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SOUVENIR DU CONGRES.

One of the very best new varieties of summer pears ; very productive.

THE
Canadian Horticulturist

VOL XVII.

1894.

No. 10.



IS a banner of gold and scarlet
October flings to the breeze,
And none other of all the twelve months
Can boast such colors as these.

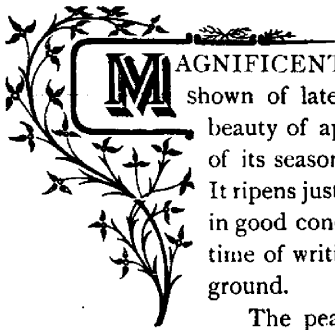
For the trees that through all the summer
Have been dressed in the darkest green,
Now hanging with red and yellow
In most gorgeous gowns are seen.

The golden-rod flames by the roadside
And over the fences old,
Till each meadow is fast becoming
The Field of the Cloth of Gold.

And even the sun in his setting,
When he slowly sinks from view
And looks over the world of color,
Has caught the golden hue.

A. S., in Fx.

SOUVENIR DU CONGRES PEAR.



MAGNIFICENT specimens of this noble French pear have been shown of late years at the Industrial Fair in Toronto. For beauty of appearance and size, it surpasses every other pear of its season, but, unfortunately, it is not of the best quality. It ripens just before the Bartlett, so that it is difficult to keep it in good condition until the time for judging the fruit. At the time of writing (Sept. 8th) the fruit is rapidly falling to the ground.

The pear originated in France, and was dedicated to the Pomological Congress of France, whence its name. The tree is a vigorous grower, productive, and naturally takes a pyramidal form. It is thus described by P. Barry, in his "Fruit Garden." Fruit large to very large, resembling the Bartlett; usually growing in clusters; bright yellow, where fully matured, with the parts exposed to the sun brilliant red, or carmine; flesh like Bartlett, but much less musky. Commences to ripen in August a little before Bartlett, and extends into September; growth moderate.

A Cheaply Constructed Reservoir for watering garden produce by irrigation is owned by John Simon, of Finney Co., Kan. He says in *Garden and Lawn*: "I use a Gause pump that draws a 5 in. stream 15 ft. high, and fills a 75 x 80 ft. reservoir 3 ft. deep in 24 hours. The mill is a 10 ft. Halliday. The number of times of irrigation depends on the dryness of the climate and the season. I water orchards and garden truck every week or two. Trees and vegetables do not require as much water as alfalfa or general farm products. In the orchard he uses a ditch between the tree rows as well as between the rows of garden stuff. He finds a little water goes farther than where the soil requires flooding. If farmers knew the advantage to be gained by the use of a little water at the proper time during the dry spells of almost every year in almost any district of the entire country, says Mr. Simon, they would put in a pumping plant, using wind power where water is not to be raised over 25 to 40 ft., and each foot under this distance the better.

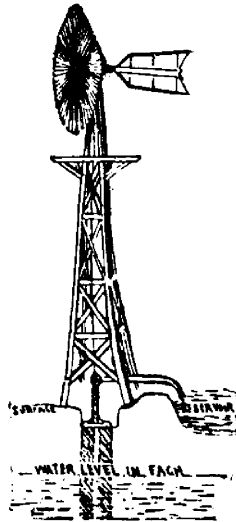


FIG. 695.

THE ELBERTA PEACH.



OUR comments in September number on the Elberta peach very much interested me, as I had just finished peeling a bushel or more of that peach for my wife to put in cans. I have fruited this peach for three years. Got the trees from Georgia, five or six years ago. The trees seem to be as hardy as our most hardy trees; bear full when other trees bear. With me the trees are not as large as other trees of the same age; late Crawford trees nearly one-third larger. My location not a good one for Crawfords. The Elberta trees yield with me five bushels to the Crawford's one. The Elberta, where the late Crawford does not do well, will prove a great acquisition. While the peach seems to be everything desired in a late peach, the tendency to rot when ripening is greater than in other peaches. The rot does not extend through the whole peach, but will be on one side, often only a small spot, the rest of the peach sound and good. These spots may be caused by being stung by some insect. There are so many good peaches on the trees, that one will hardly notice the few that show decay. I conclude by saying that the tree is hardy, a great bearer, and the peach in size, color, attractiveness and quality, all that can be desired.

S. S. BAILEY.

THE APPLE CROP.

In Ontario.—After an extended tour of the Province, the writer can make little change in his report of the condition of the apple crop in Ontario. All through the South, from Niagara to Windsor, the same doleful tale of failure is repeated, and confirmed by a view of the trees. The same is true along the northern shore of Lake Ontario, until you near Trenton, where some orchards are pretty well loaded. So also, as we proceed northward from Toronto, there are scarcely any apples till you come to the south shore of the Georgian Bay, where we found some orchards quite heavily loaded with fruit. Some growers there are on the safe side in their estimate of 60 per cent. of a full crop.

In Nova Scotia.—Mr. John Craig sends us the following interesting note concerning the condition of the apple harvest in Nova Scotia. In a letter from S. C. Parker, of Berwick, N. S., he says: "With the great show of blossom it was thought that the fruit crop was setting very lightly, but since that time it has steadily improved till to-day in King's County, I am convinced there are more apples than ever grew here in one year before. Gravensteins are a full crop; Kings 110, Baldwin 110, and the winter apple a full crop. Plums are wonderfully prolific. A gentleman in Wolfville is harvesting at least 400 bushels, while a near neighbor of ours has picked 150 bushels from an orchard seven years out. Cranberries are also a splendid crop. Mr. Parker further states that the dry weather, however, has had the effect of decreasing the size of the fruit and hastening its maturity."

PEACHES TO PLANT.



N planting a commercial orchard great care should be taken in selecting the varieties. If a mistake be made here all the other work goes for nothing. Some varieties of peaches are local and do well only on certain soils and in certain localities. It is always better to observe how certain varieties do in your locality. I shall briefly state how some of the leading varieties have done with us during the last few years. Of a great many varieties that we have planted successfully and have fruited, we have found the following to give the best results:—Troth, Early York, Mamie Ross, Thurber, Captain Ede, Elberta and Ward's Late. The Thurber is a peach comparatively little known. It is one of those comparatively new sorts that were thought a great deal of when they first came out, but were soon forgotten in the headlong rush for newer and more highly advertised sorts. It is a white peach with a faint red cheek, very firm, productive, remarkable for its hardiness in both bud and blossom. We had fair crops of Thurber when no other variety in the orchard bore a peach. Its quality, however, is not first-class, and that is probably the only objection.

The Thurber gets ripe from ten days to two weeks earlier than the old Mixon freestone. It is a good shipper and profitable. The Captain Ede is a peach originated by the man whose name it bears. It is a golden yellow freestone, finest quality, ripens same time as Thurber. It is hardy and a splendid bearer. Elberta is another good peach, ripening about with the Thurber and Captain Ede. It is yellow with a fine red cheek, a beauty, good quality and productive. It contains about all the good points one could desire in a peach. Old Mixon does not do very well with us, but about forty miles north of where I live it does very well indeed. Ward's late is the Thurber over again, only of a little better quality, ripens about one month later than the Thurber. For a medium early peach we have found nothing that excels the old-fashioned Troth and Early York. Mamie Ross is a large, white peach, with a red cheek and freestone, fine seedling of the Chinese Cling and Early Rivers, that ripens about ten days later than the Early York. It has proved to be quite a good peach. It is the best of its season I have ever found. It is extra large, hardy productive and profitable. A few years ago we planted an experimental orchard containing thirty or forty new varieties.—WILLIAM GOULD, to Illinois Hort. Society.

NOTE BY EDITOR.—In Canada we need a good peach to come between the Hales and the Early Crawford, and some say the Yellow St. John is the peach to bridge over this gap. The Early York we discarded some years ago. It was not large enough. Lord Palmerston is a fine peach, white-fleshed, ripening September 7th, as the Early Crawford is just over. It is almost equal to Old Mixon in quality, and is a firmer peach. Bowslaugh's Late is one of our best late peaches.

FRUIT PACKING AND GRADING.



FRUIT and garden producers are much in need of a general system for grading. We must have legislation and co operation as well as the enforcement of such laws enacted by our legislature. To-day, we have men authorized to inspect flour, coal, oil, whiskies, etc., placing their official mark on each article inspected. These are bought and sold by the grade as marked upon each case. Fruit is used extensively every day in every State of our Union, and yet no system of grading or inspection is in force.

