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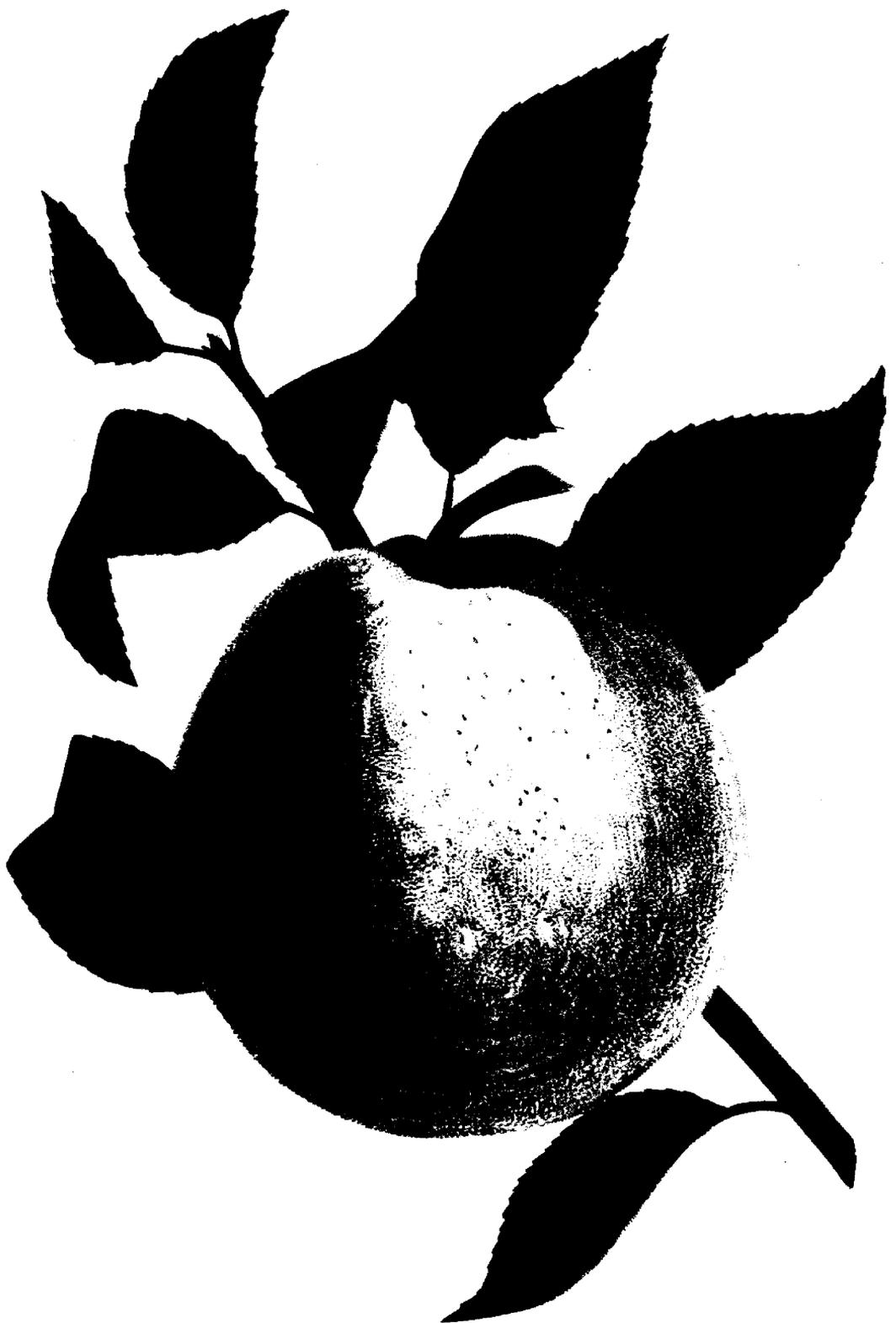
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THE
Canadian Horticulturist.

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THE DOYENNE BOUSSOCK PEAR.



