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PAINTED FOR
JAMES VICK,
ROCHESTER, N.Y.

DOUBLE DAHLIAS.

FORBES CO. BOSTON & N.Y.

THE Canadian Horticulturist.

VOL. VIII.]

FEBRUARY, 1885.

[No. 2.

THE DAHLIA.

Mexico is the native land and home of the Dahlia. But think not that the dahlias which there grow on the sandy plains bear much resemblance to the exquisitely colored and perfectly formed flowers shewn in the beautiful colored plate which embellishes this number. It is now almost a hundred years since Alexander von Humboldt sent the first dahlia tubers from Mexico to Madrid, in Spain. The flowers were something like a small purple sunflower. From Spain it was carried to France, and at length, in 1814, some roots were brought from France to England. From England it was introduced into the United States, about the year 1825. Since then the skill of the gardener has been improving the form and coloring, until we have such perfection of form and elegance of coloring as are seen in our plate.

In order to assist those of our readers who may choose a tuber of double-dahlia, to grow it successfully, we subjoin a few hints on its cultivation.

The dahlia flourishes best in a moderately cool and moist summer. Such was the summer of 1883, and those of our readers who attended the meeting of the

Fruit Growers' Association, held that autumn in St. Catharines, will not have forgotten the magnificent display of dahlias in the grounds of the writer. It is not possible for us to regulate the character of our summers, but knowing the kind of weather and general surroundings that suit them best, we can give them measurably such environment as will, under all the circumstances, produce the best possible results.

The soil best suited to the dahlia is one that has been made rich, has been deeply cultivated, and is quite friable. Even then it is well to put a shovelful of well-rotted manure into the hole, incorporate with it some of the best of the surface soil, scatter a little surface soil on that and plant the dahlia tubers so that the neck or collar of the plant will be just slightly below the surface of the ground. Drive a stout stake beside it, to which you can tie the dahlia as it grows, for it will need this support lest it be broken to pieces by the winds. Give the plant abundant room, say from five to six feet in every direction, and if you have several plants, set them that distance apart each way.

Do not plant your dahlias in the open ground until the summer has fairly set in, and all danger from frost is passed, for it is very sensitive to frost. When the season has advanced and you find that the weather is becoming hot and dry, then mulch your dahlias by covering the ground over the roots for the distance of two feet around the plants with two or three inches of half-rotted stable manure, and if you wish to hide this from view, throw a slight covering of surface-soil over it. This will keep the moisture that is in the soil from evaporating too rapidly, and when there is rain, it will afford some additional stimulant and nourishment to the plant. Should the weather continue dry, your dahlia will well repay you for your trouble if you will water it every evening after the sun is down, pouring the water all over the plant through the fine rose of a watering pot that will hold a good pailful of water.

After the season is over, and the autumn frosts have blackened your beautiful dahlias, then cut them off at about four inches from the ground, take up the tubers, let them dry for a couple of hours, then pack them in a box of dry soil and store them away in a perfectly frost-proof cellar until wanted for another season.

If it is desired to multiply the number of plants, this can be done by splitting the stalk down, in the spring, just before planting out, taking care that there is a bud on each piece. These buds will be found at or near the collar of the old stalk that you will split up

to increase your stock of plants. They may be also increased by cuttings of the young shoots. To do this advantageously, cover the tubers of the old plant lightly with soil, leaving the collar exposed, and place it where it may have light and heat sufficient to induce growth. When the young shoots have grown to the length of three or four inches, cut them off so as to leave a couple of buds on the part remaining attached to the plant. Set each of these cuttings in a thumb pot filled with pure sand, place them on a gentle bottom heat and shade them from the sun. In a fortnight or three weeks they will have emitted roots. They should be then re-potted into three-inch pots, filled with light, friable soil, and kept well shaded from the sun until they begin to grow. During all this time, water cautiously, keeping the sand or the soil moist but not wet. The buds left on the portion of the shoot attached to the old plant will grow into other shoots in due time; these may be cut off in the same manner and rooted in the same way, and the process repeated as long as desired.

When these rooted cuttings have become well established, they will no longer require shading from the sun, but should be gradually inured to the sun and air, or as the gardeners term it, "hardened off," so that when the summer has come and all danger of frost is over, they may be planted in the open ground in the manner already above mentioned, and treated during the growing season in the same way as

directed for the tuber. If well cared for and well fed, these cuttings will soon become large plants and yield an abundant bloom.

WANTED.

The Editor of the *Canadian Horticulturist* desires to obtain a few copies of the April number of Volume V., that is, April, 1882. Any one having a copy to spare will confer a favor by mailing it to D. W. Beadle, St. Catharines. In return for it, he will be happy to mail a copy of Volume IV. complete, if desired.

WHAT THE PEOPLE SAY.

Find enclosed one dollar, my subscription for this year to the *Horticulturist*. I was near forgetting it, as I was burned out lately, but I could not do without your valuable monthly.

THOS. KENT.

Peterboro', Jan. 7, 1885.

DEAR SIR,—I find the *Horticulturist* as interesting as ever. The Society is doing a work which is not sufficiently appreciated by the farming community. Your effort to test and disseminate information regarding hardy fruits is of priceless value to this northern country. I believe that in twenty years will be seen fine flourishing orchards on every farm. Even in this village, which at the present time is almost destitute of fruit, I am farming on what was once an island, in the valley of the Nottawasaga. I planted a small orchard ten years ago, and have met with a fair measure of success. I should be glad to write my experience if I thought it would be of any service to your readers, but really the articles from your numerous correspondents are so practical

and far-reaching that little is left to be said by an amateur.

Yours, &c.,

Minesing, Ont., Dec. 14, 1884. F. F.

[Please give your experience to our readers.]

The Canadian Baldwin you sent us as a premium last spring, grew nicely last summer. We are very much pleased with the *Horticulturist*, and can only express my astonishment that you can afford to send such valuable premiums to your subscribers. Please accept my best wishes for your future success.

Sarnia, December, 1884.

P. W.

I shall look forward to receipt of the annual Report of the Fruit Growers' Association of Ontario. Last year's report was very interesting, as also I find the *Canadian Horticulturist*. I will endeavour to send you a new subscriber or two. You certainly give good value for subscription, and should be well supported.

GEO. HALLEN.

Oakville, 31st December, 1884.

I have been much pleased with the magazine, *Canadian Horticulturist*, and have derived many hints from it that have been worth far more than the cost of the periodical.

T. J. WHEELER.

Georgetown, December, 1884.

I think that the best dollar I ever expended was when I subscribed for the *Canadian Horticulturist*. It contains a great deal of information to all lovers of fruit and flowers. I hope it may long succeed.

Yours very truly,

S. J. SMITH.

Wingham, January, 1885.

QUESTION DRAWER.

1.—I have about two acres of land which I intend planting with apple trees. It is limestone gravel mixed with sandy loam to a depth of from a foot to eighteen inches, under that a strong whitish clay. I want to plant about five kinds, to be at their best or ripen as follows:—Some in January, some February, some March, some April, some May. I want a fair sized apple with an attractive appearance and good quality, that will hold on to the tree till they are pulled off. What kinds would you recommend to fill the bill?

2.—I also have a piece of land I want to plant with asparagus. I have read a good deal about growing asparagus, and still I am partly blind. I would like to know why it should be planted deep in the ground. I think it is unnatural. When you raise plants from the seed do you put the seed six or eight inches under ground? I don't, because it is contrary to Nature's laws; and why put the plants so deep in the ground? One man says don't cut your asparagus under ground because it is hard and stringy. If it is not fit for use under ground what is the use of growing six or eight inches for nothing? Yours, SUBSCRIBER.

REPLY.—1. If "Subscriber" had added the place of his residence at the foot of his inquiries it would have been of great service in giving a satisfactory reply. As it is we are ignorant of the peculiarities of his climate. If the following varieties will thrive at his place we think they will "fill the bill," presuming, from his condition that they must have an attractive appearance, that he wants them for market purposes, which fact modifies the meaning

of the expression "good quality." For January, Hubbardston Nonsuch; for February, Wagener; for March, Baldwin; for April, Golden Russet; for May, Roxbury Russet. If the Russets are not sufficiently attractive in appearance substitute for them as follows:—For April, Ben Davis; for May, Northern Spy. It will nevertheless be found in practice that we cannot divide off our winter apples into separate months in this way with precision. They will vary somewhat in their time of coming to perfect maturity according to the variations in the seasons, and the manner in which they are treated, especially the temperature of the place where they are stored.

2. Asparagus—"Subscriber" asks why should it be planted deep in the ground? We would ask, who says it should? Certainly not the author of the *Canadian Fruit, Flower and Kitchen Gardener*. He says, page 195, "the crown covered about two inches deep with earth." If the crown is only two or three inches below the surface there will not be six or eight inches of stalk grown for nothing. The same writer says, page 196:—"It is the practice of many to cut the buds two or three inches below the surface; but why we should take so much pains to secure a long, white, woody stalk which no cooking will make tender and no person can eat, is more than we can understand. It is the practice of the writer to cut the buds, when three to five inches long, just above the surface of the ground, thus securing for the

table all the green portion, and leaving the white part in the soil. In this way there is no danger of injuring the buds yet below the surface."

MR. EDITOR,—1. Tell me the best dressing to put on apple trees for preventing the borers. Will tar and clay, as spoken of in July number, page 157, or would clay and cow dung be a preventive?

2. What could now be applied to apple trees to kill or destroy the eggs of the aphides? I know they can be destroyed in summer with tobacco water, but what will destroy the eggs now without injury to the buds of the trees?

3. How the best way to pack small plants to send to England, and what weight is allowed and what rate of postage is required?

4. How best to prepare pyrethrum powder from the pyrethrum flowers. I believe it is made from them.

Muskoka, Jan., 1885.

H.

REPLY.—1. At page 39 of the *Canadian Fruit, Flower and Kitchen Gardener* the author says:—"There is a simple method of keeping them out of the trees. Strong alkalies will destroy the vitality of the egg. The most efficient method of applying this alkali is in the form of a ropy soft soap, rubbed upon the body of the tree with a swab, particularly at the collar. A solution of potash at the rate of a pound of potash to two gallons of water will be found to answer the purpose in the absence of soft soap, but will need to be oftener applied." We have more confidence in the alkali preventive than in the gas-tar and clay, or cow dung and clay.

