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PROSPECTUS FOR 1882.

After careful deliberation, it has been decided to enlarge "THE CANADIAN HORTICULTURIST" to double the amount of reading matter hitherto contained, and to embellish each number with a colored illustration. In doing this, the Directors expect that each member will endeavor to increase the circulation by getting, at least, one more subscriber. Surely that is not asking too much. Will you not, in the interests of Canadian Horticulture, do this much to increase the circulation. The premiums offered this year are the subscribers' choice of any one of the four following articles, to be sent to him by mail in the spring, either 1st, a plant of *Spirea Prunifolia*; or 2nd, a plant of Lee's Prolific Black Currant; or 3rd, three bulbs of *Gladiolus* (see illustration); or 4th, a vine of Moore's Early Grape.

Besides this, each subscriber will receive a copy of the Annual Report of the Fruit Growers' Association for the year 1881, now being printed, which is full of very valuable horticultural information, and gives a complete report of the discussions at their meetings, and the papers read at the meetings in full.

No Canadian who wishes to be fully informed on the Horticultural topics of the day, including fruit, flowers and forestry, can afford to be without this the only Canadian Horticultural Journal, giving the experience of the ablest cultivators in the country.



THE Canadian Horticulturist.

VOL. V.]

JANUARY, 1882.

[No. 1.]

THE GLADIOLUS.

The beautiful colored plate which adorns this number will enable our readers to form a very correct impression of the perfection in form and coloring which has been attained in the cultivation of a flower which, perhaps, many of them will well remember under the name of Sword Lily. If our readers have not recently noticed the progress that has been made in the production of new forms and brilliant colors, they will thank the Directors of the Association for calling their attention to it again by giving them this colored illustration, and the opportunity of seeing it flower in their own gardens, by offering them as one of the premiums which they can choose, three bulbs of this interesting flower.

Our climate is well suited to the growth and culture of the Gladiolus, much better than that of England or France, and it is as easily grown and cared for as the potato. It is only necessary to avoid soils that are wet, and therefore cold, which means ground that is badly drained, and plant in such ground as one would select in the expectation of raising a good potato crop. In enriching the bed where it is proposed to plant them, do not use fresh or partially fermented manure, as this tends to produce disease in the bulbs. The best is that which has been thoroughly decomposed and composted with old sods and ground bone. After the weather has become settled in spring and the ground in good working condition, the bed should be dug over and the manure thoroughly mingled with the soil. Then as soon as all danger of severe frosts is passed the bulbs may be planted out about ten inches apart each way, and four to five inches deep.

A nice bed of Gladiolus is a most showy and attractive feature of the after midsummer flower garden, and is particularly desirable on account of the blooms appearing at a time when flowers are less abundant. The colors are so bright and showy, and withal so varied, the form of the flowers so elegant, and these borne so conspicuously upon their tall spikes that they never fail to produce a most beautiful effect. The cut blooms are also particularly useful for large bouquets and table decoration, for if the spikes are put into water, though only the lower flowers are open, the buds above will all expand in succession as perfectly as if they had never been severed from the plant.

In the autumn, when severe frosts begin to appear, the bulbs should be taken up, the stalks cut down to about an inch from the bulb, then after allowing them to dry for a few hours they can be stored in a box in the cellar, where they will be free from frost until they are wanted for planting in the spring. Small bulblets will be found adhering to the bottoms of the large bulbs; if these are saved, put into a paper bag and kept out of the ground for one whole season, and then sown in good rich soil in the spring of the second year, they will grow, increase in size, and the following year will produce flowers like those of the parent bulb. It is also important to keep the bulbs away from mice for they are very fond of them.

Our climate is so much better suited to the cultivation of the *Gladiolus* than that of Europe that there is great inducement for those who are fond of experimenting to raise new varieties from seed, all of which will be more or less beautiful, and some of them possibly better than those for which our European raisers are so fond of charging us five dollars a piece. It only requires two, or at the most, three years to grow nice blooming bulbs from the seed, so that one does not have to wait very long before reaping the reward of his labours. It is something to have learned how to "labor and to wait."

The colored illustration which has been kindly supplied at cost to our readers by Mr. James Vick, of Rochester, N.Y., represents flowers selected from his collection of named varieties on account of their fine form and contrast in color, and yet he says they are not superior to scores of others. It is not necessary that the planter confine himself to named varieties, many of the unnamed are quite as pleasing and far less expensive, and those who wish a quantity of bloom can obtain mixed sorts at little cost.

A FEW HINTS ON GRAPE GROWING.

Great attention is now being given to the growing of grapes in this country. It is not very long ago that we had only two varieties of grapes in cultivation, and neither of these were suited to the climate of any large part of the Province. The Catawba would ripen its fruit only in the most favored spots, such as the Lake Erie shore or some specially warm and sheltered nook. The Isabella, in favorable seasons, ripened over a somewhat larger area, but that was but a limited territory as compared with the whole. The arrival of the Clinton extended the limits of possible grape culture, but in our climate

the heat did not continue long enough or was not sufficiently intense to develop its saccharine properties so as to make it a popular table grape. But within a short time the number of varieties has been greatly multiplied, resulting in the production of several possessing great excellence, capable of enduring our climate and of ripening their fruit in almost every part of the land.

Since the advent of these varieties adapted to general cultivation, our people have not been slow to appreciate what a grand addition nice, rich, juicy, sweet grapes are to our list of fruits; nor slow to find out how much sooner

they come into bearing than the most of our fruit trees; that instead of waiting five, six, eight or ten years for fruit, they are sure of gathering a nice supply the third season. Nor have they been slow to find out that the product of a few vines was not only a beautiful and toothsome addition to one's home comforts, but a profitable source of money revenue. It was soon found that an acre of grapes would yield five tons of fruit, which, if sold at the moderate price of four cents per pound, brought to the producer the comfortable item of four hundred dollars, which left him, after making liberal allowance for labor and capital invested, a better income than any, even the most favorable, yield of grain. Hence it is that to-day the planting of grapes has reached such vast proportions, and that new kinds, which promise to be well adapted to our climate and to take in the market, are so eagerly sought after. Hence, also, it is that inquiry as to the methods of pruning, training and caring for the grape is so active, and everything throwing light upon the subject so eagerly sought.

To help those who are thus seeking information upon a matter so important and interesting these hints on grape growing are given, believing that, in as much as they embody an experience extending now over many years, they will be found helpful to those especially who are but beginners, those who are just trying their prentice hand at the mystery of grape growing, nor will they find the lesson at all hard to learn. The grape-vine is a very patient plant, yielding generously her luscious fruits under even very crude treatment. But, as in everything else, he will reap the finest fruit and the most money who gives his mind to the business, attends carefully to every detail, and never allows any item of the work to suffer through neglect. There may be "no

royal road to learning," but there is a royal road to success in grape growing, and none may travel it but those who have royal blood in their veins; those who, though they claim not descent from regal sires, are nature's noblemen; men of earnest purpose, who, with head and heart devoted to the culture, will watchfully supply every want and guard against every foe. To such there will be truly golden harvests.

THE SOIL, AND PREPARATION FOR PLANTING.

One of the first questions that arises in the mind of the intending vine planter is whether the soil at his command is suitable, and what the preparation it requires. Fortunately the vine is not very fastidious in its choice of soils. I have planted it on gravelly, sandy and clay soils, and find it to thrive vigorously, and to bear profusely on them all. One thing it requires, and if this be given it, there is hardly any soil in which it will not yield generous returns; but that one thing is essential to healthy and permanent growth. That thing is this: the soil must not be wet. If the drainage be not such that the soil is dry at all times, that the water does not stand in it at any season of the year, it must first be made dry by thorough underdraining. When this is attained, the character of the soil in other respects seems to be of little moment.

We may take it for granted that the vine will flourish on soil suitable for an apple-orchard; and may proceed to plant on such soil with every expectation of success.

Nor does the soil need such long and expensive preparation as many writers would have us to believe. Soil that has been deeply and thoroughly tilled; soil that has been tilled as it ought to be to yield a good crop of Indian corn, will be in a suitable condition for the

planting of grape vines. The deep trenching and heavy manuring advised by some writers I believe to be not only unnecessary, but positively injurious. It causes an undue and unnatural growth of wood; it causes the texture of the wood to be less firm, and the vine becomes less able to resist extremes of temperature.

I conclude, therefore, that any soil that is well drained and in suitable tilth to produce a good crop of Indian corn, is suitable for the vine.