Grading fruit is not simply separating the better from the inferior; there is another grading which is pre-eminent, uniform, measure. Our old standard measures of a half bushel and peck have become so old-fashioned they are a mere figure-head with many fruit dealers. The per cent. of fruit and vegetables thus measured is exceedingly small. Barrels, crates, baskets, berry boxes, etc., are now used to carry fruit and ship to distant markets. No fault is to be found with the box, barrel, or crate, but in the matter of sizes specified regulations should be adopted. I have found baskets holding 5-8, 1-2 and 7-16 bush. Each of these sizes is a basket of the original intention. Probably no wrong was intended, but the matter of sizes has opened the doors wide for the perpetration of fraud. The inexperienced, thinking a basket means a half bushel, offer their produce at so much per basket. The buyer brings out his 5-8 bushel basket and wants it filled round full. The farmer figures 20 bushels will fill 40 half bushel baskets, but when he counts the baskets only 32 are found. A dispute at once arises, but being sold and bought by the basket, the producer takes his pay and departs. The dealer fills his 7-16 bushel or 14 quart basket and then has 45 5-3 baskets. The dealer paid for 32 but now sells 45 5-7, gaining 13 5-7 baskets on the 20 bushel. Frequently such dealers are the loudest complainers.

We need wise legislation and the co-operation of good, honest merchants, backed by every horticultural association in the country, against tricksters of this kind. Barrels, crates, baskets, boxes, etc., should be of established sizes and so easily distinguishable that every buyer and seller knows what he buys and sells. The size of pint and quart berry boxes sometimes returned in crates is often surprising. Every manufacturer has his own notion about the size, or else in his calculation must figure on liquid measure. Crates have never been returned to me with boxes of different makes of the same size.

Careful picking, careful handling, scrupulously clean baskets and boxes, free from last year's mold and stains, add largely to quick sales and better prices. Often one poor over-ripe berry prevents the sale of the box, one inferior peach lessens the value of the whole basket; one bruised, brown

spotted pear rots the whole basket, as there is no established schedule. I present my idea through observation at home and abroad. Fruit grading should be either for the home market or those most distant. First-class fruit should be the largest, most highly colored and most perfectly matured growth. Second-class, fair size, with only such slight defects as debar from the first-class. Third-class, wormy, scabby, irregular. Culls, such as will not pass as third-class and rather better than need be for cider vinegar. One schedule will not do for all fruits. As the fruit differs, so will its schedule.

To have a first-class pear we must try and grow it, have it well developed, gather it at the proper time and be well colored in ripening. Study the market, using judgment in the assorting for shipment or the home market. The fruit packed in a crate should be alike in time of ripening. Never pack pears too highly ripened or the whole box may be lost. Always sell the highly ripened pears at home. Have first, second and third class, grade them carefully and wrap in thin paper to prevent chafing. Never use boxes too large; a half bushel is large enough. The sides of the box should be planed to prevent discoloring of the fruit, then if properly handled the fruit will open beautifully and you will stand a good chance of receiving remunerative prices. Never ship wormy or scabby pears; sell them at home. Neither ship with broken stems.

Peaches should be graded when the season permits. Varieties differ in size so the number of peaches depends on the size to fill a half-bushel basket. When they run very large, I grade them 60 to 70, 70 to 80, 80 to 90 or 100, 100 to 150 peaches to the half bushel. Always have the fruit uniform from top to bottom; never put bitter, insipid, imperfect fruit at the bottom and top off with a few good peaches and a sprig of leaves—your brand will soon be known in the market. Apples are mostly sold by the barrel having a layer at top and bottom with culls and wormy fruit between. Such apples are of but little use on the English market, for there the fruit must be uniform and well colored. It is said that three wormy apples would condemn the whole barrel. Good apples always command a fair price either at home or abroad. The Continent and English market prefers red apples. In America, red, green or yellow are desirable in localities, and every grower must study the wants of his market as only those who make apple culture a study and a business can know how much they will feel the tender touch of man's kind and proper treatment. Whether we shall have poor, scrubby, wormy, or fine, well-grown, richly colored, delicious fruit, such as the ancients would have offered to their gods, is now a matter of choice with each fruit grower.

Graded fruit or vegetables are noticed by prince and peasant, and if the peasant knows how to grade, the prince is ready to buy simply because it appears nice and catches the eye. In many instances it may not be the quality as much as the care in preparing for market. Citrus fruits represent a class of which there is no better graded in the world. Especially is this true of Florida and California oranges. The fine grading of this class of fruit

was brought about a dozen years ago by a packing house on the St. John river, Fla. As they were constantly buying, they were able to grade and wrap the fruit. This soon became an established business throughout the States. Since orange shipping from Florida to Savannah first took place, the grading of the orange has taught shippers all over the country a lesson, until California ships its fine plums, apricots, peaches, pears and other fruits, so that now it is almost as common on the stands of fruit vendors as our own.—W. B. R. JOHNSON before Pa. Hort. Society, Jan. 1894.

TO ASSORT POTATOES RAPIDLY.

Sorting potatoes by hand is very tedious. With the illustration given below the smaller potatoes are easily and quickly separated from the larger ones suitable for market. It is a very simple and cheap apparatus that can be made by anyone. It consists of a slatted trough 5 or 6 feet long, provided with legs or standards of proper length to keep it so inclined that when potatoes are shoveled upon it they will roll down. The slats may be of inch stuff attached to the two bottom cleats, their centres $1\frac{1}{2}$ in. apart, a little closer at the top and a trifle further separated at the bottom, so that the potatoes may not become wedged in the spaces. A suitable width for the sorter is 20 in., with sideboards 8 in. high. When unloading potatoes from the wagon, place the sorter at the side or rear and shovel them directly upon it. Those of suitable size will run into the basket, while the smaller ones, with the earth, little stones, etc., will fall upon the ground or into any receptacle placed to receive them.—Farm and Home.

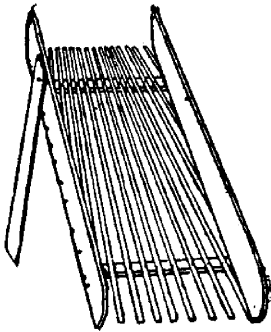


FIG. 696.

Those of suitable size will run into the basket, while the smaller ones, with the earth, little stones, etc., will fall upon the ground or into any receptacle placed to receive them.—Farm and Home.

THE growing of garden plants for sale is often as profitable work as that of producing the vegetables themselves for market. A great many farmers and gardeners, in every community, would rather buy them than go to the trouble of preparing hot-beds for the small amounts that they require. A person intending to engage in this work should begin their preparations in the autumn, and that is why we mention it now. Hot-beds for all kinds of garden plants should be made ready in the fall, the soil put under cover so it will not freeze, and arrangements made to save the manure that will be needed, in such shape that it will not heat before being put to use.—Rural Canadian.

SOME FRUIT NOTES FROM SIMCOE COUNTY.



THE season of 1894 will not be remembered by fruit growers as one of the most profitable in their experience. Strawberries here promised well in spring, but owing to cold rains and occasional frosts during blossoming time, the crop did not fulfil early expectations. One noticeable feature about them this year was that owing probably to the heat and wet at picking time, they did not keep or carry well. They would not keep twenty-four hours after picking, and any that were shipped a considerable distance arrived in bad shape and could only be sold at a loss.

I still cling to Crescent and Wilson for market berries. Haverland and Bubach do well here, also the Williams, but none excel the two old varieties for main crop. Haverland is too soft, it is no use for shipping, although it bears well and does better in a dry season than many others. Bubach No. 2 is a poor grower, does not make plants enough; stems very short and fruit gets badly sanded in showery weather. I have not had enough experience with Williams to know how it will do here, but am favorably impressed with it.

If we could get another berry like the Wilson, with all its good qualities as to firmness, hardiness, etc., and a little larger and a little earlier, such a berry would be a great acquisition.

I can say nothing as yet of the forty varieties planted last spring, on the Experimental grounds; it will be a year before I can report anything definite as to their merits or demerits. But so far as I have been able to judge, I think the Woolverton is one of the best of the new varieties.

Raspberries were a fair crop and sold at a fair price. I am getting more in favor of raspberries, in preference to strawberries; there is not half the labor involved in growing them, a plantation if well cared for lasts a long time and produces well with less fertilizing than strawberries. The Cuthbert is my favorite and it does well here.

