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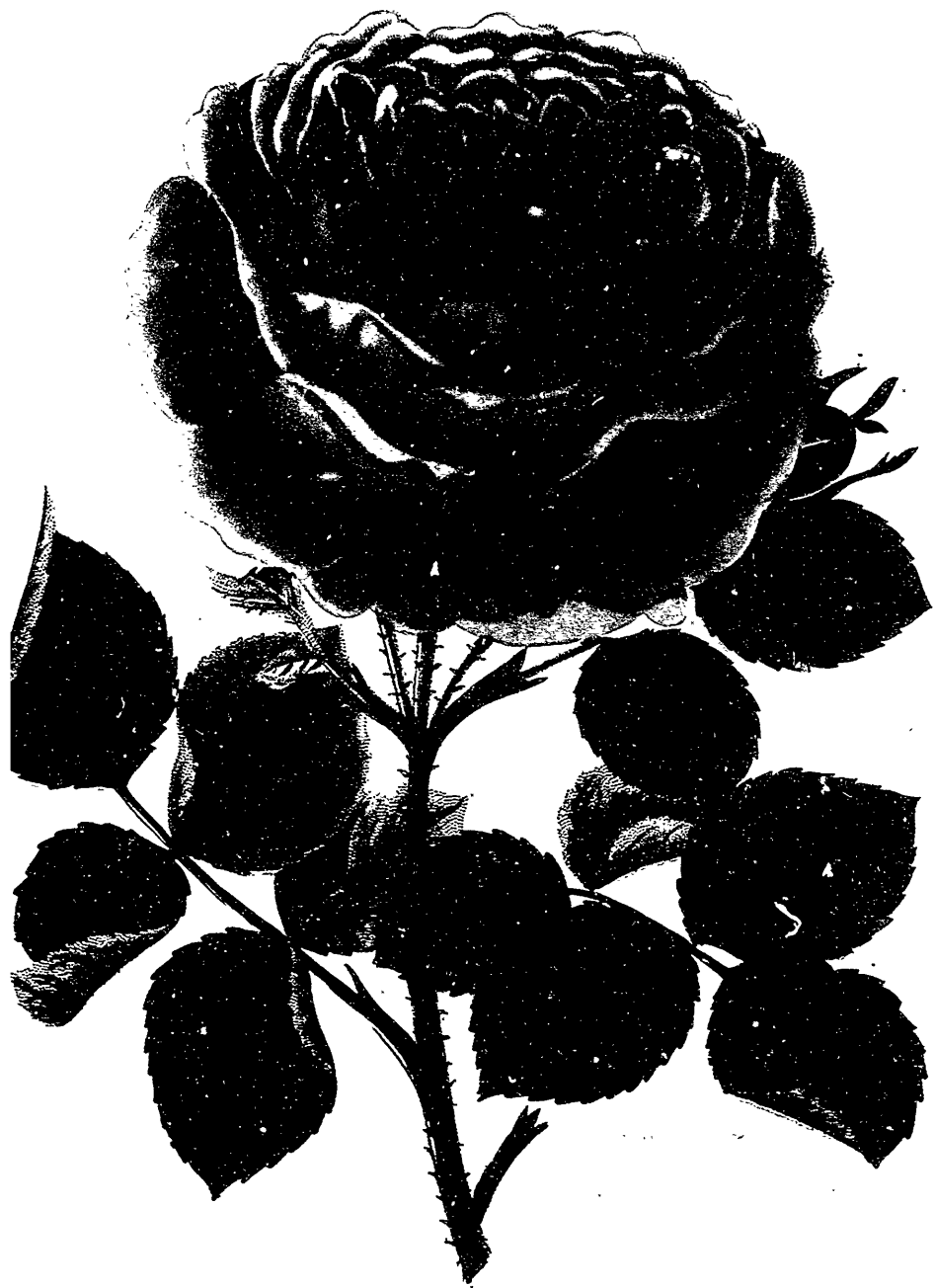
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ROSE-JOHN HOPPER.

FOR CANADIAN HORTICULTURIST.

THE
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ROSE JOHN HOPPER.



AMONG the numerous flowers that may be used to adorn the garden there is none to compare with the rose; or to express it in the language of the humorous Thomas Hood,—

The tulip is a courtly queen
Whom, therefore, I will shun;
The cowslip is a country wench,
The violet is a nun.

The lily is all in white, like a saint,
And so is no mate for me;
And the daisy's cheek is tipped with a blush,
She is of such low degree.

But I will plight with the dainty rose,
For fairest of all is she.

The rose is a study by itself, and has received so much attention from gardeners that there are now nearly one thousand named and catalogued varieties, which are in general cultivation. Among the hybrid remonant roses, the subject of this sketch is one which deserves extended cultivation. It was originated in the year 1862, by Mr. Ward of Ipswich, England, from Jules Margottin

crossed with Madame Vidot, and has proved itself a hardy, vigorous and free blooming variety.

In Mr. H. B. Ellwanger's work on "The Rose," the John Hopper is thus described:—"Bright rose with carmine centre, large and full, semi-globular, light red thorns, stout bushy growth." This point of light thorns is a point in its favor for cutting, and the only point urged against it by exhibitors is that the flowers will not stand a long journey.

Mr. Girdlestone, an English gardener, speaks of this rose as follows:—

"The opening of the flowers is rarely affected by weather of any sort, except that in a very hot, dry season the blooms expand somewhat too rapidly; but, on the other hand, autumn blooms are often developed in the cooler weather late in the year in very great beauty of color. Another good point about this rose, which, no doubt, has also materially contributed to its long-continued popularity and wide distribution, is the readiness with which cuttings of

it take root. It roots almost more easily than any other Hybrid Perpetual, and grows far better on its own roots than when budded on Manetti, a stock on which (like most of the smooth-wooded roses) it will not long succeed unless it is planted deep enough to be able to send out roots of its own from the collar.

Since writing the above we have received the following lines from Mr. Fred. Mitchell, on the "John Hopper" rose:—

" 'John Hopper,' the rose selected for distribution the coming spring, is not a new variety, but is a variety of such general all round merit that it is worthy of better acquaintance, and

more general cultivation. In Britain and throughout Europe, wherever roses are grown, it has long been known as a reliable standard sort; it was raised twenty-seven years ago by Ward, of Ipswich, England, from seed from 'Jules Margottin' another good standard variety. It is of good form, and of a bright deep rose color, generally deepest in the centre. The foliage is large and healthy-looking, and the growth strong and stubby. It is a very easily managed rose, and in short has but one fault, and that is its very objectionable incongruous name so utterly unsuited to a daintily beautiful rose."

SEASONABLE HINTS FOR FRUIT GROWERS.

PROFITS OF FRUIT CULTURE.

BEGINNERS in fruit culture need to be warned against being carried away by such statements as the following, which may be true in certain exceptional cases, and false in the majority.

(1.) It is possible to raise \$500 to \$600 worth of cherries from a single acre in one season.

(2.) Strawberries are very profitable, paying at the rate of \$700 per acre, using Crescent and James Vick two to one. Raspberries come next after strawberries. By planting such varieties as Tyler, Hopkins and Ohio, cutting back heavily and giving good cultivation, at least two thousand quarts per acre can be obtained, which sell for 15c. a quart. The cost of cultivating will not exceed \$50 per acre, and the picking and marketing \$50 more; two thousand quarts is only an average crop, and this would give a profit of \$200 per acre.