PLANTING THE VINE.

After considerable experiment and much personal observation, I have been fully convinced that we ought to give more space to our vines than has been usually given. Not less than twelve feet apart each way is required for the best development and most economical and profitable culture. Parties interested in the sale of vines may urge closer planting; but experience and sound reason, based upon a knowledge of our climate and of the habits of the vine, conspire to indicate this distance as the best for us to adopt, especially if planting a vineyard. If planting but a few vines in the garden, where space is limited, they may be set as close as eight by ten feet.

Of the manner of planting, it can surely not be needful to write. Any one that has set out a tree or a cabbage plant, knows enough to set out a grape vine. It is a living plant, not a post, and should be treated accordingly. The hole should be made large enough to allow of the roots being all spread out in their natural position, and then carefully covered with finely pulverized soil. Nor is the season of much importance. At any time after the leaves fall in autumn, and before the buds burst in spring, and the soil is in condition to be worked, the vine may be planted with success. The measure of success

will depend much on the care and judgment of the planter. A covering of coarse litter upon the ground over the roots, usually called by gardeners a mulch, will well repay the trouble of putting on.

Plant them in fall or spring, as may be most convenient; plant carefully, and mulch after planting.

PRUNING AND TRAINING.

FIRST YEAR.

When the young vines in a new plantation begin to grow, all the shoots but one—usually all but the one nearest the ground—should be rubbed off. If, however, the one from nearest the ground seems to be very feeble, or from any other cause unsuitable, then the

shoot next higher on the cane should be preserved and all the others rubbed off. A small stake—a strip of lath will answer—should be thrust into the ground at each plant, and the vine carefully tied to that, as it grows during the summer. None but slovenly cultivators will allow the weeds to grow and choke the young vines; and such persons should never plant them. This will be all the care that the vines will need during the first season.

At the end of the first season's growth the young vine will have the appearance shewn in Figure No. 1.



Figure No. 1.
VINE ONE YEAR TRANS-
PLANTED.

SECOND YEAR.

The next spring—usually in March—the vine should be cut back to two or three buds. After the shoots get fairly started two of the strongest may be selected, and all the others rubbed off. As the growing shoots lengthen, they should be tied to the stake, and treated precisely as in the preceding summer.

During the summer, preparations should be made for permanently staking and trellising the vineyard. And here we come to a point upon which there is great diversity of opinion and practice,

—I mean the method of training. There is not space enough in these hints to describe the various methods that have been recommended.

I will describe the two methods most successful in our climate, and my readers can choose the one most convenient for them to adopt.

At the end of the second year the vine will have the appearance shewn in Fig. No. 2. Now, if the trellis system be adopted in the spring of the



Figure No. 2.

VINE TWO YEARS TRANSPLANTED.

THIRD YEAR

these two canes should be stretched horizontally in opposite directions, and fastened in that position by being tied to the lowest wire or horizontal bar of the trellis. The vine will then have the appearance shewn in Figure No. 3.

Figure No. 3.
VINE IN THE SPRING OF THIRD YEAR WITH ARMS EXTENDED.

When the buds start into growth the shoots should be trained upwards, perpendicular to these arms at a distance of about six inches apart, and all other shoots rubbed off.

Some difficulty may be experienced in making the eyes nearest to the vine

to break well and form strong canes, as the tendency is to make the strongest growth at the extremities. This may be overcome by bending the ends of the horizontal canes to the ground and fastening them there until the growth in the eyes at the base has become vigorous. This may be greatly helped by pinching back the two canes several times during the second season's growth, which will cause the lower buds to be very strongly developed.

These upright canes will bear fruit this year, and in the autumn the vine will present the appearance shewn in Figure No. 4.

Subsequent pruning will consist merely in cutting back each of these

alternate canes which were left standing to the top of the trellis are allowed to bear fruit on the lateral branches which will grow from each bud. As many laterals are allowed to grow and bear each one bunch of grapes as the strength of the vine will admit; all the others are rubbed off, and, after the first bunch appears, the lateral is pinched off so as to leave two or three leaves only beyond the bunch of fruit. The next year the upright canes that bore fruit the previous season are cut back to one eye above the horizontal arm, and a new upright trained up to bear fruit the following year. Thus the canes are cut back alternately.

The other system of training is called



Figure No. 4.
THREE-YEAR OLD VINE IN FRUIT.

upright canes to the first strong, plump bud above the horizontal arm, and training up a new fruit-bearing upright cane each year. Some cultivators cut back every other one of these upright canes to within one bud of the arm, and cut the others back merely at the top of the trellis. Those canes which are cut down to within one bud of the arm are not allowed to bear any fruit, but the new shoot is trained upright to the trellis to bear fruit the next year. The

the Arbor System. Stout poles are set in each row of vines midway between the vines. To these poles are fastened other and lighter poles, reaching from pole to pole, at such height from the ground as the size of the vines may require; also other light poles reaching across to the poles of the next adjoining row. Upon these horizontal poles light sticks are laid and fastened, forming a sort of lattice over the space between the first and second row, the third

and fourth row, the fifth and sixth row, and so on; thus covering each alternate space. Then the vines on the first and second row are trained upon this lattice; the vines of the first row running towards the second, and those of the second towards the first row,—those of the third towards the fourth, and those of the fourth towards the third row,—until each alternate space is covered with vines, trained horizontally upon a lattice or support of light poles. The height of this lattice from the ground is increased each year with the increasing size of the vines, until it reaches about seven feet from the ground, at which point it is permanently maintained. When the vines have reached this height, no branches, leaves or shoots, are allowed to grow within five feet of the ground.

The pruning in this plan of training consists in cutting back the previous season's growth to one or two buds, and occasionally cutting out the old wood, so that there may be a constant supply of young fruit-bearing wood, and the vine upon the top of the arbor not become too thickly matted, but always so thinned out that the air can circulate freely through the overlying foliage.

SUMMER PRUNING.

The only pruning that the vine should receive during its season of growth will be the nipping off of the ends of shoots that should be stopped, in order to throw the strength of the vine into the fruit. The idea that the leaves of the vine must be cut away to allow the sun to shine upon the fruit is wholly erroneous, and in practice leads to injurious consequences. The leaves elaborate the sap, and ripen the fruit. In order to do this office effectually, the leaves need to be fully exposed to the sun and air; and that they may be so exposed, fully and freely, all superfluous wood is cut away in the Spring, and thus the foli-

age and fruit kept in due proportion to each other, and to the space to be occupied. How much to cut away, and what to cut away, can not be taught by written instructions. Something will depend upon the vigor of growth of the variety, and can be learned only with pruning shears in hand. One principle lies at the foundation of all successful pruning,—that is, to replace the old wood with new, the fruit being borne on the wood of the current year, which grows from buds formed on the wood of last year. Only by so pruning as to keep a sufficient supply of strong, healthy, well-ripened young wood, may a crop of fruit be secured.

MANURES.

The best for a young vineyard not yet come into bearing, is well-rotted barn-yard manure. With most farmers there is not much danger of applying too much at this stage of growth, yet it can be overdone. Judgment must be used in this as in all things else; and the best judgment is always the result of practical experience. Some varieties, such as the Delaware, will bear considerable manure, not only without injury, but with positive benefit; while such as the Isabella and Diana can be over-fed to their injury. When the vines begin to bear, in addition to a moderate quantity of well-rotted barn-yard manure, ground bones, lime, ashes, salt, and even iron filings, if to be had, may be applied with great benefit. In soils deficient in lime there will be need of supplying lime in larger proportion; and as the country is remote from the sea, the use of salt, sown broadcast upon the ground, will, in some measure, supply the defect.

DISEASES OF THE VINE.