Early apples were a good crop and very cheap, in fact a great many have gone to waste or have been fed to stock. It is a pity to see such fine Duchess apples as are grown in this section wasted. They grow to great perfection here, but transportation charges are so high, there is little or no profit in shipping them, if you pay anything like a decent price for the apples. What we want is an evaporating and canning establishment to work off the surplus and turn it into money in that way. I doubt if the canning factories put up anything nicer or more delicious than canned Duchess, if the apples are picked at the right stage. Winter apples are not more than 50% of a full crop, and such varieties as are subject to fungus are so badly affected, that only a small percentage will be fit for market.

The fungus is worse this year than ever before ; it has affected not only the fruit, but the leaves, and that to such an extent as to considerably check the growth of the trees.

There was an abundance of bloom in spring, and it is a mixed question whether the wet cold weather that prevailed at the time, preventing the proper fertilization of the blossoms, caused the fruit to drop after setting, or whether the fungus was the whole cause of the trouble. However that may be, we see very fully in a season like this, the value of a healthy, hardy variety. Take for instance the Duchess : the fruit was never more handsome than this year, not a sign of spot or blemish either on fruit or leaves, because it has the ability to resist the fungus, and is not in the least susceptible to it. And if we could get a winter apple like the Duchess, with all its good qualities as to hardiness, productiveness and grand cooking qualities, it would be a most valuable acquisition.

If among the eighty-five varieties of Russian apples planted here last spring, we can get one such apple, it will be worth alone all the trouble and expense of this experimental work. But in the meantime, as many of our old and valuable varieties are affected and spoiled by the fungus, the lesson to be learned and impressed upon us, by this season, is that we must spray our trees. As someone has remarked, it seems that this spraying business has come to stay, and those who wish to have good clean fruit and healthy foliage, must practise it diligently.

And just here I feel tempted to parody an old hymn that we used to sing in our young and innocent days long ago :—

Spraying the trees by the daylight fair,
 Spraying the trees in the noontide glare,
 Spraying the trees in the waning light,
 Dreaming it o'er in the solemn night.
 Oh, what will the harvest be-e-e-e,
 Oh, what will the apple crop be ?
 Sprayed with " Bordeaux " mixed with bluestone and lime,
 Sprayed with a force-pump in early spring-time,
 And several times through the summer, you see,
 Then sure, oh, sure, will the apple crop be.

Craighurst Experimental Station.

G. C. CASTON.

CUCUMBERS, which have been taken from brine, will be harder, greener and more plump if washed in boiling instead of cold water.

WELL matured, sound and ripe pumpkins and squashes can be kept fresh throughout the winter if properly cared for. Put them in a room where they will be free from frost and dampness. Have them perfectly dry, and do not pile them on the top of one another.

SPRAYING EXPERIMENTS.



R. JOHN CRAIG, Horticulturist, Central Experimental Farm, Ottawa, called at this office on the 3rd of September. The object of his visit to this locality was to study the progress of the careful experiments being carried on under his direction by the fruit growers of this district for the destruction of fungous diseases of the apple, pear, plum and cherry. These experiments, it will be remembered, were authorized by the Minister

of Agriculture for the Dominion, in response to a request made by the Fruit Growers' Association of Ontario.

He reported to us some interesting particulars concerning the work, as follows:—

“At St. Catharines, he said, the experiments mainly comprised the treatment of fungous diseases affecting peaches, cherries and plums. In regard to peaches the rot, which was the disease the treatment was designed to prevent, was not present this year to any appreciable extent, and so the results of the experiments were not striking. On Early Rivers, the committee in charge of the work reported a gain of two to three per cent. in favor of the sprayed trees. Mr. Broderick also noticed the fact, that the fruit of the treated trees was more highly colored than that of the untreated trees. Mountain Rose and Crawford are now being picked and the results will be carefully noted.

In regard to cherries, some very striking results were obtained in the treatment of the rot on the Black Tartarian. Roughly speaking, the sprayed trees gave three times as much sound fruit as the unsprayed trees. Mr. M. Burrill also reports good results in preventing the rot and curculio on Morello cherries, including Montmorency and Early Richmond.

In the matter of plums, the difference between the treated and untreated trees was most strikingly demonstrated in the much healthier foliage of those which had been sprayed. In the orchard of Mr. Broderick, where the shot-hole fungus has been quite abundant, the treated trees showed a marked improvement both in foliage and character of fruit. The question of improvement in quality of fruit was demonstrated by selecting one hundred average plums of the sprayed and unsprayed trees and weighing each separately. Those from the sprayed trees weighed 3 lbs. 9 oz., while the same number from the trees which had not been treated weighed 2 lbs. 1 oz. The color and general appearance of the sprayed fruit was very much better than that which had not been treated.

With regard to the experiments conducted by A. H. Pettit and E. J. Woolverton, at Grimsby, touching the prevention of the apple scab, the results here are most striking, and it will well repay any grower who can

make it convenient to visit the orchards in question and see with his own eyes and be convinced of the benefit to be derived from the application of the remedies recommended. The fruit has not yet been gathered, but it is easy to see the increased quantity, as well as the improved quality, of the fruit of the sprayed trees as against the trees of the same variety, under exactly the same conditions, standing alongside, which have not been sprayed. In preventing the rot of the cherry, the results obtained by Mr. E. J. Woolverton are even more striking than those of Mr. Broderick, which were all that could be expected.

Mr. M. Pettit, in treating the Beurre Giffard and Flemish Beauty pears, reports marked success both in quality and quantity of fruit."

Mr. Craig, who has been recently looking over the results of these experiments, has considered many of the contrasts between treated and untreated trees sufficiently marked to warrant him in getting photographs of the trees, which will be used in illustrating the report to be issued when the work is finally closed.

On the whole, it seems fair to say that the experiments have been successful, so far, in proportion as the work has been carefully performed. The season has been very unfavorable, owing to the tremendous rainfalls during the months of May and June, at a time when the applications should have been most thorough; then the extreme drought of late summer has prevented the fruit from filling out as it otherwise would have done. Mr. Craig expressed himself highly pleased at the hearty and earnest manner in which the fruit growers of the district took hold of and carried out the experiments committed to their charge, though in the face of many obstacles and drawbacks.

Vinegar Making.—One of the best ways of working up apples that cannot be marketed to good advantage, is by making into cider vinegar. Use sound apples, and have the fruit, the machinery and the vessels clean. Rotten apples will not make cider vinegar, and should not be used. Wash the mill and the barrels out clean before commencing the work. When the apples are ground up, some water may be poured over the pomace before pressing out; then press as thoroughly as possible. Do not fill the barrel more than three-quarters full at first. This will save work. Tack a piece of fine netting over the bung hole after laying the barrel down on its side, putting old rails or sticks underneath as a support to keep the barrels off the ground. It will commence working in a very short time. Let stand in the sun until this quits, and then draw off carefully into other barrels, filling full, and let stand until cool weather. But do not allow it to remain out too late, for it should not be allowed to freeze. By carefully following these directions, good cider vinegar can be made at a small cost per gallon, and much fruit that would either be fed the stock or allowed to go to waste be converted into a marketable product.—Western Stockman.

HOW TO BUILD AN ICE-HOUSE.

EDS. COUNTRY GENTLEMAN.—I use about fifty tons of ice per annum, and have on the place that I have recently purchased the remains of an old ice-house that I wish to utilize. The hole in ground is 12 ft. deep and about 10 ft. square, but the old wooden lining and roof have decayed. In rebuilding, I should like to know, first, whether this is large enough to hold fifty tons, and if not, what size is necessary.

2. Whether wooden lining backed with sawdust when under ground is fairly durable, or whether in long run it would pay better to build of brick.

3. Whether bottom has to be drained and if so, how? If you can give me the above information or inform me where I can get a book containing it, I should be much obliged.

Flushing, L. I.

D. L. R. D.



Ice is one-tenth less in weight than water and as, when packed in an ice-house as close as possible, there is some space lost between the blocks, it is safe to estimate the measure of it at fifty cubic feet to the ton. Thus for fifty tons the house should have 2500 cubic feet space for the ice, not counting the spaces around it for the sawdust or other protective covering needed.

Thus it will be necessary to increase the size of the excavation to fifteen feet each way, which will give room for the ice and some to spare for the walls of the building and the packing.

Lining of wood under ground will be quickly rotted by the continual moisture and the oxidizing effect of the porous earth, something seldom estimated for such buildings as this. Brick or stone should be used if at all possible.

The bottom must be dry; this is indispensable for the keeping of the ice. If the soil is sandy or gravelly, no special drainage will be necessary, and unless surface water is apt to flow into the cellar, the subsoil water will drain away through the soil with sufficient rapidity to avoid damage to the ice. Otherwise there should be a drain laid under the wall all around the building to cut off the water. This drain should be of three-inch tiles, and as well as cutting off the soil water, it will carry off that which collects from the melting of the ice, which it will be safe to provide for.