(3.) Strawberries should yield 4,000 quarts per acre, raspberries 3,000, blackberries a little more than raspberries, and currants should yield 1,500 to 2,000 quarts per acre.

(4.) An acre of strawberries will sometimes pay better than five acres of grain.

These may be possibilities, but not probabilities, except where all conditions are most favorable. To those of us who are in the business, it is no doubt an incentive to greater zeal and industry to read of the possibilities that lie before us; but we should give both sides of the picture, and sometimes show the losses that are just as frequent as such fine profits. Twenty years ago the writer was led away by golden dreams, the outcome of such reading. Easily reckoning that if one acre in fruit culture should yield \$500, ten acres would give ten times as much, and so on, he planted his whole farm to fruit, expecting, of course, some such proportion of profit; and that if the hundred acres did not yield \$50,000

per annum, it would at least give a most enormous income. Grain farming was therefore thrown overboard entirely, for how could one afford to devote to grain, land in which such grand possibilities lay. The cows were sold, for how could land be given up to pasture, which might yield \$500 per acre? Our fellow fruit growers of experience will smile at the recital, and imagine the result. Difficulties of every kind arose. Expenses without number proved that the annual outlay required to run a hundred acre farm would bear no comparison to that required to run a fruit farm of the same extent, and that one acre of strawberries alone costs as much to cultivate properly as a ten acre field of wheat, and more. Instead of \$600 off a single acre of cherries, we found after waiting many years, that rot often took the whole crop, that some kinds sold poorly, that some varieties bore scantily at the best, and that although he might now plant such varieties as would come up to the mark, ten chances to one that no beginner will realize any such returns.

The fact is that no man can expect to be successful in fruit culture or in any other line, without experience and a thorough knowledge of his business. It is not acre for acre that should be compared, but rather cost of production; and, when plants, labor, manure, picking, baskets, etc., are counted, the proceeds are often very small.

THE VENTILATED APPLE BARREL.

The profits of apple growing are very much reduced by the cost of the

barrels. Thirty cents a barrel is about the least sum for which the ordinary barrel can be manufactured, and some less expensive package is needed, especially when we consider

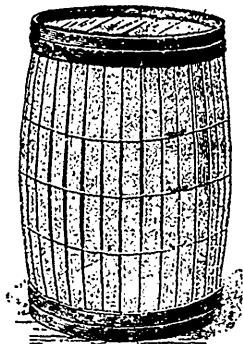


FIG. 80.—THE VENTILATED BARREL.

that there is no return of empties. We have low-priced baskets for our small fruits, grapes and peaches, and we want a low-priced one for our apples and pears. There has been one recently invented in Iowa, a sample of which has been shown us, and which we hope will be the very thing we want, for it can be manufactured at half the expense of the ordinary barrel, and possesses some advantages over it. It is made of elm wood, peeled from the log by a veneering machine, and cut into narrow staves. These are woven together with fine copper wire, as shown in the engraving, in such a manner that no hoops are required, except the two at each end to hold the heads in place, and one wide, strong one around the middle, in the inside, which gives firmness to the bilge and keeps all pressure off the fruit, caused by rolling or piling the barrels.

The company at Muscatine, Iowa, which has patented this barrel and are manufacturing it, claim that it has the following advantages over the ordinary barrel:

It weighs from five to seven pounds less than the ordinary barrel, making a material saving in freight charges.

It is the only thoroughly ventilated barrel made, a very important point.

It is stronger and more durable than any other barrel.

It costs less than one-half for trimming, and does not require an experienced hand to cooper it.

Never varies in size, even to the extent of a quart.

The heads are warranted not to come out in transit, and no liners are required, altogether making it the cheapest and best barrel in the market.

crossing the ocean, too, it may prove the right package, because it would permit the fruit to receive all the benefits of the atmospheric blast of cool air which is made to pass through the compartments in which the apples are stored, on some of the steamship lines.

BRACING OF POSTS FOR FENCES AND FOR GRAPE VINE TRELLISES.

One of the chief objections to the wire fence is the difficulty in keeping the wire from sagging. The heaving and thawing of the posts with the winter frosts soon causes the whole fence to look untidy. A most thor-

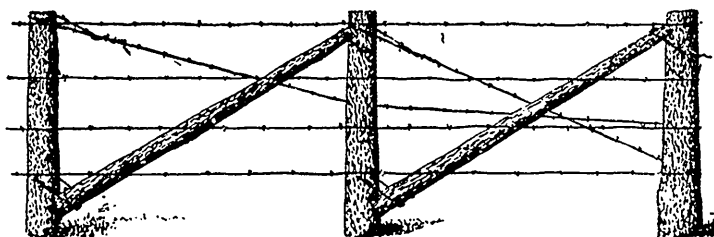


FIG. 51.—BRACING POSTS.

From an examination of the barrel, we have no doubt that these statements are correct, and we shall be glad to see it introduced into Canada, if only on the score of economy. It can be made in any size, and for shipping fancy apples and pears it seems to be admirably adapted, showing so well the color all down the sides.

Whether ventilated packages are best in all cases may perhaps be questioned, but, for the majority of cases, where a close barrel hastens the ripening process too much, ventilation is just what is wanted. In

ough mode of bracing is shown in the engraving, which explains itself, but it is rather clumsy looking, and perhaps no more lasting than a plan which we have adopted of late at Grimsby, in our vineyards. No wooden braces are used at all, but the last two posts at the end are made firm by wire stays, which pass diagonally from the top of each post to the ground, at an angle of about 45°, where each is fastened about a flat stone, buried nearly a foot below the surface. This is found to hold with great firmness, is out of the way, and looks quite tidy.

THE GRAPE CROP.

In this County of Durham grapes have been a failure this year. They, up to the blossoming time, gave great promise, but a heavy frost then did great damage.

In my own garden, which is sheltered by a belt of evergreen trees, the Delaware, Early Victor and Lady were well loaded with fruit, but the two former did not fully ripen, and the latter only fairly so, although all were bagged and allowed to remain on the vines until the 18th October.

On a Lady vine planted three years ago, I had sixty bunches of grapes, weighing from one-half to one pound. Last year this vine had ten, and the fruit resembled that of the Niagara in color and bunch, but not quite so good a flavor. It ripens earlier than either the Delaware or Early Victor. The vine is a strong

grower, with a large thick leaf and compact bunch. It is very free from the thrip or mildew, which this season has been very troublesome here on both the Clinton and Delaware. I am so pleased with the Lady that I wish to recommend it for trial wherever the Delaware will ripen.

Three years ago I ordered six new varieties of vines from a nursery near Toronto, only two of which when fruited turned out true to name, and three of them a red variety which drops its berries before they are ripe. It is simply dishonest to substitute such without permission, for special sorts ordered for trial. I hear complaints from my neighbors of substitution also in their orders and threats of publishing the name of nurserymen doing so if again repeated.—J. SMART.

CONCERNING SOME APPLES WORTH KNOWING ABOUT.

A PAPER BY THE LATE ROBERT BURNET.

THE WINTER ST. LAWRENCE.