IN placing before our readers the colored plate of the Doyenne Boussock pear, we do not make any pretention of introducing a variety that is at all new, but an old acquaintance, which, after enduring many years of faithful trial, has gradually come to the front as one that is profitable to grow in the commercial orchard. It is not a native of America, but a foreigner, having been introduced at an early date from Belgium. The tree is a vigorous, upright grower, with a spreading head. Mr. P. C. Dempsey, in speaking of this pear at the summer meeting of the Ontario Fruit Growers' Association at Picton, in 1888, stated that he had grown it for twenty years, and esteemed it very highly indeed. His trees had reached a height of some twenty feet, and were abundant bearers, often yielding as much as five or six bushels to the tree. So far his trees have also been quite free from blight, which is the terror of pear growers generally. Flemish Beauty's standing near had long ago succumbed to this disease, while his Boussocks are healthy and vigorous.

This pear can hardly be classed among the best dessert varieties, being estimated by most people as inferior to the Bartlett in this respect. It is, however, free from the musky flavor of the Bartlett, and possesses just enough acidity to make it one of the very best of pears for canning purposes. Mr. Dempsey thinks that it would be impossible to plant too many Boussocks in the vicinity of a canning factory, for no pear is more desirable for sealing down. As a general

market pear, it is highly to be commended. In a basket it has a prettier appearance than even the Bartlett, and when in competition with that variety, will bring an equally high price, besides having the advantage of ripening a few days later.

Mr. McKenzie Ross, of Chatham, stated at the meeting held there in 1887, that he had been growing the Doyenne Boussock in his orchard, and found that it would produce twice as many pears to the tree as the Bartlett. We give in this paper the experience of others rather than our own, because our trees at Maplehurst have not yet come into bearing. We shall be pleased to receive the testimony of any one in Ontario who has fruited this pear, for publication in the next number of our journal.

Mr. A. McD. Allan, of Goderich, speaks of the Doyenne Boussock pear in the following terms: "This is one of the most valuable for the general planter; a strong grower and a very regular bearer of fine, large fruit, good in quality, and always commands a good price wherever the Bartlett will sell. I have known it to be bought and sold as Bartlett. I am glad you are going to give a plate of it in the HORTICULTURIST, as it deserves to be kept before the public."

P. C. Derpsey, of Trenton, writes under date of July 21st: "The Doyenne Boussock pear I have grown for more than twenty years. With me the pear is a good grower on sand, clay or loam, and I have never seen one blighted branch, though other varieties all around it have been blighted. The fruit is always large and firm, if not allowed to overbear. Sometimes it needs thinning. I consider it one of the best market pears we have, and I believe it to be one of the most hardy.

The following description of the Doyenne Boussock pear is taken from "Downing's Fruits and Fruit Trees of America":

"Fruit varying in form, obovate, inclining to pyriform, or roundish obtuse obovate. Skin rough, deep yellow, netted and clouded with russet, with a warm cheek. Stalk rather short and stout, inserted in a round cavity. Calyx open. Basin shallow. Flesh buttery, juicy, melting, sweet, aromatic, and excellent. Very good. September and October."

BUCKWHEAT FOR TREES.—The North Dakota *Farmer* says that two years ago a Central Dakota farmer planted five acres of box elder and cottonwood trees one year old, having previously prepared the land. He then sowed buckwheat quite thick, which grew luxuriantly, and being left uncut, served as an excellent mulch, protecting from the hot sun of July and August, the cold winter, and alternate freezing and thawing of early spring. The land was well seeded from the first crop, and another heavy crop was allowed to grow last year, and left on the ground as before. The trees have stood both winters well, and the percentage of loss is very small. The buckwheat straw subdued the weeds and saved the labor of repeated cultivation.—*O. T.*

NOTES FROM MAPLEHURST.



HOUGH chiefly used as a commercial orchard, in which are cultivated on a large scale only those varieties which are most profitable, yet so many new varieties are constantly sent in for testing that it has become necessary to set aside a portion of the ground for their reception, and to take notes of their behavior. In doing this we shall in no way encroach upon the experimental station work, as such undertakings are too expensive for private individuals, and require a farm, wholly devoted to that line of operation; our plan will be to simply try those fruits, new or old, which experimental stations have first tested and recommended, and give to our other fruit growers our estimate of their value from a business point of view.

