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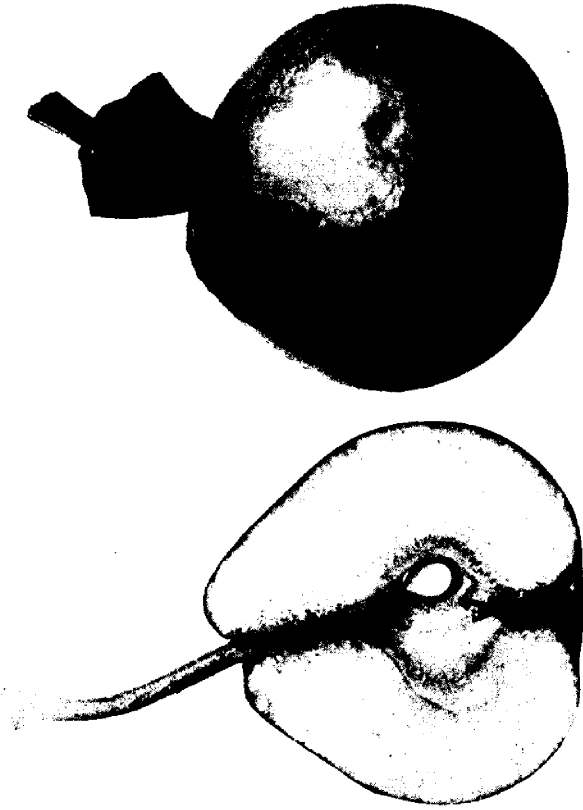
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PETITE MARGUERITE (from photograph by Miss Brodie.)

THE CANADIAN HORTICULTURIST.

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PETITE MARGUERITE.



PMONG the desirable varieties of dessert pears for the home garden, we would certainly include the Petite Marguerite, a pear of the highest quality for table use. At Maplehurst the tree has proved itself an abundant bearer and a good grower. The fruit is not large, but as size is not an object in a dessert pear, this is not a fault. Its season is immediately after the Giffard, and just before the Clapp and the Tyson. As a market pear it is hardly to be commended, because of its small size and color; and it will be a long time before we can convince the average dealer that size and color are not the chief considerations in a fruit.

The engraving is from a photograph by Miss Wilena Brodie, assistant to the writer, who is making a special study of photographing fruits, natural size, for the experiment station reports.

Origin—Angers, France, in nurseries of Andre LeRoy.

Tree—Second rate in vigor, and first rate in productiveness; succeeds as either standard or dwarf, but more vigorous as a standard.

Fruit—Medium size, about $2\frac{3}{8}$ in either diameter; form, oblate, obtuse pyriform; skin, light green, often tinged and mottled with bright red on sunny side, yellowing somewhat at maturity; stalk, an inch and a quarter to an inch and a half in length, set in a narrow cavity, of which one side is often much higher than the other; calyx partly open, in a shallow corrugated basin.

Flesh—White, yellowish at core; texture fine, melting, juicy; flavor sweet, vinous, agreeable.

Season—August 20 to 30.

Quality—First rate for dessert; second rate for cooking.

Value—Home market, second rate.

THE BACK YARD AS A SUMMER RETREAT.



FIG. 1214.

and flowers growing against the fence. The clothes-lines should be fastened to posts set at the outside edge of the walk. If you have much space plant the posts at the corners, as shown in Fig. 1214. The plot of turf in the centre should not be broken up with flower beds. A group of aquatic plants can sometimes be introduced, however, by sinking a half barrel in the ground, as shown in Fig. 1220. But do not attempt to sacrifice this valuable space to flower beds or floral effects of any sort unless you have an abundance of room.

With little expense and the expenditure of time some tree trunks can be obtained from

the neighbouring country, and used instead of the posts. Use your discretion in sawing off the branches. Pretty rustic effects can be obtained by leaving some of them longer than others. These trees can be located at various points to avoid a set appearance and will thus add a picturesque feature. A tub containing trailing vines

THE Englishman realizes the value of flowers in and about his home as a refreshing element. In the city or country the stately mansion or humble cottage is never without its note of color given by potted plants showing at the window or planted in the available space about the dooryard. American city dwellings rarely have more than a few square feet of ground in the rear of the building, but by ingenuity and care much can be done to beautify this little breathing space.

Assuming that a high board fence separates our yard from that of our neighbor, let us consider it the frame for a picture. For a space of two feet from the ground paint the boards a dark, quiet green. Above this use a cream, white or very pale green. This will make a pleasant, harmonious background for the delicate tracery of leaves



FIG. 1215.

THE BACKYARD AS A SUMMER RETREAT.



FIG. 1216.

can be placed on the top, as shown in Fig. 1217. Brick piers, built at the four corners of the centre plot, supporting an overhead trellis (see Fig. 1215), will give a very pretty effect.

When space is very limited the idea suggested in Fig. 1216 is effective. Plant an eight-inch post firmly in the ground at the desired spot. On top affix a large cart wheel, to be bought at any carriage-maker's, or make one of strips of board, each one inch thick by two inches wide and of desired length. Nail these on edge to a circular piece of plank at the centre, and tack a stout barrel hoop around the outside rim to secure the ends of the spokes. Nail the circular plank to the top of your post. Surmount the whole with a half barrel in which are planted quick-growing vines, and you will have, in a few weeks, an artificial tree. Vines can be also trained up the post from the ground.

Another effect is shown in Figure 1221. A number of short rustic posts are sunk in the ground in a circle, leaving out one in the series for a gateway. A taller centre post is placed in the middle. Kegs containing vines and

plants are placed on the tops of the posts. Wires are stretched from each to the top of the centre post, and a very pretty, artistic arbor is the result.

A good way to treat the top of a fence is shown in Figure 1217. Ordinary barrel hoops are bent and nailed to the back of the fence and supported by laths. Boxes of plants are arranged on brackets, or upon the ledge at the back, if permission can be obtained.



FIG. 1217.

Figure 1218 shows another arbor effect at the rear end of the yard,

THE BACKYARD AS A SUMMER RETREAT.

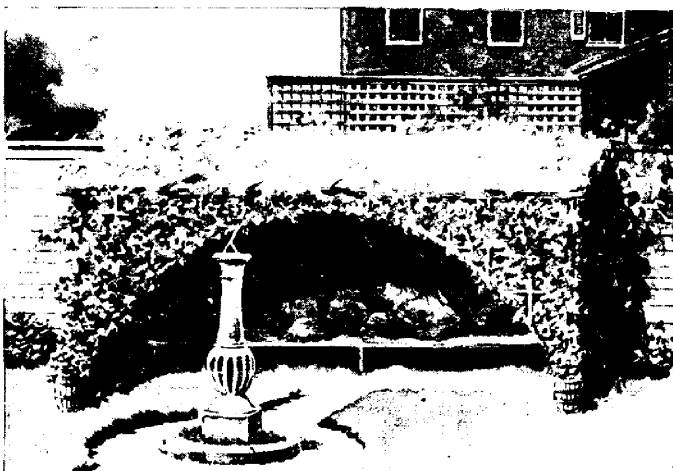


FIG. 1218



FIG. 1219.

THE BACKYARD AS A SUMMER RETREAT.



FIG. 1220.

containing a seat, with pillows which may be covered with water-proof cloth. The assistance of a carpenter may possibly be required to construct this feature, but it is not complicated or expensive, and will furnish a pleasant and delightful nook for a siesta.

Oftentimes want of space prevents the swinging of a hammock in the yard. A plan is shown in Fig. 1219. Have two brackets or davits made of two-inch gas pipe and bent at the blacksmith's. At the hanging ends hooks are welded, to which hang the hammock. The pipes are fastened securely to the fence by bands of iron screwed fast to the fence. Wires may be strung overhead upon which vines can be trained.



FIG. 1221.

The back portion of the yard, being the least used and the most seen from above, is the place for whatever large beds or shrubbery you wish to use.

By grading from large plants to small even a bed two feet in width against the fence may be made to present a large surface of plants and flowers, while here and there, climbing plants, running up on string trellises, may be carried to the top, and along it ; and if you will

select the plants so that you have early and late flowers, you may by trimming out dead foliage, keep your garden always in bloom ; and don't forget the tall, spear-like plants, such as Hollyhocks and Sunflowers, and even the

THE BACKYARD AS A SUMMER RETREAT.



FIG. 1222.

despised Mullen of our fields, which in England is grown in great beauty in gardens, its velvety gray-green leaves and spikes of yellow flowers contrasting charmingly with more showy plants. These plants make a fine background.

In such a tiny garden it is scarcely

practicable to have clipped borders, or any large growing trees; but a clump of shrubbery could be made a feature in place of a flower bed. An unsightly pile of stones may be transformed into a pretty feature by filling the interstices with earth and planting therein the Mullen and Thistle. Ordinary corn will give the effect of Palms, and will grow fairly well if it receive plenty of sunshine. It needs very little water. Even a brick wall may be made to blossom and fruit as well. It is quite a common sight in England to

find small fruit trees trained up flat against the sunny side of a house, and all bearing well.

We are indebted to the Ladies' Home Journal for this article, and the accompanying cuts.—EDITOR.

THE CORAL BERRY.

THIS excellent new berry fruited splendidly for us this season. It is so widely different from all other sorts of berries that a few words concerning it will not come amiss. It resembles a small silver Maple tree, growing to a height of about 5 feet, the leaves and wood are of a silver green color. The old plant dies down after bearing its fruit, the same as raspberries and blackberries. This plant suckers very rapidly and forms a dense thicket. The fruit of the Coral berry is a clear, brilliant red, while the flavor is most


superb, being strangely aromatic sweet and delicious. It is the most solid berry for shipping that we have ever discovered. These berries resemble very much the common red raspberries, except that they are very highly colored when compared with any raspberry. The bushes are quite productive of these large solid red fruits. The Coral berry is quite delicious when served with sugar and cream or made into a short cake.

S. L. WATKINS.

Grizzly Flats, Cal.

FRUITS AT SIMCOE STATION.

RASPBERRIES.

 UTHBERT still stands at the head in point of quality. The Columbian is the greatest bearer. Fruit large, excellent for canning, but would not ship well, I fancy, as it is not very firm when quite ripe, and it must not be picked before it gets its purple color, or it lacks flavor. But it is a prodigious bearer and should find a place in every garden.

Turner is simply a wild berry, of good flavor, but too small and soft for market. "Louden" and "Miller" bore a few berries this year and they seem to be very fine. We still favor "Shaffer's" for canning, it is quite hardy and bears well here.

Of the Black Caps I have tried so far, I think "Smith's Giant" takes the lead. I have fruited it two years. I like it better this year than last; it is a good bearer. Fruit large and quite firm, resembles the Gregg, but is of better quality. Canes only slightly affected with anthracnose, and quite hardy.

Lovett is a failure here; Palmer very good, but not so productive as Smith's or "Older." Hillborn is of good quality, but too small. Older is a splendid berry for home use, very productive, quality first class, but too soft to ship very far. But I would advise anyone planting for home use, to be sure to plant a few of the "Older," as, for using fresh on the table, they are far and away the best of all the Black Caps.

BLACKBERRIES.

Agawam has fruited well this year, and I do not quite agree with Mr. Peart, as to its quality, though it certainly lacks flavor until quite ripe. The

canes are healthy and have proved quite hardy so far. The fruit is large and fine looking. "Taylor," growing alongside of it, makes a very poor showing in comparison. I only succeeded in growing one plant of the Gainor. It has not fruited yet, for which I am sorry, as Mr. Peart praises it highly. I am anxious to know if it will do as well here as at Burlington.