THIS is a good variety, and enjoys the reputation of several advantageous characteristics. The tree is perfectly hardy, even in severe winters, and in tolerably high latitudes. Indeed, for northern Ontario we scarcely know a more eligible apple for orchard cultivation. It bears well, is admirably adapted for transportation, will carry long distances without detriment. We would like to see this variety exten-

sively tried, and, after suitable trial, largely cultivated. The worthy Editor of the HORTICULTURIST might profitably give insertion to a paragraph that it is worthy of a thorough trial in all locations in Ontario.

THE CANADA BALDWIN.

We have made careful trial of the qualities of this superb apple. A number of years ago I gave an order for a number of barrels from a Montreal house, to be shipped to the Lower Provinces. They turned out

of first quality. As a dessert fruit they are first rate, and have the peculiarity of having red streaks running through the white flesh. The tree is prolific, and can be got from R. W. Shepherd, The Nurseries, Como, Quebec. Perhaps nearer at hand from our Western Nurseries, but this is beyond my knowledge. It carries well, and without injury can be transported long distances. It is a good keeper; I kept some samples well into May. Then they were neither flabby nor wrinkled. When better known it will become a favorite market apple, as its color is altogether in its favor—showy and attractive. I have been calling the attention of some fruit growers in the neighborhood of Hamilton and Burlington to its excellence, but as yet have no report to give of its successful cultivation. I procured for an enthusiastic fruit grower, in the neighborhood of Lake Simcoe, some trees of this variety last summer, and they have done well in that locality. The soil, on which they were carefully planted, was a fine clayey loam. We heartily commend this variety to western cultivators, and though I have no permission to say so, yet from his known urbanity, we are satisfied that any one desirous of further information about this valuable apple, by applying to Charles Gibb, Esq., Abbotsford, Quebec, would receive a courteous reply, and much available experimental knowledge of the value of this variety. It is just a pity it bears a well known, but not half so valuable a surname; and one of the rules of the American Pomological

Society on nomenclature, might, with great propriety, be applied to the confusing name of the Canada Baldwin, and give it a distinctive alias to distinguish it from its popular confrere in the west.

FAMEUSE SUCREE.

A number of years ago I had the privilege, in company with Mr. Gibb, of Abbotsford, to visit the orchards of the Hon. Mon. Prudhomme, situated in one of the Coteaux of Montreal City. The main object was to inspect the "Fameuse Sucrée," which originated on the hon. gentleman's grounds. On trial we found this apple in point of quality Ar. I give it as my individual belief that it is an apple superior to the Fameuse or Snow Apple. I am aware that this is a risky assertion, and some apple growers will be apt to shrug the shoulder, still we would like them to give a trial to the apple before coming to a too hasty conclusion. It is hardy, and well stands the winter at Montreal. We might expect that it would do well in our latitude at Hamilton. The beauty of the apple gives it a great advantage as a dessert fruit. Its color is of the deepest purple, and well sets off other fruit in the dessert dish. We found it so productive that the weight of fruit had prostrated more trees than one, and yet they bore, wrecked as they were, lying on the ground.

THE DECARIE.

On a neighboring estate to that of the Hon. Mon. Prudhomme, we found the Decarie, the property of a courteous gentleman of the same

name as the apple, and the originator and owner of it. It is a magnificent apple, the Decarie. In color perfect, with a bloom like that on Pond's Seedling plum. Quality all that could be desired, and a prolific bearer. This fall fruit would be a great acquisition in Ontario, we are deeply persuaded. We secured some scions two summers ago, but owing to their having dried by the

way, only a few succeeded. We strongly commend this variety for orchard cultivation, assured that there is money in it.

PEACH OF MONTREAL.

Hardy apple of good quality, fine dessert fruit, saleable, though a yellow color. A heavy bearer, but easily bruised; valuable for a near market—a very profitable apple.

Milton. 1889.

KEEPING FRUIT.

EXPERIMENT IN KEEPING WINTER APPLES.

A question of interest to apple-growers was thoroughly experimented upon at the Ohio Experiment Station during the last season. The object of the experiment was to determine whether early or late picking of apples is best for their keeping, and which of the leading market varieties is really the best keeper. The experiment was supervised by W. J. Green, and was begun September 26th, when all the kinds were deemed of proper ripeness for early picking; the second picking was on October 6th; 3rd, October 13th; and last, October 20th.

At each picking, 100 perfect apples of the following varieties were gathered for the test: Ben Davis, Newton Pippin, Jonathan, Roxbury Russet, and Baldwin; and the Ben Davis showed the best keeping qualities all through the experiment; the tests also showed that with all of these kinds, early picking is better for keeping than late picking, though for the first two months the difference was very trifling. Thereafter it became more perceptible; and 256 days after picking, the number of specimens of each left, was:

Ben Davis, 1st picking.	..43;	2nd, 31;	3rd, 12;	4th, 12
Newton Pippin, 1st "	..13;	2nd, 8;	3rd, 6;	4th, 1
Jonathan, 1st "	..11;	2nd, 8;	3rd, 2;	4th, 0
Roxbury Russet, 1st "	.. 5;	2nd, 1;	3rd, 1;	4th, 1
Baldwin, 1st "	.. 3;	2nd, 0;	3rd, 0;	4th, 0

We are glad to place the results of this timely, judicious and instructive experiment before our readers, because we believe they may be of both present and future benefit to apple-growers.

KEEPING GRAPES.

There is an article going the rounds of the press which advises burying grapes, enclosed in a stone-pot, in a dry knoll until New Year's day, and then digging them up for use. There is no doubt that the cool even temperature of the ground, and the moisture of the same, afford just the right conditions for preserving fruit, but why may not the same conditions be secured in a properly constructed fruit cellar, or even in an ordinary cellar, by admitting plenty of cool air, and keeping the temperature down to nearly the freezing point. We cannot see the fun in digging up grapes, or any other hid treasures in mid-winter, when they can be just as well preserved in some more accessible place.

MR. CHARLES A. GREEN, in reply to the question, "How shall we keep grapes?" very sensibly says:

"How shall we keep grapes?" Why, keep them cool, dry and in thin layers. If you heap them in baskets they weigh down those in the bottom so closely as to cause mould. Place a layer of paper in the basket when half filled, then place on more grapes. We keep

ours in a cold room. When in danger of freezing we stack the baskets four or five deep in a pile and cover with heavy blankets. If desired to be kept very long we sometimes pack in dry sawdust. We have tried bran, but it did not serve a good purpose. There is no trouble in keeping ripe grapes, even the Concord, though thick skinned varieties such as Agawam, Salem, Wilder, etc., keep better.

RASPBERRIES—VARIETIES TESTED.

IN the Report of the Ohio Agricultural Experiment Station, we find some results of experience that may interest our readers, and here present them:

Ada.—This is the second season that *Ada* has fruited here, and it has thus far been satisfactory, with the exception of showing a tendency to blight. As the blight is not troublesome in most other sections, and so far as known does not appear at all in those localities where the raspberry is most at home, there need be no fear on that score. In vigor and productiveness the *Ada* equals the *Gregg*, and perhaps excels it in the latter particular, and is about the same in season, continuing in bearing a little longer, if there is any difference. In fruit, the two varieties are similar, the *Ada* being a trifle the smaller. We have not been able to test its hardiness, but there can hardly be a doubt but it will prove satisfactory in that respect. Commercial growers will do well to give it a trial.