2. The same alkaline application can be safely applied to the trees before the buds swell, and will destroy the insects or their eggs.

3. Make a thick puddle of clay and puddle the roots well; then pack in moss that feels dry when pressed in the hand. The weight allowed to the United Kingdom for samples is eight ounces; size, 24 inches in length, and twelve inches in breadth or depth; rate of postage is one cent for every two ounces or fraction thereof.

4. It is made by drying and pulverizing the flowers. Cannot give any particular method as being the best.

I like the *Canadian Horticulturist* very much and find it quite a help.

I have a small garden and only cultivate for my own pleasure and family use. I try to have a little of everything that is going if possible, but some things fail me; perhaps you might be able to give me a few hints.

1. I have about one dozen apple trees now seven years old, but as yet have never borne fruit. They are pruned every spring and the earth stirred slightly, and to look at them they are as healthy and luxuriant as one could wish for.

2. Are some grape plants. I have six kinds of Rodgers' grapes; they are now five years old, and have not borne anything worth speaking of; they are inclined to run to wood and foliage. They are beautiful to look at. I think they are properly cared for as far as pruning and winter protecting are concerned. It may be that the climate is too cold for them and the season too short, away up here on the shore of Lake Huron.

3. I have some window roses that give me a great deal of trouble. They

are attacked by the red spider about every month, which destroys the leaves as well as keeps them from blooming; and one of them is all covered with a flat sort of a louse that sticks tight to the branches and under side of the leaves. I wash them off every two or three weeks, but they are as bad as ever by two or three weeks again. Strawberries do well up here.

I have the Wilson, Sharpless, New Dominion, and Early Canada. The Wilson is the most productive; the others are about alike in fruitage although differing in flavor.

Currants and gooseberries also do very well, but I fear I am trespassing on your time and patience.

Wishing for the *Canadian Horticulturist* an increased circulation during the coming year,

I am, Sir, respectfully yours,

MRS. JOHN GEORGE.

Port Elgin, January, 1885.

REPLY.—The probability is that the apple trees have been so well fed and cared for that they are growing too fast to bear fruit. Try what a little neglect will do for them—no pruning and no cultivation for a year, and see if they do not form blossom buds. Strong wood growth and fruit production do not go together.

2. Probably your grape vines have been pruned too severely. Leave more wood on the vines, more buds on the canes of last summer's growth. The Rogers varieties are usually rampant growers, and fruit better with moderate pruning. Try Early Victor and the Brighton.

3. You keep the atmosphere of your window too dry, hence the red spider. Put an open pan of water on the stove

and keep up a good supply of vapor. Put your lousy plant under a barrel filled with tobacco smoke, or wash it thoroughly twice a week with tobacco tea, until they disappear.

NIAGARA AND JESSICA GRAPES.

MR. EDITOR,—Will you have the kindness to inform the readers of the *Horticulturist* what description of soil is best adapted to the growth of the Niagara Grape, as well as that best suited to the Jessica; and also whether the Niagara ripens its fruit as early as the Jessica.

Can you name any sections of the Province of Ontario where the *Catalpa speciosa* has been sufficiently tested to prove it sufficiently hardy to endure our climate?

Respectfully yours,

JOHN KNOWLSON.

Lindsay, 17th Dec., 1884.

REPLY,—The writer has never grown a plant of the Niagara grape. The company controlling it would not allow nurserymen to have it except on conditions that made it of no value to them, hence we have not sufficient knowledge on the subject to frame a reply. Your neighbor, Mr. Thos. Beall, has a number of the vines; he can tell you that the vines flourish finely in his soil.

The Jessica flourishes best in a well-drained, rich, loamy soil, especially one that is of a limestone character. In point of quality it is far finer and purer than the Niagara, being wholly free from foxiness, which cannot be said of the Niagara, and ripens before it. The crop of Jessica can be marketed before the Niagara makes its appearance.

STRAWBERRIES AND GRAPES.

In your next number please tell what varieties of (1) strawberries and (2) grapes would prove most satisfactory for this part of Ontario. As I grow the fruit for home use only I care nothing about carrying properties.

S. WARREN.

Brooklyn, Jan., 1885.

REPLY.—1. For crop, Wilson and Crescent; for quality, Jersey Queen, Mrs. Garfield, and Triumph de Gand.

2. Worden, Early Victor, Moore's Early, Brighton, Jessica, Lady, Niagara, Delaware.

What soil would be the best in which to plant the hardy Catalpa?

W. SWITZER.

Anderson, Ont.

REPLY.—We have only had experience with it in sandy and gravelly loam. They do well in such soil.

I have been very anxious to find for some years back if the system of pruning and training grape vines practised by the Italians employed by the late Mr. Decourtney at Cooksville has succeeded ultimately. Perhaps you would put the question in your next issue under the head of "Question Drawer," and oblige an old subscriber.

Yours truly,

T. D. LLOYD.

P. S.—I should have said the system did very well here for a couple of years after the vines commenced to bear good crops. After that the infirmities of old age (as with myself) began to show.—T. D. L.

REPLY.—Will some one who knows please to reply?

CORRESPONDENCE.

HEDGES.

An excellent defensive hedge for the orchard and farm can be made of our native crab apple (*pyrus malus odorata*), capable of keeping out cattle, and particularly the ubiquitous boy, who wants to help you, by disposing of your choice pears, apples, &c.

It is certainly superior to the Buckthorn, Osage Orange, Honey Locust, and all the varieties of the Hawthorn (*crategus*) family. The European variety (*oxyantha*) is too tender, and very subject to the downy aphides, and our natives of this genus, although hardy and bear shearing or pruning well, are subject to suckering.

For ornamental hedges, there is plenty of material suitable to the taste of the planter, such as White Cedar (*arborvitæ*), Hemlock Spruce, Tartarian Honey-suckle, Japan Quince (*pyrus Japonica*), Privet (*Lygustrum vulgare*), Barberry (*Berberis*).

For evergreen hedging, or wind-breaks, nothing that has as yet been tried is equal to the Norway Spruce; of deciduous trees, the Beech (*Fagus feruginea*) might be used advantageously, as it retains its browned foliage during the winter. The European Beech (*Fagus sylvatica*) is used for this purpose, and also for ornamental purposes. I have tried it, but find that the young shoots are apt to be frozen back during winter.

For ornamental hedges, there is plenty of material suitable for this purpose to meet the taste of the planter, such as our common Arborvitæ, Hemlock Spruce, Tartarian Honey-suckle, Japan Quince, Privet, &c. I have also seen, when residing in the Lowlands of Scotland, the old-fashioned, original Fuschia (*var. coccinea*), used for this purpose, but it was protected in winter

by broom boughs. It would scarcely be hardy enough in this climate.

The native crab apple grows singly on the lawn, is a beautiful object when in blossom, the flowers are very fragrant, and it will certainly vie with any of the fancy hawthorns, which are tender and only short-lived. I am astonished that the crab apple has never appeared in the select lists of ornamental small trees. It may possibly be that it is because it is a native—foreigners being preferred.

Berlin, January, 1885. R.

APPLES FOR MARKET.

The best varieties of apples for a town or city market, and to realize the best prices for summer and early fall, are in their order of ripening, the following, viz.:—Tetofsky, Early Harvest (when grown without spots), Duchess of Oldenberg, Red Astrachan, Benoni, Keswick Codlin, Hawley, Porter, St. Lawrence, Gravenstein, and Colvert. The new Russian varieties lately introduced—the Grand Sultan and Yellow Transparent—have not as yet fruited, but from what I learn, they will be an acquisition to our very early varieties, and likely to throw the Early Harvest out of cultivation, as it cannot now be depended on. Late fall or early winter are comparatively worthless for marketing, and are only fit for making cider, feeding stock, and evaporating. The Ribstone Pippin, Blenheim Orange, and Dutch Mignonne, all belonging to the same type, are the only exceptions. Late winter varieties, such as the following:—Golden Russet, Baldwin, Northern Spy, Rhode Island Greening, and Grime's Golden, are good value in either a home or foreign market, being generally well known.

I know that a large number of varieties of apples may suit the tastes of amateurs, exhibitors at shows, and experimentalists, but to the party who

wants to make apple-growing profitable, the varieties alluded to are all that are necessarily required.

SIMON ROY.

Berlin, January, 1885.

PEARS.

I am of the opinion that if a different mode of propagating our choice pears from what is generally practised, namely by working close at the ground, is not inaugurated, there will be very few left escaping the blight.

Amongst some thirty varieties which I have tried, being root-worked or near the ground, I find only a few that can be really relied upon, and these are the Rostiezer, Clapp's Favorite, Vezouziere (a Bergamot shaped fruit), Ananas D'Etè, Doyennè D'Etè, and Belle Lucrative.

If worked at standard height, say about four feet, on wilding stocks, the more thorny the better, almost all varieties do better; fine specimens of the following varieties can be grown in this way, such as Bartlett, Bosc, D'Anjou, Superfine, Buffum, Mount Vernon and Giffard, which latter is particularly adapted for this manner of propagation, as it is a poor grower when worked at the ground.

The Flemish Beauty is generally considered a hardy and very thrifty growing tree; the latter I will admit, but it is a tree as subject to blight as the Dearborn Seedling.

I examined some trees which were badly blighted and found that the heart of the trunk was rotten; so also of some others, such as Lawrence, Clairegeau, Easter, and Onondaga, all were blighted and prematurely affected internally. Has this internal condition of the tree anything to do with blight? I am persuaded it has.

Only a limited number of varieties of the pear are successfully grown on the quince stock, and these are Louise

Bonne, Clapp's Favorite and Ananas D'Etè.

When the pear is budded at or near the ground upon a very thrifty stock the first year's growth is too rapid, and it seldom matures sufficiently, especially if the summer is short. This evidently is the cause of the debility of the tree.

I think of working at standard height some of our valuable apples, such as Baldwin, King of Tompkins and Chenango Strawberry, they being too tender when low worked.