"Wilson, Jr." is so badly affected with anthracnose, as to be almost useless. But I believe we have struck something fine in the "Eldorado."* The canes are very healthy and just as hardy as the Snyder. The fruit is large, firm, and the quality all that could be desired. I am highly pleased with this variety and expect great things of it. Erie has not fruited yet, and from the appearance of the canes, I should judge it will not amount to much here.

Of course all these varieties of berries need further trial, as nothing conclusive is proved from one or even two years' fruiting. It is the varieties that give the best results for several years, that are going to be the most valuable. One important fact I have learned and would wish to emphasize, is that those who wish to succeed in growing Raspberries and Blackberries, will have to spray their bushes with Bordeaux mixture.

I notice the disease known as anthracnose getting worse every year. It does not seem to affect the vigor of the young canes, the first year, but, by the next year, it has spread over a large part of the surface like a rust, and the canes turn yellow and often die before fruiting. I am planting my rows now eight feet apart, so as to be able to drive between them with a spraying rig. A low-wheeled truck would be the thing,

* Eldorado is not going to be so productive as Agawam.

FRUIT AT SIMCOE STATION.

so if early potatoes or other stuff were planted between the rows, the truck would straddle the rows without injury. The outfit would be, of course, a good spray pump, ten or twelve feet of hose, a bamboo extension rod about five feet long, with a drip collar, and a Vermorel nozzle attached. This outfit, I believe, would do rapid and effective work. Currants may be sprayed in the same way, and this is the easiest way of dealing with the currant worm.

Spray with Bordeaux and Paris green in spring, and there will be no trouble with the worms. It beats hellebore for that purpose; and there is a kind of rust on the white and red varieties, and a mildew which affects some of the black varieties, for both of which Bordeaux proves quite effective.

Several varieties of currants have fruited this year, some three and some two years planted. Some varieties do not bear as early as others, so that to compare them at so early an age, may not do them justice. Some that make a poor showing now, may do better when bushes are full grown. However, I have made a test by way of comparison; the fruit was picked when ripe, and weighed. The black varieties were three years, and the white and red two years planted. There were three plants each of blacks, and six each of red and white.

RED AND WHITE CURRANTS.

No. of plants	Variety.	Date of picking, ripening.	lbs. oz.
6	Versailles.	July 20.	9 8
6	Cherry.	"	13 4
6	Fay's Prolific.	"	12 3
6	Prince Albert.	Aug. 1st.	3 5
6	Victoria.	"	2 4
6	White Grape.	July 20.	6 8

BLACK CURRANTS.

3	Saunders.	Aug. 1st.	4 8
3	Lee's Prolific.	Aug. 5th.	2 10
3	Black Naples.	"	2 9
3	Champion.	Aug. 10th.	2 8

TREATMENT.

Sprayed with Paris green just after leaves opened; later, with Bordeaux and Paris green, and given good cultivation. Soil in a fair state of fertility; rich loam, no clay.

The Red Dutch was not taken into account, as the fruit is too small, to be of any value. Of the reds, Fay's was the largest. Cherry and Versailles not far behind it. Prince Albert and Victoria, medium size, later, and very acid. The three leading varieties of reds, Fay's, Cherry and Versailles, are the most productive, as will be seen by the table. Saunders the most prolific of the blacks. Champion is much the largest of the blacks.

The three best red varieties gave within a fraction of two pounds to each plant average. It would be safe to assume that these bushes, when full grown, would yield three times that, or six pounds each. Planted five feet apart each way, an acre would contain 1,700 plants. These, when full grown, should produce 10,200 pounds of fruit, or about 6,800 quarts, which if sold at 4c., would give a gross return of \$272 per acre. Or, if they only doubled their present product, it would give \$136 per acre. That would be the present yield of bushes, two years planted.

Perhaps this way of estimating may be regarded by some, like the story of the boy and the rats, who when asked how many rats he had caught, said, that if he got the one he was after, and two more, he would have three.

Mr. Pattison told us at Kingston, that every kind of fruit is too plentiful, that planting is overdone in this country, that present prices will not pay the grower.

I agree with him as to black currants at the prices they were sold at this year, they certainly will not pay. But I believe there is still a profit in the reds, on ac-

PRUNING FIR TREES.

count of their greater productiveness, and more extensive demand for them. Black currants are only used by the majority of people for medicinal purposes. Very few relish them when canned. But the red varieties can be turned to a variety of uses, as canning, and for jelly for pies, etc.

There might be an outside market

found for red currants and their products, made into jam, jelly, or canned. There should be a profit in growing them, even at present prices. (They sold here at 5c. per box, for best ones). Will someone who has been growing them on a large scale and for some length of time, kindly rise and tell?

G. C. CASTON.

PRUNING FIR TREES.

THE problem with many owners of fir trees is how to keep them the desired size and shape, and, in addition, maintain a healthy growth from the lowest limb to the topmost shoot. As a rule the entire conifer family possesses a tendency to assume a conical shape, differing some in outline. The object sought is to so regulate the pruning as to preserve this form, strengthen the lower branches and lessen its tendency to an excessive upward growth.

The idea of depriving an evergreen of its leading shoot at first seems barbarous, but if by so doing the tree acquires a tendency to fill up below and grow much more slowly, it is just the operation needed for all except the largest park-like effects. No better illustration of this can be had than an ordinary evergreen hedge. Prevent the putting forth of leading shoots and the normal conical shape is converted into an impenetrable mass of shoots. Here, then, is the idea to work on: Check the upward tendency by shortening the leader. This will strengthen the base and cause very

slow upward growth. This pruning must begin early, at least by the time the young trees are 3 or 4 feet high, when they usually begin to make rapid growth. This will of course depend upon the condition of the tree. If a tree is making but moderate growth with a plentiful supply of side branches, the main shoot might need no shortening, while another no higher, but with a leading shoot 2 to 3 feet long, may be cut back one-half. By so doing it will be found that all the buds left on the leader will push out. One of them, usually the topmost, will start out to replace the original main stem. Sometimes two leaders will start. In this case a summer pinching of one will give impetus to the other, it not being desirable to have more than one leader. But this effort of the tree to replace a pruned leader is what is wanted. This with judicious checking means in the end a perfectly formed mass, which will increase in beauty with years, and yet will be only of moderate height for a long time.



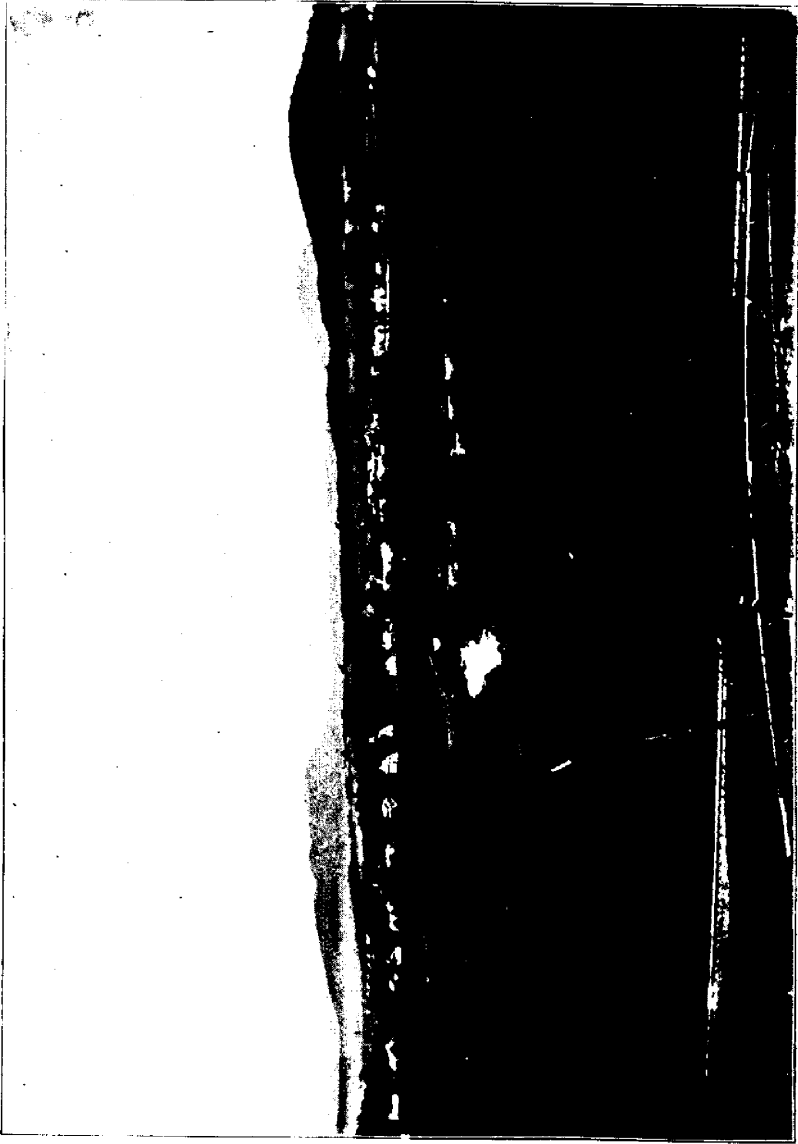


FIG. 1123.—A VIEW OF BEEBE PLAIN FROM A HILL NEAR STANSTEAD.

MEETING OF THE QUEBEC POMOLOGICAL SOCIETY AT STANSTEAD PLAIN, QUE.

THE province of Quebec has two provincial Horticultural Societies:—(1) The Montreal Horticultural Society, is more or less local in its character and has to do with the floricultural section of Horticulture more intimately than the pomological branch. (2) The Pomological Association studies the adaptability of the various divisions of the province, to the growth and cultivation of the large and small fruits. An interesting meeting of this latter Society was held at Stanstead on 17th and 18th Aug. The Quebec Pomological Society still retains the good old-fashioned plan of holding summer sessions. These summer sessions have many advantages. Members who attend are often enabled to secure valuable object lessons by studying the fruits, particularly of the summer types, on exhibition and in the orchards of the place where the meeting is held. Stanstead is situated near the Vermont border, about 9 miles from Newport, Vt. It is the centre of one of the finest farming and dairying sections in the province of Quebec. The configuration of the country is rolling, and in places quite hilly. Many of these hills present most favourable exposures for the cultivation of apples. A view from the top of some hills presents a magnificent panorama of hill top, valley, lake and river. Jay Peak, Camel's Hump and Mount Hosford are prominent features of the distant landscape.

The meeting of this year, while not as large as it should have been, was attended by representative fruit growers from all portions of the province. Messrs. Chapais and Dupuis, of L'Islet, and the Lower St. Lawrence; Messrs. Fisk and Craig, of Abbotsford; Messrs.

Shepherd, Dunlop and Brodie, of the Montreal district, were among the prominent members present.

President Brodie's address was hopeful and buoyant. While fruit crop of this year was light, as to quantity, and not up to par as to quality, yet the progressive fruit grower who practiced the best method was reaping his reward in securing fruit better in quality than that of his slovenly neighbor.

Mr. Craig, Horticulturist, Central Experimental Farm, Ottawa, gave an address on "Orchard Enemies of the Year." The season had been abnormal in many respects, and for this reason some diseases and some insects had been unusually abundant. Among fungous diseases, *Fusicladium* (Apple Spot) and Gooseberry Mildew were said to be particularly injurious. Mr. Craig recommended the use of Copper sulphate in preventing the spread of the latter disease late in the season. This should be used at the rate of one pound to 300 gallons of water. Bean Anthracnose was also an increasingly injurious disease. Soaking the seed before planting in a one and one half percent solution of copper sulphate was the best remedy.