Hilborn.—This variety has thus far given entire satisfaction here, the plants being hardy, vigorous and productive, while the fruit is unsurpassed in appearance. It can hardly fail to take rank as one of the best second-early black caps. Another season's trial confirms what has been said of this variety in previous reports. Its uncommon vigor, productiveness and beauty of fruit commend it to the attention of fruit-growers generally.

Johnston's Sweet.—This is another good second-early black cap, and is thought by some to excel all others in quality. It has shown no weakness here, except that the canes have been affected more than most other varieties by blight. It produced but little fruit the past season, owing to the blight. As stated concerning the *Ada*, this

need cause no uneasiness to those living in more favored sections. It is a safe variety to try.

Marlboro.—There is still much difference of opinion as to the value of this variety. It does not rank as a prolific bearer here, and yet is valuable, as it uniformly gives a fair crop of very fine berries. It surely has sufficient merit to warrant further trial.

Nemaha.—Thus far this variety has not proven equal to the *Gregg* in productiveness and size of fruit. Not fully tested as to hardiness. Another season's trial shows that it is decidedly inferior to the *Gregg* in the above respects, the berries being about the size of the Ohio.

Earhart.—Fruited here for the first time last season. The plants are vigorous and healthy, and apparently productive. It is probably one of the best of the ever-bearing sorts. The first crop this season was nearly equal to that of most other varieties, and there are still considerable numbers of unripe berries and blossoms.

Golden Queen.—So far this variety has proven to be all that has been claimed for it. The plants are hardy, vigorous, healthy and productive, while the fruit is beautiful in appearance and excellent in quality. It is an excellent variety for home use, and might be profitably grown for some markets.

Tyler (Souhegan).—The most reliable and profitable of early black caps. The fruit is small, and not of high quality, but sells at good prices because of its earliness. It has been reported as having a tendency to rust in some localities, but it has not exhibited that weakness here, and it is a matter of doubt if those so reporting it have it true to name.

Turner.—Among the red varieties the *Turner* is still the standard for earliness and productiveness. It may not show the first ripe berries, but it will yield a good picking

at an earlier date than any red sort thus far tested, with the possible exception of Highland Hardy. If the bushes are closely pruned in the spring, the fruit is sufficiently firm for near market. It gives greater profit than any other red variety in the station grounds.

Mr. Charles Mills, of the same State, says:—

My main crop was Tyler and Gregg for black, Cuthbert and Marlboro for red. The Tyler gives a large picking on the start and keeps good size throughout. The Gregg lengthens out the season, following close after the Tyler, with its large berries which sell at sight. It is not a large yielder nor quite firm enough to ship well. Some of its seedlings will soon take its place.

The Marlboro is doing better than at first. It produced a good crop early, and its good looks sell it, but quality or taste is not there, but it sells—that's the point. Cuthbert is our best red yet. Thompson may take the place of the Marlboro. I hope to test it next year. The disease which I have named black blight in black raspberries has done some damage. It, some seasons, kills many of the bushes. I have never seen a remedy or a cause for it yet. I find, if let stand, it completely kills the bush, but if cut out, leaving only the roots, they will sprout, grow up again with but one year lost. I prefer to set both red and black raspberries in the fall. I set red raspberries with good results in damp weather, any time from March to November. In setting green wood cut back well. Fall-set plants I give a forkful of manure on the plant in the fall, or soon as the ground freezes, then in the spring remove the manure and go over the piece often and see that every plant is alive. By adopting this plan, I am satisfied I double my first crop, over spring setting. It is impossible in the spring to set black raspberry plants without breaking off many of the sprouts. Set your plants in the fall and then you know what plants you have to sell to the earliest spring planters.

Mr. E. J. Brownell, recapitulating his year's experience in the *Orange County Farmer*, says:—

In black caps I have yet to find a better sort, all things considered, than the Ohio. As I have before said, I should not feel it a great deprivation if I were obliged to confine myself to this one sort alone. Ripening as it does within a few days of the earlier sorts, it will, if properly and thoroughly fertilized with all the manure needed to bring it to its best, continue to bear nearly as late as any of those kinds especially recommended for lateness.

In fact, under favorable conditions, it is a

very marvel of productiveness, and I have never seen any other raspberry that for healthfulness or vigor or plant-bearing qualities and everything considered, would equal it.

The Souhegan (or Tyler, which I believe to be identically the same, having both sorts from the first disseminators of each), which was so loudly vaunted as superior in hardiness and vigor of plants, and which would perhaps compare well in this respect with most of the older kinds, is certainly lacking in both vigor and productiveness as compared with the Ohio, while in size of fruit especially, unless the land is unusually rich, it is quite inferior.

There is but one point, it seems to me, in which there is any possible advantage in the planting of these varieties, that is, they will begin to ripen a very few days earlier than the Ohio, and still even then I have found that our first full picking is composed very nearly as largely of the latter as of those so-called earlier sorts.

The Gregg is later than the Ohio, but with us here it lacks in hardiness, and unless the season is unusually favorable as regards extremes of cold, it is unreliable. Then, too, it has a way of a portion of the bushes which in spring seem to start out with vigor and promise well for a fruit crop, drying up and dying off after the berries are formed and even half grown. Whether this is owing to impaired vitality on account of lack of hardiness in the plants, or some other cause, I am unable to say, but one thing I am sure, that it is a failing from which Ohio is largely exempt.

The Nemeha, for which a claim of superior hardiness as a late sort is made, has not with me sustained that claim. If it is in any way superior to Gregg I have not been able to prove it on my grounds, and I would not affirm that it is not identical with that sort.

I had my plants of Nemeha directly from the originator, so I suppose them to be true to name, but they certainly are not particularly more hardy here than the Gregg, nor better in any way, so far as I can judge.

In red raspberries, Cuthbert, this year, for the first time since I planted it, now seven years, gave a fair yield on my grounds as compared with other sorts of its class. Whether it is due to some peculiarity of the soil, or from some other cause, it has always lacked here in productiveness.

Prof. Weber, of the Ohio Experiment Station, has been subjecting to chemical analysis the following varieties, viz.: Shaffer, Ohio, Hilborn, Ada and Gregg, and finds that certain varieties are much better

adapted to drying than others. He says:—

The Ohio plainly takes the lead, having more than 16 per cent. of solid matter, but the Ada, Hilborn and Gregg fall but little below it, while the Shaffer takes much higher rank than commonly supposed. From the consumers' standpoint, however, the Ohio is decidedly inferior to all others, containing, as it does, a very high per cent. of seeds—almost half of its solid matter. It is probable that as ordinarily dried, or evaporated, about one-third of the total product is seeds, in case of the Ohio, which puts its food value very low and renders it a costly variety for the consumer to buy. The Gregg, Hilborn and Ada stand much higher, the latter excelling the Ohio in actual value by about 16 per cent. The Shaffer yields but little less profit to the grower, and is decidedly superior to any on the list, in the dried state, to the consumer.

Prof. Weber found the actual product of the dried fruit of the Ohio to average 9 lbs. to the bushel, while the Gregg, Hilborn, Ada and Tyler produced only 8½ lbs., and Shaffer 8.

We notice in another Ohio authority, that another new raspberry is being introduced with "great flourish." It is the Palmer Seedling, the productiveness of which is claimed to be something enormous, yielding at least double the amount that either the Gregg or the Souhegan does; besides being of stronger growth and very hardy. Time alone will prove all this.