The most common disease in this country is the mildew, which attacks the leaves and fruit, and sometimes

extends to the young shoots. It is a parasitic plant, and I am disposed to believe that those fungoid or parasitic plants are not only not a disease, nor even the first cause of a disease in the vine, but only a consequence of disease. It is not in the healthy vine, growing in vigor and normal condition, that these parasitic plants find the conditions favorable to their development. It is when the vine has received some shock, has become in some degree unhealthy, or been placed in some condition that is abnormal, that these plants, ever ready to fasten upon enfeebled and failing vegetation, finding conditions more or less favorable to their development, begin to show themselves, and then *effect* becomes *cause*, and the sickening vine becomes more sickly by reason of the preying parasite. There are some vines of so delicate and feeble a constitution that they are naturally inclined to be unhealthy. Upon these we may expect to find the parasitic fungi known as mildew and rot. But they are not to be expected upon vines of a robust constitution, such as the Concord, and when they are found, we may at once conclude that there is something more to pay than any accidental so-called disease. Over-bearing is one great cause of sickly and enfeebled vines. Injudicious pruning is another, and probably the most common cause, for even over-bearing is the result of injudicious pruning. But most especially is excessive summer pruning and defoliation a fruitful cause of disease, mildew, and death. An abundant supply of foliage, well exposed to the action of air and light, are essential to the health of the vine and the ripening of the fruit. When mildew begins to make its appearance, it can be frequently prevented from spreading by dusting the vine, leaves and fruit, with flour of sulphur, and scattering it upon the ground under the vines. Better

still, if there be reason to apprehend mildew from the experience of previous seasons, to apply the sulphur before the mildew appears, and in this way, it may be, prevent it wholly.

The grape vine of Europe (*vitis vinifera*) seems to be unable to bear the extremes of heat and cold, drought and moisture, incident to our climate. In a short time it becomes so enfeebled as to fall an easy prey to the mildew, and it is found that those varieties of grape which are crosses with the European are more or less subject to this disease. Hence, in planting vines, especially in vineyard planting for commercial purposes, it is of the utmost importance to ascertain beforehand whether the vine possesses a robust constitution.

INSECTS.

There are some insects which are sure to be found upon sickly vines, very rarely and sparsely upon vines that are perfectly healthy. Of these are the Aphis and Red Spider. In some sections and in some seasons, however, there are other insects which attack perfectly healthy vines; and what is the worse feature in the case, some take particular delight in feeding upon the grape flowers, and so destroy the crop outright. The worst of these is the Rose Bug (*Macrodactylus subspinosus*). When these make their appearance in large numbers they make fearful havoc in the vineyard, eating first the flowers and then the foliage. There is but one method of effectually getting rid of this pest, and that is the simple one of catching and killing. It is easily and rapidly done, but it needs to be made a business of, and all in whose grounds they appear should join in a work of utter extermination. The annexed cut, Figure No. 5, will enable those who are not familiar with this little mischievous



Fig. No. 5.
ROSE BUG.

beetle, to form an idea of its appearance, and so to recognize it if it should visit their vines.

There are a few other insect enemies which have been found in Canada preying upon the vine, but thus far they

ters of fruit. Figure No. 6, *d*, shows the perfect beetle. Should the beetles become numerous, so that they threaten serious damage to the vines, the following method of destroying them may be adopted :

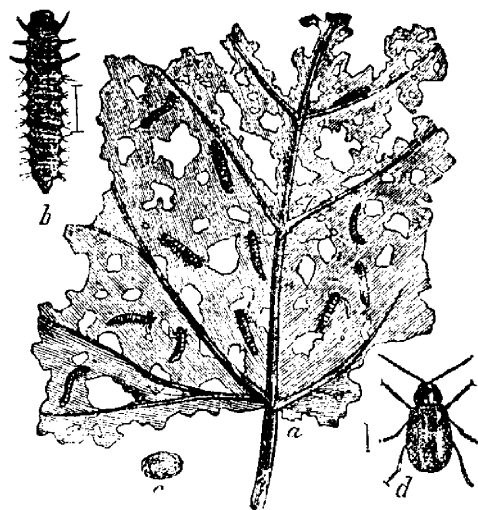


Figure No. 6.
THE GRAPE VINE FLEA-BEETLE. (*Haltica Chalybea*).

a shows a leaf of the vine perforated by the larvae, which are at work on the under side. *b* is the larva magnified, the line at the right indicating the natural length. *c* is the cocoon, and *d* the perfect beetle enlarged, the line at the left being intended to shew the natural size.

have not appeared in sufficient quantities to do much harm.

The Grape Vine Flea-Beetle is a little greenish-blue, jumping fellow, that should be carefully looked after whenever he makes his appearance, lest the number should multiply so as to become formidable. It feeds on the grape-vine in both the larva and the beetle state. Figure No. 6, *a*, shews the insect in the larva state, and its manner of feeding upon the leaves. At this time there is no difficulty in gathering and destroying them, but in the beetle state they are so active as to make it difficult to catch them. If anything they are more destructive in the beetle state, eating into the bursting buds, and devouring the entire embryo branch with its clus-

Take two pieces of common cotton sheeting, each being two yards long and half as wide; fasten sticks across the end of each piece to keep the cloth open, and then drench with kerosene. Give the sheets thus prepared to two persons, each having hold of the rods at opposite ends of the sheets. Then let the persons pass one sheet on either side of the vine, being careful to unite the cloth around the base of the vine; then let a third person give the stake to which the vine is attached a sharp blow with a heavy stick. Such a blow will, in nearly every case, jar the beetles into the sheets, where the kerosene kills them instantly.

This process, after a little experience, can be performed almost as rapidly as

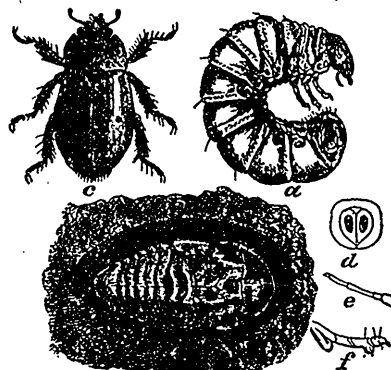


Figure No. 7.

THE SPOTTED PELIDNOTA. (*Pelidnota punctata*).

a represents the full grown larva, b the pupa, c the perfect beetle.

the persons employed can walk from one vine to another. The expense necessary is very trifling, and boys can do the work quite as well as men. Warm, bright afternoons are the proper times for this work to be done, and it should be performed faithfully every sunny day until the vines are out of danger. This mode of combating the beetle promises to be much more effectual than any other which has been hitherto suggested; for it can be used early in the season before the vines are seriously injured and before the insects have begun to multiply. In connection with the above, the remedies which have been recommended often should, if necessary, be used. These are as follows: First, all rubbish should be removed from the vineyard, and the stakes and trellises which support the vines be well cleaned of bark and splinters, so as to afford the beetles little chance for hibernating in the vineyard. Second, if the larvæ appear in great numbers, lime should be sifted over the vines.

The spotted *Pelidnota*, shewn in Figure No. 7, feeds on the leaves of the vine, and it is just as well to kill

the beetles when you find them, lest they should multiply sufficiently to commit serious damage, though I am not aware that they have yet been so numerous as to become seriously troublesome.

(To be continued).

THE CEDARS OF LEBANON.

The once famous and extensive cedar forest of Lebanon, according to a writer in the *Politische Correspondenz*, has dwindled down to the dimensions of a mere thicket, numbering about four hundred trees. To save it from complete destruction, and preserve it at least in its present extent, Rustem Pacha, the Governor-General of the Lebanon, has issued a special ordinance, containing a series of stringent regulations calculated to check, if not quite put a stop to the vandalism and carelessness of most travelers. It is expressly forbidden to put up tents or other kinds of shelter within the district of the trees, or to light fires or cook any provisions in their vicinity. No one is allowed to break off a bough or even a twig from the trees. It is forbidden to bring any beasts of burden within the district. Should oxen, sheep, goats or other pasturage cattle be found within the prescribed limits they will be irredeemably confiscated.

GRAPE GROWING AT LINDSAY.

BY JOHN KNOWLSON.

In February last I addressed a short note to you giving an account of my commencement of a small vineyard, consisting of sixty varieties of vines, planted in the spring of 1879, and intimated that I expected to be able to report my success with them by the end of the current year. Out of that number (averaging eight vines of each variety) thirty kinds fruited this season. I may mention that, when I made my selection of plants, my aim was to get early and hardy sorts, with the exception of four or five late-ripening varieties, which I determined to risk as an experiment. Out of the thirty kinds that fruited, twenty-five of them were quite ripe by the middle of September, indeed it was on the fifteenth that we had these twenty-five pulled and housed, and a few of these had been ripe a full week previous, viz.: The Champion (a variety which has been introduced into the Province of Quebec under another name, viz. Beaconsfield), the Hartford, Tolman, Janesville, Telegraph, Massasoit and Eumelan. Of the late kinds, the Concord, Clinton and Agawam ripened about the twenty-fifth of same month, and the Diana and Cynthiana the first week in October. Of the Cynthiana, the great red wine grape of Missouri, the bunches and berries were very small, and the berries generally throughout the vineyard were, I think, smaller than they otherwise would have been but for the long-continued drought through a great portion of the summer months. If we had had an occasional copious rain-fall during that extremely hot and dry period, I imagine the fruit would have been larger; whether that long continuation of parching weather had the effect of producing early ripening, I do not undertake to determine; possibly it had, so that, taking into consideration the exceptional character

of the season, I do not pretend to decide that the present year's production is a fair test of the results that may be expected in the future; however, I am thoroughly convinced that the ground on which my vines are planted is well adapted to their cultivation. The surface soil is a clay loam, mixed with numerous small roundish lime-stones, from twelve to fifteen inches in depth, resting upon a sub-stratum of the same sort of stones, say from an ounce to four or five pounds weight, five to six feet deep, with little or no soil mixed through them.