STRAWBERRIES.—Of about sixty varieties of strawberries under trial, we have discarded all except about a half dozen for the market plantation. No money can be made, in our opinion, from the Ohio, Burt, Pineapple, Itasca, Cloud, Seneca Queen, Belmont, May King, Downing, Old Ironclad, Cumberland or many others; even the *Crescent* is too soft and often too small. *Parry*, though promising fine, because its berries stand up above the leaves and are a fine size, disappoints one's expectations when quarts are to be counted. *Jessie* is magnificent under favorable circumstances on moist soil; and, for the table, it is one of the best, in our estimation, for it is very large, fine shaped, a good color and of an excellent flavor; but for market it disappoints one, for it gives us few quarts to the acre, and on dry soil it is a scant bearer and the fruit is small.

For market we would be inclined to head the list with *Bubach*, for it averages larger than any other variety, and is at the same time very productive, even in the dry season. The chief fault is that it is not very firm and will not keep very long. This season we received nearly double for this berry than we did for the *Crescent*.

Saunders (Little's No. 10), which originated with our old friend, Mr. John Little, compares favorably with the *Bubach*, both in size and productiveness; the fruit is large and conical, slightly flattened, with several depressions; the color is a deep red and glossy; flesh is sprightly and agreeable.

Haverland and *Warfield* have already had a good deal of attention in these columns, and we think deservedly, and especially the former, which is a large and very attractive looking berry.

Logan is a new berry from Indiana, and the plant is thrifty and productive. The berry is large and showy, roundish and even in form; quality is good, and altogether it is very promising.

Eureka originated in Ohio, and is a very vigorous and healthy grower. The berry is large, firm, conical, chopped off at the point. The quality is good.

These six are our choice for the market garden ; perhaps we shall include the *Williams* after a year's trial. Mr. Greig has favored us with one hundred plants for testing, and our report will appear next season.

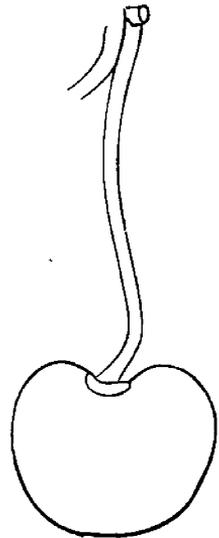
THE CHERRY CROP this year is something extraordinary. Given a crop like this, and with such immunity from rot as we have this season, and no small fruit crop would pay better. Even the Yellow Spanish, Rockport Bigarreau, Napoleon Bigarreau and the Elton, though overloaded with fruit, have been harvested without a sign of rot.

The great problem of gathering has been solved in the Niagara district by the employment of Indian labor. Hundreds of Indians and squaws from the Indian Reserve at Brantford are tenting about and picking fruit ; and the general testimony of growers is that the work is well done and that these people are honest and respectable. Our crop ran over 500 baskets this season, many of which must have wasted on the trees but for their aid.

Reine Hortense is the finest cooking cherry grown at Maplehurst out of some twenty-five or thirty varieties. It is a vigorous growing tree and quite productive of fine large fruit ; the skin is a bright, lively red, somewhat marbled and mottled ; the flesh is very tender, with just enough acidity to class it among the sour cherries and to make it a delicious morsel. It is just now, 11th July, ripening in the garden, and is preferred by the good housewife above all others, as a cooking cherry.

This cherry reminds us of one of another very similar variety, the *Empress Eugenie*, which has similar excellent characteristics ; and so long as our tree endured, no other cherry was wanted for cooking or canning. It grew to a fine size, with an open spreading head, indeed it equalled in strength of growth the most vigorous of the heart cherries ; but, like many of the Dukes and Morellos, it is badly subject to black knot, and in the end it had to be cut down and burned. We notice that the *Reine Hortense* is also being effected by the same disease, even worse than the Kentish or the Early Richmond. Still, we have confidence in being able to save our cherry trees from this trouble, so long as we are careful to cut off each knot on its first appearance. Our late Kentish trees were almost covered with them two years ago, but the faithful application of the knife was so effectual that we have had little or no occasion to use it since.

The *Vladimir*, received from the Association two years ago, is bearing abundantly this year with us, as we suppose it is doing with many others. We would like to receive reports from our subscribers concerning its hardiness at the north. The cherry is quite dark colored, and of a very mild, sub-acid flavor, with a slight touch of bitter. It is too small a cherry to be grown for market in Southern



REINE HORTENSE.

Ontario. Has it any value at the north? for its chief point of merit is supposed to consist in its hardiness.

The *Montmorencys* seem to be excellent bearers. Some trees set out a year ago are already doing their best to give us a good crop of fruit.