WIND-BREAKS.

MR. L. H. BAILEY, of Cornell University, has been making a study of wind-breaks in their relation to fruit growing, and after considerable investigation, he has published the following conclusions, viz.:

1. A wind-break may exert great influence upon a fruit plantation.

2. The benefits derived from wind-breaks are the following: Protection from cold; lessening of evaporation from soil and plants; lessening of windfalls; lessening of liability to mechanical injury of trees; retention of snow and leaves; facilitating of labor; protection of blossoms from severe winds; enabling trees to grow more erect; lessening of injury from the drying up of small fruits; retention of sand in certain localities; hastening of maturity of fruits in some cases; encouragement of birds; ornamentation.

3. The injuries sustained from wind-breaks are as follows: Preventing the free circulation of warm

winds and consequent exposure to cold; injuries from insects and fungous diseases; injuries from the encroachment of the wind-break itself; increased liability to late spring frosts in rare cases.

a. The injury from cold, still air is usually confined to those localities which are directly influenced by large bodies of water, and which are protected by forest belts. It can be avoided by planting thin belts.

b. The injury from insects can be averted by spraying with arsenical poisons.

c. The injury from the encroachment of the wind-break may be averted, in part at least, by good cultivation and by planting the fruit simultaneously with the belt.

4. Wind-breaks are advantageous wherever fruit plantations are exposed to strong winds.

5. In interior places, dense or broad belts, of two or more rows of trees, are desirable, while within the influence of large bodies of water

thin or narrow belts, comprising but a row or two, are usually preferable.

6. The best trees for wind-breaks in the northeastern States are Norway spruce, and Austrian and Scotch pines, among the evergreens.

Among deciduous trees most of the rapidly growing native species are useful. A mixed plantation, with the hardiest and most vigorous deciduous trees on the windward, is probably the ideal artificial shelter belt.

MANURING APPLE ORCHARDS.

WHEN apple trees get into full bearing, manure may be applied pretty freely without much danger of making wood growth rather than fruit. The paler green of the leaves in bearing apple trees, as compared with those not bearing, shows the tax on vitality which fruit production causes. It is probably in case of most old trees the inability of the roots to supply food for the present crop, and anything besides that prevents the formation of fruit buds for a crop another year. In other words, if the soil were made rich enough a partial or full crop of fruit might, accidents excepted, be looked for every year. Some apple trees do bear every season, but they are chiefly of the summer varieties, that mature early enough to allow time for the production of fruit buds afterwards.

This is in most eastern localities the off year for apples, and trees are generally fruitless. But this fall is for this very reason the best time to manure these non-bearing apple orchards. Fruit buds are now formed which shall burst into blossoms next spring. A dressing of manure spread on the surface in the fall will work its way through the soil by rains and melting snows the coming winter and spring. Nothing will or can be lost, for apple tree roots go down so deeply that leaching beyond their reach is hardly possible. Not only will the soil be enriched, but it will also be kept moist by the mulch into which the water will sink in lead

of running off over the surface, as it may on clay soil exposed to beating rains. It is not merely nor chiefly under the trees that manure should be spread. Apple roots extend very widely, and in years ago in digging an underdrain through a rich spot we found roots from an apple tree that grew fully four rods away. Whether the roots extend as widely in every direction we do not know. Probably if not interfered with by other trees they did.

Stable manure is a complete fertilizer for crops that grow mainly to leaf and stalk; but it is not a full manure for grain, and still less for fruit trees. In natural fertile clay soils the carbonic acid gas caused by decaying manure in the soil makes soluble some portions of the inert potash which all clays contain. But even here potash salts or hard-wood ashes will be useful, while on sandy or gravelly soils the addition of potash to stable manure is almost indispensable. Without the potash the manure will make the trees grow more luxuriantly, but without fruiting. Probably it will be as well to postpone putting on the mineral fertilizer until near spring, less from fear that it would leach away, than that it would combine with the soil during the season when carbonic acid gas is largely developed, and thus become insoluble and useless. The potash is most necessary for the fruit at the time the seeds are being produced and the fruit is ripening. Without potash, the change from the

sour and acrid juices of the green fruit to the ripe melting sweetness of the same fruit when ripened would be impossible. Overloaded grape vines often suffer from lack of available potash, when the grapes hang for days and weeks without change upon the vines.

It should be remembered that years ago, when the soil was rich and insect enemies were unknown, apples were the most easily cultivated of all fruits and the surest to produce a crop. They ought to be and may be made so again. With the right proportions of various plant foods properly administered, apple growing ought to be the most certain and successful business known, instead of being, as it has become, the most uncertain. We know now how to destroy or guard against insect enemies, and it only requires the same untiring vigilance which farmers have long learned to use in keeping down noxious weeds to make destructive insects a blessing rather than a disadvantage.—*American Cultivator.*

The Switzer Apple.

THE *American Garden* says this apple is the best in quality, as well as one of the most beautiful of the Russians, and the tree is perfection as a grower and bearer. Its "out" is in dropping its fruit prematurely; but this fault has not been noticed this season. It is described as larger than the Fameuse, a bright rose color, free from spotting, and of a Fameuse flavor, corresponding also in season with that apple.

The Value of Fruit Trees.

"A good fruit tree is worth fifty dollars," we heard an old farmer say recently. If this is true, an orchard of one acre containing fifty trees should increase the value of the farm upon which it is situated by the pleasant sum of \$2,500—less, of

course, the original value of that individual acre. While it might be difficult to find a purchaser who would accept this valuation, my own experience inclines me to the belief that the farmer's assertion was not far from right. A money yield of three dollars per annum from each tree would give six per cent. upon this capitalized value. It is a poor tree that will not average this, even allowing for off years, and off years are not so frequent as to alternate regularly with the bearing ones. A healthy tree, properly cared for, will give a crop two years out of three that will pay for harvesting. Occasionally a tree will give a crop that will pay the interest for many years in one.

An Early Richmond cherry tree paid me last year eight dollars, besides the fruit used at home, which was sufficient to pay entire cost of gathering. From a sweet cherry tree this year I sold three-and-one-half bushels at two dollars per bushel.

Two Chickasaw plum trees, growing so closely together that their branches intertwine as if they were one tree, the two covering a space of about five hundred square feet, frequently pay ten dollars in a season, which would be at the rate of over \$800 per acre. A pear tree near by yields ten bushels in a good season, and one dollar per bushel is not an unusual price. Three early apple trees this season gave over fifty bushels, which sold at from eighty cents to \$1.20 per bushel. The trees were so full that I had to commence picking while yet very green, to save the limbs from breaking. Yet the same trees last year gave a crop that paid more than six per cent. upon a value of fifty dollars each.—*American Agriculturist.*

Winter Care of Apple Orchards.

No doubt the most successful and profitable orchards in Ohio are those

in which swine are pastured. Hogs give the triple advantage of maintaining fertility, keeping the surface loose and friable, and consuming the falling fruit, thus destroying the larvæ of those ruinous insects, the curculio and codlin moth. Some of our farmers pasture old orchards with sheep or cattle and get fair fruit. Orchards kept in turf, either for pasture or meadows, should have a top dressing of coarse barnyard manure once in two years. This should be applied evenly under the trees, enough to cover the ground as far out from the body of each tree as the roots or branches extend. December is the proper month for this application, as the manure then affords protection to the roots in winter loosens the soil and serves as a mulch in summer, for the preservation of moisture. All things considered, I have, with many years' experience, found this winter application of coarse manure the most satisfactory for any crop, as well as for orchards, on all land where it is not liable to be washed away, and the earlier in

winter the application, the better.—
H. G. TRYON, Lake County, O.