I planted about 800 more vines last spring, principally Concord, with a view to make a fair and cheap drinkable wine. I have had several varieties of grapes ripen in Lindsay four seasons out of five for the last eighteen years, although grown on a hard clay soil; but the vines I have been referring to above are planted about ten miles to the north of here, and are about fifty miles north from the town of Port Hope, situate on the shore of Lake Ontario, at which latter place, as also about the neighbouring Town of Cobourg, the attempt to grow out-door grapes has not been successful, although the soil seems quite well adapted to the purpose.

A few of the varieties I have planted I should have no desire to repeat—the Champion for one, as I consider it of very poor quality, and if the people of Quebec have a relish for it I for one do not envy them their enjoyment of it; the Hartford is not much better, besides it is objectionable on account of dropping its berries as soon as ripe; the Janesville is only four or five days later than the Champion, and I think of better quality than either it or the Hartford; the Massasoit I like if pulled at the proper stage of maturity; if

allowed to hang too long on the vine it loses its flavor, particularly should wet weather prevail at the time.

I have made a few gallons of wine each year for the last five years from the Clinton, and find it improves very much with age, and thus makes a wine not to be despised. I would grow more of the Clinton were it not that the robins are so destructive on the crop; it is impossible to protect the fruit until it gets properly ripe; they also devour large quantities of strawberries and other small fruits, and I have never discovered that they are of much value in destroying pestiferous insects. It is not at all uncommon to find caterpillars and insects of different kinds swarming on the same tree with the robin's nest, while hatching and rearing its brood, and not one of the insect tribe disturbed.

I may mention here that the Rev. Mr. Logan, of Fenelon Falls, which is about six miles still further north than my plantation, has been quite successful in ripening several varieties of out-door grapes, and the late Mr. Hooley, of Rosedale, a few miles still farther north, grew fine specimens for several years in succession. I visited his place in 1879, and found his soil, both surface and sub-soil, quite similar to mine.

I may refer to another fact which serves to give me confidence as to my future success, viz., that the wood of nearly all my vines was hard and thoroughly matured by the 25th of September, and a few varieties even much earlier.

I am persuaded that there are large areas of land in the Counties of Victoria and Peterborough well suited for the cultivation of the grape, and I am sanguine enough to believe that Canada ere long will be found to be a wine producing country, and I hope to see efforts made to make it such; for if we desire to do away with the common use

of bad whisky and other spirituous compounds, a substitute must be provided; we must encourage by every legitimate means the production of a wholesome, exhilarating, non-intoxicating beverage made from the juice of the grape; cheap, pure, light wines to be used by all classes, young and old, as it is in France, where amongst the rural population, as well as that of many of the large towns, a drunken person is a *rara avis*. Here let me say that although I by no means undervalue the work that has been done, and the great efforts still making by temperance advocates (notwithstanding, to my mind, some very illogical arguments often escape the lips of the most sincere pleaders of the cause), for strict temperance has long been and still is my motto, yet I am persuaded that if such wines as I have alluded to can be produced and become the common beverage, as in France and other portions of Europe, it would prove the capstone to all the temperance movements that have yet been inaugurated. I have but little faith in the doctrine of Prohibition of the spirituous liquor traffic, unless a refreshing and harmless substitute is provided, neither do I concur in a decision that was recently given by a debating club a few miles from here, "That the moderate use of liquor is a sin." In my collection of vines I have four or five white varieties, one of which is the *Elvira*, said to make a good white wine. From its manner of fruiting this season it has not proved all ^{as} was led to expect from it; the bunches, though numerous enough, were small, and the berries so closely compacted that their size was not half developed, besides they ripened unevenly, a few of the largest on each bunch taking the lead and either cracked open or the skins were punctured by wasps, which seemed to confine their depredations to this variety,

besides many ants joined them in the feast. This is my experience with the Elvira so far; they may do better as the vines get older. Any of the white kinds that I have proved so far has not come up to the standard of what I desire. In quality the Rebecca pleases me best. My Delawares, planted with the others in 1879, have not borne fruit yet, and seem slow growers, although I allotted them, as was necessary, the richest part of the soil; the six Ionas I planted in the spring of 1880 have given me as yet no proof of what they will do in the way of ripening; my Prentiss, Duchess and Lady Washington were only planted last spring, so that I am unable to speak for them, and am now patiently waiting for a few vines of the Niagara, which is generally expected to eclipse all competitors. I hope it may. All Rogers' Hybrids I have planted give promise of good results. My first planted vines are eight feet apart in the row, and the rows nine feet apart, and my trellises are constructed with four horizontal No. 12 galvanized iron wires, placed about eighteen inches asunder and fastened with wire staples to the sides of cedar posts, which were cut eight and a-half feet long and about four inches and upwards in diameter, sharpened as a stake at the thick end, and one placed midway between each vine; a hole being first prepared with a crow-bar, and the post driven down two and a-half feet with a heavy maul, the driver standing on a raised platform; these were put down in 1879, and so far have shown no signs of heaving by frost, but, should they ever do so, a little pounding occasionally will put them right. The posts at the end of each row are braced, and small holes bored through for the wires to pass through where they are fastened to the posts, but at one end of each row only, by bringing the end of the wire half round the post and,

meeting the wire on the other side, twisting them together; at the other end of the row the wires also pass through similar holes in the post, and here I use a strip one inch and a-half square, ripped out of one and a-half inch dry oak plank, thirteen feet long, each length cut into three equal parts of four feet three inches each; through this strip is bored four small holes corresponding in spaces with the four holes in the post; these strips are placed vertically on the outside of the post, first placing three small wedges, four or five inches in length, and from an inch to an inch and a-half thick at the large end, between the strip and the post at convenient distances; the end of each of the four wires is then brought through the holes in the strips and tightened with the stretcher or the claws of a good hammer, a turn taken half round the strip to meet the wire on the opposite side and twisted together. This method I have adopted to provide against contraction and expansion of the wires; possibly there are simpler and better plans for this object, but I have had no opportunity of making their acquaintance. In the fall I slacken or remove the wedges altogether. When the wires again require tightening, all that is required is to give a few taps of the wedges. I intend in future to set my posts twelve to sixteen feet apart.

I am desirous to plant eight or ten acres more, in addition to my present three acres, but find myself too far advanced in years (now bordering on four-score, for nearly sixty-five of which I have made Canada my home) to undertake such an extension. However, between now and next spring I intend looking out for a practical vine-dresser and experienced culturist, or one disposed to invest some capital, to join me in carrying out the project to the desired extent.

PRESERVING PLUMS FROM THE CURCULIO.

BY J. W. JOHNSTON, CAMPBELLFORD.

Last spring, as usual, I had a prospect of a large crop of plums, if the curculio would only let—say half of them alone. For years back I tried every remedy I heard of, including smoking with coal tar, jarring trees on sheets, &c.; but with very indifferent results, as every one who has tried it knows that large trees can not be successfully jarred.

So last spring I resolved to put in practice a theory I have had in my mind for a long time, viz.: to coat the plums over with some substance that would not in any way injure the fruit, and yet be impervious to the attacks of the curculio. I had not long to wait. The fruit was no sooner set than the curculio began to work in a lively manner. If I meant to do anything I had to hurry up. Well, early in the morning I went out with a pail of dry air-slaked lime and threw it thoroughly through the trees, using up two pailsful on six trees about seven years planted. Every leaf, twig, and plum was thoroughly coated with lime. When the sun dried the dew off, the trees were dazzling white. This coating I repeated three times, as winds and rains took it off. The result was the trees were overloaded. The curculio would not bite the lime off to get at the plums. They could be seen running along the twigs during the day with their long noses elevated at an angle of 45 degrees, while on the other trees not so treated they were positively travelling with their noses down. The lime did not injure either the fruit or the foliage. I had about one hundred bearing trees, and only those limed escaped; on the latter not a plum was stung. That this remedy will prove successful wherever faithfully applied, I have not the slightest doubt; but if

he is allowed a day or two the start, the plums will be all stung before you know where you are. Before the fruit is ripe the wind and rustling of the leaves will have taken all the lime off the fruit. As soon as the curculio egg-laying season is over, say four weeks after fruit sets, the trouble is ended.