Some useful information will be gained from the volumes of *Rural Affairs*, in which has been collected in easily available form, a large amount of practical information of daily use to rural residents in all walks of life, including the construction of ice-houses. It may be added that if the walls of an ice-house are of brick or stone, there should be a wooden lining inside, leaving an air space of six inches; or this may be filled in with sawdust, in which case no sawdust will be needed about the ice except on the top of it, and under it, as the walls will be sufficiently non-conductive of heat to preserve the ice during the summer. Otherwise at least six inches of dry sawdust, or tan-bark, or other porous matter as dry leaves well packed down, or the chaff from the clover threshing which is excellent, or as a last resort, finely cut straw or wheat

or other chaff. A foot of either of these should be laid on the bottom, under the ice. The non conducting efficiency of an air space only is about half of that of dry porous packing, but the efficiency of any packing is reduced in proportion to the moisture it may gather, and when saturated it is no better than a solid wall. The air space is more efficient in proportion to its tightness; hence if lined inside with tarred paper and the wall tarred over or plastered and then tarred, the intervening dead air space will be about as good as the ordinary filled-in space that will be sure to gather moisture in time.—Country Gentleman.

JUDGING FRUIT BY POINTS.

The Massachusetts State Board of Agriculture has established a scale of points for judging vegetables. Pamphlet forms, containing cuts and scale of points for two or three of the finest varieties of all the different vegetables, are being issued for the use of the Incorporated Agricultural Societies. This is one advance needed by all agricultural societies, as very often men are appointed to judge at shows who differ very widely in their ideal of a perfect specimen, and by having an authorized scale of points to guide them, much less unjust decision will often be given. As an example of their plan, we give scale of points given for "Beauty of Hebron" potatoes and tomatoes:—

Size—Should be $4\frac{1}{2}$ inches long and $3\frac{1}{2}$ inches wide for perfection—30 points.

Form—Should be according to engraving, as given in pamphlet—30 points.

Smoothness—Free from deep pits, warts, or excrescences—30 points.

Quality—Fresh appearances, freedom from coarseness, and bright color—10 points.

Total 100 points.

The following is the scale of points for tomatoes:—

Form—Should be according to engraving—40 points.

Color—Should be bright red or purplish pink, according to variety—30 points.

Size—Should be not less than $2\frac{1}{2}$ inches and not more than $3\frac{1}{2}$ inches in diameter—15 points.

Quality—Firmness, ripeness and freedom from green spots or cracks—15 points.

Total 100 points.

—Farmers' Advocate.

TULIP bulbs as well as others, can be set out as long as the ground is not frozen.

A BUNCH of chrysanthemums makes an elegant ornament for the dining-table. They will last a long time if kept in a cool place between meal times.

✦ Viticulture. ✦

SOME FACTS ABOUT GRAPES.



RAPES prefer southerly exposure, with a well-drained, fertilized and cultivated soil. The beginner would scarcely credit the difference careful cultivation makes, not only in the appearance, but in the flavor of the fruit. The vineyards in the famous grape region from Erie, Pa., to Brocton, N.Y., in August are as free from weeds and as carefully kept as the daintiest flower garden in the land, and the vines cling to the trellises perfectly, with no vagrant branches to accuse their owners of carelessness. There is no other fruit requiring more delicate handling than the grape; if the bloom is rubbed off or the clusters are in any way disfigured, the market value is seriously reduced. As soon as the fruit has ripened, the labor of picking and packing begins. The picker is supplied with wooden trays, each of which holds about 30 pounds when a little less than even full. These trays are made so that they can be piled up in tiers on the grape wagons. The picker takes each cluster by the stem and cuts it from the vine with sharp-pointed grape scissors, and lays it carefully in the tray. The clusters are handled entirely by the stems, and the careful picker lays them in the tray with stems up, so that packers find no trouble in taking them out by the stems. Grapes are usually assorted by the packer into three or more grades. The Niagara Company, says the Rural New Yorker, puts a certificate of excellence on its first-quality fruit, and nothing goes into these boxes that is not absolutely perfect. The clusters must be large and shapely, and the berries large, well-ripened, and of good color. The second-quality boxes contain smaller clusters, but all imperfect berries are clipped out, and all webs and other foreign matters are removed. No loose clusters are packed in these boxes. If fruit is scarce and high, a third quality may be packed with profit, but the fruit left from the second selection is usually made into jellies, catsup, or fermented and unfermented wine. It is said that grapes may be produced at a fair profit for two cents per pound, but unless sold in bulk the margin from such sales must be very narrow. The care necessary to pack the grapes for market render this part of the work expensive, as cheap labor cannot be utilized. True, a great bulk of fruit may be raised per acre, but the average packer will not ordinarily put up more than 500 pounds per day.—Prairie Farmer.

Root crops can be kept best by being packed in sand and placed in the cellar.

VARIETIES OF GRAPES.



Y experience with the Brighton would lead me to say it had not been over-estimated. I have long considered it our best red grape. It is early, vigorous, hardy, healthy and productive. Its clusters are large and the quality of the fruit is excellent. The Delaware is, in the estimate of many good authorities, accorded first place in the list of American red grapes, but I must confess a preference for Brighton for a large bunch and berry, greater weight and bulk of fruit, more vigor of vine, and being more satisfactory to eat. It is possible that soils not widely separated may be the chief factor in forming this estimate, notwithstanding the difference in people's tastes. I have never witnessed the half-grown green grapes among the ripe ones of this variety as often seen in others. While imperfect fecundating is a defect in the Brighton, the unfecundated blossoms remain dormant. In some other varieties they sometimes swell and even ripen of pea size, but without seed.

Diamond is a promising variety, not quite as large in berry or cluster as Niagara, or vigorous in growth, but a year or two more in age may overcome these disparities.

Lady is too feeble in vine and too small in cluster, and it cracks and decays too soon for me to recommend. It is very early, sweet and rich, but too uncertain. Green Mountain is the earliest white grape I have, and I esteem it highly. The vine is vigorous, healthy and productive, and the grapes are of medium size and have few seeds. Empire State has not come up to promises, and one vine is enough for one. Woodruff Red is a vigorous grower, and productive, berries and clusters are large, compact and very attractive; it is a beautiful showy grape, but only of medium quality. Although the vine in appearance indicates strong native qualities, it is not sufficiently so to be proof against mildew, and, barring the quality, there is no grape in my collection of seventy varieties that captures the eye more readily.

If I wanted a white grape it would be Green Mountain. If a red one of good quality, Lindley (Rogers 9), though it, like many others, is not always sure of perfect fecundation. If I wanted a black grape I would try Aminia, Rogers 39; Herbert, Rogers 44; Merrimac, Rogers 19; Wilder, Rogers 4, or Barry, Rogers 43. Any one of these, if adapted to the soil, would, I think, prove satisfactory ones to end the season with.—E. WILLIAMS, in Market Gardening.

Keeping Grapes Fresh—The following recipes were given at a fruit growers' meeting in Ohio: (1) Dip the stems of the bunches, where broken off, into melted red sealing wax and pack them in cotton in large pasteboard boxes. They must be kept where it is dry and cool. (2) Toward the end of October cut the shoots with the cluster attached, sharpen the lower ends to a point and stick them into potatoes. Spread the bunches out on straw or dry hay, so that they shall not touch each other. The grapes must be placed where it is dry and cool.

GRAPE JUICE A POPULAR BEVERAGE.

Unfermented Juice.



EVERYWHERE there is a good local demand for unfermented grape juice for sacramental and pharmaceutical uses. If a thoroughly good and wholesome article were put on the market in quantities large enough to create a demand for it for table use, there would be an almost unlimited market.