Berlin, January, 1885.

R.

THE RUSSIAN MULBERRY.

No doubt some who have planted only single seedlings of the famed Russian Mulberry will be disappointed in not getting fruit. The fact is the tree is dioecious, either being a male (*staminate*) or a female (*pistillate*), and when grown apart at a distance from the effects of insects or the wind, the female tree will bear fruit, but no seeds; the male will blossom but have no fruit. This peculiarity is often witnessed in the vegetable kingdom. For example, our cut-leaved Weeping Birch is a female and cannot be propagated from seed if separated from a monœcious birch. The Lombardy Poplar is a male tree, and both are or can be propagated artificially, either by cuttings, suckers, or budding, or grafting, as is the case with the former. A notable instance of the sexual character of plants may be seen in the hemp; in a clump, you will find both male and female plants growing together.

What has led to the supposition that this variety of Mulberry, being a native of Russia, must therefore be hardy, is that the Duchess of Oldenburg is also Russian and is very hardy. But this is a mistake. This apple comes from the confines of Siberia, from a latitude as far north as Quebec or Labrador.

The Russian Mulberry is indigenous to the South of Russia, near the sea of Azov, the climate being as warm as that of Ontario in summer, and not so cold in winter. I find the tree no hardier than either the Asiatic or American varieties, and where either cannot be grown successfully, neither will the Russian succeed.

Seedlings of all cultivated fruits cannot be depended on. One in a thousand may be good, and the only way to perpetuate good varieties is by artificial processes. The cultivated Mulberry, either for feeding the silk worm or for fruit, is grown artificially. The majority of seedlings of the Russian variety produce fruit no larger than a common raspberry.

All Mulberries are more or less injured in this locality by late spring frosts, the young shoots being killed back to the branches.

Berlin, January, 1885.

R.

A PLEA FOR THE CHAMPION GRAPE.

TO THE EDITOR OF THE CANADIAN HORTICULTURIST.

In 1878 your correspondent planted six grape vines. The smallest among them was a Champion. In three years it had far out-grown all the others, and commenced to bear. The year following it was so loaded with fruit, as to make the impression it would surely die from over-bearing. But no; for it has gone on increasing ever since. In 1883, while the grapes on all the other vines were badly mildewed, the Champion was completely free. Last year it reached twenty-five feet on the trellis, covering it ten feet wide, producing 140 pounds of good, sweet grapes. From the 25th August they were eaten freely, sold, given away, while the seeds were removed from a sufficient quantity to fill twenty quart cans. After being boiled down with sugar, the expressed juice of the remainder was put up as unfermented wine,

which, without one particle of alcohol, keeps well, making a refreshing, wholesome beverage. In drinking it no danger of imitating Noah.

In flavour the Champion grape may be inferior; yet in the three essential particulars of being very early, wholly free from mildew, and immensely productive, it has no coupeer; for every year it bears twice the quantity of all the other vines put together.

True, one thing in its favour must be mentioned. It happened to be planted on the edge of an under-ground pool, caused by water from the kitchen sink. But even here its benefit is apparent, for it certainly absorbs the noxious qualities of the pool, thus promoting health. Who wishes a full supply of ripe, sweet grapes on his table two weeks earlier than the Concord comes in, let him plant the Champion. Surely this is the grape for the million.

FRANCIS COLEMAN.

Hamilton City, Ont.

REPORT ON PLANT RECEIVED FROM
F. G. A.

The grape vine (Prentiss G.) you sent me last spring has done well. Before I got it I had planted the Pocklington, Lady and Lady Washington, still it seemed to take root sooner and send out vines faster than any of them. By the fall it had produced more permanent wood than any of the others. Another feature about the plant I noticed compared to the others was that it stood the autumn frosts better than the others. My soil is very warm and dry, there being only about eight inches of earth on solid limestone rock, with here and there fissures running through it. In the very dry season I have to water all my plants, and while I noticed some of my other grape vines with their leaves softened the Prentiss remained fresh and green all through

the season. I may be able to report further after another season's trial.

Yours respectfully,

A. C. SLOAN, M. B.

Annan, Dec. 29th, 1884.

BLACK KNOT.

Scientists have demonstrated that the Black Knot, affecting the plum and cherry, is a fungoid epidemic, and I think this theory is correct. Trees of the Damson type are more subject to it, and all the hybrids are more or less affected, particularly the Lombard, Purple Gage, and Early Orleans; others not having so much of the Syrian element in their composition, are not quite so bad, such as Pond's Seedling, Bradshaw, Glass' Seedling, and Imperial Gage. The only varieties that are exempt on my grounds are the Prince's Yellow Gage and Yellow Magnumbonum, evidently having a hardier element in their composition, probably from some of the wild varieties indigenous to Europe. I think the liability of trees to be affected with the Black Knot is exactly in accordance with an unsound condition; the trees which I cut down were all rotten inside, having only a small rind of sound wood next to the bark, illustrating that an unsound condition is more subject to the attack of epidemics than a sound one.

Plum growing has hitherto been a profitable business, but since the advent of the Black Knot, orchardists will have to substitute something else.

A field is now open for hybridists, and I have no doubt but that a hardier race can be produced, admixed with some of the European and American varieties of plums. The hybrids now produced between the European and American grapes are a success, why not the plum.

Berlin.

R.

THE ENGLISH SPARROW.

Alas for the poor Sparrow, whose services by some are lightly thought of, and who is discarded as a nuisance. But such is the way of the world generally. A good and faithful servant, after years of faithful and honest endeavors to perform the duties assigned to him, is not unfrequently shown the cold shoulder, and sometimes kicked into the bargain. So it is precisely with the Sparrow. After he has cleared the orchards of caterpillars and our ornamental trees of these and other injurious insects, he is shown the cold shoulder. The clamor is now for his extermination; but like the rat, who is also useful in his way, both being associates of man, who have followed him from Asia in all his migrations, neither now are quite so easily got rid of, having once obtained a foot-hold.

Arguments have been adduced of rather a hypothetical character, and theories advanced that the decrease of insects is due either to insects or fungoid parasites, preying upon them. This may all sound very plausible in theory, but more enlightened investigation is required to make reasoners believe.

One fact is certainly patent, that with the introduction of the Sparrow, bugs of almost all kinds injurious to trees, have gradually disappeared. Our native insectivorous birds not being adequate to the emergency, hence the importation of the Sparrow was necessary.

In some places in Europe birds were slaughtered indiscriminately, and the result was a pest of caterpillars was allowed undisturbed sway, and the birds had to be brought back again.

If the Sparrow is annihilated, a new era of bugs will be inaugurated, perhaps worse than what we have experienced, then we will have a confirmation of his former usefulness.

His musical talents have not as yet been developed, but his song, although

short, is often repeated, giving quantity for quality. Neither is he gaudily attired, his forte is use and not ornament.

The Coney (rabbit), a native of Africa, at one time over-ran Spain, committed great devastation, just such as is done in the Australian Colonies at present. Some Savan advised the introduction of another African animal, the Ferret, the natural enemy of the Coney. The country was soon cleared of the destructive nuisance, but when the Coney was destroyed and the Ferret had no more to live on, he fell back on the hen-roosts for a living; but the last evil was of minor destruction than the first, and more easily kept in control.

So it is with the Sparrow, his natural food is almost exhausted; he must live; he will naturally fall back upon grain, and is but poorly remunerated for his services.

Evils apparently exist in the moral as well as in the natural world, and of such choose the least; it is better to submit to a minor evil, provided it prevents a greater. The Sparrow is, of course, a grain eater when he cannot get bugs to eat, but his good services amply repay all the depredation he does; besides, if too numerous, the Sparrow is more easily controlled than the bug pest, which has as yet defeated human ingenuity, especially the tent caterpillar, span-worm, codlin moth, and fall web-worm.

The introduction of the Sparrow as a vermin destroyer, is due to James Goldie, Esq. He at the time residing at Elizabethtown, New Jersey. Some parties interviewed him, representing the ravages done by the span-worm to the trees in the avenues, parks and squares of New York, and asked for a probable remedy; the reply was given to introduce the European Sparrow, advice which was acted upon; and as the Sparrow began to increase, a corresponding decrease took place in the

span-worms. Other cities, Boston, Philadelphia, &c., followed suit, with equally favorable results.

SIMON ROY.

Berlin, 5th Jan., 1885.

SMALL FRUITS.

(For the Canadian Horticulturist.)

Some of our friends often ask us is the growing of small fruits profitable?

In reply we say, "Yes," under certain conditions.

There are two kinds of mistakes which people make when they begin the cultivation of small fruit.

One is to devote the entire attention to one kind, and the other is to attempt the cultivation of too many kinds. If we have only one kind under cultivation, and that kind fails (as the strawberry did nearly so last season owing to the frost in the latter end of May last), we are in a bad fix. The secret of profitable small fruit culture is to provide a succession of crops, then the income will be steady, and some of the necessary things about the business, which cost money, can be in steady use. Really profitable and reasonably sure small fruit culture, we see therefore, will be found in strawberries, raspberries, goosberries, currants and blackberries.

As to the varieties of the different fruits to be cultivated, it will depend altogether on the market. The individual taste of the grower has nothing to do with it. He is growing fruit for profit; he is growing it for others to buy and eat, and he must satisfy them, and, too, he must regard the shipping quality of his fruit. I have seen fruit shipped to St. Mary's Market, and you could track the express waggon from the station to the store, the juice running from the crates. A good shipping variety, although it does not bring so much in price in the market as some other variety, is, of course, better

to grow than a variety which is really superior otherwise, but will be worthless by the time it reaches the consumer. The main point in all marketable things is, the better it looks the better it will sell; and this is true in regard to the small fruits, the better it looks the better it will sell. The public know nothing about quality, species, and colour that people are after. Those about to engage in small fruit culture in the spring, should decide on a sufficient number to last through the season, and next select varieties the market demands, keeping in view their shipping qualities and productiveness.

If spared, my next paper will be my experience in these varieties.

Fish Creek.

JOHN LITTLE.

PLUM CURCULIO.

MR. EDITOR,—I have been a member of the Fruit-Growers' Association for a number of years, and have had the benefit of many writers.