THE RASPBERRY ROOTBORER is quite bad with us in some of our older plantations. We noticed first some canes sickly and dying, and upon pulling them up and cutting open we found the enemy safely hidden away in his tunnel just about at the neck of the root. In appearance it so resembled the peach-borer (*Ageria exitiosa*), that our foreman declared it one and the same; but further investigation proved it to be another species of the same family, viz., *Ageria rubi*.

On inquiring of Prof. Jas. Fletcher, Ottawa, he responded as follows concerning this borer: "I fancied I had good results in treating this insect over a limited area, in a small garden, by applying wood ashes around the roots of the plants. Strange to say, I have seen the moths lay their eggs on the leaves nowhere near the roots. Another row I treated with carbolated plaster, as prepared by Prof. Cook, and was also successful with these. Until I stopped them they were entirely clearing out a fine lot of Brinkle's Orange and Cuthbert raspberries, which I grew in my garden at Stewartville. I took young shoots and transplanted them to another part of the garden, keeping them well treated, and then I never could find another specimen."

GROUND BONE AS FERTILIZER.—In a report on experiments made at the New Jersey Station with ground bones as a fertilizer, it is pointed out that ground bone is both a phosphate and a nitrogenous manure, insoluble in water, but when in the soil is decomposed and yields its constituents to the feeding plant in proportion to the fineness. It varies but little in composition and is less liable to adulteration than most fertilizers. They, in fact, are usually pure. Ground bones have a tendency to cake, and to avoid this the manufacturer may use other substances, which, while aiding mechanically, reduce the chemical value of the mixture. Raw bone is most usually pure, but the fat it contains renders it less easily decomposed. Bones having served the purpose of the glue maker are low in nitrogen and very high in phosphoric acid. The method now employed of steaming the bones under pressure improves their quality without altering the amount of the plant food ingredients. As the value of ground bones depends upon composition and their fineness, a mechanical as well as chemical analysis is required to determine their value. The farmer must determine by crop tests which grade he should buy—whether, for example, pay a dollar for ten pounds of phosphoric acid in one condition, or for eighteen and a half pounds in another form. Average wood ashes are worth \$9 per ton, but the best vary considerably.—*Fruit Growers' Journal*.

MILDEW OF THE GRAPE.



THE disease, particularly referred to in the following, is known among viticulturists as "downy mildew," "brown" or "gray rot" of the grape, and to scientists as *Peronospora viticola*, and was very severe last year in many grape growing districts. It has been particularly destructive in the Eastern and Central States, and also in Western Ontario. Last year it was prevalent in vineyards in the Province of Quebec, and also in the Ottawa Valley.

As a rule it is first noticed on the fruit when about half formed, presenting a downy and frosted appearance, which gives place to a grayish-brown in the later stages. The berries shrivel and fall to the ground when slightly shaken. Beginning with one or two varieties in the vineyard, the disease if allowed to run its course will spread rapidly, attacking other kinds, which were at first entirely exempt.

It usually affects the leaves and wood later in the season, sometimes in the case of early varieties after the fruit has been gathered. This stage of the disease was prominent as affecting the Roger Hybrids in the Experimental Farm vineyard last season.

At first it is seen on the upper surface of the leaf shown in brown spots, while the lower surface presents the frosted appearance resembling that form of the disease affecting the fruit. This particular leaf form is not easily detected on grapes having the thick pubescent leaves characteristic of the Concord family.

TREATMENT.

Carbonate of copper.....	2 oz.
Ammonia.....	1½ pints
Water.....	25 gals.

As soon as the mildew made its appearance last year on our vines they were thoroughly sprayed with the above mixture. Two applications and the removal of all diseased berries had the effect of checking the spread of the malady, but at the same time demonstrated—when compared with the results of my former experiments—that the proper line of treatment leading to complete success, lies in the *early application* of the remedy.

The following is the course of treatment planned for the vineyard of the Experimental Farm this season :

1. All prunings, leaves, etc., to be carefully burned.
2. When vines are uncovered spray them—including the posts and trellises—with a simple solution of copper sulphate (blue vitriol) 1 lb, dissolved in 15 gallons of water.
3. Spray with the ammoniacal copper carbonate using the formula already given soon after the fruit sets ; make two or three additional applications at intervals of ten days or two weeks, as the necessity of the case seem to demand.
4. Remove and destroy diseased parts of the fruit and foliage.