To make sound, unfermented grape juice that will keep well, requires careful manipulation and the most fastidious attention to cleanness during the process. The juice as soon as expressed should be strained through two folds of unbleached muslin, and then run at once into a double jacketed covered kettle and heated to 180 degrees F., at which temperature it must be held for twenty to thirty minutes. It should then be removed from the fire and allowed to stand closely covered for twenty-four hours. At the end of this time return to the kettle and re-heat to 180 degrees F., for half an hour, then strain through a thick white woollen cloth into the bottles in which it is to be marketed, or if more convenient, it may be run from the strainer into large glass carboys, or air-tight kegs, holding not more than five gallons. These must be previously disinfected by boiling water, and should be as hot as the juice is when ready to be filled. The vessels, whether large or small, must be filled until the juice begins to run out at the opening, and then corked tightly and the cork or bung covered with wax or resin to make it air-tight. If a wooden vessel is used to store the juice it should have been thoroughly varnished on the outside to make it air-proof. If the juice is run at once into small bottles no further manipulation is required. If it is temporarily stored in large vessels, when wanted for market or consumption it must be once more heated to 180 degrees F. and strained through a woollen cloth into the bottles. When the storage vessel is opened, the entire contents must be removed at once. If allowed to remain twenty four hours in a partly filled vessel the juice will begin to ferment. This fermentation may be stopped at any time by heating the juice to 180 degrees F., but the character of the liquid as unfermented wine is lost and cannot be recovered. It is of the utmost importance that the juice be heated to 180 degrees F., and neither less nor more. If heated above 180 degrees F., the albumen of the juice will coagulate and greatly deteriorate the nutritive properties, and the taste of the juice will be quite spoiled.

If heated to less than 180 degrees F., the germs of the ferment microbe will not be killed, and the juice will soon begin to ferment. To insure the proper temperature in the kettle a glass dairy thermometer, costing about ninety cents, should be inserted through a hole in the cover and allowed to float on the juice. In this matter guess work will not do. Never, under any circumstances, add

sulphur, sulphite of lime, soda, or any other preservative to the juice. Sugar is unnecessary, and should not be used unless the grapes are unripe.

Grape Jelly.

Grape juice may be evaporated into syrup or jelly. The grape growers of California are beginning to work up a portion of their crop this way. But a first-class article cannot be made without the use of a vacuum pan, such as is used for condensing milk, because, as already stated, if the juice is heated above 180 degrees F. its taste and nutritive properties are injured. Still, a fairly good and wholesome article for home use may be made by evaporating the juice in a double boiler or in a thick porcelain lined kettle. The following is an excellent recipe for jelly: Dissolve two ounces of gelatine in a pint of water with a half pound of white sugar. Put from two pounds to two and a half pounds of juicy grapes into a saucepan; bruise them with the back of a wooden spoon till the juice flows freely from them. Strain the juice and add three-quarters of a pint of it to the gelatine, with the whites and yolks of three eggs. Whisk it well on the fire, and squeeze it through a jelly bag, add a wineglassful of brandy and a few drops of burnt sugar. Pour the jelly into the mould, the top of which should be ornamented with a few grapes. Put it in a cool place to set. If to be kept for any length of time, pour it while hot into tumblers or wide-mouthed jars. Over the mouth lay a piece of parchment paper, such as is used to wrap butter in, and over this lay a piece of the prepared cotton wadding used by dressmakers—the fuzzy side up—bend down the edges and tie tightly to exclude the germs of fermentation.—North Carolina Horticultural Society.

THE LIVERPOOL APPLE MARKET.

JAMES ADAM, SON & Co., of Liverpool, writes:—Shipments from your side have commenced earlier this season than was expected, and are already assuming some degree of importance. In all, some 10,600 barrels have come to hand so far, exclusive of consignments per three steamers just in, the greater portion of which have been auctioned this week, and for early shipments it must be said that the out-turn, in some instances, has been fairly satisfactory. Soft varieties, as is to be expected, have landed in faulty condition, but of the harder sorts some good samples were shown, and, with a fair demand for the best of them, gratifying results were obtained. Poor grades, however, moved but slowly, not being yet wanted, if indeed they will be at all this season, and, in view of the reported abundant yield, we should strongly advise shippers to send forward their best only. Even for good stock, the market at present cannot altogether be relied upon, trade generally throughout the country not being in a flourishing condition, and, while immediate prospects for colored sorts, in moderate quantity, are encouraging, a big arrival, we fear, would send values down considerably.

We quote from the week's sales as follows: New York—Baldwins 12/ to 17/, Greenings 11/6 to 14/3, Kings, 16/ to 25/6, Sundries 10/6 to 16/3; Boston—Ramshorns 11/ to 16/, Gravensteins 11/6 to 14/, and Red Pippins 10/9 to 15/6 per barrel.

Canada, so far, has sent forward very few, and we almost think it will be better if shippers confine themselves to winter stock.

MESSRS. WOODALL & Co., Liverpool, report market very active; good selling at 13/16 and common 9/13 and from MESSRS. L. & H. WILLIAMS, Glasgow. Home fruit no quantity, prospects excellent, if the quality is prime and in good condition; hasten shipments.

MESSRS. WILL & JONES, Buffalo, quote, subject to fluctuation as to receipts:

Apples, fancy red varieties, \$2.75 to \$3.50; Apples, fancy green varieties, \$2.00 to \$2.75; Pears, Bartlett and Duchess, per barrel, \$3.00 to \$3.25; Pears Sickle, per barrel, \$2.25 to \$2.75; Eggs, fresh, 18c. to 19c.; Beans, medium and pea, hand-picked, per bushel, 2.00 to 2.10; Turnips, per barrel, 80c. to \$1.00; Potatoes, fancy white, per bushel, 70c. to 75c.; Potatoes, fancy red, 60c. to 65c.

SOME INJURIOUS GRAPE INSECTS.



AMONG those which appear somewhat early in the season and affect the vines by puncturing the leaves, sucking out the juices and causing them to turn whitish, and sometimes to become shrivelled or withered, is the Leaf Hopper (*Typhlocyba vitis*). Its attacks are generally more noticeable on the thinner-leaved varieties, and of little consequence on the thicker-leaved forms, such as Concords and Worden. The Leaf Hoppers pass the winter in the adult state secreted under leaves and rubbish, and begin their attacks on the vines almost as soon as the leaves are expanded, also depositing eggs which produce numerous young, which develop during the summer months, the number increasing rapidly until the vines may be so thickly infested that a swarm of hoppers will rise upon the least disturbance of the leaves.

This insect is not easily treated since it is not affected by any sprays upon the leaves, but any destructive agent must reach the Leaf Hoppers themselves in order to be effective. Spraying with kerosene emulsion, taking pains to reach the under sides of the leaves, is perhaps one of the most effective plans, and is particularly useful while the insects are young, but less likely to affect the adults, which take wing quickly when disturbed, and may possibly escape the spray. A plan which has recently been recommended somewhat is known as the Shield method, and consists in covering a canvas or pasteboard stretched on a frame with tar, and carrying this along the rows of vines. The Leaf Hoppers are disturbed by shaking the vines with one hand, while the shield is held in such position that the insects will hop or fly against the tarred surface and be caught.

The Grape Berry Moth or Grape Seed Caterpillar (*Eudemis botrana*), has not until recently been known as a destructive species in Iowa, but I have learned from a Dr. McDonald, of Des Moines, that a caterpillar which evidently belongs to this species, has caused much injury in his vineyard during the past season. It is a species which will prove very troublesome if it becomes abundant. The insect is imported, and has long been injurious to grape culture in Southern Europe. The larvæ begin to appear in July, when the injured grapes show a discolored spot where the worm has entered. They feed upon the pulp, and sometimes upon the seeds, and if a single grape does not suffice for their growth, two, three or more are attacked, these usually being fastened together with silken threads.

They are said to pupate upon the vines, folding a leaf as protection. Two broods

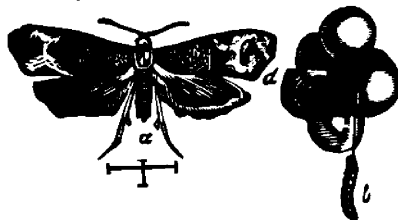


FIG. 697.—GRAPE-BERRY MOTH
a, Moth; b, Larva; c, Injured Fruit.

occur each season, but the injury is not observable except during autumn. Saunders says: "As it is probable that most of the late brood pass the winter in the chrysalis state attached to the leaves, if these were gathered and burned, a large number of the insects would perish. The infested grapes might also be gathered and destroyed. This insect is attacked by a small parasite, which doubtless does its part towards keeping the enemy in subjection."

THE CULTIVATION OF NEAR MARKETS.



Y experience of the last four years has demonstrated at least to my own satisfaction that the small fruit trade of Ontario is capable of being enormously increased. The consumption of small fruit at present is largely confined to city and towns. Country people, as a rule, do not buy fruit, simply because they have never been in the habit of it. When the fruit grower supplies the shops in his vicinity, he imagines he has fully supplied the local need; but he never made a greater mistake, for though the farmer never thinks of buying fruit when he goes to town, yet he will buy it if his attention is called to it or the fruit brought to his door.