As I have read so many requests to write experience of any fruits or vegetables, I venture to contribute my mite.

I read on page six of your monthly, of 1885, what Mr. Johnston Eaton, of Pennsylvania, writes about his experience with plum trees; he says "take sulphur and smoke the trees once a week for two months." Now, Sir, I raise good crops of plums each alternate year. The way I do, I take air-slacked lime when the plum trees are in full bloom. When the bloom begins to fall, in the morning, when the dew is on the trees, make the trees white with the lime; three times in two weeks is plenty, or when you think proper.

CABBAGE WORM.

Last year, 1884, I have grown the best cabbage for years. My experience is to take air-slacked lime when the worm is eating the cabbage, and also

when the butter-fly is laying its eggs; watch for the young worms, put on the air-slacked lime all over the cabbage when you see them on the cabbage, and you will have a good crop.

Yours truly,

GEORGE TAYLOR.

Scarboro' Junction, Jan. 15, 1885.

CELERY.

I raise a great deal of celery and find good market for it. I find Sandringham and Boston Market the best I have had. W.M. TURLEY.

Lucknow, Dec., 1884.

FRUIT GROWING IN COUNTY OF GREY.

DEAR SIR,—Last summer was a bad year for fruit. We had neither plums nor peaches. Plum trees were badly killed around here. We had not very many apples, but we had a great crop of grapes and cherries. All the plants received from the Association have done well. The Glass Seedling plum is quite healthy.

WILLIAM BROWN.

Annan, Jan., 1885.

VEITCHE'S PERFECTION PEA.

DEAR SIR,—I have read of this and that best pea, but I think they must be out and out best peas that can beat Veitche's Perfection as a fine large table pea, splendid flavor. It is a late pea. I think if it was better known it would be more grown. The only catalogue that mentions this variety in Canada as I see is Bruce & Co., Hamilton. I wish I could get a good early variety of tomato as reliable as the above pea. I have purchased tomatoes from time to time but cannot yet get a reliable early tomato for the cold North.

T. A. H.

Muskoka.

GRAPE VINE FLEA-BEETLE.

In order to lessen the grape vine flea-beetle an excellent plan for this purpose is to provide some fly-paper prepared with boiled linseed oil, etc. These may be placed at the base of the vine, and when the insect is disturbed the natural course of protection is the ground, and by this means is very easily captured.

This plan may be very effective for only a few vines, but may with ingenuity be applied on a large scale by placing the papers on a stretcher and moving along from vine to vine.

Berlin, Jan., 1885.

R.

MASSACHUSETTS HORTICULTURAL SOCIETY.

Programme of Meetings for Discussion during the season of 1885:

- Feb. 7.—Methods of Fruit Growing, by Prof. S. T. Maynard, Amherst.
- Feb. 14.—Garden Flowers, by Mrs. T. L. Nelson, Worcester.
- Feb. 21.—Discussion on such subjects pertaining to Horticulture as may be suggested.
- Feb. 28.—The Leaf as a Study, by Dr. G. Austin Bowen, Woodstock, Con.
- Mar. 7.—Propagation of Trees from Seeds, by Jackson Dawson, Jamaica Plain.
- Mar. 14.—Nomenclature of Fruit, by Hon. Marshall P. Wilder, Boston.
- Mar. 21.—Heating Greenhouses, by Joseph H. Woodford, Newton.
- Mar. 28.—A Comparison of Manures for the Orchard and Garden, by Prof. G. C. Caldwell, Ithaca, N.Y.

The meetings will be held at Horticultural Hall, Tremont Street, Boston, at 11 o'clock. All interested are freely and cordially invited to attend.

THE YELLOW TRANSPARENT APPLE.

The tree is a free and symmetrical grower, upright when young, but spreading as it becomes older under the loads of fruit. The bark is of a light cinnamon color, almost yellow on the young wood, and the leaves are light green, being slightly pubescent, and whitish beneath. It is a healthy tree, and like most of the Russians, "iron-clad" against cold, enduring 40 deg. below zero without injury. It is a heavy bearer annually in rich gardens, but biennially on poorer soils, or in sod. The fruit, fairly grown, is medium in size, though specimens that would rank as large may often be found on young trees in good soil. But the tendency to overbear is likely to make the fruit small when not thinned, especially on poor soil. The tree is of dwarf growth, and, when branched low, nearly all the fruit may be gathered by hand, even from an old tree. My oldest trees (15 years old) have little fruit out of reach.

In delicate, waxen beauty, the Yellow Transparent, especially when allowed to mature upon the tree, is unequalled among American apples. It is soft-fleshed, and of a mild, delicate, but not very high flavor—not equal to the Early Harvest. But the fruit is always fair, and its attractive appearance, joined with its very good quality, makes it extremely saleable. As an early market apple, it has great merits. If gathered just as the seeds begin to color, it bears transportation well, and will keep two weeks or more, before showing any signs of deterioration. How far south it will succeed, I cannot say; but have no doubt that in the mountains it may be successfully grown nearly down to the latitude of New York city.

There are at least two other Russian apples which are nearly, if not quite, identical with the Yellow Transparent. I have them growing and bearing in the

same orchard, and cannot distinguish any positive difference in tree or fruit. These are the Grand Sultan and the Charlottenthaler. The Grand Sultan does not appear to be quite as hardy a tree as the other two, or perhaps I should say not quite so healthy, being subject to bark-blight upon the trunk, by which the young trees are destroyed. I have in one place two parallel rows of Yellow Transparent and Grand Sultan, set nine years ago. The first are all perfect, but of the latter two-thirds have died from bark-blight. The remaining trees of Grand Sultan, however, cannot be distinguished in any way from their neighbors. The Charlottenthaler was at first thought to bear larger fruit than the Yellow Transparent; but my experience with the trees as they get older does not sustain this belief. The young trees of all three often bear very large apples, but as they get older they all come to about the same size.—J. H. HOSKINS, M. D., in *Rural New Yorker*.

FAMEUSE SUCRE.

This "Sugared Fameuse" is an apple in which I have been very much interested since I first saw it, some six or seven years ago. In quality for dessert I consider it the best apple I ever met with, decidedly superior to Primate, Garden Royal, Early Harvest, Early Joe, or any of the highly and justly admired American dessert Apples. In size it is about with the Fameuse, but more flattened. In color it is a dark rosewood red, with a thick, firm skin. It is in eating all through October. The flesh is white, tinged with red or pink, in quality soft, perfumed, and of an indescribable luscious flavor, more like some imaginary tropical fruit than an apple. It is not sweet, having a decided but delicate acid, yet shot through with a fine, sugary sweetness and spiciness that must be tasted to be understood, but is something like strawberry

ice cream. The tree is as hardy as Fameuse, an early and excellent bearer, and the fruit is even and fair. If known in our cities it would easily bring ten dollars per barrel.—J. H. HOSKINS, M. D., in the *Home Farm*.

SAPIEGANKA PEAR.

BY PRO. J. L. BUDD, IOWA AGR. COLLEGE.

The impression prevails that the pears of Russia are coarse and unfit for dessert use. With a view to removing this impression I send another note from Mr. H. Goggener, of Riga, Russia, on the pear bearing the above name. In many places in Iowa it has shown its ability to carry healthy foliage during our changeable summers and to endure our recent test winters:

"This is a pear from Lithuania, and probably comes from the gardens of the family of the Prince after whom it seems to have been named. It is found generally in Lithuania and Poland. It is also found in the countries belonging previously to Poland; and attains its highest point in the Government of Vilna.

It has not, as yet, been described in the works on German Pomology, and is not known in other countries. In the Baltic Provinces it is known as the Courland Bergamot, or Round Bergamot. In form it is like a Bergamot, decreasing towards the stem; towards the calyx it is more flattened, and may be mistaken for the Summer Bergamot. The color is green when on the tree; later, light yellow, with red cheeks if exposed to sun. It has many marked dots, and is russety only at the calyx and stem. The flesh is yellowish-white, juicy and of fine Bergamot flavor. It should be gathered early in September. It is a good fruit for shipment, and in the markets always meets with a ready sale. The tree grows to a large size, usually healthy. As it seldom suffers from frost when blossoming, it usually bears

every year. It does not seem to suffer from underground water, but does poorly in sandy soil. The leaves are round, shiny and leathery, on long, red stems. This is one of our best fruits. It can be used for all purposes, and therefore should be generally cultivated.—*Prairie Farmer*.

ONTARIO'S CHOICE FRUIT.

MAGNIFICENT COLLECTION OF APPLES FOR THE WORLD'S FAIR AT NEW ORLEANS.

Prof. William Saunders, the well-known entomologist of this city, is at present engaged in preparing for shipment a collection of apples designed to represent at the great world's fair in New Orleans some conception of the resources of Western Ontario as a fruit-growing district. It will be remembered that in consequence of the apathy displayed by the two Governments in regard to having a good representation at this exhibition, the directors of the Ontario Fruit Growers' Association determined to send a collection of fruit that might in some degree do credit to the Province. Mr. Saunders entered into the project with his characteristic energy, and with the assistance of Mr. J. M. Denton, a grand success has been achieved. Through the medium of the press voluntary contributions of choice fruit was solicited from the western district, and the response has been a liberal one; in fact Mr. Saunders expresses his conviction that the assortment of apples is one of the finest and most complete that he has ever seen. The best fruit is being arranged into fifty distinct varieties—four of each kind being included therein—besides which there are samples comprising twenty-five, ten, five, and single varieties respectively. In addition, two or three bushels of good fruit will be sent for the purpose of assisting in decorating the tables and enlarging the display. Extra apples of each kind, of the

choicest varieties, will be forwarded, so that any fruit injured en route may be promptly replaced. The collection is now being carefully packed, and will be shipped to its destination not later than next Monday. There is no doubt that this magnificent display will reflect much credit on the western district, and it is a cause for congratulation that the city possesses a gentleman of such enterprise as Mr. Saunders.—*London Free Press.*

LE CONTE PEAR.