Bulletin 10, Experimental Farm, Ottawa.

PLAIN HINTS ON FRUIT GROWING—NO. V.

KEEP THINE OWN VINEYARD.



HERE are three aspects under which profit is realized by the successful tiller of the soil

1. That for which by far the greater number engage in it, viz., to make money or *temporal gain*. "Will it pay?" is about the first question that is asked by the many who are about to launch upon the tide of effort in gardening and fruit growing. And the answer to this question, affirmatively, depends so much upon the right judgment, well directed effort and *perseverance*, which must necessarily be brought to bear in order to succeed, that it is little wonder that many fail to make it pay.

Many, who have succeeded in various lines of effort in business and the professions, think that it is an easy matter to retire on a piece of land and "go to gardening." Others again who have failed in everything else, think that, as a "dernier resort," they can fall back on gardening as a paying occupation. But without experience, or a knowledge of the obstacles they must surmount, they go at it, like shooting an arrow at a venture, and, ten to one, *fail*.

Others again, sit quietly down, count well the cost; look on both sides of the question, and in the face of all possible chances of success or failure, grasp the practical and put it into execution, and, ten to one, *succeed*. And when success in a financial point of view has crowned their efforts, and they have mastered the situation fully, they can enter upon the

2nd aspect of profit, which is, *physical health*. In order to enjoy a good degree of bodily health and vigor, there should be an easy mind in a sound body, and both have that action in the proper season, which causes a relish of both *food* and *rest*. These rightly enjoyed, with all care and anxiety kept under foot, their recipient is prepared to enter upon the

3rd aspect of profit, viz., a *devotional frame of mind*. If we never rise above the financial or physical gains of our occupation, we are but poor indeed in the field of pure enjoyment and real profit. If we can go out into our gardens and lay aside all carping cares and temporal distractions, and rise into the sublimity of meditation upon the works of our Heavenly Father, then we can render a tribute of praise and thanksgiving for all that we are privileged to enjoy, and take both courage and comfort in the pursuit of the noblest of all earthly callings, the tilling of the soil, in its various aspects and varied returns.

As a prolific help to our three-fold means of enjoyment, one would earnestly present the thought contained in the heading of this paper, "*Keep thine own vineyard.*"

It pays in a financial sense to look after your garden or farm, in *person*, not to trust to careless employees, who, oftener than otherwise, think of putting in

the time instead of furthering the interests of their employer. Be up in the cool of the morning, take the hoe or spade in hand *yourself*, put in an hour-and-a-half at some profitable effort before breakfast, and it will not be long, if you *persevere* before you will see how it will pay financially. Then you will have a hearty appetite for your breakfast, and you can eat so as to strengthen your body for four or five hours, honest toil before the dinner hour. If you have hired help, your presence with them in the work will inspire them with respect and confidence, and they will work with a better relish if the "boss" takes a hand with them. Besides you will have a better knowledge of what is to be done and how to direct labor to advantage, then if you trust everything to a "foreman" as some do. *Be your own foreman*, and you will not only profit financially and physically, but you will be able to sympathize with the laborer, and be more inclined to humility in your intercourse with your fellow-men around you, a quality very precious in the sight of God and man.

There are more of the elements of success wrapt up in your own individuality than you may think, and if properly applied they will render their consequent fruits in due season. This may seem like foolish talk to the man who lies in bed to seven or eight o'clock, and gets up to breakfast without breathing the fresh air of the morning; but to the practical man, who hopes to succeed and *enjoy* his success, it is quite in place if they put it in practice, as it has been the privilege of the writer of this paper to do. It is said of the late Peter Henderson, who was a noble example of success in the garden industry, that he personally superintended his various lines of effort, and at one time an editor of a horticultural magazine in Boston, who had published some of his contributions, visited him at his garden near New York and found him on a manure pile turning it as a preparation for further use. There is true grace in the *come down* principle, from the sublimity of ideal conception to the practical needful effort of everyday experience. It is well to have right theoretical conceptions, but if not accompanied with practical manifestations, they are of little or no value. Patience, perseverance, calmness of mind, trust in God, and a teachable spirit are all necessary if we would each keep his own vineyard, and these, accompanied by a proper application, in their due season, of such means as produce the required results, all combine to develop the three-fold profit to purse, body and soul.