Among the particularly injurious insects of the season were, Tent Caterpillar and Aphis. The latter had been a first-class pest in most portions of the Dominion. Tobacco water, (10 pounds of tobacco waste to 50 gallons of water, with 2 pounds of whale oil soap) had been found to be the most effective remedy.

Mr. J. C. Chapais, of St. Denis, Kamouraska, announced that the winter of 1896-97 had been the most severe in its effects on orchard trees that had visited that vicinity since 1857. Many orchards

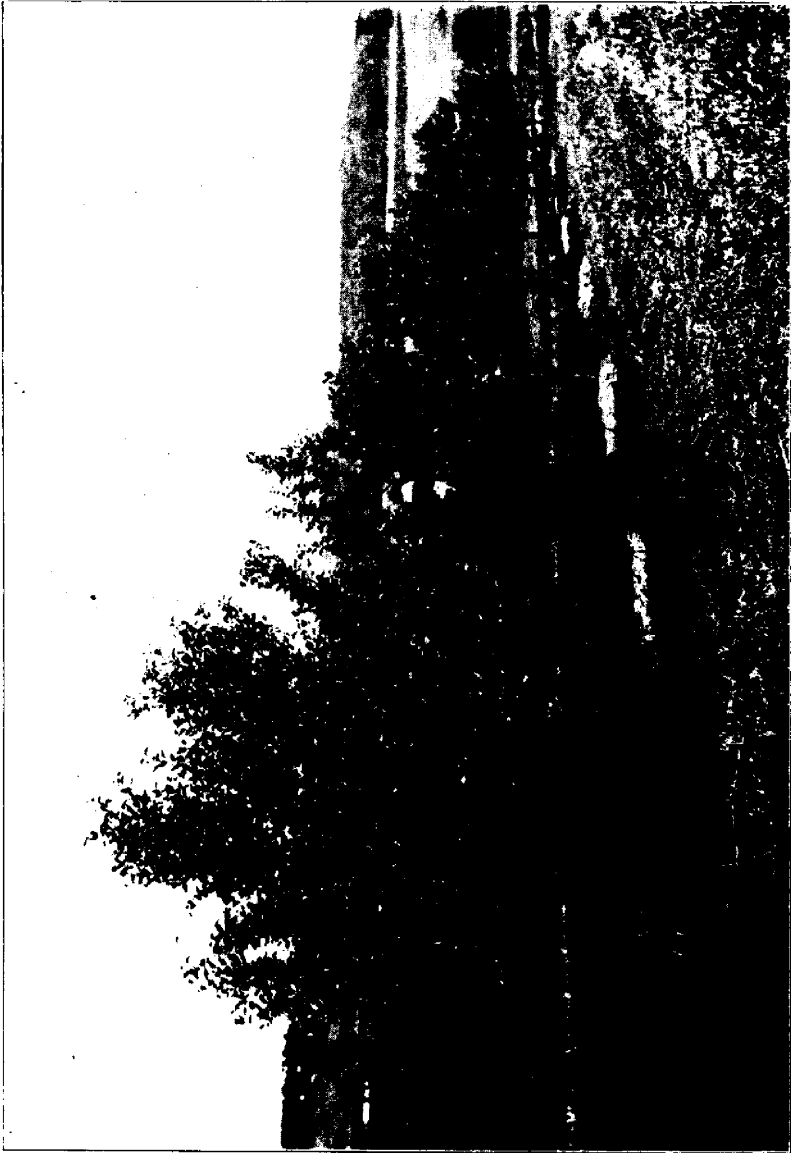


FIG. 1224.—A ROW OF SCOTT'S WINTER—DR. HOSKINS IN FOREGROUND.

MEETING OF THE QUEBEC POMOLOGICAL SOCIETY.

were killed outright. The injuries were so irregular, as to varieties, that no definite conclusions could be drawn with regard to the hardiness of individuals. As a general rule, cherries on their own roots had been less injured than grafted varieties. The same was true of plums. In the case of apples, the hardiest varieties, as a rule, had suffered less than the tenderer kinds, but owing to the fact that the greater part of the injury was due to root killing, the question of hardiness or tenderness of the top did not play a very important part.

Wm. Patterson, of Clarenceville, in a paper on currants, spoke strongly in favor of Moore's Ruby. Prof. Waugh, of the Vermont Experiment Station, in a thoughtful address, classified the American plums. He was of the opinion that varieties of the Niagara section of *Prunus Americana* would be of greatest value to fruit growers in the province of Quebec and in the Ottawa Valley. The varieties of Chickasaw or *Angustifolia* type were now being largely planted in Maryland and in the Chesapeake Peninsula.

In speaking of the newer varieties of strawberries, Mr. Craig recommended Bissel, Scarlet Ball and Buster. He was of the opinion that these were decided acquisitions to the list of varieties adapted to commercial culture.

"The Planting of Orchards," by R. W. Shepherd, brought out a good discussion, the general trend of which went to show that apple trees were being planted too closely at the present time in the province of Quebec. He advocated a distance of 33 feet apart each way.

An interesting talk on "Ornamental Trees and Shrubs" was given by Wm. Craig, Jr., of Abbotsford. His remarks were illustrated by specimens of tree and shrub growth from Gibbland Farm. Among the varieties of ornamental trees of beautiful foliage and adapted to the climate of Quebec, he recommended Schwedler Maple, Kentucky Coffee Tree, Honey Locust, Cut Leaf Birch, Golden Arbor Vitæ, Golden Retinospora, Concolor Spruce and Austrian Spruce.

Mr. C. P. Newman, of Lachine Locks, gave useful information upon cider making. His paper went to show that summer apples were of little value for this purpose and that the best cider was made from the firm-fleshed winter varieties, such as Pomme Grise and Golden Russet.

The question of how local Horticultural Societies might aid the Provincial Association was discussed by J. M. Fisk, of Abbotsford, and a resolution was passed appointing a committee whose duties it would be to formulate a scheme for the organization of local associations and their affiliation with the Provincial Society. Bee keeping was treated by Gilbert Winter, and the President spoke interestingly regarding tomatoe culture.

A number of members took advantage of their proximity to Newport to visit the orchards of the veteran fruit grower of Newport, Dr. Hoskins. It was a pleasure to meet the Doctor and to look with him through his large orchards of selected hardy Russian varieties and native Vermont seedlings. Scott's Winter and Longfield were two striking varieties in these orchards.



HOW TO GROW APPLES.

VALUABLE HINTS ON THE PLANTING OF ORCHARDS BY MR. R. W. SHEPHERD.

THE summer meeting of the Provincial Fruit Growers' Society, held at Stanstead Plain, was brought to a close on the 18th of August. At the evening session Mr. R. W. Shepherd, the well known pomologist of Como, read a paper on the planting of orchards, in the course of which he said:—

In the "good old days" of planting orchards in Quebec province it was thought proper to set the rows of trees only twenty or twenty-five feet apart. There are, in fact, few orchards of fifty years of age where the trees were planted at greater distances than twenty-five feet apart. The result of this mistake has been to produce orchards in which, as the trees grew, completely shaded the ground, they interlaced their branches with one another and became unfruitful, bearing fruit of small size and imperfectly colored. To mend matters the orchardist starts out to prune his trees, with an axe and saw, slashing and cutting right and left large branches in order to admit some light and air, the most necessary adjuncts to successful orcharding. All this work of slashing and cutting of branches is the result of the intense desire to plant out as many trees as possible to the acre—another proof of the shortsightedness and avariciousness of human nature. In this enlightened age, do not let us repeat the mistakes of our grandfathers. Let us understand first that an apple tree must have

PLENTY OF AIR AND SUNLIGHT

to produce perfect and well colored fruit. A tree of forty or fifty years of age standing in the open, in good, well cultivated soil, will bear as fine specimens of fruit

as a tree fifteen years old. It is a common idea that the finest specimens of apples are grown on young trees; but give the old trees the same sunlight and air, with like cultivation and nourishment to the soil in which its far-spreading rootlets permeate, and you will see equally fine specimens of fruit.

In this age of necessary spraying of trees and thorough working among them, it is absolutely imperative that the new orchard trees be planted at greater distances apart than heretofore. Everyone who has tried to spray an old orchard knows how laborious the work is, and, generally, how imperfectly it is accomplished. In two orchards that I planted recently at Como, we set the trees thirty-three feet apart each way, i. e., thirty-three feet in the rows, and the same between the rows. I believe that for such varieties as St. Lawrence, Winter St. Lawrence, Canada Baldwin and others, even forty feet apart would be preferable.

FALL PLANTING.

There has been considerable difference of opinion as to the proper season to plant apple trees, whether in the spring or the fall. I have had good results with either. Let me give you the result of my efforts last fall and last spring. We all know, to our cost many of us, what a very severe winter the past one was to many old as well as young trees. Therefore, the planting of an orchard last fall was attended with considerable risk. About the first of November last, we planted one hundred and twenty-six trees of the following varieties: Fameuse, McIntosh Red, Rochelle, Canada Red, Scott's Winter. The soil had been well ploughed and

HOW TO GROW APPLES FOR MARKET.

broken up, and the spot selected was dry, sandy, rich loam. Wide, shallow holes were dug. The trees were taken from my own nursery and very carefully planted; and the earth heaped up against the trunk of the trees, two feet high. This is absolutely necessary when planting in the fall, in order to protect the roots from frost, and at the same time it serves as a protection to trunks of the trees against the field mice. About the middle of December, we carted out manure and spread it six inches thick on top of the heaped-up earth. This was an extra precaution, against frost attacking the roots, and was suggested to my mind by the very severe winter weather beginning with little or no snow. It was well we did take this precaution, as no doubt this extra protection to the roots, given by the mulching on the top of the heaped-up earth, saved my trees from total destruction. Last spring, vegetation, we all know, in this province at least, was much retarded by the cold weather which lasted all through the month of May. The trees in my new orchard looked as if they had no intention of leafing out. When the nursery trees were almost in full leaf the trees in the orchard scarcely showed signs of budding out. But I was not alarmed. I knew that the roots, so deeply covered with earth and mulching, had not yet begun to feel the effect of the sun's heat. It was some time after the heaped-up earth had been levelled that the trees began to show signs of life, but after the copious rains in June and the heated term in July, followed by more rains, my trees have made wonderful growth. Of the 126 trees planted only six have failed to grow satisfactorily or have been injured by the winter so as to need replacing.

The orchard of 90 trees planted last spring (almost the same varieties as those

planted last fall), has been quite, if not more satisfactory. The trees had been selected from those that had been taken from my nursery in the fall and very carefully heaped in for winter. They have made very satisfactory growth since being planted. Fall planting can be successfully carried out if we take the necessary trouble to plant the trees as I have related.

In my own case, at least, I find it preferable and more convenient to plant in the fall than in the spring, because we are not so busy, and there is more time to do the work than in the midst of the rush of spring. I imagine that many farmers and fruit growers are similarly situated and have neither time to devote to the preparation of the ground nor to the planting of the trees; in such cases I would recommend fall planting. Perhaps, when time can be given, planting of apple trees in the spring is more desirable. But at the same time I firmly believe that fall planted trees, which survive the first winter (and with proper precaution, such as I have mentioned, in an ordinary winter with snow protection, there is scarcely any doubt about it) really

MAKE MORE RAPID GROWTH

the following summer than those trees planted in the spring. This is accounted for, I believe, by the fact that the shock of transplanting, which the tree must sustain, has been more fully overcome, and also the fact that the earth has been, through the action of the frost during winter, more thoroughly compacted around the roots and the interstices filled up than is the case when trees are planted in spring. We all know that spring-planted trees, the second season, should, and generally do, make good growth, which is owing in a great measure to the same cause, the compacting of the earth

FRUIT AT BREAKFAST.

around the roots the previous season ; or, in other words, and in the language of the old Fruit-Grower, "the trees do not grow well until the roots 'get good hold' of the earth ;" and this "getting hold" of the earth is more noticeable during the first season in fall-planted trees than it is with trees planted in the spring.