A gentleman residing in Florida writes to the *Country Gentleman* that this pear, by its superior vigor, rapid growth, early bearing and abundance of fruit, which sells at satisfactory prices, is making for itself a reputation second to no pear before the public. He says: I can show your readers trees one year old from the cutting—we raise them all from cuttings—cut back to two feet last winter, that are now (Sept. 1st) twelve feet high, with from four to six branches, and larger trees with proportionate growth. Some idea of the size of a fruiting tree of twelve years old may be obtained from one I lately measured: Spread of branches, 35 feet; height, about 20 feet; circumference of trunk, one foot above the ground, 42 inches. Another, of the same age, produced 45 bushels of fruit, which sold on the tree for \$26 before it was gathered. The fruit sold from here this season, in New York and Boston, for \$2.75 to \$5 per bushel. It improves in quality with the age of the trees. Some of the best nurserymen in the South think that growing the Le Conte here will, in the near future, revolutionize pear growing, using it for a stock for others. One thing is certain—we can now, with the Kieffer following, have pears for home use from June to October in abundance, and

one of the most profitable market pears known.

We desire to caution our Canadian readers by telling them that this pear tree will not endure our climate.

PERMANGANATE OF POTASH AS A PLANT-FOOD.

A writer in the *London Garden* gives the following interesting account of his experiments with permanganate of potash as a fertilizer:—

“I had been using a solution of this for some time as a deodorizer and disinfectant, and as such recommended it to a friend. For convenience sake he kept the liquid in an old watering-can in the potting-shed, near to which was growing a houseful of pelargoniums in pots. It happened one day that a very young practitioner watered the plants on one side of the house with it; dire results being, of course, anticipated. Such was not the case, however, but quite the reverse, for the dosed plants showed increased instead of diminished vigour. I at once commenced a series of experiments, using an unvarying strength of as many crystals of permanganate as covered a six-penny piece to a gallon of water for watering the soil with, but for over-head syringing using double the quantity of water. Rare ferns in a Wardian case four feet by two feet have been syringed once a week for some time with this, and are to all but myself a mystery of luxuriance. From ficuses to fuchsias, aspidistras to adiantums, tender grasses, seedlings in pans, and roses in pots—all without exception seem to derive much benefit from its administration. In order to ascertain its fatal strength, I planted two plants of *Tropaeolum aduncum*, one in sand saturated with a strong solution repeatedly passed through it, the other in the liquid itself, covering the surface with cork to

keep the roots in and light out. Both plants are alive and vigorous after two months.

"Both manganese and potash, the components of permanganate of potash, are essential fixed elements in the structure of plants. Manganese occurs in small quantities; and, although its beneficial properties have not yet been definitely ascertained, it is doubtless taken up by the rootlets in solution with other matters. Of the absolute necessity of potash for plant-food there is not a shadow of doubt. In short, it is essential to the life of a plant, and there seems to be no end to its power of combining with other substances, in most cases rendering matters solvent and assimilable which without its aid would have remained useless. The liquid permanganate of potash certainly looks a very risky thing to water plants with; but it is not so, for adiantums dipped overhead in it gave no unfavourable result. Poured through a pot filled with pure sand, it filters through as pure, colourless water of beautiful softness. For flowers in vases it is evidently good; the water does not require changing or become offensive, and the plants preserve an unusual freshness and vigour. I have used it for some time in a glass button-hole holder, and the flower-stalks seized and absorbed the colouring matter in about an hour. This was especially the case with yellow flowers. Overhead watering with this liquid is disastrous to our common enemy, the green fly."

APPLES IN THE LONDON MARKET.

Keeling & Hunt, at Monument Buildings, London, England, on 30th December, 1884, reported the following sales, viz:—Choice selected Greenings, 10s. 6d. sterling; Baldwins, 14s. 6d.; Roxbury Russets, 10s.; Golden Russets, 12s. 6d.; Ribston Pippins, 13s. 6d.

THE YELLOWS.

The *Gardeners' Monthly* notes the success which has attended the experiments of a Mr. Miller in staying the ravages of the "yellows," or a kindred disease, which attacks the Rhododendron, Norway Spruce, White Pine, and other things, by the application of sulphur to the roots. "That the fungus which causes the peach yellows," says the editor, "is the same as that which works injury in other cases has been positively proved by experiments recorded in our pages, where a spadeful of soil near a diseased peach tree permeated by the fungus spawn, placed around a Norway Spruce produces the disease in that tree also, and a microscopic examination of the two fungi shows them to be the same. A species of fungus ferment seems to permeate the whole tree after these attacks, and buds taken with the ferment fungus in the tissue and used for inoculating other stocks will spread the disease. Even seed taken from such diseased trees carries a portion of the ferment with it, and the disease is spread in other directions." The editor then refers to a visit to Mr. Miller, the consulting landscape gardener, of Fairmount Park, N. Y., and says:—"Every practical gardener knows that sulphur is always fatal to the lower organisms, though wholly innocuous as against the higher forms of life, and it required only the suggestion to use that on fungus below ground, which had been found so effectual on fungus above. The sulphur application was quite as effectual here, and Mr. Miller was quite enthusiastic as he pointed out his Rhododendrons and Pines, once so thoroughly disease-stricken that most gardeners would have at once committed them to the flames, now as green and healthy as the best. The only wonder is that no one has thought to try sulphur on the root fungus as a remedy for the

'yellows' before. Probably it has come about because those who have suffered are chiefly among those who have no regard for those who are 'fungus-mad,' and who are quite sure that nothing is known regarding the disease. For our part we regard the successful experiments of Mr. Miller as entitling him to a wide appreciation by his fellow-cultivators."

CARE OF SCIONS OF THE STONE FRUITS.

A student came to me to-day with a copy of the *Rural* and directed my attention to your advice to E. K. T. in a late issue. Said he:—"Our class notes say pack all scions in dry forest leaves."

The subject is worthy of more attention and careful experimentation than it has yet received. An experiment like the following will be conclusive:—Pack away a bundle of cherry scions in November in moderately moist moss in a moderately moist cellar. In January use these for putting up say 500 root grafts. At the same time and with the same roots put up 500 grafts with scions of the same variety packed in November in dry leaves in a box in the same cellar. Set by the same man in similar soil, it will always happen that the stand will be from twenty to fifty per cent. better with the dry scions. If the scions be used for top-grafting or crown-grafting in the open air the difference in the stand will be far greater in favor of the dry scions.

My attention was first called to this subject in March, 1870. The cherry scions I was using in top-working were cut in November and kept in the cellar in quite dry moss. They were nice and plump, with a show of callousing at the base. I was sure they were in fine order, yet less than five per cent. of them grew. The same day it happened that I put in a dozen or more scions received by mail from the old homestead

in New York. These were so dry that the bark was shrivelled, and I only expected to save the variety by the possible growth of one or two specimens; but they all grew. Since that time I have experimented largely with the stone fruits, and am certain that the scions should be kept as dry as is safe. In all cases—unless the scions be scarce and valuable—they are thrown away if they show the least trace of the starting of a single bud or of callousing at the base.

The principle involved is the reverse of our attempts to graft the cherry after the water coming up from the roots has commenced to change the starch of the cell structure of the stock into sugar water. If we expect a uniform and satisfactory union of scion and stock both must be in dormant condition. The scions of the apple and pear do not absorb water so readily; yet with these I have known many poor stands to result from the use of water-soaked scions.—PROF. J. L. BUDD, in *Rural New Yorker*.

AMMONIA FOR FLOWERING PLANTS AND STRAWBERRY PLANTS.

A writer in the London *Gardeners' Chronicle* says:—Last year I was induced to try an experiment in chrysanthemum growing, and for this purpose purchased one pound of sulphate of ammonia, which I bottled and corked, as the ammonia evaporates very rapidly. I then selected four plants from my collection, putting them by themselves, gave them a teaspoonful of ammonia in a gallon of water twice a week. In a fortnight's time the result was most striking, for though I watered the others with liquid cow manure, they looked lean when compared with the ammonia watered plants, whose leaves turned to a very dark green, which they carried to the edge of the pots until the flowers were cut. As a

matter of course the flowers were splendid. The ammonia used is rather expensive, as I bought it from a chemist's shop; this year I intend getting agricultural ammonia, which is much cheaper. I have also tried it on strawberries with the same satisfactory result, the crop being nearly double that of the others. It is very powerful, and requires to be used with caution.

NATIVE AND FOREIGN CHESTNUTS.

Among the later novelties in the way of chestnuts the Japan varieties are well worthy of attention. They are probably of the same origin as the common European chestnut, although some of our botanists claim that they belong to a distinct species, to which the name of *Castanea Japonica* has been given. But whether originally from the same species or not, the Japan varieties, or at least the kinds that have been introduced, appear to be far more hardy and productive than the varieties usually imported from Europe. The trees grow rapidly when worked on stocks of the American chestnut, and usually commence bearing when three or four years old. One of the first varieties introduced produces a large nut of a rather light mahogany colour, with quite distinct dark lines running from base to apex of the nut. The leaves of this kind are also quite distinct, being narrower than the ordinary European chestnut, and of a pale yellowish green, the underside being covered with a whitish pubescence. The quality is also good for so large a nut, but not quite so sweet as the best of our native varieties. Another Japanese chestnut, of which I have seen only a few specimens, has from four to eight nuts in each burr, the more usual number being six. As might be expected with such a number of nuts

crowded into one burr, they are not of a uniform size or shape, and the centre one is often of a triangular form resembling a large beechnut. There are usually three or four large nuts in each burr, and the others smaller and of an irregular shape. The trees of this curious variety are very hardy and wonderfully prolific. Three nuts in a burr appears to be the normal number for the chestnut, but it is not a fixed number either in the cultivated or wild species of this country, at least; for in the Chinquapin (*Castanea pumila*) the nuts are mainly solitary or one in a burr. We really do not know but this is merely a variety that has been produced from the larger or sweet chestnut of our northern forests. The Chinquapin is a smaller tree—in fact in some parts of the South where this species is indigenous, it is sometimes only a small shrub, bearing abundantly when but three or four feet high.—A. S. FULLER, in *American Agriculturist* for February.

PROFITABLE GARDEN CROPS.