Nepean, July 10th, 1891.

L. FOOTE.

ROSE BEETLE AND HOT WATER.—The R.N.Y. reports having experimented with hot water as an insecticide and been quite successful. The rose beetle was found to succumb to a spray of water heated to 125 degrees, and was rapidly exterminated, and some bushes were completely cleared of them by the use of this simple remedy. The potato beetle was found able to endure water of this temperature; but it was destroyed by the application of water of a temperature of 150 degrees.



PACKING AND MARKETING FRUIT.

PACKING, marketing and selling are all factors so important and so well understood that it would seem of little use to mention them, and yet often choice fruit is so badly handled in picking and so neglected in sorting and packing that it cannot be sold with profit to the producer. The fact is, that many good men, conscientious as to everything else, are exceedingly neglectful, to say the least, in handling their fruit, and then complain bitterly because their commission merchant, or whoever handles it, fails to render returns corresponding with quotations on choice grades. My friends, "this ought not so to be." A man's name or number on a package of fruit should be a guarantee of its quality, and instances there are where such is the case, in which fruit, bearing such and such trade marks, is sold every year far above market quotations. Such fruit, however, is carefully graded, and everything at all imperfect is marked *number two* on the package. Better that all should be marked number two than that your character should bear the stigma of that work. A few years since, early one morning while looking over the markets in one of our eastern cities, and engaged in conversation with a salesman, a passing buyer enquired the price of some quinces. The quotations given were one dollar per keg higher than the market rates. This raised a question from the purchaser, which was answered at once by the salesman as follows: "Those are guaranteed good, sir; no imperfect specimens in those packages. We never open packages that carry that mark. If they do not bear our recommend, return them at our expense and we will return your money." It so happened that I knew who they were from, and I should say that the adoption of this careful plan of putting up their fruit has led to a large direct trade as between the consumer and producer, by means of which the party frequently saves the expense of middleman, and in addition gets extreme outside prices for their fruit. The fruit grower cannot too carefully guard his reputation for honesty and fair dealing, and I am sure a strict adherence to such principles on the part of all would greatly aid to raise the character and value of the products of Western New York fruits to a point where they would command the highest price of any upon the market.—S. D. WILLARD, *Geneva, N. Y.*

CRANBERRIES IN AMERICA.—Prof. L. H. Bailey, of Michigan, writes to the *London Garden*, that "it is only thirty years ago that the Cranberry was known in a wild state; now it is much improved, and several good varieties have been produced. He states that in New Jersey alone there are some 5,200 acres under cranberry culture; that the leading cranberry-growing States are Massachusetts (near Cape Cod), New Jersey, Wisconsin and Connecticut, and that the entire crop in the United States last year from cultivated plants was probably not far from 600,000 bushels.



VIEW OF HORTICULTURAL HALL, WORLD'S COLUMBIAN EXPOSITION.

THE WORLD'S FAIR HORTICULTURAL BUILDING.



AGNIFICENT preparations are in progress at Chicago for the World's Fair of 1893. No money is being spared by our American friends to make this exhibition equal, if not surpass, the famous Paris Exposition of 1889. Already more than \$10,000,000 have been subscribed by the various States of the Union, besides which, as much more is expected from gate receipts and other privileges. A vast extent of land has been devoted to the purposes of the fair, including several parks, such as Washington Park and Jackson Park, the latter of which has a frontage of two miles on Lake Michigan. In all, there will be nearly one thousand acres set aside for the use of the exhibition. Artificial canals and lakes are also being made, which will add very much to the landscape effects.

The directors are already well assured of a grand success, so far as the display is concerned, as some twenty-one foreign nations have already accepted the invitation to participate, including Chili, Turkey, Denmark, etc.

We have no room in this journal to speak of the great Machinery Hall, costing some \$450,000; or the great Administration Building, the architectural gem of the exhibition, costing some \$750,000, and, strange to say, made of material which will only last for about two years; nor of the great model of the battle ship, "Illinois," which to all appearances will be genuine, made at a cost of \$100,000, and an exact model of a ship costing \$3,000,000.