Root Pruning.

Root pruning maybe an unnatural and reprehensible practice, and according to some writers is now almost obsolete, but there are exceptional cases when it answers the purpose of inducing fruitfulness when other devices failed. Particularly is this the case with dwarf apples, which in some instances grow vigorously but refuse to bear, caused, perhaps, by the formation of roots above the dwarf stock. A decrease of vigor is essential to an increase of fruit-bearing spurs, so that it is necessary to open a trench around the specimen, a short distance from the body of the tree, cutting off all roots that show. This operation must be performed whilst the plant is in a state of rest. Summer pinching also assists in the formation of fruit spurs, and the two systems taken together will accomplish the desired end.—
JOSIAH HOOPER.

Use of Fruits.

Grape Juice.

ALTHOUGH I have alluded to this in a previous number, there are so many who prefer it to fermented wine that I give here what I consider an improvement in the manner of preparing it. Instead of pressing out the juice from the fresh grapes, I plucked the berries from the stems and boiled them until soft. A little water is necessary in the boiler, or some of the grapes at the bottom may burn before the juice has been sufficiently extracted. When the grapes are quite soft take them out and drain through a sieve. Then

press them and boil all the juice until no scum arises. Have bottles ready sufficiently heated to prevent cracking; fill them up full with the hot juice, cork at once tightly, cut the corks off even with the mouth of the bottles and dip them in melted cement. Set them away in a dark place in the cellar, and you have a delicious article of drink, any time thereafter for years. I use half a pound of good white sugar to the gallon of juice, put in while boiling; this is, however, not really necessary but gives it more body. When using it, fill a tumbler half full of juice, fill up with fresh water, and it is simply

delicious and just the thing for the sick or the well. It is just the thing for the strictly temperate folks, and a glassful of it will revive one wonderfully when tired and fagged out. It may be put up in five or ten gallon vessels if well bunged up and sealed, but when such a body is once attacked in warm weather it must be used at once, or it will soon turn into wine and then into vinegar. This boiling the grapes whole seems to give more aroma to it, and makes a superior article.—SAMUEL MILLER in *Orchard and Garden*.

Crystallizing Fruit.

THOUGH no authority on crystallizing fruit, *i. e.*, professionally, there is a simple process for home crystallizing, which I know of. The fruit is dried first. For this the finest fruit is selected. It must be very ripe, then thoroughly dried, and after this "sweated." Then it is dipped in the very heaviest syrup one can make, say that used for

candied fruit, which is a gill of water to a pound of sugar. I can give no exact rule for time of dipping—two or three minutes in the hot syrup. Then the fruit is dried again. This process makes a delicious article, and for this reason: The dried fruit without sugar retains all the fruity flavor, and the dipping process after the drying does not penetrate the fruit so as to destroy that fine and natural flavor, but merely adds to it the taste of the sugar crystals which are formed on the surface. It is unnecessary to say that the very best granulated sugar should be used. I might add that some confound crystallized fruit with sweetmeats or candied fruit. As I understand the matter, the difference between them is this: For the former the fruit is dipped in the syrup after being dried, not cooked in it, while for the latter the fruit is cooked, slowly and carefully, in the heavy syrup, and then dried.—*Good House-keeping*.

~ Horticultural Miscellany. ~

Ornamental Hedges.

I HAVE recently seen in one of our best horticultural journals all ornamental hedges condemned. I cannot agree with this. The Scarlet-flowering Quince makes a fine hedge; the Lilac is also good, but best of all is the Bush Honeysuckle. It does well in spite of abuse, if given half a chance. If a bush gets killed back, it is up again within two months, and stout as ever at the close of the season. The flowers are lovely and the berries equally so. The robins eat the berries in preference to raspberries.

The Japan Quince is superb in blossom. These are white, red and

pink flowering. So of the Tartarian Honeysuckles you will be able to procure red, pink and white flowering ones.

Another ground screen or hedge may be made of Catalpas cut down and grown as bushes. They will blossom superbly at three or four feet high; and in July make a very beautiful display. Set them six feet apart. The Ribes make pretty, small hedges, showing finely in early May. The list of good shrubs for hedges is quite long. Of course, these ornaments need care, and as a rule, all hedges tend to become ugly if neglected.—E. P. POWELL in *Popular Gardening*.

The Best Fertilizer.

THE fertilizer that every one engaged in small fruit culture should use, and that extensively, is a judicious mixture of brains and elbow grease. And it must be used in the field, and manufactured on the spot. It is of little value without it is applied every day and every hour in the day, from five o'clock in the morning until nine at night during the growing season; in this way it is as efficacious as a patent medicine; it will develop the plants and kill the weeds; it will keep the ground loose and clean and destroy the insects and worms; in short it will make a success when everything else will fail. Try it.—L. H. WILCOX *before Minnesota State Hort. Society.*

Orchard Care.

You must keep an eye on your orchard. Never trust to providence and your hired hand, for a careless hand will do more damage in an orchard than he will do good. Keep all tramps out of the orchard that are around after jobs of pruning. Let no man prune in your orchard without you know he is a skilful hand at the business. Wrap your trees early in the fall to keep the rabbits from barking the trees. The best material to use is screen wire. It will keep the borers and mice away from the trees as well as the rabbits. The wire will cost about twenty-two cents per yard, and one yard will make five guards.—MR. SCHULTZ *before the Missouri State Hort. Society.*

Heating a Small Greenhouse.

My house is a span roof 15 feet square and 10 feet to pitch. It is heated by two oil stoves with two three-inch burners each, and it is very seldom necessary to light more than two burners. Over each stove is a galvanized iron boiler holding

about three gallons, and without cover. I use the best refined oil and have never noticed any smell in the house. The stoves burn from 10 to 12 hours without any attention. A small boiler heated by oil stoves I think would pay manufacturers, as in the south we do not need any costly heating apparatus used at the north. Hot water is the best for heating.—E. B. HOLLINGS, S. C.

Winter Mulching of the Strawberry

WHEN fall comes, cover your plants. If you can get prairie hay it is better than anything else, as it is generally cleaner than straw. Sometimes there are foul seeds, which are liable to seed your bed. I wait till the ground is frozen. Don't put on too thickly, as you are liable to smother the plants. When the spring comes you mustn't be in too much hurry to uncover. The ground freezes and thaws and often throws out the plants or breaks the roots. In either case the plants are ruined for that season. Leave the covering until all danger is past, then remove it, except where there are bare spots. If I find any weeds I pull them out, and then put on a coat of fine manure or ashes at the rate of 75 to 100 bushels per acre. When they are about ready to bear, men have come to me saying that their plants were not going to have any fruit. The Wilson will always bear—indeed, if you have the true Wilson, it is bound to produce fruit as surely as the Canada thistles will propagate themselves. During the more than 20 years that I have been cultivating them I have never seen, either upon my own grounds or elsewhere, a good, strong, healthy Wilson plant that was not loaded with fruit. I have known some other varieties to partially fail and other kinds where the failure would be complete.—HON. J. M. SMITH, *President of the Wisconsin Hort. Society.*

The Erie Blackberry.