Wherever there are manufacturing villages, early cabbages are always in demand, and bring good prices. Spinach is another saleable vegetable. Beets, parsnips, carrots, turnips, onions, etc., as well as spinach, may be sown in rows far enough apart, to be worked by horse implements. The distance between the rows is to be governed by the width of the horse-hoe or cultivator, which should close up as narrow as twenty inches. A market-gardener sows such crops twelve or fifteen inches apart, but the farm-gardener has cheaper land, and can give more space if he can save labor, and substitute horses for hands. Those who propose to undertake farm-gardening, will do well to begin with sweet corn and early potatoes, and not undertake other gar-

den-crops until the land has been in cultivation with these for one season. Another way to prepare the land for garden crops is, to plough, harrow, and sow it to buckwheat. When this is in flower, plough it under, and sow it again to buckwheat. Turn this under at the proper time, and in September, or at the usual time, sow the land with rye, to be plowed-in next spring. The object should be to bring the land, a few acres at a time, into condition to raise any garden-crops. The rapidity with which this can be done will depend upon the amount of manure at command for the purpose. It will be worth while for all farmers, who are within easy reach of a market, to give this subject proper thought, and be ready to commence the coming spring to make a farm-garden.—DR. THURBER in *American Agriculturist* for February.

THE BEST AUTUMN-FLOWERING SHRUBS.

If we had to name the best spring-blooming shrub, a first choice among so many beauties, might be hard, but among fall-bloomers the *Hydrangea paniculata grandiflora* stands supreme above all competitors, and, considering its many excellent qualities, it seems strange that it is still comparatively rarely found in cultivation. For small inclosures it is rather large, and not as well adapted as for large, open lawns, where its effect, especially when seen from a short distance, is really grand.

In a neighboring lawn, in full view from the window near which we write, and several hundred feet distant, stands a group of half a dozen large bushes in full bloom, completely covered by their large panicles of white and rosy pink. A superb specimen of *Abies Nordmanniana*, with its deep-green, glossy leaves, furnishes a splendid back-ground; on one side stands a *Magnolia macrophylla*, which by the slightest breeze turns the

under side of its monstrous leaves to view, giving a peculiar shining, glaucous tint to the entire tree. A little further distant on the other side, is a beautiful, well-shaped Kentucky Coffee-tree, the tips of its branches just changing to golden yellow in pleasing contrast to the bluish-green of the main foliage. It would be useless to attempt to describe in words the imposing effect of this magnificent combination of rich colors and graceful forms, which, we fear, shows to better advantage from our window than from the proprietor's own grounds.—*Am. Garden.*

FARM-GARDENING.

The farmer who continues to raise the same crops that he grew before towns and manufacturing villages sprang up all around him, makes a great mistake. In the older States, at least, there are but few farms not within an hour's or two hours' ride of a market. It is worth while for farmers in such localities, to consider if they can afford to raise field corn, when sweet corn will pay them much better. It is true, that sweet corn needs high manuring, but when the ears are off, there will be a heavy crop of the very best fodder. The ears will bring in ready money, just how much will depend upon the market, but safe to say, more than any crop of ripe corn would be worth. It is a mistake to grow late potatoes, to be dug when every one else has potatoes, and prices are low, while early potatoes will bring several times the price of late ones. It is so with other crops. There are but few garden vegetables that may not be grown as farm crops, and it is a mistake to raise produce that will bear transportation from a distance, instead of that suited to a near market, and must be disposed of at once. A farmer, on the other hand, would make a mistake, were he to devote his land to a

new set of crops at once. He should determine to grow those things that pay the best, and to gradually work into a more profitable kind of farming. Those who propose to do this, will find sweet corn and potatoes excellent crops to begin with. Others will pay better, but these are best to prepare the land for other and more profitable crops. It would have been better had the land been prepared for these last fall, but as this was not done, make it ready as soon as it is safe to work it.—*American Agriculturist*.

THE CONCORD AND OTHER GRAPES.

Newport, Vermont, is in about the same latitude as Kingston, but without the ameliorating influence of the water which Kingston enjoys. Doctor Hoskins writes to the *Rural New Yorker* as follows:—

"Here the Concord ripens about once in five years, while the Salem is fit to eat every year, and ripens well two years in three. Salem has one advantage over most grapes, in being quite eatable before it is ripe. But I begin to think both Merrimack and Massasoit would have been preferred to Salem if they had become well known sooner. They are both a little earlier than Salem. But our earliest good grape is Brighton. If it would keep like the three Rodgers' grapes named, I would grow that only. Long-keeping grapes are as valuable as long-keeping apples, and that is where Vergennes takes 'the whole bakery;' but it is too late here."

GREGG RASPBERRY.

Purdy's Fruit Recorder says of this black raspberry:—"This year's experience has satisfied us that there is no black raspberry grown in this section, and especially on our grounds, that will yield equal to, and such uniform large berries, as the Gregg. Our pickers can pick, on an average, the season through, two quarts of them to one and one-fourth quarts of any other sort, and the

reason for this is they hold out large to the last picking, and, too, withstand drouth better than any other sort. Show us where an acre (we don't mean an acre estimate by a few rods' yield) has yielded one hundred bushels of fruit, as have the Gregg's. Persons living in sections where land is flat and needs draining, and where Tylers will stand and Gregg's have been killed back some, can of course tell about 'Tylers yielding as much as the Gregg,' but it's not true with us.

"The Tyler and Hopkins are both splendid sorts, and we shall set heavily of all three."

PLUMS FOR A COLD CLIMATE.

A gentleman residing near Portland, Maine, asks the editor of the *Home Farm* for the best varieties of plum for him to plant in his locality, to which inquiry Mr. S. T. Cannon replies:—For an orchard of 100 trees I would recommend the following sorts: Lombard, 25; Imperial Gage, 20; Bradshaw, 15; Yellow Egg, 10; Gen. Hand, 8; Jefferson, 6; Shropshire Damson, 5; Fellenberg, 5; Monroe, 4; Mooers' Arctic, 2. The first five named in the above list are old, popular, and well known sorts. The Shropshire Damson is esteemed for its preserving qualities. In regard to the Mooers' Arctic, I think it not so good as most other kinds, below medium in quality; its chief merits are its earliness in coming into bearing and earliness in ripening.

TULIPA GREIGI.

Of all the known species of tulip this is perhaps the most showy and desirable as a garden plant. It blooms freely in April or May, its large goblet-shaped flowers being generally of a vivid scarlet color; but there are also purple and yellow flowered forms. The bulbs are so extremely hardy that they will withstand with impunity freezing and thaw-

ing, and even when the leaves are half-grown they will endure a temperature as low as zero without any protection. The plant is a vigorous grower, attaining a height of from nine to fifteen inches, and bearing flowers from four to six inches in diameter, when fully expanded; and three or four lance-shaped glaucous leaves, with undulated margins, the whole of the upper surface being boldly blotched with purple or chocolate brown. Varieties occur without spots; and others with yellow and spotless flowers. It grows freely in any light rich soil, in an open sunny position, and rarely requires transplanting. Any one who admires handsome flowers should not fail to get at least a half dozen bulbs.

EARLY RICHMOND, OR KENTISH CHERRY.

Doctor Hoskins says, in the *Rural New Yorker*, "that at Newport, Vermont, the tree is hardy enough to grow to a large size, but it seldom bears, the bloom being heavy, but a slight chill—less than frost—prevents the fruit from setting. By the way, will some reader give his experience (as far north as possible) with Lieb, Large Montmorency and Ostheim?"

We would emphasize the Doctor's request and ask our readers to tell us what success they have met with in fruiting the Lieb, or the Large Montmorency, or the Ostheim. If our readers will refer to page 166 of the Report of the Fruit Growers' Association for 1880, they will find that, at Lindsay, Mr. Beall says the Kentish Cherry grows well, and blossoms, but will not set much fruit, and that what does set falls off when about the size of peas. If a light chill, less than frost, will prevent the fruit from setting, it may be that a similar chill is the cause of the premature dropping of the fruit.

BOOKS, &c., RECEIVED.

SCIENCE, an illustrated weekly, published by the Science Company, at 4 Bond Street, New York, for \$5 a year, devoted to scientific subjects.

CANADIAN BREEDER is published weekly, at the corner of Church and Front Streets, Toronto, S. Beatty, manager, at \$2 a year. It is devoted to the stock and farming interests of Canada, more especially in the live stock department.

FLORAL CABINET is a magazine of floriculture and domestic arts, published monthly, at 22 Vesey Street, New York, by the Ladies' Floral Cabinet Company, at \$1.25 a year, or it may be had in connection with the *Canadian Horticulturist* at \$1.80 a year for the two.

AMERICAN GARDEN, an illustrated journal of horticulture, published by E. H. Libby, Greenfield, Massachusetts, at one dollar a year, is edited most ably by one of the most interesting of horticultural writers, Dr. F. M. Hexamer. You can obtain a specimen copy on application to the publisher, and be able to see how good it is for yourselves.

VICKS' ILLUSTRATED MAGAZINE is always full of information for every one who is interested in the cultivation of flowers. The New Year number is very handsomely illustrated with a colored plate of *Canna Ehemanni*, and numerous engravings. It is published monthly by James Vick, Rochester, N. Y., at \$1.25 a year, or will be sent with the *Canadian Horticulturist* for \$1.75, for both magazines.

GARDENER'S MONTHLY is a well-known standard publication, now in its 27th volume, published by Chas. H. Marot, 814 Chestnut Street, Philadelphia, Penn., at \$2 a year. It is still edited by Thomas Meehan, so long and so favorably known as both a scientific

and a practical horticulturist. More need not be said to denote the character and value of this publication to all who would keep abreast of the times in horticultural matters.

SCIENTIFIC AMERICAN is devoted to the dissemination of information in relation to art, science, mechanics, chemistry and manufactures. It is very fully illustrated and of especial value to every one interested in the mechanic arts. Published weekly by Munn & Co., 361 Broadway, New York, at \$3.20 a year; by arrangement with the publishers, we can supply it with the *Canadian Horticulturist* for \$3.50 a year for both publications. See advertisement in this number.