It is more in our line to speak of the Horticultural Hall, a building designed by a Chicago architect and to cost some \$400,000. It is 1,000 feet in length and 286 feet in its extreme width. The plan is a central pavilion with two end pavilions, which connect with the central by front and rear courts, and these are decorated in colors and planted with ornamental flowers and plants. In the centre there is a crystal dome 187 feet in diameter and 113 in height, in which will be exhibited the tallest palms, bamboos and tree ferns. Here will be exhibited all varieties of fruits, plants, flowers, wines, seeds, horticultural implements, etc.

The accompanying engraving represents this building and is one which appeared originally in the *Scientific American*.

It has not yet been decided as to what extent the Ontario Fruit Growers' Association will take part in the fruit exhibit, but it is most desirable that a large and creditable display of Canadian fruit should be made at this fair, and there is no other organization in Ontario so able to take it up as our Association, providing that the necessary funds are provided.

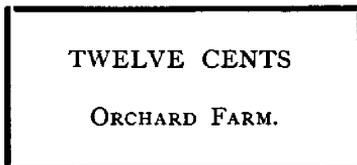
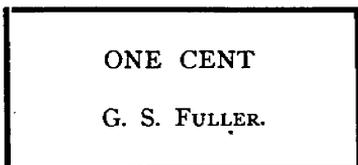
HORTICULTURAL HINTS.

MARKETING THE MELON CROP.—The shipment of the melon crop to New York from the South has begun. The crop is a very large one and growers realize that great care must be taken to realize good prices. Accordingly they have asked the railroads to help them by keeping out all melons under weight, 18 lbs., and those sunburned, deformed, green or overripe. The crop this year is estimated at 44,000 acres and the season lasts from June until October, beginning with Florida melons and ending with those in the North, Jersey melons ripening during September. The Southern melons are shipped over the Atlantic coast dispatch line. They are packed in refrigerator cars, which are so timed as to arrive in New York in the night, and are not touched from the time they arrive until there. Receivers are compelled to pay the freight charges, which are \$120 for the allrail route and \$100 for the part steamer. Each car contains 1,200 melons. The Georgia melon growers' association met at Albany, Ga., on June 5th and decided to employ six commission merchants instead of one as formerly. They also pledged themselves to ship no melons under 18 lbs., nor any defective ones.

THE FIRST PRIZE STRAWBERRIES.—If you want the finest and nicest strawberries next year do not allow your plants to set runners. Keep them cut off and where every runner is cut off there will come up a fruit spur next spring that will bear many berries. The quickest and easiest way to keep back the runners is to go through the patch every week with a good sharp hoe. Do not cut off merely the runners, but take all the weeds as well. It is necessary to keep the ground cleared of weeds so that the plants may receive all the strength of the soil. Running the cultivator through the patch every ten days or two weeks will help in time of drouth and make the hoeing much less work. If you want fine berries and are willing to give the plants a little extra care, the hill system is by far the best. Where the matted row system is followed the weeds are a little easier kept down, but the berries will not be as large or handsome. In starting the matted rows the runners are allowed to take root between the hills.

A NEW WAY OF SELLING.—The plan of selling fruit at auction is meeting with much favor whenever tried. In New York, oranges, lemons and many tropical and sub-tropical fruits are sold this way. The first carload of 1,200 boxes of cherries that came into the Chicago market from California this year were put up in that way and were all sold in twenty minutes. A consignment of fruit is taken and two or three samples are opened and looked at by the buyers. The auctioneer announces so many packages of such a mark. The bidding begins and the highest bidder can take the whole lot or as many packages as he wants. By this plan the buyer pays only what a thing is worth and the seller is sure of getting all that his goods will bring.

HOW TO PAY FRUIT PICKERS.—How do you pay your berry pickers? The easiest, best, quickest and most satisfactory way to all hands, is by a system of tickets. These tickets are similar to those used by milk peddlers in cities and villages and are made of stiff cardboard an inch and a quarter wide and two inches long. These should be of different colors so as not to get them mixed. Have printed on the tickets of one color your name and the amount which it stands for, as 1c., 10c., and so on, thus :



If your picking tray holds eight baskets you should have a lot of 8 and 16c. tickets so as to give one ticket for a full tray. Tickets of the denominations of 1c., 4c., 8c., 16c. and \$1 are found to be all that are needed and make change very readily. The dollar tickets are to change with the pickers at the end of the day's work. These tickets can be cashed with money at night or at the end of the week or season, but the pickers should retain them until they are changed for money. This system saves the keeping of an account with each picker, which takes a long time to write up and always leads to a dispute. Where you keep accounts, pickers often insist that you did not credit them with all they have done, but with this system there is no chance for a dispute, for you pay them in money for only what tickets they present. Many use these tickets and have quarts and pints printed in place of cents, but this is not so satisfactory because a uniform price is not paid all through the season, and for all kinds of berries and small fruits.—*Farm and Home.*