This is easily explained. The wild berry has either disappeared or retreated into inaccessible barrens and swamps, but it has left him with a cultivated taste for fruit. And very little management beyond exhibiting the fruit, and calling his attention to the cheapness of it will be found necessary to effect the desired change in the old custom of getting fruit for the picking. One sale, however small, I have found will always turn habit into the new channel.

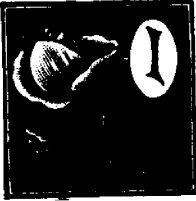
Strawberries sell most readily, gooseberries the most slowly. And yet my whole crop of gooseberries sold at home this year, and the bulk of the orders were in before picking time, many of my old patrons bringing in orders for neighbors that I was unable to fill. But this may be called peddling, and the fruit grower a peddler, and so he is if the butcher and the baker are. I have no doubts that hundreds of baskets of peaches could be sold in this way in country places.

At a strawberry festival held here late in the season about 100 baskets were left over, and these sold readily at $8\frac{1}{2}$ cts. to farmers who had passed by heaps of them during the season selling at 4 and 5 baskets for 25 cts., and so strong was the demand it was hard to settle who were to have them. One more point. I was filling orders in a neighboring village, and had taken an extra basket of gooseberries along with the intention of experimenting on this line if opportunity offered. I took the basket into a general store, and requested the proprietor to offer it for sale. He thought there was no demand for gooseberries. Three country people were in the shop at the time, and I merely called their attention to the fruit and its cheapness, with the result that one bought the basket, and the other two each left an order. The next day the store keeper sent an order for 6 baskets he had promised through the one basket, but I was sold out.

✧ The Garden and Lawn. ✧

NOTES ON THE ROSE.

“I dream of a red rose tree ;
And which of its roses three,
Is the dearest rose to me ?”



IN every age of the world since man first beheld the beauties of earth, the rose has held a prominent place in his admiration and affections. In every age of the world have the poets written of its beauty and its fragrance. And in every age, till the end of time and all things perishable, will they continue to do so ; and not then will the theme have been exhausted.

The season just past has not been a satisfactory one to the rose-lover, inasmuch as it has been too brief. The early opening of spring advanced the bushes too rapidly to bear without injury the heavy frosts of the latter end of May. And then came several weeks of cold rains followed by an intense heat and continued drouth. A season of extremes and sudden changes is the very reverse of a favorable one for roses. But though the blooming season was short, and the bloom not so heavy as the year before, there has been a splendid growth of bush ; and if other conditions are favorable, an extra season may be looked for next year.

The HORTICULTURIST for July gave an extract on the rose, from “Gardening,” in which a long list of varieties suitable for outdoor cultivation, was named. That list contained many very choice sorts, well suited for the localities further south than this, but very unsuited to Central Ontario. Lest some of your readers might be misled into trying some of the varieties named, I would, as one having had some sorrowful experiences, warn them to select with caution.

In advising in the matter of a selection for an amateur, to begin with, I would observe the same principle urged by our Society in the selection of an apple orchard—avoid too many varieties. I would, with Mrs. Lambert (See HORTICULTURIST for August), begin my selections with the General Jacqueminot. Of that variety I always plant two roots together, or rather within a few inches of each other, in order to get a large bush and a heavy mass of bloom. With the exception, perhaps, of the Fontinelle and Prince Camille, I would let all other dark varieties alone and repeat Jacqueminot. My next favorite is Magna Charta, though its short blooming season is a sore defect in so beautiful a rose. John Hopper, Mrs. John Laing, Anna de Diesbach, all choice sorts, I would pass by and repeat Magna Charta, though from the former you may get a more continuous bloom throughout the season. For a still lighter color take Gabriel Luizet ; and for a pure and pretty white, Mad. Plantier. The Luizet will bloom

more or less throughout the season, but *Mad. Plantier* will not extend its season beyond the second week in July. To complete the collection I would take the common English Moss and the *Glory of the Mosses*. Either one or both will add greatly to any collection.

My method of cultivation is to cut out all two-years' wood at the end of the blooming season (about the middle of July), and manure heavily by removing the earth from the roots of the plants, and covering in as much well-rolled manure as I can. With this treatment, together with occasional showering in dry weather, the *Jack* and the *Luizet* will continue to bloom more or less all the season through; and even the *Magna Charta* will not refuse to respond, as I have at this date one or two bushes bearing a second load of handsome blossoms. For winter protection there is nothing like the snow; but I always bend over and protect with a light covering of leaves or clean straw. In spring, as soon as the leaves are out I spray with Paris green, about the same strength as I use for fruit trees and currant bushes. I repeat this treatment a few weeks afterwards, and find no other treatment necessary. My assortment this year comprises about seventy varieties, some of which, besides those mentioned, I will refer to again.

T. H. RACE.

Mitchell.

PEDDLING FRUIT.—The young man who peddles a good article of fruit and vegetables of his own growing from door to door will grow faster in all legitimate knowledge in the line of his business than if he deals entirely with middlemen. He learns and operates two kindred trades and gets most of the profits of both.

He learns to grade his products, and put them in the most attractive form, and after a while gets his eggs into a number of baskets, and thus in spite of adverse seasons of storms manages to have considerable to sell all the while. This idea that it is degrading to offer an article for sale from house to house interferes greatly with the profitable sale of odds and ends of fruit and garden stuff on many small farms or village lots. For example, during the last two weeks *Astrachan* apples and *Early Harvest* pears have sold as low as 35c. per bushel, but consumers have readily paid from 15 to 25 cents per peck for the same, for the dealers asked even more than that. I sold 35 quart boxes of the *Mary* pear from a small pear tree for a nickel a box, and as they were sold in connection with a load of apples, sweet corn, tomatoes (also in boxes), blackberries and cabbages, the selling took scarcely any extra time. Perhaps I could have found a dealer who would have given me a half-dollar for the lot in bulk, but I might have had to offer them to a dozen or fifteen grocers before selling. They were small but bright yellow with a red cheek, and very attractive in the way I offered them. I have sold early peaches and plums in the same way at double what dealers would pay in bulk.—*Green's Fruit Grower.*

BULBS AND TUBERS.



THE principal cause of loss of bulbs and tubers, such as dahlias, cannas, gladioli, etc., is that they are not sufficiently ripened before being stored away for the winter. Those who have a greenhouse can ripen them under the stage, but those who have not will find it the best way to put a hot-bed frame on a dry spot in the garden, facing the sun, and lay the bulbs or tubers inside of it. Put the glass on and give a little ventilation, except when it rains, when the glass should be pulled shut. The tops should be cut down to two or three inches from the ground after the first freeze, and they may be left in the ground if you like till the middle or end of October—according to the locality—and kept in the cold frames until there is danger of their freezing through the boards and glass. They can then be kept in a cool cellar till spring—the gladioli in small baskets, say 10 lbs., so as not to have too many together, and hung up out of the way. Dahlias and cannas keep best, I fancy, in dry sand. It is better not to split up the bunches of tubers till the spring, when the eyes can be readily distinguished.

A good many people are growing the little hybrid tea roses sent out at 25 for one dollar by the Websters of Hamilton, and other firms, and are finding them very satisfactory. I wintered a lot of these last winter by pulling them up and planting in boxes and keeping in a cold cellar, watering perhaps once or twice if the ground got very dry, but they don't want to grow any. Mr. Webster advised me to build a little shanty of rough boards, four feet high in front and three feet in rear, over the rose bed, and fill in to the top with dry leaves, then cover over with boards to shed the rain. He says nearly all the plants will winter and come out fresh and good in the spring. The shanty could be built any time, but I would not put in the leaves and cover them over till hard winter sets in. This looks reasonable, and I intend to try it. One thing is certain, these little roses give infinitely more satisfaction than the hybrid perpetuals or remontants, as they bloom from May to November, while the old kinds give a wealth of bloom for a few weeks and then are about done, and are too often unsightly, untidy objects for the bulk of the season. The teas, too, do not seem so susceptible to the attacks of insect pests of various kinds. If they can be successfully wintered, the problem of rose culture is pretty near settled.

It may have escaped your notice that the original McIntosh Red apple tree has been destroyed by fire. Mr. Allan McIntosh's house at Dundela, in Dundas County, was burned the other day, and the tree along with it. The tree was 85 years old, of immense size, and still bearing fruit. The McIntosh Red is one of the most highly esteemed varieties in Eastern Ontario, being superior in looks and flavor to the Fameuse.

The crop of apples in this vicinity is unusually good, both as to quantity and quality. The show at Cornwall fair this week was larger than ever before, and included some of the best winter varieties. The first prize Spys were perfect in every way. It used to be thought that Spys and such hard apples could not be grown here, but that was evidently a mistake.