THE AMERICAN AGRICULTURIST is a monthly periodical of established reputation, devoted to agricultural pursuits, published by the Orange Judd Company, at No. 751 Broadway, New York, for \$1.50 a year. It is ably conducted, and numbers among its regular contributors some of the best and most practical agricultural writers of the United States. We club this with the *Canadian Horticulturist* at \$2.00 a year for both papers, and for \$2.40, the "Agriculturist Family Cyclopaedia," a valuable work of reference and general information, will be sent in addition. See advertisement in this number.

SOUTHERN CULTIVATOR AND DIXIE FARMER.—We are in receipt of the January number of this sterling Agricultural Journal. It has been changed in form, being made more compact—magazine size—and can be handled with greater satisfaction and preserved in better condition than the old form. This issue numbers over seventy pages, and in quantity it is ahead of any agricultural publication that comes to our office, while in quality it is the only journal of the kind that is fully adapted to the needs of Southern

farmers. The very best Southern talent is employed in its columns. The "Thoughts for the Month," and the "Inquiry Department," are alone worth the subscription price. The paper has pages for special departments of farm work, and they are full and interesting. Without enumeration of the excellencies of this magnificent journal, we advise each and every one not a subscriber, to send \$1.50 to Jas. P. Harrison & Co., Atlanta, Ga., for a year's subscription, or if they prefer, we will send our paper and *The Cultivator* one year for \$2.15.

EDUCATIONAL WEEKLY, published by the Grip Printing and Publishing Company, at \$2 per annum, is devoted to the educational interests of Ontario, and will receive a hearty welcome from all those that take an interest in the education of the youth of our Province. We have been very fond of boasting of our system of education as unsurpassed, and flattering ourselves that we had attained to perfection in educational matters. This is far from being the fact, however. Our educational system is very faulty, and needs the careful attention of our educationists. We are wasting the time of the average child on things of no practical use. Careful and well considered reforms are very greatly needed, and a decidedly more practical turn given to the common school instruction of our children to fit them for the battle of life. To do this, we will have to reform our Normal Schools, and fit our teachers for the work they should do, for we submit that our teachers have not been properly instructed in the true object of teaching, namely, to fit boys and girls for the realities of life in this eminently practical age. How far this new Canadian publication will contribute to the accomplishment of much needed improvements, remains yet to be seen.

"THE EMIGRANT'S NEW YEAR."

Fare-weel to the year that's fast wearin' awa',
Fare-weel to its poorth and sorrow,
The fortune it brought, wae's me was but sma',
The new ane may giint on us to-morrow!

Last year I was hame on my ain heather hill,
In our wee theekit house by the burn,
Mang neebors I lo'ed, an' lo'e them a' still,
An' I'm deein' o' grief to return!

I ken they a' wish me a Happy New Year,
And speak o' the friends far awa';
But little they ken o' what I thole here,
Or the heart that is burstin' in wae'.

Oh, why did I leave our snug "But an' Ben,"
Our bonnie kail-yard and the Smiddy?
Or what gar'd me sell, to help us out here,
My twa grancie kye an' the cuddy?

Had I the wit then I think I ha'e noo
I wadna be sabbin' an' murrin',
But dark days may brighten e're the next year is
through,

It's "a lang lane that hasna a turnin'."

The Lord has been kind to spare my guid-man
Through sickness that fell on us saif,
He weighs a' our burdens, an' wunna' lay on
But just what He kens we can bear.

There was plenty o' room in our ain native soil
For John an' the callants an' me,
And John and the callants were willing to toil
If the laird had just let us a-be.

But the laird o' the manor maun hae braw hunting-
grounds,
And cared nair for his "game" and his "deer";
He wanted the land for "Preserves" an' his hounds,
And expatriated us here!

They say the "guid folk" will make hames for the
poor,
God send it were this very day,
For wi' strugglin' sae hard, wi' "the wolf at the door,"
Like the year we're fast wearin' away.

Oh, if they'd begin what they said they would do,
An' no daidle, but "do with their might,"
Many blythe hames where dark forests grow
Would shine in God's blessed sun-light!

And my three bonnie laddies wha' weary an' yammer,
An' greet for their parrich an' kail,
Would dance at the sound o' Dad's auld smiddy ham-
mer—

It's for them I am makin' this wail.

Yes; Geordie an' Jamie an' Sandy will grow
Brave men, an' stalwart in body an' mind,
And pride whispers fondly auld Scotia may know
What she's lost by losing sic men o' their kind.

Hops bids me cheer the incoming year
May chase a' our sorrows awa',
And the joy it may bring will gar the "bush" ring
Wi' praise frae the hearts o' us a'.

Montreal.

GRANDMA GOWAN.

SHAFFER'S COLLOSSAL.—The season for this monster raspberry is about the same as the Gregg Black Cap, and the product about twice as much. Our row of two-year-old plants is a wonder indeed. The

bushes stand full six feet high, and heavily loaded with fruit. The size is sustained after all suitable nipping and cutting back has been done; the bush being perfectly hardy and sufficiently sturdy and strong to withstand winds. They should be planted about eight feet by four; 1,360 plants to the acre. They have the red raspberry flavor to a large degree, particularly if picked in the red stage. When fully ripe they form a reddish purple, the proper condition for the table, when they are generally well liked; but for market or evaporating they should be handled when red. As they fill the place of the red sorts very well for common use, and perfectly so for evaporating, they are coming into very general use and demand. The evaporated article is produced at much less expense of time and amount of fruit, and is of excellent quality, hence marketable at paying prices.—*Robert Johnson.*

KEEPING WATERMELONS AND SQUASHES.

—We ate the last of our watermelons Dec. 8th, a large one, a descendant from seed brought from Virginia a dozen years ago or more. This fruit, as usually managed, lasts only three or four weeks in the Northern States. The season may be prolonged through October and November with a little painstaking. Specimens for late use should be picked about a week before they are in their best eating condition, carefully handled, and placed in a cool dry room, where there will be no danger of frost. By the first of October they should be packed in dry saw-dust; clean, dry hay, or cut straw; kept in a dry room and used as wanted. The old-fashioned way of keeping crook-necked squashes, hanging up in the kitchen by a loop of woollen listing, is still in use, and is effective when the room is safe from frost. When the coal is not suffered to go out, they keep well through the winter. The Hubbards and the Marbleheads are good keepers under similar conditions. Where there are closets against the chimney, these and other hard-shelled squashes keep well. The great secret of success is in very careful handling. As a table vegetable, and in pies, these winter squashes are hard to beat.—*WM. CLIFT in American Agriculturist for February.*

"The Canadian Horticulturist."

PROSPECTUS FOR 1885.

The Fruit Growers' Association of Ontario was established for the purpose of collecting and disseminating information concerning the kinds of fruit best adapted to the different parts of our country. To enable them to do this in the best manner, the Directors decided to publish a monthly periodical, which they named *The Canadian Horticulturist*.

This publication has been continued for seven years, continually growing in favor with the public, and being improved in size, appearance, and usefulness, as experience dictated and the means at command permitted. It makes a handsome volume of 288 pages; each monthly issue embellished with a colored picture of some fruit or flower; and filled with the latest information on horticultural matters. It now numbers among its contributors our ablest Canadian horticulturists, who, residing in different parts of the Province, thus give to its readers the results of their valuable experience in our own climate. It is the only horticultural publication, written by Canadians with special reference to our circumstances, and is valuable as a guide to the methods of cultivation best suited to our Canadian climate.

During the year 1885 the Magazine will be conducted as heretofore under the editorial care of Mr. D. W. Beadle, whose ability as an horticulturist and a writer, is recognized not only in Canada, but also in the United States and Europe. He will be assisted by the best writers and most experienced pomologists, florists, botanists and entomologists of the country, by such men as Saunders, Spotton, Dempsey, Allan, Robinson, who are acknowledged as authority in their several departments. It will be handsomely illustrated with colored portraits of fruits and flowers, and engravings.

In ADDITION each subscriber will receive a copy of the Annual Report of the Fruit Growers' Association for the year 1884, now in press, which will contain the discussions at the three several meetings held during the past year, carefully reported by a short-hand writer, besides the valuable reports of the various committees.

BESIDES THIS each subscriber will receive in the spring, by mail, post paid, without cost, whichever of the following articles he may choose, namely: Either a yearling tree of a Russian Apple, grown from scions imported, expressly for this purpose, by the Association from Russia; or of that most beautiful ornamental tree, the hardy Catalpa; or a yearling plant of Fay's Prolific Currant, the most desirable red currant that has yet been produced; or a tuber of a double Dahlia, such as is shown in the beautiful colored plate that embellishes this number of the *Canadian Horticulturist*; or three papers of seeds of beautiful flowers imported expressly by the Association from the best growers in Europe; one each of Diadem Pink, of Salpiglossia, and of Striped Petunia.

FURTHER, each subscriber is entitled to all the privileges of a member of the Fruit Growers' Association, and to receive the reduction in railway fare and hotel accommodation, when attending the meetings.

The subscription price of the *Canadian Horticulturist*, including all advantages, is only one dollar a year, which may be sent at any time, now is the best time, to the Editor, Mr. D. W. BEADLE, at St. Catharines.

THOS. BEADLE,

Chairman Publication Committee.

"CANADIAN HORTICULTURIST" PREMIUMS.

You surely would like to have one or more of the books mentioned below. They are now offered to you for a little exertion, without any cost in money. You can easily have them *all* by a very little effort. If you have not got a copy of the *Canadian Horticulturist* write to Mr. Beadle, and he will send you a copy to show to your friends. It is the only Horticultural Magazine published in Canada, and every body should have it.

The following PREMIUMS will be sent to any one who will get a few NEW SUBSCRIBERS :

To any one sending to the Editor, D. W. Beadle, St. Catharines, *Twelve Dollars* and the names and post-office address of twelve *new* subscribers for the year 1885, he will send by mail post-paid, a copy of *Saunders' Insects Injurious to Fruits*. This is a handsome work, illustrated with 440 engravings, containing 436 pages, bound in extra cloth. Price, \$3.