AN INTERESTING DISCUSSION

followed. Mr. J. C. Chapais (St. Denis, Kamouraska), said planting forty feet apart might be suitable for the district about the Island of Montreal, but it would not do below Quebec. The trees would die from want of protection. They must be planted closer together. He had tried fall planting, but his experience was the reverse of Mr. Shepherd's. Less than 5 per cent. of his trees succeeded. There were differences of climate in different parts of the province, which must be taken into account. No doubt Mr. Shepherd's rules would work well in his own district.

Professor Waugh (Burlington, Vermont), was in favor of fall planting, for

the reasons Mr. Shepherd had given, which were well worth consideration. If the roots were carefully trimmed they healed and began to make growth during the winter.

Mr. Fisk (Abbotsford), thought that for the climate of his district spring planting was preferable. That had been his experience.

Mr. R. Brodie (Montreal), the president, was also in favor of spring planting. As to distance, in view of the cheapness of nursery stock, he suggested planting 20 to 25 feet apart, and then cutting down each alternate tree after 18 or 20 years.

Mr. Fisk—Yes, if you had the courage to do it.

Mr. Shepherd thought the branches would be interlaced by that time.

Mr. Barnard (Quebec), in 25 or 30 years' experience found close planting necessary for safety in places exposed to the wind.

Mr. Shepherd closed the discussion by reiterating his firm belief in air and sunlight.—The Gazette, Montreal.

FRUIT AT BREAKFAST.

FRUIT in some form should have a prominent place in every breakfast menu. Either the uncooked fruits may be employed in their season, canned fruit or sauces. All will be found appetizing, and all medical testimony bears witness to their value as an article of diet. More especially where there is a dry, disagreeable, slightly feverish condition of the stomach, the cooling action of the fruit juices will be found most agreeable and refreshing. The action of the fruit acids is especially beneficial. All persons require more or less acid in their food or drink, to meet the requirements of the system. If this comes from the natural acid of fruits, it does away with the stronger and less wholesome acids of pickles and other vinegary condiments

over indulgence in which unquestionably does harm to many a stomach.

A writer on this subject recently declared that "for a breakfast dish nothing is nicer than sliced oranges with cocoanut. Some add sliced bananas to this, and if heavily sprinkled with powdered sugar you will abandon hominy, chops and steaks, and breakfast exclusively on this dainty dish which French people have justly called "Fruit de Paradis." The writer would not go to the extent of urging an exclusively fruit diet for breakfast, feeling that in many cases there should be "substantials" added in more or less generous measure ; but that fruits should have a place and a large one, at every breakfast cannot be denied.

STORING AND PACKING FANCY APPLES.

IT is evident that our apple growers must adopt new methods, if success is to be expected. To be successful, fruit growing must become a science, and the best methods followed from start to finish, and this can only be done by the man who

which to do the work. For winter apples an ice storage house, such as is required for storing summer apples, peaches and other tender summer fruits is hardly necessary, for in autumn the temperature is usually low enough; and, therefore, the only requirement is a

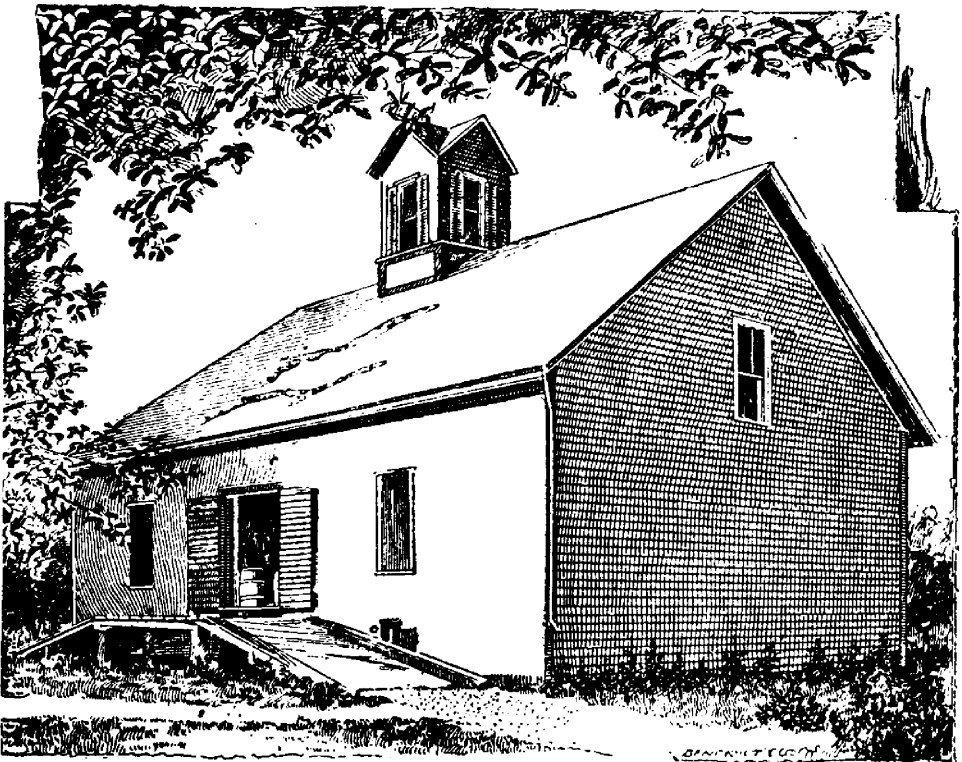


FIG. 1225.—KENNEY'S APPLE STORAGE HOUSE.

makes fruit growing a business. He must first grow only the very finest varieties for export, and then he must cultivate, thin, spray and prune, so that only fancy stock is allowed to mature. And when he has learned the art of growing fancy fruit he must also learn to grade and pack the same. The first requisite, of course, is a warehouse, in

frost proof building in which the fruit can be stored and packed during the winter for shipment as fast as may be convenient, according to the requirements of the market.

There are several of these frost proof apple houses in our province, and one of them belonging to Mr. Walter Dempsey, of Trenton, has been pictured in

STORING AND PACKING APPLES.

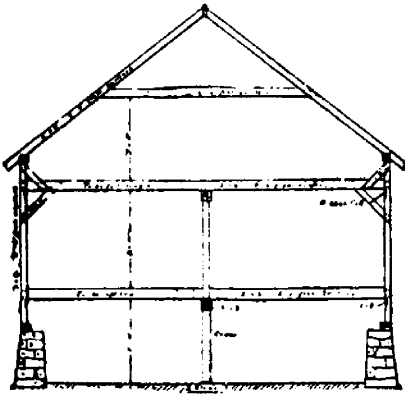


FIG. 1226.—CROSS SECTION OF APPLE HOUSE.

these pages. The American Agriculturist in a recent issue shows one in Grand Isle Co., on Lake Champlain, Vermont, and speaks of it as follows :—

“One of the largest orchardists, Mr. T. L. Kinney, has been very successful in commercial orcharding. One of the factors is an apple storage house shown in the illustration, which enables him to hold his fruit and put it on the market whenever he wishes. The house is simple of construction, and cost him about \$1,500. The lumber bill amounted to about \$445, and undoubtedly the same building could be constructed much more cheaply at present. Mr. Kinney says that he has ‘practiced keeping apples for several years and the venture has always been successful. The fruit must be well grown, free from fungous diseases, and insect injuries, and must be carefully handled. I prefer to sort before putting into the house. The market calls for standard Vermont stock in winter, and this should not be sold

at any other time. My method of storing is much cheaper than keeping the fruit in large cities and is much better for the fruit.’ During the winter of 1896-97, Mr. Kinney’s apples kept well and sold in the New York city markets during February and March, 1897, at from \$1.50 to \$4 per barrel, thus giving a handsome margin.

“There is no question but that apple culture in this section, with a private storage house is a brilliant success. (Vermont experiment station, Bulletin 55, F. A. Waugh). It will not be many years, according to the present prospects, before any man who attempts to grow apples on a considerable scale will have a private storage plant.

“The low wagon used for handling apples was made by one of Mr. Kinney’s men from the trucks of a threshing machine horse power. It costs practically nothing, but is very useful in handling apples in transferring them from the orchard to the storage room. It is much more convenient than the stone boats which are commonly used in the neighborhood for this purpose.”



FIG. 1227.—LOW APPLE WAGGON.





❖ Flower Garden and Lawn. ❖

NEW HYBRID GLADIOLI.



FIG. 1229.—GROFF'S HYBRID GLADIOLUS.

MR. H. H. GROFF, of Simcoe, has very kindly sent this office a bushel of the most gorgeous colored gladioli spikes imaginable. The wonderful mingling of colors and the size and beauty of the florets, combined to make an exhibit well worthy of mention. The accom-

panying cut shows one of Mr. Groff's new hybrids, of which the florets are immense, equaling lilies in size.

He writes: "Am glad the flowers pleased you, but one basket could in no way represent my collection. It is my hope to exhibit at Toronto in 1898, the best quality and variety ever shown in America and I can do it. Beside the freak referred to in the paper last sent, I have a trumpet for hybridizing blooming at same time and later, is some pure white seedlings on which I have been working for years, and have now fixed a strain coming true from seed, giving a quality of pure writes, practically unknown."

COVER THE BULB BED.

Be sure to give the spring blooming bulbs a nice warm winter blanket of leaves, litter from the stable, or brush, or a combination of all, and do not be in a hurry in spring to get them out of their winter clothes. Don't rush out the first warm day and clear away all the brush and litter just because it is unsightly looking. The crocus and snow-drop will not need so warm a covering as the other bulbs and can be uncovered earlier in the spring. But from the tulip, hyacinths, etc., gradually remove the covering, leaving the finest of the stable litter on the beds permanently.—Vicks Magazine.




FIG. 1228.—AN INTERESTING FRONT GARDEN IN ENGLAND.

AN INTERESTING FRONT GARDEN.

MR. EDWARD OWEN GREENING, of London, England, edits a rather attractive Annual for amateurs, entitled "One and All" Gardening. Last year a competition of photographs of gardens of taste was instituted, and in this way Mr. Greening received a large number of photographs of beautiful gardens, which are full of suggestions. These were used as illustrations in the Annual for 1897 and one of them we reproduce for our readers. In this one the flowers and shrubs are disposed in a very tasteful manner, and the front of the old fashioned house is made picturesque with beautiful creepers. The

editor sees nothing in this to criticise unfavorably except the "somewhat promiscuous statuary and vases that catch the eye directly you look at it. If these were removed, the picture would be without a blemish. The picture teaches us the great value of creepers for covering the bare walls and softening the harsh outlines of the building, also how much more effective hardy flowers look when they have a back ground of shrubs. The plant seen in the right of the immediate foreground is evidently the Gardeners' Garter Grass (*Phalaris arundivacea variegata*), an old fashioned but very beautiful plant when growing by itself or in company with other hardy plants."

THE FAILURE TO FRUIT.