Our local grape king, W. A. Roys, of Maple Grove, has marketed over 10 tons of grapes in Cornwall, including some of the choicest varieties.

Cornwall, Ont.

C. W. YOUNG.

AN ATTRACTIVE RUSTIC VASE.



SIMPLE and inexpensive devices for the decoration of lawns are often more attractive and beautiful than conventional urns or lawn vases, no matter how elaborate or costly they may be. It is true that such vases often possess more grace of form than is usually imparted to rustic work, but the artistic effect produced by the soft coloring of natural woods more than compensates for this. The illustration shows the promotion of a prosaic lard barrel from the depths of a grocer's cellar, to a conspicuous place on the writer's lawn, where its use is obvious and its beauty appreciated. There is, I find, a great lack of



FIG. 698.—AN INEXPENSIVE FLOWER STAND.

adaptability in old tree stubs and the prevailing sizes of tubs and barrels to the convenience of their owners. The perpendicular sides of tubs are objectionable, and there seems to be nothing in the ready-made circular style of receptacles between sugar barrels and hogsheads, except lard barrels. These come nicely hooped at the ends with bark-covered hoops.

The section used in this case measures six feet in circumference, and the tree stub about four, with an entire height of three and a half feet, which makes a fairly well proportioned vase, with little expense or labor. To insure durability this barrel was charred inside, and good drainage secured by boring holes in the bottom near the edge. The soil for the class of plants used must be rich in all the good things which horticultural knowledge can supply, and a liberal supply of water given every day, which is, in fact, all the care required after the plants are placed.

The beauty of any such arrangement depends largely upon the selection and disposal of the plants. The combination shown in the illustration is particularly happy. Two common green cannas were planted a little back of the center, while in front and between the other two is a bronze-red variety, with a bright yellow coleus on either side of it as an excellent foil to throw out its color, and a dash of blue lobelia in front and between the two; these, with caladiums placed on either side and at the back, and given a red relief of coleus plants, form a rich and artistic mass of color, greatly heightened by the soft gray and brown beneath it. The artful bit of drapery at the side adds to the picturesque effect, but was only a subterfuge to hide the bare place on the stump where a boy indiscreetly pulled off the loose bark instead of nailing it back in place. A strip of poultry netting tacked across prevents further pulling of the bark, and supports the morning glories and nasturtiums. *Ampelopsis quinquefolia* is also growing at the base, and is eventually expected to take the place of both, which will be desirable because of its permanency. The cannas, caladiums and coleus have had a glorious time all summer; a more luxuriant growth would be hard to find; the cannas reached a height of four feet, and the red blossoms looked beautiful in the air nearly eight feet above the green grass at the base of the stump.—Orange Judd Farmer.

Japan Maples.—The maples from Japan are likely to become as popular in this country, in time, as the chrysanthemums have been for the last few years. They are especially adapted by their diminutive size and brilliancy of colors to garden decoration. The Japs use them in this way. Where a change of color is desired in their gardens, a pot is sunk in the ground, and one of the richly colored maples planted. The fine, delicate, fern-shaped leaves of some of the varieties make a grand display at a short distance off, when the lacy veining of the leaves can be seen traced in all their beauty. Other varieties, where the colors are more solid and the leaves larger, look better when at a longer distance. They make a good foreground for lawn scenes, and have a grand effect in small parks.—Vick's Magazine for December.

GATHERED LILIES.

“My Beloved is gone down into His garden to gather lilies.”—Cant. vi: 2.



BEAUTIFUL flowers, in wreath and boquet,
 On casket containing one fairer than they ;
 A flower celestial, that earthward did stray,
 To gladden with beauty and fragrance its day ;
 To bloom, and then wither, and vanish away
 From earth's cold and darkness, to heaven's bright day.

Beautiful flower, more precious than gold,
 Or jewels,—of worth that can never be told ;
 A flower that drew its rich life from a heart
 That breaks in its clinging, and effort to part
 From its dear cherished treasure,—ah me, let me fold
 Thee again to my bosom ;—oh, death, thou art cold !

Beautiful flower—pale lily to-day,
 It was like to a beautiful rose bud in May ;
 Alas, that such beauties so transient should be,
 And pleasures and hopes should so suddenly flee ;
 But thanks to the wisdom that orders in love,
 And gathers our lilies for gardens above.

W. H. PORTER.

Brantford, August, 1894.





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.

✦ Notes and Comments. ✦

THE WASHINGTON PLUM.—Mr. J. B. Patterson, Hamilton, sends us samples of a plum for name. They are probably Washington, one of the best of dessert varieties, but not productive enough for profit.

SOME LARGE PEACH ORCHARDS are reported by the Blenheim News, as being situated between Troy and Caledon Springs, aggregating in all about 10,000 trees in bearing. Dr. McCully thinks it quite as important a point for a peach experiment station as Leamington.

THE RUBY PLUM.—Mr. S. Hunter, Scotland, sends us (September 8th), samples of a seedling plum, which he says is a great bearer. He says it is an excellent variety for canning. The samples are a trifle larger than Lombard; the flesh is firm and rather dry; quality ordinary. It would be an excellent shipper.

A MAGNIFICENT PEACH ORCHARD.—One of the finest peach orchards in the Niagara District is owned by Mr. George Smith, the well-known breeder of Jersey cattle and Shetland ponies at Grimsby. Although only three years planted, the trees are as large as most six-year-old trees, and are loaded with Crawford's of the most magnificent size, and the highest color. These trees will probably average two bushels per tree, something unprecedented in peach culture. The explanation is the wonderfully fertile soil, enriched by constant manuring. The reason so many of our fruit growers are unsuccessful is, that they have too much land, and can neither cultivate nor fertilize it sufficiently to make it yield a paying crop.

THE SUPERLATIVE RASPBERRY, from Messrs. Ellwanger & Barry, planted last May, is fruiting just now, July 16th, in our Experimental grounds at Maplehurst, and the flavor is certainly very fine, justifying what the introducers say of it that it is *par excellence* a dessert kind.

Of course it is quite too soon to say anything about its productiveness, which is so important a point with all commercial growers, but we have distributed plants to each of our Experimental Stations, whose report will be published annually. The following is the description given of the introducers:—Large, conical, handsome; dull red; six good berries weigh an ounce. Canes stout, supporting themselves; a heavy cropper.



FIG. 699.—SUPERLATIVE RASPBERRY (Natural Size).

APPLES IN ENGLAND.

MESSRS. WOODALL & Co., of Liverpool, writes:—The greater portion of arrivals to date have been from New York State, and for so early in the season the quality, generally speaking is considered satisfactory, the fruit, though small and wanting color, being remarkably clear and free from grubs. Some early varieties landed out of condition, and we think shippers would do well to keep these at home, as they have the effect of disorganizing the market and getting prices on to a low basis. The first Kings sold from 18/ to 25/6, according to size and color.

Some Red fruit received from Boston brought fair rates, but were somewhat soft.

The demand is active, and we look for an excellent trade when the color improves, and there should be a better chance for shippers than for many seasons past.

↪ Question Drawer. ↩

Strawberry Rust.

674. SIR,—I notice this season that on some of my strawberry plants which I take to be anthracnose. Is the Bordeaux mixture as good as any for this fungus?

ROBT. SCOTT, *Carlisle, Scotland.*

The disease to which our correspondent refers is no doubt the strawberry leaf rust which so largely interferes with vigorous growth of the plants of many varieties. The Bordeaux mixture is the best remedy so far as we know. The vines should be first sprayed with this mixture when the first fruits are set and again as soon as the crop is harvested, and even a third application may be given if the foliage shows the rust later in the season. In addition to this it may be well to give an application of ammoniacal carbonate of copper just as the first fruits are ripening, because at this time the Bordeaux mixture would cling to the fruit and make it unsalable.

Renewal System.

675. SIR,—In the August No. you speak of training grapes the renewal system. Would you please explain what this means?

C. M., *Montreal, Que.*

This has been explained several times in back Nos. of the *CANADIAN HORTICULTURIST*, but, if desirable, will be given again with illustrations at the proper season. It is the method of training adopted with continental varieties of grapes by which the new growth is annually cut back to the old wood. Usually two arms are grown upon the lower wires about two feet from the ground. These are allowed to grow about four feet in length, when from each of them three or four upright stems are turned. Every spring these are cut back to within one bud of the old wood, or with some varieties every other upright stem is annually cut back. In this way the new growth is always kept near the ground, the vines are trained in a tidy shape and the finest fruit is produced.

A Cheap Greenhouse.