MR. T. GREINER says in *Rural New Yorker* :—

I am quite certain the Erie is distinct from the Lawton, but greatly doubt whether it is very much better. It is the same strong grower, and, if anything, more productive. The berry differs but little in quality, but is plumper or rounder in shape. The cane is exceedingly thorny, apparently healthy and hardy in New Jersey. Its greatest fault is one which it has in common with the Lawton, perhaps even in an intensified degree, namely, that of turning red and appearing stale or in the first stages of decay, very soon after being picked. A few hours' standing renders freshly-plucked, luscious fruit in the baskets so exceedingly unattractive as to be unfit for sale, and I have known the greater part of a crop left on the bushes to go to waste merely on account of the unwillingness of buyers to accept the ill-looking stuff.

Quinces Useful and Ornamental.

If I should plant an orchard I would set mostly the Orange variety, with, perhaps, one-fourth Meech's Prolific, and one or two Champion. The latter is quite late in ripening, and the fruit can be kept until New Year's. Rea's Mammoth does not yield any more or nicer fruit than the Orange, as far as I can learn. I have not tried the Meech, but from what I can learn it is a very fine strain of the Orange, and by proper pruning and cultivation can be grown to the highest perfection possible with this fruit. — *Vick's Magazine*.

The Juneberry (*Amelanchier*).

In my notes in 1882 I spoke of several dwarf varieties in the hands of Germans in the Western States. I have fruited four varieties, received from Iowa Agricultural College. Last summer the little bushes, from

nine inches to two feet in height, bore an abundant crop of berries, the size of the largest Saguenay blueberries, and richer in flavor. I think Grinnell was the finest in flavor, Green County and Gardener being also good fruits. The Alpinum of Mexico, though quite hardy, does not bear as large or as fine a flavored berry.—CHAS. GIBB, *Montreal*.

Early Strawberries.

AT a recent strawberry meeting the point was made that by heavily summer mulching a late variety the season can be prolonged a week. The converse of this proposition is true, and by not mulching early varieties the greatest earliness can be obtained. I am creditably informed that this fact is to be made use of the coming season to boom a new variety for earliness. Grown beside the May King, the latter heavily mulched, a variety, no earlier than that early variety, could be advertised as a week earlier, and inexperienced growers induced to buy plants without suspecting the trick made use of to sell them.—L. B. PIERCE, in *Ohio Farmer*.

Liquid Grafting Wax.

FOR painting the wounds made in pruning trees and for similar purposes this is one of the best, and may be made by melting one pound of resin over a gentle fire and stirring in one ounce of beef tallow. When the mixture, after being removed from the fire, has cooled off somewhat, eight ounces of alcohol are to be added to it. When cool put it in bottles or cans and keep well closed.

The Vegetable Garden.

Culture of Asparagus.

Extract of Paper read by Chas. W. Garfield before the Michigan State Horticultural Society.

A RICH sandy loam—a piece of ground to grow 75 bushels of shelled corn per acre—well drained, makes a good beginning for an asparagus field. I prefer to grow the plants, sowing the seed early. Plants are set three feet apart, in rows four feet apart, but five feet is a better distance.

Two men can plant an acre in half a day, setting the crowns of the plants five or six inches below the level of the soil. It takes about 3,000 plants to the acre, in four feet rows. When the planting is completed, the lines of plants will be in the bottom of the furrows, which need not be filled at once, but during the season cultivation will gradually level the soil, and the process of weed extermination is greatly aided by leaving the furrows open at the outset. Clean cultivation is given during the growing year, and in October the tops are mowed off and burned. The expense of growing asparagus is about \$100 per acre, up to the second spring after planting, and results in a net profit of \$100 an acre, which is not a large profit when the time required to get the plantation into bearing, the investment and the skill, are considered.

The great advantage is that the work and the money come in early, at a time when the farmer does not interfere with other duties. The cut-worm is the worst insect foe, but by stirring the soil in the spring and autumn plowing, its ravages are considerably reduced. The shoots are broken off when gathering, instead of cutting. The ends are squared with a knife after bunching; and

rubber bands are used for bunching. The plantation should not be weakened by too prolonged cutting.

Two exigencies have materially reduced profits with me. First, untimely frosts, which may in one night destroy a full picking, which upon an acre may mean from twelve to twenty dollars. To avoid this I contemplate giving a surface dressing with shavings manure in the spring, which can be hauled over the shoots, which are just breaking the earth, in an emergency, at slight cost, and save the picking.

Second, a dry, hard wind sometimes arises when a cutting of asparagus is nearly ready. The sand blown against the tender shoots punctures the epidermis and checks growth on that side. In a few hours the shoots will turn over and be so unshapely as to be unmarketable.

Keeping Celery.

SOME gardeners preserve their celery for winter by banking it up in the rows where it grew, throwing a covering on each side up to the tips. This is the least trouble, but it may be frozen in just at the time when it is most needed for market. The better way is to store it in trenches, where it may be taken out at any time. A trench is dug in a dry place, a foot wide and as deep as the plants are tall, the length being suited to the quantity to be stored. The celery is set in this in rows across the trench, and setting the plants close to one another. As cold weather increases the celery is covered with leaves, or marsh hay, and finally with earth. The use of short boards over the litter will facilitate getting out the celery if there is a heavy fall of snow.—*American Agriculturist.*



AMONG THE FLOWERS.

Once, in the Morning Glory,
I had an odd conceit;
Sweet William was a bridegroom,
The bride a Marguerite.

And Violet was the bridesmaid,
She combed the Maiden's Hair
With a dainty bit of Cockscomb,
Found in the garden fair.

The priest, good Johnny Fump-up,
A fitting Monk's Hood wore,
And said the rite in silence,
As ne'er was said before.

"Now may you Live-for-ever,"
The guests united said;
Fair Lily, tall and stately,
Just bowed her queenly head.

But Rose went up with blushes,
And kissed the winsome bride;
Here, too, was Bachelor Button
With Daisy by his side.



*When Blue-bell rang for breakfast,
They went in two by two;
How Bouncing Betty hurried,
She had so much to do!*

*They ate the Butter-and-the-Eggs,
The Honey-suckles, too,
And then, from golden Buttercups
They sipped the morning dew.*

*They fanned with Princes' Feathers,
And all were gay, I ween;
"No room is here for Bleeding Hearts,"
Quoth Lady-in-the-Green.*

*And some wore Lady Slippers,
And danced to music fine,
Of Lily-bells a-swinging,
All in the glad sunshine.*

*So, from the Morning Glory
Till Four O'Clock they stayed;
Dear flowers of the upland,
Sweet blossoms of the glade.*

—VICK'S MAGAZINE.





The Canadian Horticulturist.

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.

The End of the Year.

WITH this month we close another volume of the journal, conscious that it is in many respects imperfect, but trusting at the same time that it has been the means of stimulating Ontario fruit growers to greater zeal in their chosen line of industry. We trust also that its visits have somewhat increased the interest in floriculture of our lady readers; and we hope to give greater attention to this department in the next volume.

We ask all who have appreciated the efforts made through this journal, to interest and profit them, will lose no time in sending in their renewal subscription, and that of as many new friends as possible, because we wish to know how many copies of January number to print, and how many test plants and trees to order for distribution.