 **T**HE fruiting of an orchard is the end of its culture, and everything should tend to this end. A failure to fruit at proper age, and in the right season, is a sure indication that something is wrong, and that something ought to be done. There are a number of cases for a full-grown tree not fruiting, and it will be a good plan to investigate, ascertain the cause, if possible, and apply the remedy.

In some cases trees may have too much head and will exhaust themselves, nourishing their foliage at the expense of their first buds, but this is the exception. Generally a tree lacks plant food rather than an over-supply, and the application of well-rotted manure will remedy this. Sometimes there is a lack of lime or potash in the soil. Bone-dust or wood ashes make a good fertilizer when mineral elements are lacking, as there may be an excess of moisture in

the soil and drainage may be the necessary remedy. Pruning and thinning out may be necessary when there is an excessive growth of top. The soil may have become packed and hard, so that the tree cannot make as thrifty a growth as it should, and cultivating or digging about the roots may be necessary. With proper care the tree can be made to bear good fruit, quality being of more importance than quantity, and if, after proper remedies have been tried, the trees fail to yield good fruit, the quicker it is cut down and another one is planted in its place the better. Allowing a tree to overbear one year will be the cause of its not bearing the next. The tree so exhausts itself in maturing the excessive yield that a rest is required in which to recuperate. Thinning in good season is the remedy for this, while a better grade of fruit is secured.—N. J. Shepard, in *Farmers' Voice*.

HARDY PLANTS THAT WILL STAND THE DRY WEATHER.

HERE is a great variety of herbaceous plants suitable for planting in a sandy soil and which will thoroughly stand the drought.

Any of the varieties of the Helianthus or perennial Sunflowers are very fine. There is scarcely a position in which these plants refuse to grow. When established they are very effective, forming rich masses of golden yellow blossoms during the summer and early autumn. *Saponaria officinalis* is another free-growing and free-flowering plant. *Gypsophila paniculata*—this is, or would be, when more widely known, an indispensable plant; it possesses a grace not found in any other perennial, and attracting the eye of everyone. It forms a symmetrical mass two to three feet in height and as much through, of minute pure flowers, forming a beautiful gauze-like appearance. For table decoration it is exquisite, and some most lovely effects can be produced with it.

Lychnis Vespertina, fl. pl., called in some of the American catalogues *Viscaria alba*, which is wrong; but I may mention here that is synonymous to *L. diocea alba*, fl. pl., or commonly called in England the double white Champion. It forms a pyramid of branching stems 3 feet in height, bearing from June to September, innumerable flowers as large as a dollar piece. These are exceedingly double, pure white, and fragrant, somewhat resembling a white pink.

Bocconia cordata, this is a noble perennial, beautiful in foliage and flower, and adapted for the shrubbery, borders, centre of beds, and as a specimen plant on the lawn. It will grow in any soil, attaining the height of from two to four feet, flowers in panicles, or graceful,

loose-like spikes of minute flowers. I saw some fine specimens of this in Mount Royal cemetery, Montreal, and Mr. Ramsay informs me it is quite hardy in his garden at Westmount, Montreal.

Galega officinalis alba.—This is another excellent free-flowering border perennial, that is capable of enduring a good deal of drought with impunity. Some fine specimens of it have been flowering for some time with the greatest freedom.

There is also a much finer variety, which I intend to introduce to this country next spring, being quite hardy in the north-eastern parts of Germany. I am inclined to try it here; it bears much closer trusses of lilac flowers, far superior to the common or white form; they are most suitable for borders, beds, or groups.

Chrysanthemum maximum (Ox-eye Daisy).—This plant would soon become a favorite in every garden when more widely known. It is free-flowering, a strong grower, reaching the height of 2½ to 3 feet, forming a large bush, which is literally covered with large pure white flowers of great substance and very symmetrical. For cut-flower purposes it is of the highest value, as the flowers last over a week when cut. Succeeds well in good rich sandy loam; needs slight protection in winter.

Heuchera Sanguinea.—Of all the interesting perennials that it has been my fortune to handle, none has given me such pleasure. Its dwarf, compact, branching growth, robust constitution, and the matchless and striking color of the flowers, render it one of the most important and valuable for vases, epergnes, etc. It grows about two feet high; the

YUCCA AND CEREUS AT PICTON.

flowers are produced in loose graceful spikes, and borne in extravagant abundance, of a light coral scarlet ; when seen in full sunshine, dazzles the eye with its brilliancy. This is quite hardy round

Montreal. Some fine spikes were exhibited at the last Horticultural Society's show by Mr. W. M. Ramsay, Westmount.

Hamilton.

FRANK BRUNTON.

YUCCA AND CEREUS AT PICTON.

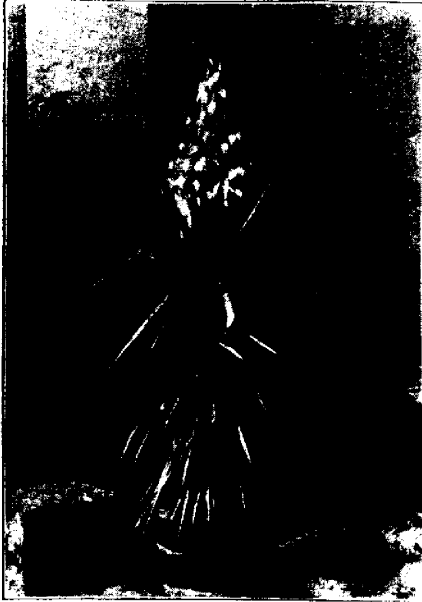


FIG. 1230.—YUCCA.

Mrs. E. A. Yardwood, a member of the Picton Horticultural Society sends us two fine photographs of a Yucca and Cereus, grown by her, together with the following letter :

"Reading your request for photographs I inclose a couple, which if not useful for your journal you will please return to me. The picture of the 'Night Blooming Cereus,' was taken in my home several year ago. As the flowers do not open full until late in the evening the photograph was taken by lamps being placed near it, I think between eleven and twelve at night."

In this connection the following clipping from Farm and Home about Hardy Yuccas will be of interest :

"Few hardy plants have a more stately appearance when in flower than the popular Spanish bayonet or Adam's

Needle, one or more species of which may generally be found in the majority of gardens, either as isolated specimens, planted in masses, or associated with rock work or water. Not being at all particular as regards soil, yuccas are admirably adapted for any of the above named positions. The common Adam's Needle (*Y. gloriosa*) and its varieties are probably the hardiest and most robust. Old plants of this species grow to a height of 6 ft. or more, and when branches from heads nearly as much in diameter. Yuccas do not flower at any definite age or size ; one in a group may produce a panicle this year, while others beside it under precisely similar conditions may not do so for a long time."



FIG. 1231.—NIGHT-BLOOMING CEREUS.



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.

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ADVERTISING RATES quoted on application. Circulation, 4,000 copies per month.

LOCAL NEWS.—Correspondents will greatly oblige by sending to the Editor early intelligence of local events or doings of Horticultural Societies likely to be of interest to our readers, or of any matters which it is desirable to bring under the notice of Horticulturists.

ILLUSTRATIONS.—The Editor will thankfully receive and select photographs or drawings, suitable for reproduction in these pages, of gardens, or of remarkable plants, flowers, trees, etc.; but he cannot be responsible for loss or injury.

NEWSPAPERS.—Correspondents sending newspapers should be careful to mark the paragraphs they wish the Editor to see.

DISCONTINUANCES.—Remember that the publisher must be notified by letter or post-card when a subscriber wishes his paper stopped. All arrearages must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given. Societies should send in their revised lists in January, if possible, otherwise we take it for granted that all will continue members.

✎ Notes and Comments. ✎

A SHIPMENT OF PLUMS, PEARS AND TOMATOES is being made to Great Britain by Mr. G. E. Fisher, of Burlington, by steamer Numidian. Should these experiments prove a success, a fine export trade in Canadian fruit will soon be developed.

THE FIRST SHIPMENT of Canadian tender fruits by cold storage left Grimsby on Tuesday, the 7th, to be forwarded by steamer Merrimac to London, via Bristol. It consisted of 890 cases of Bartlett pears, Crawford peaches and tomatoes, each case containing about a bushel of the choicest fruit. Mr. J. W. Robertson examined the fruit at Montreal as it was loaded, and found it in good condition, but some cases of peaches were too ripe, and the pears not graded high enough. The arrival and sale of this fruit in London, England, will be watched with great interest.

THE ENGLISH FRUIT MARKET.—Messrs. R. Marks & Sons, of Leeds, quote Williams (or Bartlett) pears \$1 per case of 48, and tomatoes at 8 to 10 cents a pound.

THE FIRST COLD STORAGE SHIPMENT of fruit to England was photographed by Mr. E. S. McCully, Grimsby, the picture showing drays of cases, the loaded car, the shippers and the warehouse.

MAGNIFICENT GLADIOLI.—On the 29th of Aug. we received a large basket of cut blooms of Gladioli, huge spikes of the loveliest colors, enough to give one a mania for growing this flower. How few realize the possibilities before one of Mr. Groff's scientific turn, who by hybridizing can produce such endless shades of rich colors, both plain

NOTES AND COMMENTS.

and variegated, and such huge blooms. The accompanying photo represents one of Mr. Groff's hybrids, and is a study by itself, while its grand size equals that of a tiger lily.

ERRATA.—On page 329, under section of apples read Yellow Transparent, not Early Harvest. And on page 349, for C. R. read C. H. R. The article was written by Mr. C. H. Roberts, Secretary Paris Horticultural Society.

MCCONNELL'S SEEDLING peach is a fine free stone, with yellow flesh and fine quality, ripening about season of Early Crawford.

SOME BEAUTIFUL CANNAS were brought us by Mr. Frank Brunton, of Hamilton, among them Queen Charlotte, Chicago, J. D. Cabos, Italia, Austria, and Alba Rosea.

THE AMERICAN POMOLOGICAL SOCIETY held its 25th session the first week in Sept., at Columbus, O. It is proposed to form a scheme by which this old Society shall co-operate with the U. S. Pomological division of the Department of Agriculture. The Hon. P. J. Berckman declining re-election, Mr. C. N. Watrous, of Iowa, was elected President. Mr. Craig, of the Central Experimental Farm, was in attendance, and read a paper.

RICHER THAN THE KLONDIKE is the heading of an article in the Weekly Sun, regarding the Niagara Peninsula. We are willing to take all the advertising the Sun chooses to give us gratis, but when \$2,000 is mentioned as a sample of profits from one acre in a single year, we think it time to speak and say such talk is entirely misleading. The fact is that the low prices of fruit in 1896 and

1897 have been so discouraging that many growers would like to give up their business entirely, having been compelled to borrow money for current expenses. If the experiment of exporting our tender fruits to Great Britain is a success, then we will have great hopes for the future of the fruit industry in Canada.

THE PROVINCIAL FRUIT CROP is referred to in the following terms by Bulletin 62 of the Ontario Bureau of Industries: The supply of apples will be far below the average, as might be expected after the immense yield of last year. In a few instances large yields are spoken of, but a considerable number of correspondents report the opposite, and too frequently mention is made of scab. Of the standard winter varieties the Northern Spy has done best. Pears will give a better yield relatively than apples, but mention is made here and there of the blight. Plums suffered considerably from curculio and rot, but many speak of large yields, and the season has been a good one for careful and intelligent growers. Peaches are yielding heavily in Lincoln, although there has been a tendency to rot among some early varieties. In Essex and other counties this fruit has done very poorly. On account of the ravages of black-knot comparatively few cherry trees have been left in the Province, but as a rule these have been loaded. Several correspondents complain of the non-enforcement of the law governing black-knot in plum and cherry orchards. Grapes promise a fair to good yield, although in many quarters threatened with mildew on account of the damp season. This crop is reported to be a week or two late. In most sections of the Province small fruits were abundant, raspberries especially giving a magnificent yield.