To the person sending *Six Dollars* and names and address of six *new* subscribers, he will send post-paid, a copy of *Canadian Fruit, Flower and Kitchen Gardener*. The only standard Canadian work on the subject. It contains 390 pages, is illustrated with three handsome colored plates, and 70 engravings. Price \$2.

For *Four Dollars* and names and addresses of four *new* subscribers, he will send post-paid, a copy of *Window Gardening*, a handsome book of 300 pages, illustrated with 126 engravings, cloth binding, price \$1.50.

For *Three Dollars* and three *new* subscribers, he will send, post-paid, *Every Woman Her Own Flower Gardener*, written by a lady, containing 148 pages, neatly bound in cloth, price \$1.

For *Two Dollars* and two *new* subscribers, he will send by mail, post-paid, carefully packed, in the spring, three yearling trees of new Russian Apples, and for *One Dollar* and one *new* subscriber, he will send one yearling tree of a new Russian Apple.

Every subscriber whose name is thus sent to the Editor, will receive the *Canadian Horticulturist* from the first of January, 1885, the Report of the Fruit Growers' Association for 1884, and the subscriber's premium. The premium will be sent to subscribers in the spring, as soon as the plants can be safely removed. The list of subscribers' premiums will be found in the Prospectus.

CLUBBING RATES WITH OTHER PAPERS.

If you would like to avail yourself of our Clubbing Rates to secure two papers cheaper than in any other way, we offer the <i>Canadian Horticulturist</i> , without plant distribution, and <i>Grip</i> for	\$ 2 00
With plant distribution	2 25
<i>Canadian Horticulturist</i> and <i>Rural New Yorker</i> , with free plant and seed distribution of both papers, and Report of Fruit Growers' Association, for	2 65
Or with four plants of Marlboro' Raspberry, in addition to all the foregoing, for] ..	3 00
<i>Canadian Horticulturist</i> and our free plant distribution and Report with the <i>Floral Cabinet</i> , for	1 80
Or with the <i>Floral World</i> and 16 packages of flower seeds, for	1 50
Or the <i>American Agriculturist</i> , for	2 00
Or the <i>American Agriculturist</i> and <i>Cyclopædia</i> , for	2 40
Or with <i>Vick's Monthly Magazine</i> , for	1 75
Or with <i>Scientific American</i> , for	3 50

These clubbing rates are not available for the premiums mentioned above.

WM. SAUNDERS,
PRESIDENT.



SEED Warranted to Grow.

or order refilled gratis. I have sold vegetable and flower seed to over a million farmers and gardeners in the United States, perhaps some are your neighbors, if so ask them whether they are reliable. Mr. Thomas Henshall of Troy, Kansas, writes me: "For 16 years I have dealt with you. I have lived in Iowa, Missouri, Colorado, and Kansas, and no matter what the soil or climate, the result was always the same, to wit:—religiously honest and good." This is the kind of seed I raise and sell. The Hubbard and Marblehead Squash, Marblehead Corn, Marblehead Cabbages, Ohio Potatoes, Eclipse Beet, are some of the vegetables of which I was the original introducer. A Fair with \$500 in premiums. See my catalogue, free to all.

JAMES J. H. GREGORY, (Seed Grower), Marblehead, Mass

IMPORTANT TO FRUIT GROWERS.

It is of the greatest importance to those who are planting Fruits of any kind to get them true to name, and to get their Trees and Plants in good order; and the surest way to do this is to get them direct from the grower. Trees bought from travelling agents who represent no responsible Nursery are liable to turn out very unsatisfactory; and sometimes agents who do represent responsible Nurseries carry the right of substituting so far that the result is not much better. During the last three or four years I have discontinued the agency business altogether, excepting that I supply a few local agents to sell in their own immediate neighborhood, and farmers and others who club together. And I find that in thus dealing directly with planters, I give them much better satisfaction; besides, I can supply them cheaper as I have no agents to pay. I have sent out many thousand Plants and Vines by mail, which have given general satisfaction, besides many more by express to all parts of the Provinces; and I take this method of thanking the many patrons I have who are readers of the *Horticulturist* for their liberal support in the past, and of soliciting further favors.

I am the only propagator of the *Niagara Grape* for the Company in Canada, and all of my customers will be supplied with Vines of my own growing, *Free of Duty*; and planters can judge for themselves whether it would be better to buy from me or from agents who are working for parties in the States.

The Vines can not be got without restriction from any one for less than \$2 each; and I will mail them to any part of Ontario or Quebec, and guarantee them to come in good order for that. I will also give special rates to any one wanting to plant large quantities in vineyards (and will take all but 10 per cent. of pay in proceeds of the fruit) on application.

My *Catalogue and Price List* for the Spring of 1885 is now ready, and will be mailed free to all applicants.

Parties intending to plant largely are invited to send in their lists, and I will give special rates for large orders. Neighbors clubbing together and buying by the 100 or 1,000 will get **Lowest Rates**.

Order Early to Secure the Best Stock.

Special Offers will be made from time to time in the *Horticulturist*. Below is one.

For \$3 I will mail, and guarantee to come in good order, one each of the following:—

The best 5 varieties of White Grapes, good 2 years old Vines, *Niagara, Jossica, Prentiss, Pocklington, Duchess*.

And to those sending the first 10 orders for the above I will add 1 *Lady Washington* and 1 *Jefferson Vine*.

Address: **A. M. SMITH,**

DOMINION FRUIT GARDENS,

ST. CATHARINES, ONT.

NEW FRUITS.

**Strawberries, Raspberries in Variety,
New Grapes, Keiffer Pears, &c.**

Catalogues free.

A. G. HULL,

Central Fruit Gardens, St. Catharines, Ont.

SPECIAL OFFERS.

SPECIAL OFFER No. 2—Of Plants by Mail for \$5. I will mail 1 good two-year old Vine of each of the following 8 varieties of Red Grapes: *Brighton, Vergenes, Jefferson, Lady Washington, Delaware, Agawam, Findley, and Salem.*

SPECIAL OFFER No. 3—For \$5 I will mail 1 dozen each of the 5 best varieties of Red Raspberries: *Marlboro', Hansel, Niagara, Cuthbert, and Turner.*


SPECIAL OFFER No. 4—For \$5 I will mail 1 dozen each of any 8 different varieties of Strawberries selected from my Catalogue.

Plants guaranteed to come in good order.

Address: **A. M. SMITH,**

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**25 YEARS IN THE
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SMALL FRUITS.

Cornelia, Daniel Boone, Prince of Berries, Atlantic, Connecticut Queen, James Vick, and other New and Old Strawberries.

Marlboro', Beebe's Golden Prolific, Souhegan, Tyler, Hopkins, Shaffer's, Hansell, and other leading Raspberries.

Early Cluster Blackberry.

Fay's Prolific Currant.

Gooseberries, Grapes, and other Small Fruits.

First-Class Plants. Low Prices.

Send for **Illustrated Catalogue**, with Colored Plates, free to any address.

W. W. HILBORN,

ARKONA, ONT., CANADA.



VICK'S FLORAL GUIDE

A beautiful work of 150 pages, Colored Plate, and 1000 illustrations, with descriptions of the best Flowers and Vegetables, prices of Seeds and Plants, and how to grow them. Printed in English and German. Price only 10 cents, which may be deducted from first order. It tells what you want for the Garden, and how to get it instead of running to the grocery with disappointment after weeks of waiting.

BUY ONLY VICK'S SEEDS AT HEADQUARTERS.

VICK'S ILLUSTRATED MONTHLY MAGAZINE. Colored Plate in every number, and many fine illustrations. Price, \$1.25 a year; Five copies for \$5. Specimen numbers 10 cts; 3 trial copies 25 cts. We will send to one address Vick's Magazine and any one of the following publications at the prices named below—really two magazines at the price of one—Century, \$4.50; Harper's Monthly, \$4.00; St. Nicholas, \$3.50; Good Cheer, \$1.25; or Wide Awake, Good Cheer, and Vick's Magazine for \$3.00.

JAMES VICK, Rochester, N. Y.



For 1885 is a richly illustrated and elegantly printed book of over 70 pages, with illuminated cover. It tells how to grow all kinds of fruits; gives honest descriptions and fair prices of all worthy varieties, old and new, of Small Fruits, Fruit and Nut Trees, representing the largest and best stock in the United States. Contains full instructions for planting, pruning, and obtaining fruit trees and plants, and is replete with information valuable to all interested in fruit-culture, especially beginners. The different grades are figured, enabling a novice to determine at a glance the size to order. Price, with six colored plates, 10 cents; without plates, 5 cents. Price-lists free.

J. T. LOVETT, Little Silver, New Jersey.

LOVETT'S Bouquet Collection of BEAUTIFUL BERRIES

\$8.50 for \$5.00 Consisting of one dozen, best early and late red Raspberries; each, Hansell and Cuthbert early and late black Raspberries; Seabrook and Gregg Taylor, best early and late Blackberries; Old Iron-Clad, the best early, and Farry, best of all strawberries. Two plants, Farry's Profile, best of all currants, worth at low prices of Guide, \$9.50. Sent by mail for \$5.00, by express for \$4.50, or half the number of each variety by mail for \$3.00. Novelty Collection, consisting of the best new small Fruits: No. 1, value \$18.00, by mail for \$10.00; No. 2, value \$10.00, by mail for \$5.00. Full description of all mailed free. A beautiful picture in oil colors, 9x12 inches, worth the cost of the entire collection, mailed free to each buyer of any of the above collections. Ship to all parts of the country, North, South, East, and West, by mail and express, with perfect safety. Black Raspberries and Peach Trees specialties.

AMERICAN AGRICULTURIST.

100 COLUMNS AND 100 ENGRAVINGS IN EACH ISSUE.

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20,000 RASPBERRY PLANTS.

CUTHBERT, GREGG, MAMMOTH CLUSTER, and others. RUBY CASTLE—The Best Currant. TAYLOR, SNYDER, and other Blackberries. STRAWBERRIES, GOOSEBERRIES, CRAPES and EVERGREENS.

My list comprises the very best Market Varieties that have been thoroughly tested. Grounds kept in first-class order. Price List free.

E. MORDEN, Niagara Falls South, Ont.

FERRY'S SEED ANNUAL

FOR 1885
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