Photographs of fruits, flowers, country homes, lawn views, etc., are solicited for engraving. If desired they will be carefully returned when copied. It is our intention to use such illustrations more liberally in the year 1890 than ever before.

PEAR TRIOMPHE DE VIENNE—a sample of which was sent us by Mr.

W. Holton, of Hamilton, last fall is thus spoken of by the editor of the *Gardener's Chronicle*:—
 "I cannot help thinking that this pear, when better known, will become a general favorite. With us it is one of the heaviest croppers on standards. The fruit grows to a good size, is of a russet color, sometimes streaked with dull red on the sunny side. The flesh is exceedingly melting and full of honeyed sweetness. In addition to the above good properties, it comes in at a season when sometimes a gap occurs, viz., just after Williams' Bon Chretien is over, and it will keep good for a long time after being ripe."

Keeping Tomatoes.

A writer in the Fruit Growers Journal is experimenting to keep tomatoes in a fresh state for winter use and spring sale by packing them in dry sand. Up to first of November they were in a state of perfect preservation, and if they will keep in this way until a good market opens for them, then it will pay to pack them by the barrel, instead of selling them at low prices in the fall. The process is thus described:—

I first dried the sand thoroughly, then cut the tomato from the vine

(just as it changed from green to white and pink) leaving a portion of the stem attached. In the bottom of the box I placed a thick layer of sand; then on this a layer of tomatoes (the flat ends down, and taking care they did not touch each other in any way), and then another layer of sand, so thick as to entirely cover the tomatoes and stems, and so on until the box is filled. Nail up and place in a dark, dry place.

The attachment of the stem seems to be very essential for perfection in ripening, as those tried without have a shriveled appearance.

Woolly Baldwins.

MR. RIVERS, Vice-President of the British Fruit Growers' Association, in a speech before that Association quite recently, said that he hoped before long their markets would be so well supplied with apples of such good quality that their very good friends, the Americans, would be compelled to consume their flat, tasteless, and woolly Baldwins amongst themselves. They should not want them here. There is no doubt that the productiveness of the Baldwin, and its fine color, have united in causing it to be planted in much larger quantities than its quality will warrant. But if this is so, what shall we

say of the Ben Davis, the great market apple of the west, which, even according to its best Canadian friend, Mr. Dempsey, of Trenton, needs flavoring with lemon juice to make it palatable.

Edible Fungi.

MR. P. WEATHERS writes in the *Gardeners' Chronicle* on this subject, and gives a list of four species of *Agarici*, including of course *Agaricus campestris*, the common mushroom, and the following in addition: *Coprinus comatus*, *Marasmius orcadese*, *Boletus edulis*, and *Lycoperdon giganteum*, all of which are edible at certain stages of growth, at least, and counted great delicacies by some.

The last mentioned, *Lycoperdon giganteum*, is the giant puff-ball, often looked upon by us in Canada as poisonous. He says of it: "For cooking the puff-ball should be gathered while young and snow-white color, finely sliced, and fried with butter, with a flavoring of pepper and salt; when cooked in this manner the dish will compare favorably with many of our most expensive dishes. This fungus has other qualities besides that of being edible; the spongy portion of it can be made into tinder, which, when burned, is used as a narcotic, and the dust of it is very useful for healing wounds.

QUESTION DRAWER

Varieties of Small Fruits.

86. Will you kindly inform me which is the best sort of strawberries, also currants and raspberries for market purposes.—S. KEMP, *Hawksbury*.

It is not easy to give advice concerning the varieties best suited to a distant locality; but would commend the Tyler, Ohio and Gregg for black raspberries; and Marlboro and Turner for red. Of currants, for market the Fay and the Cherry are

the most profitable, both on account of ease in picking and the ready sale which these varieties command.

In strawberries, in spite of the many new and wonderful varieties being introduced, we are not yet able to say whether any "have come to stay" or not. In the mean time plant for market Crescent on sand, and Wilson in clay loam, and plant enough of the new varieties for experiment.

The Russian Apple Trees.

87. I send for this day's post two apples from the Russian tree received from the Society. I may say that the tree is exceedingly healthy and vigorous as well as perfectly hardy; not even the terminal buds suffered.—W. W. HIGGINSON, *Hawksbury*.

The Russian trees referred to were seedlings, sent out without name, and consequently nothing could

be said of the kind or quality of the fruit they would produce. Their only point of excellence was their hardiness, in which respect these appear to be all that could be wished. The size and color of these samples compares favorably with the Greening, but the quality is inferior.

OPEN LETTERS.**Dominion Convention of Fruit Growers.**

SIR,—In response to an application from the Provincial Fruit Growers' Associations, the Dominion Government has granted an appropriation to aid in the extension and development of the fruit growing industry in Canada.

A Convention of the Fruit Growers of the Dominion will be held in the City of Ottawa, February, 1890. Delegates will be present from the various Provinces, and a programme will be prepared upon subjects of general interest.

Prizes to the amount of \$400 will be offered

for dried, preserved, and late-keeping varieties of fresh fruits.

Special railroad and hotel rates will be obtained for those desirous of attending.

Schedules of prizes and programmes of proceedings will be issued at an early date, and may be obtained from L. Woolverton, Secretary Ontario Fruit Growers' Association, Grimsby, Ont.; C. R. H. Starr, Secretary Nova Scotia Fruit Growers' Association, Port Williams, N. S.; A. H. B. Macgowan, Secretary British Columbia Fruit Growers' Association, Vancouver, B. C. or W. W. Dunlop, Secretary, P. O. Box 1145, Montreal.—*Montreal, Nov., 1889.*

OUR FRUIT MARKETS.

OUR home markets have been a little fitful owing to the plentiful supply coming in from certain localities, but on the whole there is a constant demand, and prices for first class apples are from about \$3 upwards. The export trade in apples from the Atlantic seaboard to Great Britain, including the ports of New York, Boston, Montreal, Halifax and Annapolis, have amounted to 261,176 bbls. to date of Nov. 9th. Last season to same date the amount was 553,456 bbls.

Liverpool.

SIR,—Apples from your side are being forwarded on a very limited scale and prime stock of every description meets with a very ready sale, and this class we can recommend shipping. We quote: Baldwins, 15s. to 18s. 3d.; Greenings 14s. 9d. to 18s.; Kings, 23s. to 26s. 6d.; various, 13s. 3d. to 20s. 6d. Market steady with a continuance of limited supplies. Prices will be sustained. Waiting

your favors, yours faithfully, WILLIAMS, THOMAS & Co.

Edinburgh.

SIR,—The markets here and in Glasgow are maintaining prices of Canadian apples with a tendency to firmness for the finer parcels, the prices quoted in your last issue being fully maintained up to this date.

In this market, careful and honest regular packing is essential to good results.

There is, at present, a scarcity of color which we should be pleased to see supplied.

There has indeed been a fair supply of Danish Gravensteins, but though color is beautiful, the flavor is very deficient.

The Danes have shown remarkable energy this season, shipping their fruit in American style, also in cases of from 60 to 130 pounds net, and as it has met with a very fair market, they will no doubt be stimulated to greater efforts in the future.

Packing with them has been made a special feature, so much the more necessary does it become for our Canadian friends to attend to this vital point.—We are, sir, yours respectfully, WOOD, ORMEROD & Co., *Edinburgh, Oct. 21, 1889.*