NOTES AND COMMENTS.

THE CITIZEN (Ottawa) quotes Mr. Robertson as saying :—I was able to arrange for the sale in Great Britain for the trial shipments of peaches, pears and grapes, which are to be sent from the Niagara district. For the first year these trial shipments will be sent only, or mainly, to Covent Gardens, in London, and to the fruit bazaar, in Glasgow.

I saw pears from California arrive in a very good condition at Covent Garden. They were sold at excellent prices, and I am sure that the Canadian pears, of higher flavor and rather finer quality, can be delivered in equally good condition.

Since I returned I visited Grimsby, Ont., inspected the cold storage warehouse, and had a conference with the fruit growers who have agreed to furnish fruit for these trial shipments. There is an excellent crop of Crawford peaches on the trees, a fine and unusually heavy crop of Bartlett pears, and the promise of a very good crop of grapes. The fruit growers at Grimsby have procured a quantity of suitable packages, and a first trial shipment will be sent from there next week. Each fruit will be wrapped in tissue paper. They will be packed in comparatively small trays, holding from three to five pounds each, and these will be put in crates holding about twelve trays each.

The outside cases or crates, are constructed to permit of thorough ventilation. The fruit will be cooled in the cold storage building before it is put in the refrigerator cars; a special chamber will be provided on the steamships, and every reasonable precaution will be taken to see that the fruit is landed in good condition in London and Glasgow. Full information of the prices obtained, etc., will be published for the benefit of the fruit growers in Canada, and I am confident that a large and profitable trade can be developed in the shipment of these fruits to Great Britain.

THE U. S. apple exporters say that, from the reports so far received, the crop in New England is below an average, especially winter fruit; that in New York there is less than an average crop along the lakes and a fair crop in the Hudson River Valley. In Virginia a fair crop, but very light in the Ohio River Valley. Missouri, Arkansas, Kansas and Iowa promise an average crop. Michigan and Nova Scotia are below the average. Baldwins are reported light in all sections of the United States, and the larger part of the crop consists of russets and green varieties. This is bad for the exporter, for the red varieties take best in Great Britain.

PROPER HANDLING OF GRAPES.

Grapes, like other fruits, need to be carefully handled to bring the best prices. The vines need to be gone over frequently during the ripening season, gathering only those with full color, because grapes do not, like other fruits, color after being gathered. The bunches should be cut off with a pair of scissors, and so handled as not to disturb the bloom. Ordinary varieties may be at

once packed from the vines into the basket that is intended for sale. Choice varieties should be gathered into shallow trays or baskets, in which they should stand a day or two on shelves in the fruit house, and then repacked. By this treatment the stems will wilt, and the bunches will then keep without molding and pack more closely than when green.

* Our Affiliated Societies. *

WATERLOO.—The Weekly Telegraph, Waterloo, gives the following account of the Third Annual Exhibition of the Waterloo Horticultural Society:—

The Third Annual Horticultural Show under the auspices of the Waterloo Horticultural Society, opened in the Waterloo Town Hall, on Tuesday afternoon, Sept. 14. The displays are the finest since the inception of the Society, indicating that success has marked the efforts of the local horticulturists. The interior of the hall is a veritable flower garden, and the fragrance of the numerous blooming specimens is extremely sweet. The exhibits are displayed in such a manner so as to command a perfect view, which reflects much credit on the ladies, who supervised the arranging. From a collective standpoint the show is one of the finest ever witnessed in Waterloo county, and shows what an interest Waterloo people take in the culture of flowers. An inspection of the exhibits revealed the fact that there is a deficiency in the quantity of Gladioli, but a decided improvement in the quality. The most beautiful display is a collection of Campanulas, which surround the stage. The specimens are very high and their beauty is revealed in clusters of large, bluish blooms. The collection of Begonias is also very large, and of the choicest varieties, comprising both foliage and tuberous-rooted plants. Probably the rarest and most highly prized plant is a specimen of the "Old Man Cactus," which presents a woolly appearance. Exhibits of fruit and vegetables are also made.

The stage resembles a mound of blooming flowers, and the fragrance impregnates the whole building.

The Waterloo Horticultural Society was formed three years ago with a membership of 55. Since that time its membership has steadily increased, and at the present time there are connected with it 155 enthusiastic horticulturists, all of whom are amateurs. The Society is under the auspices of the Ontario Fruit Growers' Association, and it receives Government assistance. The Society was formed for the purpose of increasing local interest in horticulture; that this has been accomplished the elaborate displays at the show attest, as does also the increased membership of the Society.

The show affords no advantages except to create a deeper interest in the work, as no prizes are awarded. All members work jointly. The show will be continued this evening, and residents of the Twin City who are fond

of plants, should not miss this excellent opportunity of augmenting their knowledge of horticulture.

SEAFORTH.—On Monday, Sept. 6th, the First Annual Flower Show of the Horticultural Society was opened and it continued until Wednesday the 8th. The Society intended to hold their exhibition in the Agricultural Hall, but owing to that building being burnt, they chose a vacant store in Cardno's block. The hall was prettily decorated with flags, bunting, emblems, evergreens, Goldenrod, grain and autumn leaves. The plants in pots and cut flowers were mostly annuals, but beside these there were some very rare tropical plants, namely, a Banana in fruitage, a Screw Palm, two Orange trees with fruit, a Chinese, Hibiscus in bloom, a very large Balsam and a Japanese Fern. Out of this list, probably the greatest novelty was the Banana tree which was about 5½ feet high, with quite a large bunch of bananas and a blossom. Judging from the profusion and the variety, the Aster seemed to be the favorite annual, for cultivation with the people of Seaforth, as by far the largest exhibit was made of that flower. The Gladioli and Dahlias ranked second, as to number and variety. The children's exhibit was not as large as expected by the members of the Horticultural Society, as a large quantity of the best seeds that could be bought, were purchased by the Society and distributed to the school in the spring. Some of the members of the Clinton Horticultural Society kindly sent down some cut flowers to the Seaforth Society, to give the people here an idea how the Clinton florists compare with the Seaforthites. It is very encouraging to the members of the Horticultural Society, to see the large number of people who are taking a lively interest in the show. This will in all probability increase the number of names on the membership roll for next year.

We omit the list of awards made, as being only of local interest.

The show was to have been closed at 5 p.m. on Wednesday afternoon, but on account of being such a success and so many people wanting to see the flowers, it was held open till 9 p.m. on Wednesday evening. On that evening a night-blooming Cactus opened about 8 o'clock and added greatly to the attractions of the show. The building was lighted by the new Acetylene gas. The members of the Society wish to compliment Mr. Donald Stewart, of Brussels, for the just and effective way in which he performed the difficult task of awarding premiums to the different plants and flowers.

OUR AFFILIATED SOCIETIES.

THE FLOWER SHOW AT NAPANEE. — The members of the Napanee Horticultural Society provided a great treat for our citizens and scored a great success in their grand display in the curling and skating rink last Friday afternoon and evening. The society has been in existence but a few years, but in that time it is truly marvelous the strides they have made, and the interest they have created in the culture and love for flowers in our midst. Each year the society gives a display, and each successive exhibition has proved a marked advance over the preceding one. Last year the town hall proved too small for the proper display of the large collection of plants, and this year the management conceived the rather risky experiment of showing in the large rink. To transform the bare and unsightly space into the scene of beauty presented on Friday night was no small task, and only those who planned and labored in its accomplishment, know the work and anxiety expended to secure this end. Our citizens are greatly indebted to the society for the work they have done and are doing in our midst, and it is to be regretted that all of our citizens had not availed themselves of the privilege of being present.

The President, Mrs. Wilkinson, and her staff of willing assistants are to be congratulated on the success which attended their efforts to make the show such a decided success.

On entering, the scene was indeed a surprise and delight to all; and where all the flowers and plants came from was an equal surprise. The display was just a little out of our reporter's line, and too extensive and bewildering to describe in detail. However, a brief sketch where so much was to be seen and so much taste and labor were represented, is demanded.

The sides, ends and rafters of the large building were gracefully draped with flags and jubilee bunting in red, white, blue and yellow. Along the two long sides of the structure were arranged shelves, on which were displayed cut flowers, in glass and vases, and abundance of grasses, ferns, vines, etc., filling the spaces and backgrounds. At the south end, on entering, was a mammoth sunflower, stretching up 15 feet plant. This end of the building was banked up with rushes, golden rod, grasses, vines, etc., and above all were a crown and the floral letters "V.R." of daisies draped with Union Jacks, the letters and crown the handiwork of Mrs. Uriah Wilson.

The northwest corner was banked with ferns and vines, and across the north end, with the Union Jack for a background, were the initials, "N.H.S.," in letters about three feet high, constructed of Sunflowers. Here also was an ingenious piece of floral work, a beaver, life-size, made entirely of red Sumac berries, the creation of Miss Ballantyne. In the northwest corner was a fairy bower, which we will describe later.

Along the east side, besides cut flowers in reckless profusion, were two bicycles, a lady's

and gentleman's, beautifully decorated with flowers, scarcely a vestige of the framework being visible.

The centre of the space was devoted to four large platforms, eight feet square, on which were displayed potted plants, common and rare, arranged in pyramid shape, the foliage and colors being arranged with rare taste. Two of these tables were arranged by Mr. Thos. Symington, to whose utiring energy and good taste much of the success of the show was due. The other two contained elaborate displays by Mr. James Harmer and Lloyd & Hill, florists. In the centre were also distributed many large vases, filled with foliage and bloom.

The centrepiece for the collection was a "Ferris Wheel," designed and constructed by the Society's secretary-treasurer, Mr. J. E. Herring. The height of the structure was 11 feet, and the wheel itself was made to revolve, carrying eight suspended boxes, each filled with brilliant flowers. The entire framework was tastefully decorated with green and Goldenrod, flags, etc., and the whole piece was considered very handsome. The decorations were effected by Mrs. Burritt, Mrs. W. K. Prunyn, Mrs. J. E. Herring and Mr. Cowan.

A crowd was always gathered before the exhibit in the northeast corner of the building, which represented the handiwork of Mr. and Mrs. W. S. Herrington. The corner was cut off by a partition of tall Broom-corn and Goldenrod, a space being left in the centre through which to view the *piece du resistance* within. Over this space was draped a pair of lambrequins made from Millet and joined at the top by a heart of crimson Verbenas. Looking through this unique and handsome entrance, one saw the exhibit proper, which was a model of a modern battle-ship, constructed wholly of flowers, and complete in the minutest detail. This was a study in itself, and represented many hours of labor. The hull was of white Verbenas, the deck of Asters, and a border of tricolor around the entire ship marked the water-line. Guns of Phlox protruded from turrets of Marigolds and Calliopes. The fighting towers were made of Candytuft, Pinks and Larkspur. The Union Jack with the colors accurately arranged floated over the stern, while an anchor cunningly wrought of tiny Forget-me-nots hung over the bow. The whole floated upon a sea of green. The walls of the building behind this exhibit were covered with green vines, through which could be seen here and there the golden face of a half-hidden Sunflower.

NOTES.

The band during the evening played a number of selections, and added materially to the pleasure of all present.

A lemon and fig tree were amongst the curiosities of the exhibition. Mr. Walter Ross, Sec.-Treas. of the Picton Society, showed a full-sized lemon grown by him. Mr. Ross was present and was greatly surprised at the beautiful display made.

OUR AFFILIATED SOCIETIES.

