping off my name and putting on theirs.

course they are not going to pay to advertise another man's business." What about a Dominion Fruit Growers' Convention this season?

R. BRODIE, Montreal, Que.

THE CRANDALL.

Sir, -Last spring I purchased some plants of the "Crandall Black Current" from a nurseryman in whose catalogue it was lengthily described as a most desirable novelty. Of course, they have not yet fruited with me, but the foliage and habit of growth is so exactly similar to that of a large bush of the old established yellow flowering current (Ribes aureum præcox), growing in my garden, that I am getting suspicious that this vaunted "novelty" may be none other than our old friend under a new name. If so, it is worthless as a fruit producer, as a few scattered berries, single or in pairs, is all that my old bush produces. I think it well to ventilate this subject in your pages for the consideration of others before the next planting season arrives.

ARTHUR GEO. HEAVEN, Boyne, Ont.

THE FRUIT EXPERIMENT STATION.

Sir. - Being at the meeting of the Fruit Growers' Association when they were discuss ing the establishment of an Experimental Station in the interest of fruit growers, I will add my opinion to those expressed in the meeting. Would it not answer the purpose as well, to have a fund for experimental purposes without the station? To illustrate, take the "Excelsior Peach" for example (a gentleman in the meeting said it was a cling stone, I see by description in American Agriculturist, it is a free stone). The price was said to be \$1.00 per tree single, or \$25.00 per 100 trees. Now, if there was an experimental fund, buy 100 trees, and after supplying the present stations, divide the balance into lots of two each, and send to trusty fruit growers all over the province from Windsor to Ottawa, and from Niagara to Owen Sound, to report on the hardiness of the tree, and character of the

Thus, the value of the tree would soon be known, and the section of the country in which it would succeed. Whereas, if it was tested at a station, it would take as long time to test it, and the test would only be of value for that immediate locality, and individuals in other localities would lose as much more time to find out if it would suit them. Or, if the 100 trees was retailed at wholesale price, I think there are very few fruit growers who would grudge 50 cents for two trees, when they would not give one dollar for one tree. You will thus see the drift of my idea, which is to test new fruits or plants, over as wide a section of country, in as short a time as possible, and with as little expense. I would like to emphasize what one speaker said about growers confining themselves more to such fruits as they could grow to perfection.

R. R. HUNTER.

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Dundas, Dec. 29, 1891.

THE KENTISH COB-NUT.

SIR,—In answer to numerous enquiries regarding the English cob-nut, I would state, there was an extra crop this year, something over a bushel to the dozen trees; the young trees four or five years of age also bore well. Mr. H. E. Van Deman, Pomologist of Washington, is introducing and recommending the English cob for planting in the States. By request, I forwarded him a specimen of the nut last year. This nut does not become hollow, nor has it that rank taste from age as the Spanish nut. I have some gathered in 1889 still sweet and sound. Planted twelve feet apart, I judge to be the proper distance, unless for a wind break, then six feet; fertilizing like corn. I would not advise planting a tree by itself.

E. WARDROPER, Pelee Island, Ont.

3 Our Book Table. &

MEEHAN'S MONTHLY for December contains a beautiful colored plate of Sarracenia Prupurea, or side-saddle flower. This magazine is one of especial interest to all gardeners and fruit growers who have the slightest interest in the study of botany. Magazines devoted to that science are now far beyond the reach of amateurs; even botanical students can scarcely appreciate them, unless each is provided with a first-class microscope. But in Mechan's Monthly, we have the various native plants brought before us, one by one, in a way that will interest the amateur botanist. A monagram is written showing its history and its botanical relationship, its peculiarities and its habitat in a very interesting style. In addition to that, much attention is given to general gardening and fruit growing. It is published by Thos. Meehan & Sons, Germantown, Philadelphia, Pa., U. S.

FRUIT GROWING FOR PROFIT, is the title of a pamphlet published by W. O. Creighton, a graduate of the Nova Scotia Provincial Agricultural College, and editor of the Maritime Agriculturist. This work is calculated to encourage fruit growing for profit in Nova Scotia, and is, on the whole, a creditable production. It is evident, however, from some details of operations there, that we in Ontario are in advance of the Nova Scotia orchardists in our methods of handling fruits.