676. SIR,—Would you please inform me whether a greenhouse 25x12 could be satisfactorily heated from the furnace in the house? Also, what would be the probable cost of a greenhouse of that size.

O. F. B., *Kingscourt, Ont.*

On pages 74 and 310 of volume 1892, some cheap greenhouses are described and illustrated. Possibly one of these might meet the requirements of our correspondent. We would ask any of our readers acquainted with this kind of work to please write us an article fully answering our correspondent. If drawings could be furnished to illustrate the article, we would have them engraved and be much obliged for the trouble taken by the writer.

New Hybrid Plum.

677. SIR,—I send you six samples of a new hybrid plum and would like to know your opinion of them. The tree appears to be hardy and a great bearer.

R. TROTTER, *Owen Sound, Ont.*

These plums are a fine sample of prune and seem to be worthy of careful testing. We have shown Mr. S. D. Willard, of Geneva, N. Y., some samples, and he says that from the appearance of the fruit he would regard the plum with great favor, but of course there are so many other points to be considered as regarding habits of growth, etc., that it seems premature to give any decided opinion.

Mr. George Cline, of Winona, thinks the plum would be a valuable one for the grower, possibly rivalling the Grand Duke, because the quality is good and the size, color, shipping qualities and season of ripening are all that can be desired. The great question is, whether the tree is a good grower, with strong foliage and a heavy bearer.

Three Insects Described.

678. SIR,—Can you give me any information respecting the three insects described below.

1st. A beetle, or rather bug (judging from the scent-bottle which he carries) appears on red currant bush about when the berries are forming. He is then dark grey in color and soon turns to dark green. Very nimble. I blame him for nipping off the berries. A little over $\frac{1}{2}$ inch long and say $\frac{3}{4}$ across the shoulders. Shield shaped.

2nd. This succeeds the former, making appearance about the end of July, but is perfectly oval in shape, with a fine line of pink round the entire oval back, and somewhat smaller in size. Disappeared after two or three days.

3rd. A very beautiful little moth or butterfly, makes its appearance when the lilacs are in bloom. Easily mistaken at a little distance for a small Humming Bird from its flight and poise on the wing while dipping its bill into the flower. Body from $1\frac{1}{4}$ to $1\frac{1}{2}$ inches in length, with a flat fish tail tripartite; has two bars of bright yellow on the lower part of the back, the rest of the body a beautiful bright brown. Appear only when the lilacs are in bloom, in considerable numbers, and when the flowers die they disappear. If you can tell me where to get information about these insects I shall feel much obliged.

JOHN J. WATSON, *Rockingham.*

Reply by Prof. James Fletcher.

In the absence of specimens I cannot, of course, be certain, but from the drawing and description I should judge that they are as follows:—No. 1., a plant bug found on red currant bushes. This I think must have been the Placid Soldier bug (*Podisus Placidus*) a well known enemy of the Currant Saw fly larvæ. It is sometimes very useful in destroying this injurious caterpillar. It is not in the least likely to have been the insect which bit off the berries as it has no jaws with which to do this work.

No. 2, it seems to me, from the description, may be the Green Cedar plant bug (*Penatoma juniperina*), but we here generally find it on cedar trees.

No. 3, the moths which Mr. Watson saw around the lilac bushes when in bloom. These were evidently one of the species of Humming-bird Hawk-moths. There are two or three species which appear at the same time and closely resemble each other. The caterpillars are found on honeysuckle and willows. The moths are quite harmless.

As Mr. Watson has observed, their time of appearance in the perfect moth condition is just at the time when lilacs are in flower.

The Wild Cucumber Plant.

679. SIR,—I enclose slip of plant which no one here seems to know. Is it Ginseng?

S. GREENFIELD, *Ottawa.*

Reply by Mr. John Craig, Central Experimental Farm, Ottawa.

The plant sent for name by Mr. Greenfield is the well known creeper *Echinocystis lobata* or Bladder Cucumber. It is a very common plant in cultivation here, where it is grown on houses as an ornamental creeper under the name of Wild Cucumber.

The Ginseng is quite a different plant, not being a creeper at all, but a herbaceous perennial which sends up a single stem every year which bears three leaves of five leaflets each, and in the center of which is borne a single cluster of flowers which, later in the season, produces a bunch of beautiful scarlet berries. The Wild Cucumber is an annual.



FIG. 700.—*ARALIA QUINQUEFOLIA.*

George H. Stahl, of Quincy, Ill., manufacturer of the well-known Excelsior Incubator, has found it necessary, owing to the rapid growth of his business, to seek new and larger quarters where his capacity will be equal to the increasing demand. The new plant will be five stories high, giving a floor space of 35,000 square feet. It will be thoroughly equipped with the latest appliances, operated by electricity, and capable of producing, if necessary, a hundred Incubators a day. That there is a reason for such a step as this during these dull times will be apparent to every thoughtful reader. It means, on one hand, that the poultry business must be in comparatively healthy condition; on the other hand, it reflects the greatest credit on Geo. H. Stahl and his business methods.

The Excelsior Incubator has grown from the mere germ of an idea to the most perfect apparatus of its kind possible to conceive. Perfect in every detail, automatic in operation, never failing in results, it offers possibilities to the enterprising poultry raiser which but a few years ago were unthought of. The greater percentage of eggs possible to hatch, and the great reduction in cost over old methods makes the Excelsior Incubator the best assistant that a poultry raiser could possibly enjoy. Another reason for the great success of the apparatus is its remarkable durability and the comparatively small price at which it is sold. Those who are now engaged in poultry raising, and those who are studying its possibilities as a source of profit, will do well to send 6 cents to Mr. Stahl for his catalogue. It contains much valuable information about incubators, brooders, and poultry raising in general.

* Our Fruit Table. *

Peach for Name.

SIR,—I herewith send you a sample of peaches I am growing in my garden. They are from the pits of some California Crawford's planted four years ago. Please give me your opinion of this variety, and also tell me the best time and the best stock on which to graft.

LOUIS CLARK.

This sample does not resemble a Crawford in the least, for the latter is a yellow-fleshed peach, and this is a white-fleshed peach, somewhat resembling the Mountain Rose. It is not so good in quality, however, as the Mountain Rose, and being of the same season, is not desirable for propagation.

Peaches are never propagated by grafting, but always by budding. Seedlings are raised from pits of any healthy trees and used as stock upon which to bud. They are kept in the earth until early spring, when they are cracked and the kernels planted in rows. The following August they are large enough to bud. Then buds are cut from the young growth of the varieties it is desirable to propagate. At the proper time for budding, we will give full instructions for carrying out this work, if any of our readers ask for it.

British Columbia Greening.

Mr. W. E. Brooks, of Mount Forest, writes us concerning the British Columbia Greening which, in his opinion, even surpasses the Green Newtown Pippin in quality. It is, he says, a fine, crisp, juicy apple of excellent flavor. It much resembles the book description of the Canada Reinette, but, if it is the same apple, he considers that our committee have not given it enough marks for quality to this apple in the catalogue.

A fine seedling peach comes to hand (September 22nd), from Mr. Alexander Johnson, Collingwood. It is about $2\frac{1}{4}$ x $2\frac{1}{2}$ inches in size, yellow flesh and free stone, resembling the Early Crawford in appearance, with equally good flavor, but smaller. Its season should make it valuable if it is very productive; and from Mr. Johnson's statement this would appear to be a characteristic, for he states that the tree produced thirty-eight pounds the first time fruiting.



PRESERVING TIME.

SAID Mr. Baldwin Apple
To Mrs. Bartlett Pear,
"Your growing very plump, madam,
And also very fair.

"And there is Mrs. Clingstone Peach,
So mellowed by the heat,
Upon my word, she really looks
Quite good enough to eat.

"And all the Misses Crabapple
Have blushed so rosy red
That very soon the farmer's wife
To pluck them will be led.

"Just see the Isabellas;
They're growing so apace
That they really are beginning
To get a purple face.

"Our happy time is over,
For Mrs. Green Gage Plum
Says she knows, unto her sorrow,
Preserving time has come."

"Yes," said Mrs. Bartlett Pear,
"Our day is almost o'er,
And soon we shall be smothering
In syrup by the score."

And before the month was ended
The fruits that looked so fair
Had vanished from among the leaves
And the trees were stripped and bare.

They were all of them in pickle,
Or in some dreadful scrape;
"I'm cider," sighed the apple;
"I'm jelly," cried the grape.

They were all in jars and bottles,
Upon the shelf arrayed;
And in their midst poor Mrs. Quince
Was turned to marmalade.