The attendance was very good, about six hundred taking advantage of the opportunity to witness the progress the members of the Society are making, and their taste in massing, decorating, etc.

The function was a brilliant one, the great building being brilliantly lighted with incandescent lamps, Chinese lanterns, etc. The throng, young and old, gayly dressed, criticising, chatting, inspecting and enjoying the treat, promenaded to the stirring music of the band until 10 o'clock, when the exhibition was

closed.

Strangers in town and many of our citizens, who had no idea of the strides the Society is making, were surprised and delighted with the display. Many new members should now be added to the N. H. S.

The Society and its energetic President deserve a public vote of thanks.

The beaver and letters N. H. S., were the work of Miss Ballantyne and Mr. W. Waller. The crown and initials V.R., were contributed by Mrs. U. Wilson.

TENTH ANNUAL REPORT OF THE CHEMICAL DIVISION OF THE DO- MINION EXPERIMENTAL FARM, 1896.

A copy of this report has just been received and we presume, therefore, that it is now ready for distribution among the farmers of the Dominion. There is much in it of interest and value to every farmer.

It would appear that the past year has been an exceedingly busy one for chemist (Mr. Frank T. Shutt), for the forty odd pages of his report are crowded with results of analyses, and deduction therefrom, of soils, fertilizers, cattle foods, well waters and a host of other materials more or less closely related to agriculture.

Among what appears to us as the more important features of this work, we notice the following:—an exhaustive account of certain typical soils in British Columbia. Their relative fertility is noted and suggestions made for their profitable treatment.

The economic improvement of muck soils is the subject of a chapter that will be found most useful to all farmers having muck deposits on their farms. Mr. Shutt has been able to demonstrate the value of woodashes (potash) and lime for these soils. The results of pot experiments show a large increase in the yield from such treatment. A well executed cut of the pot experiments illustrates this chapter.

Many analyses of "muds," "mucks" and substances of like character, occurring naturally, have been made. It has been shown that many of these deposits are of a highly nitrogenous character, while others are useful as "amendments" rather than as fertilizers. Instructions are given how to make composts with swamp muck, and attention also is called

to the value of this material as an absorbent in and about the farm buildings.

Some instructive results obtained by rotting manure are given. They show that even under fairly good conditions there is considerable loss of fertilizing material. Manure must be kept compact, to exclude the air, and moist (not wet) if the loss during fermentation is to be minimized.

Some valuable experiments regarding the use of clovers as green manures have been made. The data shows the extent to which the various clovers enrich the soil with nitrogen. This chapter contains information of the greatest importance to every farmer who is anxious to obtain an increase of fertility of his land.

A large number of materials of fertilizing value, such as woodashes, fish meal, etc., have been analyzed and their composition is stated in plain language.

On the question of cattle foods, the Chemist presents his results on the "Chemistry of the Corn Plant," an important piece of work which clearly indicates the changes in food value that take place during the growth of the crop. Scientific data are given to show that the corn should be allowed to arrive at the "glazing" condition before it is harvested.

The results of the Chemist's examination of waters from farm homesteads is anything but encouraging. They show that on many soils polluted water is being used. Mr. Shutt points out the great danger to health of both man and beast from the use of a contaminated water supply.

All thoughtful farmers, we believe, will be interested and benefited by a perusal of this report and we should therefore advise them to apply to the Chemist of the Experimental Farms at Ottawa for a copy.



❖ Question Drawer. ❖

Corn Smut.

967 SIR.—What is the cause, and what the cure for Smut in Corn.

A SUBSCRIBER.

Reply by Prof. T. A. Patterson, O. A. C.
Guelph.

Corn Smut (*Ustilago mayadis*) is a disease of corn, the remedies for which must be largely of a preventive nature. Professor Kellerman states that the mode of infection is not thoroughly understood at present and therefore we cannot be sure of the most rational remedy. The fact, however, that smut thrown or left upon the ground produces the disease in succeeding crops, and the apparent probability that infection may be brought about by the distribution of the spores, or sporidia, indicate (1) that rotation of crops should be practiced, and (2) that as much of the smut as possible should be destroyed before it comes to maturity. The smut balls should be collected and burned before the membrane covering them bursts, and thus prevent the spores from escaping. Do not feed smutted corn to cattle as the spores will be distributed in the manure. The best remedy is to adopt a system of rotation. By planting corn in different ground each year, and sowing unaffected seed the losses from smut will not be appreciable.

How to Grow Sage.

(See Question No. 958.)

I have been growing herbs for the last ten years for the retailers, and have found no difficulty in growing sage. I simply set up ridges 30 inches apart, rake the ridge down flat. This will remove stones, sticks, or any matter that is on the ridge that would impede the drill. Use Mather's hand seed drill, and sow at the gage. For sage keep free from weeds. With new seed a crop is certain.

N. B.—Have several hundred dozen of herbs for sale.

WM. SPENDLOW.

Billing's Bridge, Ont.

The Worden Grape.

968. SIR.—Will you please inform me through THE CANADIAN HORTICULTURIST what year the Worden grape was sent out by the F. G. A. I think it is as much as fifteen years ago. I have one sent me by the Association, and I believe this grape to be the king of all grapes for this section of country. I have only the one vine, and it has never failed any year to produce a large crop of grapes. It has been growing side by side with the Concord, and the Worden gives me about as much grapes in one year as the Concord does in four. The Concord fails here in some years to get ripe, but the Worden never fails to get ripe; it ripens its fruit two or three weeks earlier than Concord. The vine is very heavily loaded with fruit this year, and there are some bunches ripe now at this date. It starts late in the spring and escapes late frost. I let it down on the ground in the fall, and turn some brush on it to catch the snow; this is about all the winter protection it gets. I have one vine of the Niagara, it is just commencing to bear, it is well loaded this year, I think it will be a success here.

A. BRIDGE, *West Brook.*

GRAPE JAM.—Separate the skin from the pulp of the grape, putting them in different dishes, then put the pulps in the preserving kettle with a teacupful of water, and when hot run them through a colander to separate the seeds, add

the skins to the pulp and weigh, allowing three-quarters of a pound of sugar to each pound of fruit, and just sufficient water to keep them from burning. Cook slowly for three-quarters of an hour and bottle.

* Open Letters. *

Gooseberries in Simcoe Co.

SIR,—I have read the letter from Mr. Stanley Spillett, in the August number, and feel sorry that his gooseberries turned out so bad this year, as he has given us some good advice about mulching, etc. I have two kinds of gooseberries growing in North Simcoe; I do not know their names, but they are both large and prolific, and there is no sign of mildew on them. In the spring I put a small half ounce of bluestone in a large bottle and fill up with water, and when I spray with Paris green, I put in a small tablespoonful out of this bottle to the pail; perhaps that may have something to do with keeping off mildew.

ROBERT H. PLATT.

Insect on Gooseberry and Currant

SIR,—In the August number of the HORTICULTURIST, the Rev. W. A. Adcock, of East Angus, Que., writes about a small insect which has blighted his gooseberry and currant bushes, and upon which Paris green had no effect. In Quebec there is quite a lot of tobacco grown, and if he would get some of the dry stalks, which are no good for other use, and cut them up and make a decoction in a pail or barrel of water, and as soon as he would notice the leaves turning dark, give them a good spraying with this tobacco water, I think he would settle them for the season; and if done for two or three seasons, would exterminate them altogether.

If I am mistaken in the insect and the recipe does not answer, then try spraying with kerosene emulsion.

ROBERT H. PLATT.

Whitesmith Gooseberries.

SIR,—The illustration of Mr. F. W. Porter's gooseberries, given on page 296 of the HORTICULTURIST of last year, taken with the writer's statement that "The samples of Whitesmith were so fine that we photographed one branch for the public benefit, *exactly the size of the original*," (the italics are mine, T. B.), showed—as I then thought—the berries much too small for a good sample as grown here; and if so, then the picture did not do that excellent variety the justice it so well merited; but the season was then too far advanced (about 15th September) to compare the picture with our specimens; but now, when we can do so, the superior size of the fruit grown here is apparent. As big gooseberry stories, like fish stories, do not receive much attention without good corroborative proof, I herewith send one dozen berries taken from a one gallon measure of fruit

that was being cleaned for market (and the sample was not thereby sensibly injured), which weighs 5½ ounces. Compare these with the size of the berries as shown on page 296.

By the way, Mr. Editor, might it not be a good idea, now that so many persons are interested in growing this kind of fruit, for you to ask growers to send you samples of their berries another year, so that you might compare the fruit grown in several districts? You could ask for a *given number* of berries from each and have each lot accurately weighed. Or, you could ask for a *given weight* (which you should verify), and then count the berries. In the first case, the number weighing most would be the best, and in the second case, the best sample would be the least in number.

THOMAS BEALL,

Lindsay, July 27th, 1897.

The Gooseberry.

SIR,—We often read of the success and failure of those who are raising gooseberries, and to the average reader it would seem almost useless to venture into this branch of fruit growing, as the present prices realized by some would hardly pay for the labor spent on them. As to the real cause for this widespread difficulty, it is hard to determine, but as each grower has a theory of his own, and no doubt the result of success or failure is to some extent in the grower himself.

I do not think that there is an over-production of this fruit, anyway, not in this section. However, as readers of this Journal, let us reason the matter, in a brief consideration. We all know that all fruit must be ripe, or nearly so, to be fit for using, and especially the gooseberry.

Just think to harvest the raspberry before it is ripe, what it would taste like; much worse, we think, the gooseberry. I do think it is perfectly apparent, upon a moment's thought, that the gooseberry is gathered too soon in many parts; and I am not surprised we have no market for this fruit. Nearly all of us know the delicious flavor of the gooseberry at its best, and for pies, tarts, etc., it has no equal.

Now the result is in pressing this fruit on the market too soon. We discourage buyers of this article or any other fruit, and consequently they have no desire for it. I have known Downing, Whitesmith and others pushed into our market here three and four weeks before they were ripe. Think of this; would you buy them?

No doubt we may improve in other directions in this matter, but let us improve in this.

F. HERSEE, Woodstock.

* The Markets. *

The Foreign Apple Market.

Messrs. L. H. Williams, of Liverpool, write under date August 14 :—

APPLES.— In the Home Country on the whole the crop is exceedingly light, and from the Continent some few districts report fair crops, while others are a complete failure. Altogether we believe the total yield will be considerably below average; but as the apples grown here do not compete with your fine stock, we can strongly recommend shipping in moderate quantities right through the season; and while we would advocate your sending prime fruit, we would most strongly discourage exporting inferior grades.

Messrs. J. McKittrick & Co., of Liverpool, write :—

We have delayed our Annual Report this season until we have had some information from your side as to the probable size and quality of the apple crop, as this is in our opinion of more importance to the probable course of prices, than any shortage or abundance of our home and continental supplies.

We are now told that the crop in the States is below an average, and that the largest supplies are in the west, which will curtail to a certain extent the quantity available for export. From Canada we are told that prospects are not of the brightest, and that Baldwins will be decidedly short, while blight and worms have made considerable havoc among the best orchards.

As to the European crops, we have to report that North Germany has a good crop of early apples, but the remainder of the Empire is very short.

Dutch and Belgium fruit is fairly plentiful and will be early on the market.

As to our home crop, the early fruit is fairly plentiful and cheap, and now on the market, and to give an idea of values, Worcestershire growers will sell any quantity of choice apples at 90/ to 100/ per ton. At the present moment the market is full of these apples, and the few small lots arriving from New York sell at low prices, being of inferior quality and in poor condition.