Remedy No. 2 is another plan I had thought of for some time, but have not yet tried it, as I found the first so successful. It would consist of a balloon-shaped net of any cheap material, such as cheese-bandage cloth, costing four to six cents per yard; and as each net could be used several seasons, it would not be expensive. It would only require to be on the trees about four weeks, and would save the entire crop. One side of the net would require to be left open, with small hooks (and eyes or not) sewed down the edge to close it when the tree was enveloped, and then closely tied at the bottom to prevent any curculio effecting an entrance. The trees would require to be well jarred first to make sure of none of the enemy being left within. The cloth netting might be made very durable by soaking in oil of some kind. I hope the members of the Ontario Fruit Growers' Association will try one or both of these remedies next spring and report success.

REPORT ON TREES, &c. RECEIVED.

I submit the following report of the trees, &c., received from the Fruit Growers' Association, with the results:

1872. McLaughlin Plum grew well, is a fine tree, in good bearing. This plum as a dessert plum is in every respect first-class, of the finest flavor, but too tender to send to market except in small baskets packed like strawberries.

1873. Grimes Golden Pippin—Tree dead when it came; evidently had been badly heeled in and winter killed.

1874. Downing Gooseberry and Salem Grape—Both very satisfactory. The gooseberry is perfectly free from mildew, bears well, and in my opinion is one of the best small gooseberries I have seen, being nearly double the size of the Houghton Seedling, and just as hardy and prolific. The Salem Grape is so well known much need not be said. It ripens well here, and we esteem it one of the very best out-door grapes for the table, being sweet and luscious. The vine, like most of Rogers' Seedlings, is a very strong grower.

1875. Swayzie Pomme Grise Apple and Flemish Beauty Pear—The apple tree was very poor, being nearly gnawed through by mice when it came; with care it has lived but not borne any fruit yet. The Flemish Beauty Pear is hardy. The fruit needs no description, but with me it has a tendency to fire-blight. There is no pear has succeeded so well with me as the Buerre d'Anjou; it passed last winter—the severest we ever knew here—without injury, when almost every variety were hurt. The fruit is first-class, and ripens at a season when fruit is getting scarce in the market.

1876. Glass Seedling Plum—A hardy tree and good grower. The plum, being late, is a good market plum; preserves well.

1877. Diadem Raspberry—Strawberries—The plants received were rubbish; the raspberry a shoot broken off an old root, and two strawberries, apparently third or fourth runners. Neither grew, as might have been expected.

1878. Burnet Grape—The vine received in good order has grown well, fruited a few bunches last year, but not sufficient for a test. The grape does not appear to set its fruit well,—something like the Creveling and Eumelan. The vine being now strong, this year will probably test its quality in that

respect as well as the flavor and time of ripening.

1879. Arnold's Ontario Apple—Received in good order, has grown fairly but of course not yet fruited.

1880. Saunder's Seedling Raspberry. No. 72—A good plant, made good shoots this year. Will not be able to form an opinion of the fruit till next summer.

1881. Dempsey Potatoe—A strong grower; the excessive drought this season, causing a failure of crops in most places, prevents me giving an opinion respecting their productiveness or quality.

Yours respectfully,

GEORGE ELLIOTT.

THE GRAPE.

(From the address of the Hon. Marshall P. Wilder, President of the American Pomological Society, at its last session, Sept. 14, 1881.)

In the order of discussion I have placed the Grape first on our roll. No other fruit, unless it be the strawberry, is now attracting so much attention; and perhaps no other, if we except the apple, is of more importance as a source of revenue, or as an article of luxury for our tables, as the Grape. No other country possesses such a vast extent of territory, or possibilities for its successful culture, and in no other section of the globe is there, at the present time, such encouragement thereto. In fact, it seems as though Providence had designed many parts of our continent especially for its cultivation. The Scandinavians, as the Sagas have it, eight hundred years ago, here found the vine growing so abundantly that they gave to our coast the name of Vinland. Champlain, in his voyages on our coast about five hundred years afterwards, saw vines in abundance. The Pilgrim Fathers, at Plymouth, found grapes, "white and red, and very strong," and should the phylloxera con-

tinue its devastation in the vineyards of the Old World, our country may become the most favored vineland of the world.

In the whole circle of our pomological progress there is no fruit which excites so much enterprise and interest, whose culture is being so rapidly extended, or which gives so great promise of success as that of the Grape, and should this same enterprise continue for fifty years to come, we can hardly estimate its value as a revenue in our country. All localities are not equally suited to its growth, but where our wild species are found, other new and improved sorts, produced by hybridization, will be found equally well adapted. With every succeeding year new and valuable varieties are coming to notice, either adapted to special locations or purposes, or for general cultivation. Nor is it too much to hope that ere the close of this century, with our present zeal and skill, we shall produce varieties that will rival the choicest kinds of the most favored climes. Even now we have those which compare favorably with our foreign varieties, and we believe the time is not distant when the aroma of our native sorts, now so much despised by some, will become, when chastened down as it has been in the Brighton, Duchess, Rochester, and Monroe, one of the excellent characteristics of our American grapes.

How potent the influences of this art! Little did Mr. Bull think what a blessing he was conferring on the world when he sowed the seed which produced the Concord grape, the mother of so many improved varieties. See the number of white varieties (not to speak of others) which have been produced mostly from this. the Martha, Lady, Pocklington, Lady Washington, Hayes, Ann Arbor, Prentiss, Duchess, and still another soon to be within our

reach, which is heralded like Niagara herself as one of the wonders of the world.

The illustrations of this improvement are manifested in the numerous seedlings obtained by crosses on the Concord, some of which are of a very remarkable character, possessing great size and beauty, and whose vigor and productiveness are declared to be even greater than that of their mother. We see this improvement also in the crosses of a wild Grape with the foreign species by Rogers, as shown by the amelioration of the native aroma in the Barry, Wilder, and Lindley, the last named, like the Jefferson of Ricketts, possessing a peculiar rich flavor, which might, with propriety, be denominated, and may yet be distinguished as the Muscat of America. Nor do I doubt that we shall in time produce varieties which will compare favorably with, and perhaps be equal in size, beauty, and excellence, to the Cannon Hall, or other Muscat, now so highly praised for their peculiar aroma. The Pocklington, in size and beauty, is an approach to this. Nor is it unreasonable to suppose but we may have a Grape, if we have it not now in the Duchess, that is as well adapted to exportation as the White Malaga, and of much better quality. What has been done can be done again. Nature has in her laboratory infinite stores of the same elements which have produced our finest fruits, and we have only to knock at her portals and pronounce the SESAME, when she will open to us the secrets of her wonder-working power. These predictions may be considered as the fantasies or vagaries of imagination, or as indications of a too ardent desire for progress. No, no, neither are they the results of chance. They are founded on those immutable laws which govern all sciences, in the control of mind over matter, and the power of man to assist nature in her

onward march to higher and higher states of perfection. That we shall possess such improved varieties as we have predicted we have no reason to doubt. Our country is large and varied in climate and soil. Though we of the North cannot expect to grow tropical fruits—nor may we grow a Grape of the excellence of the Black Hamburg suited to out-door cultivation—yet we can produce fruits of great importance to ourselves, and of inestimable value to other portions of our country, as we have seen in the Baldwin, Rhode Island Greening, and Roxbury Russet apples, in the Diana, the Concord, the Rogers Grapes, the Bartlett pear, and other fruits which have been sent out from New England.

FARMERS AND SMALL FRUITS.

In travelling about the country among the farmers I have often wondered why so few of them raised small fruits. Not one in five, on an average, tastes any kind of small fruit of his own growing from one year to another. Formerly a few currant bushes struggled with the grass and weeds in the fence corners and gave an abundance of small but wholesome fruit, but, with the worm as a foe, the bushes were unequal to the contest; the grass waves triumphantly over their dead remains, and the farmer is entirely without small fruit. Why this great scarcity? Certainly not because farmers do not love fine fruit. Ask any one of them into your plat, and you will be surprised to see what capacity he has for stowing a large quantity in a small space. Nor is it because he is too stingy for he will send the boys and girls, and even go himself, miles away to a few straggling wild bushes to pick a few poor berries that cost him two or three times as much as it would to grow those very much better on his own farm.