Last season the imports were close on 3 million barrels, of which only 120,000 went to the continent. Of the remainder, upwards of 1½ millions came to Liverpool. Although there were times when prices here ruled low, still, we feel confident that less money was lost here than elsewhere.

Of the continental markets, Hamburg appears to be the best port for the article, and we made some very good sales there, and we are advised that the fruit is now very much appreciated and red stock will do well. Greenings do not appear to be in favor.

To sum up we think the prospects are decidedly favorable, and those who have made the business a study, and can put up suitable fruit in a way which will enable it to stand

the long transit to this side, have this year a better opportunity of making money than ever before.

Messrs. Jas. Adams' Son & Co., write :—

Throughout this country there appears to be a very light yield of apples, owing, it is generally supposed, to the spring frosts and drying winds, and it is very doubtful if the quantities to be marketed will prove sufficient for trade requirements, even in early varieties. From the Continent our reports are very meagre and unsatisfactory, and we find it difficult to express an opinion, but it would certainly seem as if the general condition of things was more favorable there than with us, several of the northern sections reporting moderate to full crops, and altogether we think it reasonable to assume that fair quantities will find their way to the various markets in this country. These, however, will not last very long, and what is more, they are but little appreciated, as compared with American and Canadian growths, so that for fruit of fair size, and of really good quality, prospects, in our opinion, are fairly encouraging. By this we do not mean that all grades may be shipped to advantage, as some shippers unfortunately concluded last season; in fact we would recommend the same care being given to the grading and packing in a light season as a heavy one, as poor apples are rarely, if ever, wanted on this market.

LONDON.

Messrs. Garcia Jacobs & Co., write :—

According to all reports the crop of apples on the Continent of Europe will be a little below the average, not so much in the matter of quantity as quality, the latter being below the normal. It means that a more than usual quantity will be packed and shipped to the different markets, and lots of it will find its way to the English ports of distribution, to come into competition with local supplies there.

The crop in the United Kingdom is estimated by the best authorities as follows: Out of three hundred districts or points of production, ten districts show more than the usual average, seventy an average crop, and two hundred and twenty districts under an average crop. Our reports cover the ground fully, and our advices received only yesterday indicate that the quality, as a rule, will be inferior. It all means that the usual call will be made upon America for supplies, and that the latter must be good in quality to command satisfactory values.

Beginning with Nova Scotia and following the great St. Lawrence Valley to the lakes as far as Michigan, the crop of apples will be below the average of ordinary years, and the quality will not compare with last season. In the great fruit belts of Canada our reports indicate a very largely increased quantity over what is generally being published, and

THE MARKETS.

there, as in other districts, it will all be barreled upon the supposition that anything will sell this year. Fruit will be packed closer, and made dangerously poor in quality. It will, as you can see, also tend to increase the out-turn very materially. In New England the same condition exists—a moderately light crop, every possible barrel of which will go to market.

The crop on the Hudson River is heavier than generally supposed, and runs in streaks, there being now no "off" year for their apple crop. This is now beginning to move, but is later than usual, and will not go in quantity for two or three weeks yet. In Western New York the crop of green fruit is fair. Red fruit is not heavy, and will be of poor quality as a rule. In the great Western districts of Illinois, Missouri, Kansas and Arkansas, which are now coming rapidly to the front as apple producing States, the crop is fine in quality and abundant in quantity. There is also more than the usual quantity in Virginia and one or two more of the Southern tier of States. Maryland, Pennsylvania and New Jersey all have apples in more or less quantity, and the aggregate output will be much more than is now generally supposed. To sum up the situation, while there will likely be on the whole, a little under, rather than over, the normal supply of good fruit, there is every prospect of a fair exportable surplus, much of which promises to be of a quality that ought not to be shipped, and that will have a tendency to keep prices down in Europe. Fine fruit, we think, will meet with a ready sale at satisfactory values; but it should be packed well, and culled freely.

EDINBURGH.

Messrs James Lindsay & Son write under date of August 31:—

We again take the liberty to advise you *re* the prospects for Canadian apples. We are pleased to say that it is our opinion there will be a very good outlet for that article this season. There will not be any local supply as the weather has been entirely against the growth of apples, too little sunshine; and what apples we have had from the continent are not of a quality that will affect the sale of fine Canadian fruit, so anything that is of this nature, and good color, is sure to make satisfactory prices. Greenings and Falawats although not of the red variety will also sell well, as those are both favorite apples in our market.

We would strongly recommend that shippers ought to be careful in selecting and packing, and distinctly brand any barrels of a common grade, so that they may be sold on their merits. It is a great mistake to have such grades in a parcel of good quality, as when exposed for sale it might just happen that such packages were taken for sampling, and when exposed to buyers would simply spoil the sale of the bulk; but when distinctly marked with a counter-mark, or with a less number of crosses, then they are sold separately and in no way interfere with the sale of the finer quality.

Also we recommend that packers should be careful and write the proper name upon the barrel. Last season there were many green apples branded Baldwins. Also common Pippins, branded Spies and Baldwins, even some of them were marked Kings. When purchasers find that there are parcels of this description, they generally give them a wide berth, and those interested lose much more on the price of the stock in general, than they would by those barrels being distinctly marked and sold separately.

We strongly recommend that the paper felt should be put on the top, so as to keep the skins of the apples smooth, and as soon as they are ready for packing we recommend they should be shipped. It is much safer than waiting till the cold weather comes. Last season many fine apples were completely destroyed by being caught in the cold chill.

Prospective Apple Crop Report.

DEAR SIR,—We beg to submit for your persual and guidance our ideas regarding the indications of this year's apple crop and prospects, formed both from observation and from reports by us received from reliable correspondents from various apple-producing sections wherever apples are grown.

Great Britain.—Considerably less than last year, as from 314 reports received, 10 are over average, while 74 are average, and 230 under average.

Continent — Spain and Portugal.—Early kinds average yield, but late ones light.

France and Belgium.—Fair average crop, especially early varieties; later varieties (although showing fair crop) are being reduced by apples falling.

Germany and Holland.—Similar to France and Belgium, but with this difference, that later kinds will be lighter, and apples are dropping.

United States.—The following are the estimated percentages, based on a 100 as a full crop:—

New England States.....	25%
New York State.....	35 "
Pennsylvania.....	50 "
Maryland.....	60 "
Virginia.....	70 "
West Virginia.....	45 "
Kentucky.....	65 "
Ohio.....	25 "
Indiana.....	65 "
Michigan.....	35 "
Illinois.....	85 "
Iowa.....	75 "
Missouri.....	85 "
Kansas.....	70 "
Arkansas.....	90 "
Tennessee.....	70 "
Colorado.....	100 "
California.....	100 "
Oregon.....	100 "
Wisconsin.....	50 "
Minnesota.....	55 "

Canada — Nova Scotia.—Under average, being appreciably less than last year.

MAKING AND PRESERVING GRAPE JUICE IN BOTTLES.

Ontario.—From reports received, about 35% of an average crop, with all winter varieties short, except Northern Spies, which appear to be in many sections quite up to the average.

While the United States will this season produce a large quantity of apples, yet the sections yielding best are in the West, which usually are not extensively exported, but it is quite possible this season a considerable quantity may be exported from the Western States. It is quite apparent our reliable market this season, will be Great Britain, and we are of the opinion that for choice apples, properly packed, at reasonable prices, the outlook is encouraging.

We, however, would warn intending shippers, that great care should be exercised in handling only good apples, and only such quantity as you yourself, or some other one or ones of experience, in whom you have confidence, can personally oversee.

It is reported, buyers in some localities, owing to undue excitement, have offered astonishing prices, but it is the misfortune of the apple trade, that prices paid by buyers are often not justified, as the custom is that the apples are purchased before any large percentage is marketed.

We do not care to suggest the proper price to be paid, as so much depends upon the quality and varieties handled, but there is a limit to the price to be paid, which may be discovered when too late.

Buyers should bear in mind that buying orchards by the lump early in the season is a dangerous practice, as a wind or hail storm might easily mutilate the apples as to make them unmarketable.

M. H. PETERSON, Toronto.

Making and Preserving Grape Juice in Bottles.

I notice in July number of Fruit Grower a request for instructions in detail for expressing and preserving unfermented grape juice in bottles, by some person who has had actual personal experience in the process, and as I have been doing more or less of it every year for over fifteen years, for my family use, and in evidence of my success in the simple process, can show sample bottles of that age and of later bottling, that we test one of occasionally, and find them "fit nectar for men or gods."

In proceeding, use only clean, well ripened grapes. I prefer expressing the juice in an ordinary hand cider-mill (same as making cider), by grinding the grapes; the advantage is, you get the juice at once, that which is expressed by grinding is clear and retains so little foreign matter or pumice. It may, by careful straining through double thickness light flannel, be immediately bottled, while that obtained from pressing the skins, pulp, seeds, etc., will require, beside straining, a little time to precipitate a sediment resulting from pressing. I sometimes filter through a few inches of clean, washed river or creek sand. The sooner, however, it can be bottled and corked, the less fermentation and the

more of the peculiar grape aroma may be retained. Whereas, if the grapes are crushed in a tub or barrel, I find it difficult or impossible to express the juice until fermentation dissolves the pulp, thereby losing much of the grape flavor; but the fermentation cuts no figure in the keeping qualities, as I sometimes, for variety, let some ferment to a certain flavor, when I heat and seal it with the assurance that, when opened in the months or years following, the same flavor will prevail.

I use the ordinary wine and beer bottles—carefully wash and drain them, fill to within about three inches of the top. Set an ordinary wash-boiler on the stove; put an inch of sand on the bottom, or fit a thin board over the bottom to prevent the bottom of bottles over-heating, to break or give the juice a cooked flavor; fill the boiler with bottles as close as they will stand without crowding, and fill the boiler with cold water within about four inches of the top of the bottles. Lay on the lid and start the fire; bring the water slowly to a distinct simmer, but in no instance allow it to come to a boil, as this, too, will cook the juice. Have your corks steaming. I use a one-quart fruit can; fill half full of water and put in the corks, lay on the cap, set alongside the boiler to heat and steam while bottles are heating. As soon as the juice gets pretty well heated the air will be thrown off in a volume of minute bubbles rising to the surface, which eventually brings to the top a thick scum or pumice in proportion to the amount of impurities in the juice; this scum increases and pours over the tops of the bottles, which suggest the air is sufficiently driven off to proceed with corking. Lift out a bottle, place on a low table, blow off this pumice, pour off any surplus juice in excess of to fill to two inches of top of bottles. else the cork will not go down; insert a cork, giving it a twisting pressure with the fingers, pushing it down a little below the mouth of the bottle, or can use a cork driver, to be had at any hardware store. Wipe the bottles with a damp cloth and set aside; proceed till all are corked; in refilling the boiler, take out part of the water and fill with cold to a tepid temperature; fill up as before and resume the fire, then proceed to seal those already corked. I use the ordinary canning wax or cement. When melted, add a teaspoonful of linseed oil to each stick of cement, which renders it more adhesive, it should then be well stirred and applied quite hot. I experience no difficulty in the juice keeping with the bottles in any position, but if upright, if any sediment has precipitated, the juice will pour off clear of the sediment. I keep the bottles in my cellar, which is cold, dry and frost-proof. Seldom indeed that a bottle bursts, and then only by defective sealing. I do not put hot juice in the bottles nor bottles in hot water: have never used a thermometer to test the temperature of the water, but had I one, would not let the water exceed a temperature of 190 to 200 degrees Fahrenheit, as water boils at 212 degrees. The same treatment applies to apple juice or cider.—Green's Fruit Grower.