There are three reasons to which we can attribute this lack of small fruits

on the farm: First comes carelessness. The farmer sees the fruit in its prime and resolves to raise plenty for his family, but before planting time comes he has partially forgotten his good purpose, and lets the proper season go by. Second, the mistaken notion that prevails as to the great labor and expense of growing what would be needed to supply his family. The last and best reason is that the Farmer does not appreciate the value of the small fruits to his family, both as food and as medicine. When he looks at the early strawberry blushing and nodding amid the dew-laden leaves, and his mouth waters for a taste, he does not realize that nature is yearning within him for the acid contained in the fruit, to help relieve the system from the accumulations of winter, and prepare it to endure summer's heat. He does not consider that each of the fruits in its season contains some principle that is just adapted to the wants of the body at that time, and that many times the free use of each would save large amounts in doctor's bills, as well as much suffering, and many times the life of a beloved one. The average American farmer is not yet educated up to the full enjoyment of his high calling and God given privileges. He does not yet realize that he is near the fountain-head, and is entitled to partake first and of the best of everything that grows, and that when he neglects to provide himself and family with these health-giving necessities he is culpably responsible for the bad results.

To correct these false impressions, and to cause him to provide and enjoy these, his rights as the tiller of the soil, would be conferring on himself and family a great and lasting benefit. One acre of good land, properly divided and cultivated, would furnish any ordinary farmer's family all the fruits, fresh and canned, needed from the earliest ripen-

ing of the strawberry to its coming again. To what other use could an acre of land be put that would add so much of health, comfort and enjoyment. In planting, the farmer should not fall into the too common error of using small beds or plots here and there scattered about, but let the rows run the whole length, and so place them that the main cultivation can be done with a horse. This will save much hard work and valuable time in hoeing. Another fact he should remember: "The easiest cultivation is thorough cultivation" — no half-way business. It is much easier to keep the land entirely clean than to keep it half overrun with grass and weeds. He should remember this acre is worth two in corn or potatoes and give it good care, allowing nothing but fruit to grow. Of kinds, it should contain at least strawberries, raspberries (red and black), currants, blackberries and grapes. — *Rural New Yorker*.

JELLIES AND PRESERVES.

CURRANT AND GOOSEBERRY JELLY.—

The currants are beginning to ripen, and those housekeepers who want nice jelly must take them in time before the juice begins to grow thin, else they will have trouble to make their jelly "come." Look them over carefully, crush and strain through a jelly bag, then measure the juice, and for every pint allow a pint of best white sugar. Put the juice over to boil in a porcelain-lined kettle, and boil twenty minutes or more, according to quantity and thickness of the juice. It is better to boil little juice at a time if you want your jelly very nice, as the less time it is over the fire, the lighter-colored it will be. Skim off carefully all the refuse that rises to the top. Put your sugar in the oven and heat it hot, being very careful not to scorch it; then add it to the boiling juice and boil three or four

minutes, or until a few drops taken out on the tin will make jelly readily, then turn into jelly-cups and set away in a dry, cool place. Gooseberries make a nice tart jelly, delicious with meat. Pick the berries clean, cover with cold water, and boil till soft; strain through a jelly-bag, then proceed the same as in making currant jelly.

Though I am fond of canned fruit (when it is properly put up and comes out from the can fresh and free from mould or must), there are some fruits which, for variety, I like "done up" in the old-fashioned ways, and as I have some receipts which I think will please, I give them for the benefit of other housekeepers who like an occasional dish of preserves, spiced fruit, jam or marmalade.

TO PRESERVE PLUMS.—Look them over and pick out all that are imperfect or unsound. Make a syrup of clean, brown sugar and clarify it. When perfectly clear and boiling hot, pour it over the plums. Let them remain in the syrup two days, then drain it off, make it boiling hot, skim it and pour it over again; let it remain another day or two, then put over the fire and simmer gently till the syrup is thick and rich. Use one pound of sugar to each pound of fruit.

PEACH BUTTER.—Pare and stone good peaches and cut them in quarters. Cook them two hours; then to each pound of fruit add half a pound of sugar, and cook two hours longer, stirring almost constantly.

SPICED CURRANTS.—To 5 lb of fruit, add 3 lb of sugar (either white or good clean brown), 1 pt. of good cider vinegar, 2 large tablespoonfuls of ground cinnamon, 1 tablespoonful of ground cloves, and 1 tablespoonful of ground allspice. Heat all together in a porcelain-lined kettle; skim out the fruit, and boil down the juice till it will make jelly; return the currants, and let it

boil up once ; then pour into your fruit jar. When cold, tie or paste a thick paper over the top, and set where it is dry and cool.

SPICED GRAPES.—Get ready 5 lb of fruit, 4 lb of sugar, 2 tablespoonfuls each of cinnamon and mace, and 1 pt. of the best vinegar. Boil the sugar, spices and vinegar together about one hour, or until thick. Heat the grapes and rub through a colander. Add the syrup to the fruit, and let it boil up once.

CURRENT PRESERVES.—To each lb of fruit, add one lb of good white sugar, and set it on the stove. Let it come to a boil ; skim out the currants, and boil the syrup down till it will make jelly ; put back the fruit, and dip into bowls. When cold, paste paper wet with white of egg over the top, and set away.

CRAB-APPLE MARMALADE.—Boil the apples in a kettle till soft, with just enough water to cover them. Mash and strain through a colander ; then to a pound of fruit take three-fourths of a pound of sugar, and boil half an hour.
—SUSAN BUSYBEE, in *Country Gentleman*.

HARDY PEACHES.

In such portions as are favorable to the growth and bearing of the peach, we have not discovered much difference in the endurance in winter of the different varieties, the temperature rarely passing lower than 12° below zero. As the shoots of most of the sorts are never winter-killed, no material difference can be seen in the hardiness of the varieties. But in many places at the West, where the growth is more luxuriant, the ripening of the young wood not so perfect, and where the thermometer often sinks to 20° below zero, the case is different. D. B. Wier, of the *Prairie Farmer*, says the past winter was very useful to the fruit-grower in indicating hardy

sorts for future propagation. He mentions two well-known peaches, both great favorites, known as Crawford's Early and Oldmixon Free. The Crawford is large, handsome and popular, and sells at the highest price, but the tree and fruit buds are easily injured by severe cold. The Oldmixon, although not so large and handsome, bears in that State four bushels of fruit to one borne by the Crawford, and notwithstanding the former sells at a lower price, it gives the grower twice as much money tree for tree. The Crawford bears well in good seasons when prices generally are down, and the Oldmixons sell at much higher prices in scarce years than the Crawfords in the plentiful seasons when they bear. For this reason it is recommended in all localities where this difference occurs, as the most profitable and worthy of more extensive planting.—*Country Gentleman*.

BLACK RASPBERRIES.

We expect to add to our raspberry plantation by setting out this fall twenty-five acres more of black caps, and these will be in about the following proportions : Three acres in Thornless, five acres Tyler, five acres Mammoth Cluster, twelve acres Gregg. This gives good pickings, first to last. The Davidson Thornless are so very early that we get twelve to fifteen cents per quart for bulk of crop. The Tyler is very near as early, and yields larger and a much longer crop, taking the place of the Duolittle—which sort is so much affected by the rust the country over. The Tyler is a rank grower, and has never shown rust with us ; and were we to be confined to but two black raspberries for market purposes, we should choose Tyler and Gregg—though the Mammoth Cluster is needed to fill in well between the two, as the Tyler is about gone when the

Gregg gets into good picking, and such pickings we never saw in the black raspberry line. The bushes are literally covered over with clusters.

Our best pickers would average ten to twelve quarts per hour of the Gregg. The bush is a rank grower and perfectly hardy with us. With black raspberries dried, quoted at twenty-seven to thirty cents per lb., we see no danger of overdoing the business for years to come.—A. M. PURDY, in *Fruit Recorder*.

THE NEWER STRAWBERRIES.

FINCH'S PROLIFIC.—Originated in Southern Ohio, and thought to be a cross of Russell's Prolific with Wilson. We have only tested it one season, but are strongly impressed with its value as a very productive and firm market berry; plant strong and healthy; fruit large, good form and color; medium quality, very firm; think it should be tested by every one growing fruit for market.

BIDWELL.—A very valuable early variety; plants strong and vigorous even on light soil; very productive, fruit of large size; long and conical in shape, with an occasional coxcomb berry; color, a glossy crimson; superior quality.

MARVIN.—A cross between Wilson and Jucunda. It will not thrive on light, dry soil; on heavy clay soil it is of great value; fruit of large size, dark red, very firm and solid, good quality; and what is best of all, the very latest to ripen.

MOUNT VERNON, OR KIRKWOOD.—Originated in Southern New Jersey, and said to be the most profitable market berry ever grown there. The plant is one of the most vigorous on our place; very productive, fruit of medium size and quality; moderately firm; ripens very late, and valuable for market on that account.—*Fruit Recorder*.

MOORE'S EARLY GRAPE IN THE PROVINCE OF QUEBEC.

The Fruit Committee of the Montreal Horticultural Society, in the Report for 1880, say of this variety that it is fully equal in quality to the Concord, that it ripens before the Hartford Prolific, or as nearly as possible with the Champion, known there more recently as Beaconsfield, but quite surpassing it in flavor, and add, "we believe this variety will prove of great value to our Province on account of its early ripening,—and because, as we are informed, the vine is vigorous and healthy. It has been fruited in Ontario, and is there much esteemed. The Massachusetts Horticultural Society, after testing this grape for several years, awarded it a prize of sixty dollars as the best new seedling grape."

THE WILDER GRAPE IN THE PROVINCE OF QUEBEC.

At the recent exhibition of the Horticultural Society of L'Islet County, Province of Quebec, latitude 47° north, Mr. Auguste Dupuis exhibited this grape, grown by him in the open air, perfectly ripe and of first quality. We are fully persuaded that this grape will prove to be one of the most valuable of the Rogers varieties in our climate.

PACKING GRAPES.

I wish to offer a few suggestions to the grape growers in reference to packing grapes for shipping to market. The manner of packing has much to do with the condition in which they arrive in market, and the condition has much to do with the price obtained.

In the first place, grapes should never be gathered when wet with dew or rain. The best method that I have tried for gathering grapes is to take a sharp pair of shears (pruning shears answer well) or a sharp knife with hooked blade: take hold of the bunch with one hand and cut the

stem of the grapes with the knife or shears held in the other hand, and take off all green and decayed berries, then lay in carefully in a basket, then proceed to the next; when the basket is full, carry it to the place of packing, which should be under roof; the next operation is to pack them in boxes, which should be both light and strong; twelve by eighteen inches, and four or five inches deep, is a convenient size and will hold from sixteen to twenty pounds if properly packed; to do this right it will take some experience.

I would recommend that the box be set on a table of convenient height, having the back end of the box elevated three or four inches by placing something under it, then commence at the end next to you and lay the bunches in carefully, pressing them together gently, but not hard enough to break the berries. When the bottom of the box is covered one layer deep, commence at the front again, put in a second layer, placing the larger bunches in the low places and the smaller bunches on the high places, thus keeping them as level as possible; proceed in this manner until the box is full, being careful to have the box as level as possible when done. Cutting bunches to fill up cavities is not a good practice, as large bunches sell best.

When the box is full set it aside and proceed to fill another, and so on until all are full. The boxes thus-filled should be allowed to stand until the stems of the grapes are wilted and become pliable, which will take from six to twenty-four hours; then take a board and cover the box, placing one hand under the box and the other on the cover; then set the box on end holding the cover securely in its place with one hand, then shake or jostle the grapes till they settle compactly together, which is easily accomplished after the stems are wilted; this will cause a cavity at the upper end of the box, which should be carefully filled with grapes that have had stems wilted in order that they may pack closely.

Great care should be taken to avoid rubbing the bloom off the grapes, as it injures their appearance, and it is thought they will not keep so well. Care should be taken to hide the stems of the last layer and have the berries look even or level on the top. Grapes should not be

allowed to stand in the sunshine after they are gathered. Grapes packed according to the above directions can be transported a long distance without injury.—E. P. BOWWELL, in *Fruit Recorder*.

THE CORWIN'S COLLECTIONS.

The collection of specimens and relics brought back from Arctic regions by the Arctic cruiser Corwin is described as large and interesting. Lieutenant Myrick and Doty have accumulated a rare assortment of models of weapons and boats used by the tribes inhabiting the extreme northern limits of the habitable portion of the globe. These models include boats of various shapes and character, hunting weapons, pipes, bird traps, nets and other trinkets which would prove invaluable to a collector of the curious in any portion of the world. Dr. Ross, of Washington, who accompanied the expedition, has a collection of very rare specimens from the Alaskan and Siberian coasts, as well as from Herald Island and Wrangell Land. Among these are specimens of the flora, vegetation, soil, and minerals of the newly acquired territory, New Columbia. Among the flora may be seen some of the most delicate and beautiful flowers, and while all are void of brilliant colors, the leaves and blossoms, all of delicate tints, are very beautiful and extraordinarily curious as coming from an unexplored land so close to the North Pole. The grasses are also delicate, and resemble both the common bunch and "foxtail" variety of California and the blue grass of the Eastern States. The rock from Wrangell Land is a coarse blue sandstone, a fine slate, and some pale drab sandstone, all good building material. The specimens of coal from Cape Lisburne, on the north coast of Alaska, are of a deep black color, soft and bituminous. It is easily ignited, and emits a strong sulphuric odor. From Herald Island the Corwin brings some fine specimens of granite, which is susceptible of a high polish. It is gray in color, and resembles the granite of Lake Superior and the coast of Maine. Among the curiosities in the possession of Mr. Haloran, the boatswain of the Corwin, is the tooth of a mammoth found upon the shores of Siberia. It is as large as a 20-pound can-

non ball, and being petrified, is equally as heavy. The collection of curiosities brought down from the Arctic by the Corwin is, perhaps, the most interesting of any brought to San Francisco.

A NEW GARDEN IMPLEMENT.

Mr. Oren Stoddard, of Busti, N. Y., has patented a combined hand seed planter and fertilizer distributor, which has a very perfect action and separates the fertilizer from the seed in the ground. In this device, a central box in which phosphate or other fine fertilizer is placed has combined with it outer side boxes for reception of the corn or other seed. Followers terminating in or connected with a handle above, serve, by a suitable construction of the interior of the boxes, to discharge, as they are thrust downward, the fertilizer and seed in measured quantities into the ground, the same passing out through or between elastic plates, which form the necessary openings in the soil, while the bottom of the boxes act as a stop to insure the seed being planted at a uniform depth. By this construction the seed for each hill will be divided, and the fertilizer will be deposited in the space between the parts of the hill without being in contact with the seed, so that the seed will not be injured or killed by the fertilizer. Connected with the fertilizer follower are levers, having attached covering plates which, as said follower is drawn upward, force the soil into the openings in which the seed and fertilizer have been deposited, and cover the seed. —*Scientific American.*

THE TOLMAN-CHAMPION-BEACONS-FIELD GRAPE.

This grape originated within two miles of where I now sit writing, some twelve or fifteen years ago, and was first named the Tolman. After having proved worthless under that name, certain Rochester parties bought plants of Wm. Day, of Syracuse, and re-named it the Champion, and by a series of misrepresentations they have succeeded in scattering it broadcast over the country. It has been especially recommended for the latitude of Canada, but I am pleased to read that one Canada

gentleman, at the meeting in Boston, reported that it could not be sold at one cent per pound in the streets of Montreal.

Some of our Canada brethren—evidently encouraged by the success of our Rochester friends—have again re-named it, and this time it is the Beaconsfield. What success it will have under this last name remains to be seen, but name it as you will, it will still remain a worthless thing. There have been more lies told about this grape than about any other fruit that has been offered to the public in the last twenty years, and it is now time that these false statements should be discontinued.

It is true that a very few grape-growers have made it pay, by selling it to people who had not yet learned its worthlessness, but this was only a transient profit. A few years ago this grape sold in our market at fifteen cents per pound wholesale, but from year to year the price declined, and this season the growers of it were peddling the fruit from house to house at two and three cents per pound. Now they find themselves burdened with vines that are practically good for nothing. When will people learn that it pays best, in the long run, to grow good fruit? If I have been rather severe upon this subject it is because, in my opinion, plain talk is best in this particular case.—NELSON RITTER, in *Country Gentleman*.

CANKER WORMS.

This is how I got rid of them on four hundred apple trees: I took one barrel and a half of tar, warmed it in a pail with half rain-water, and applied it at about four o'clock in the afternoon with a large paint brush. I made a ring around the body of the tree, about half way up to the limbs, and repeated it every day for 31 days, having commenced on the 3rd of April.

The habits of these destructive worms are peculiar. The miller that lays the egg for the worm commences coming out of the ground as soon as it begins to thaw in the spring, and immediately crawls up the tree and lays its eggs in and on the buds, which hatch as soon as the tree begins to leaf, when its work begins. These millers are hardly ever seen in the day-time, and they never climb the tree except at

night. From a half an hour after sundown they appear to pop out of the ground and start straight for the tree. The female has no wings and gets stuck in the tar, and that is the end of it.

I had a man who tarred the four hundred trees in about two hours; some of the trees had been only four years set out. The tar was applied to the bark. No harm resulted from it to the trees, but the worms were exterminated. This was done some six years ago. My trees had been stripped for five years of fruit and leaves, but not a canker worm has been seen since.—C. W. PALMER, in *German-town Telegraph*.

LACKAWANNA CAULIFLOWER.

This is a new, early, large heading variety, which was first offered by Mr. Tillinghast, of Pennsylvania, last spring. Although the past season has been extremely unfavorable to the growth and development of cauliflowers, which require more moisture than cabbages, the reports received thus far from this have been highly satisfactory. A gardener residing upon a tract of Long Island which annually produces thousands of barrels of cauliflowers for market, writes that this proved one of the most profitable market varieties introduced. It is somewhat later in the season than the Snowball and Erfurt varieties, but grows much larger, and is a remarkably sure header. It should be sown very early so as to mature before the summer droughts come on.

SHEEP AND TREES.

The wash recommended by me last summer is a sure preventive of sheep barking or gnawing fruit or any other trees. Take soap, the dirtier and more offensive the better, and make a very strong suds; dissolve one-fourth pound whale-oil soap in every six gallons, and into this stir sheep-manure until it is as thick as good whitewash, with a brush or old stub of broom, and with this mixture wash the trees as high as the sheep can reach, and no sheep will come near enough to rub against them for at least two months, the time depending upon the amount of rain. We keep the mixture handy and repeat

the application as often as necessary, usually not more than twice in a summer. Sheep running among fruit-trees should have plenty of good, fresh water; it is thirst that first induces them to gnaw the bark, but after they have once got a taste they eat because they like the bark. The above mixture will effectually keep them away, and besides is a very good application for the health of the trees, keeping the bark smooth and fine, and killing any insect that it comes in contact with.—J. S. WOODWARD, in *New York Tribune*.

FORCING THE LABURNUM.

The pendant spikes of the Laburnum would come into excellent play in many forms of floral decoration. The *London Gardener's Chronicle* says of an attempt to force it:

"Among forced flowering plants, the Laburnum takes a prominent position, though it is not so generally seen grown in this fashion. Geo. Buck, the gardener at Castle Ashby, finds it invaluable in early spring, and his forced plants yield him splendid wreaths of yellow flowers, which are much prized for house decoration. Late in autumn the plants are lifted from the open ground, and the roots thrust into suitable sized pots *sans ceremonie*; but the plants flower well when introduced into heat, notwithstanding the summary character of the potting process. After they have done flowering, they are planted out in the open ground for the summer, and in the autumn again potted and placed in warmth as stated above."—*Gardener's Monthly*.

APPLE MARMALADE.—Apple marmalade is a simple and excellent preserve, and offers a change from the ever present cider apple sauce and stewed apples, seen on so many country tables. Take seven pounds of late fall pippin and stew them in a pint of water. Put them through a sieve, add the juice and the grated rind of three lemons. Boil about one hour; ten minutes before it is done add three ounces of ginger root. This may be made of one-third quinces and two-thirds apples, when the ginger root and lemons should be left out.

SPARROW-GRASS.

DEAR BROTHER,

You've asked me in terms to relate
How to grow Sparrow-grass to have it first-rate;
You ask what I do, and how it is done,
To insure in the quality letter A one.
I'll disclose to you all you desire to know,
To be happy at dinner and win at the show.

Be firm in the thought and prompt in the deed,
Persist in destroying each insolent weed:
Let no such intruder e'er rob of its food
A plant that is worthy of everything good.
Yes, root out the weeds whenever you pass,
If you wish for a crop of the very best grass.

When autumn arrives, and the growth is done brown,
Take a terrible knife and cut it all down;
Then fork the beds lightly; don't injure the roots,
Or you ought to do penance with peas in your boots;
Make tidy and clean, remove all the litter,
Then take a short rest and a mugful of bitter.

Now, refreshed by the essence of hops and of malt,
Bring forth your supplies of soot and of salt;
Spread the black stuff to cover the bed like a pall,
Then sprinkle the salt to make white over all;
Some stercur (politely so called) from the stable,
Lay two inches thick, or three, if you're able.

Leave all alone now to the mellowing light,
The rain and the frost, and the dew of the night;
But at times you must drench the bed freely with
sewage,

And for this you need only the household brewage.
Put it on as you get it direct from the house,
And, if needful, be secret and sly as a mouse.

When winter sets in leave the whole thing alone,
If you sewage in frost you will soon be undone;
In times when the rain kills the flowers and midges,
Put sewage on laud that is laid up in ridges.
When the grass has done growing it needs a long rest,
So withholding the stimulants now is the best.

Once more the bright spring, with her elegant tresses,
Her laughter and tears, her green and gold dresses,
Will skim o'er the land to make us all merry,
And put on our faces the bloom of the cherry;
Then, then, my Sparrow-grass grower, look out:
There is work to be done, if your sinews are stout.

Your loins must be girded, your head in its place,
Your feet firmly shod; and your knife in its case;
Spread straw or rough litter all over the bed,
To screen off the wind, or your grass will rise dead:
By "dead" I mean dull, dry, shriveled, and shrunk,
Like a man who much tipples, yet never gets drunk.

Once again pull the weeds, let the salt-box be found;
Give a dusting like snow to cover the ground;
Do all this before a green top shall appear,
And you'll have your grass right for the rest of the year.

But beware of great haste in removing the sticks;
Let them grow to four inches or even to six.

Then pull—do not cut—and the crop will be fine;
You will say to your cook, "I desire to dine";
Rich and tender, full-flavoured 'twill be, if cooked
right—

Fill the stomach with food and the soul with delight;
Oh, the world must be good that in plenty produces
A grass so abounding in delicate juices!

Once in for this pastime, bravely go on.
Fill the basket each morn in advance of the sun;
But on June seventeen the tables must turn—
You must cease to take grass, though your fingers
may burn.

One more merry pull, 'tis the last you may have,
Unless for your grass you'd be digging a grave.

Be content, let it grow, make an end of your feast;
Be wise like a man, do not waste like a beast;
Thus, season by season, as weeks and days pass,
You must manage the work as you wish for good
grass.

If you think the name vulgar you may, without
malice,

Just call it *Asparagus officinalis*.

—*The Gardener's Magazine*.

BOOKS AND PERIODICALS.

HAND-BOOK OF PRACTICAL LANDSCAPE GARDENING. By T. R. Elliott. Second edition, enlarged and improved. Published by D. M. Dewey, Arcade Hall, Rochester, N. Y., U. S. A.

This is just what it claims to be, an eminently practical book, containing plans drawn to a scale, and the places where trees and shrubs are to be planted so numbered that any one can carry out the plan. We commend it to every one wishing to lay out his grounds, however small, and plant them in a manner that will be a source of pleasure to him ever after. School Trustees will also find useful hints for planting the grounds around the school-house—a matter sadly neglected, and that deserves attention. The book only costs a dollar and fifty cents.

VENNOR'S ALMANAC FOR 1882. Published by J. M. Stoddart & Co., Philadelphia, Penn., U. S. A.

Contains Mr. Vennor's prognostications of weather for the year, besides other matter interesting to weather students.

VICK'S FLORAL GUIDE, 1882.

Of the many Guides and Seed and Plant Catalogues sent out by our Seedsmen and Nurserymen, and that are doing so much to inform the people and beautify and enrich our country, none are so beautiful, none so instructive as *Vick's Floral Guide*. Its paper is the choicest, its illustrations handsome, and given by the thousand, while its colored plates are gems. This work, although costing but ten cents, is handsome enough for a gift book, or a place on the parlor table. Published by James Vick, Rochester, N. Y.