SALICYLIC ACID.—In a recent study of so-called "Prohibition beverages," which contain not more than one per cent. of alcohol, Prof. C. F. Robinson, of Bowdoin College, has made some interesting discoveries. As a result of them, he cautions the public against indulging in the use of these drinks, assuring them that they are more harmful than beverages of the orthodox kind, containing much more alcohol. This arises from the fact that these milder beverages contain salicylic acid, introduced for the purpose of preventing fermentation. This drug, he says, used in any preparation of food or drink acts with dangerous effect on the kidneys and is almost certain to produce Bright's disease. We have previously warned our readers against the use of such preservatives. A salt widely advertised to preserve butter, was shown by analysis to contain this drug. All recipes and powders hawked about the country and sold at fairs, and which are guaranteed to preserve fruit without hermetical sealing and to keep cider perfectly sweet, are nothing but salicylic acid, and their use has caused thousands of cases of kidney disease. Leave all such preparations in their owner's hands. They are dangerous to health.—*Fruit Growers' Journal.*

* The Kitchen Garden. *

GROWING CAULIFLOWERS.

An excellent book on "How to grow cauliflowers" has been written by Mr. A. A. Crozier, Botanist, of Ohio Experiment Station, and Secretary of the Pomological Society; cloth, pages 230; and published by the Register Publishing Co., Ann Arbor, Mich., 1891.

This being an age of specialists, books on special subjects are needed nowadays, rather than those dealing in generalities. This book, devoted entirely to cauliflower growing, is exactly in the right line and must be invaluable to those who are situated advantageously for the prosecution of this industry. Two or three requisites seem necessary for success with it, and chiefly a rich loamy soil, and convenience for irrigation. Such a soil is found in the eastern part of Long Island, in the county of Suffolk, where nine-tenths of the cauliflowers are grown which come into the New York markets. So well is the soil of this island adapted for growing cauliflowers that the revenue thus derived from this county is \$200,000 per annum. Peter Henderson claims to have made in a prosperous year as much as \$1,500 off of an acre of cauliflowers, and \$300 per annum is said to be a very ordinary income. It is claimed by some that there is more money in the growing of cauliflowers than in celery, even providing the work can be carried on successfully.

But it is not in every place or by every man, that such success can be attained. One of the chief difficulties in growing this vegetable is in securing heads. A New Jersey market gardener says he only got 500 heads from 2,500 plants he had set out. He attributed the failure to late planting. But, on the other hand, success does not reward the efforts of many who understand the business, and it is for those persons who wish to achieve the best results that such a book as Mr. Crozier's is written. It gives full information about soils, fertilization, planting, cultivation, keeping and marketing. It describes 150 varieties; it points out the enemies and how to destroy them. It gives the history of the vegetable and, in short, is such a complete work on that subject that we can recommend it with pleasure to our readers.

The Rural Home remarks that beets are very easily grown and may be forwarded a week or two by starting the plants in the hot bed. Quite dry, sandy soil will grow good beets for early use. Sow in rows a foot apart and quite thickly in the rows so as to have some beet greens in June. The early Egyptian is the earliest and is a fine beet for early use. Dewing's Early is better for keeping. The Eclipse is very early and a first-rate beet.

THE CAULIFLOWER.



In the cultivation of the cauliflower everything depends on keeping up a steady vigorous growth, for if the plants are checked in their growth, they are liable either to form small heads prematurely, or to continue their growth so late as to fail to head at all. Level cultivation is usually practised, the same as in ordinary field crops. Drawing the earth to the stems, as sometimes recommended and practiced abroad, is unnecessary, though with tall growing varieties it serves a useful purpose in preventing the plants being blown over by the wind. Cultivation should continue until the leaves are so large that they are liable to be broken off, or until the plants are nearly ready to head. The application of a mulch of manure or litter at the time cultivation ceases, is an excellent practice, though seldom resorted to. It is important that deep cultivation should cease at the right time, even if the hoe has to be used afterward. The crop may be seriously injured, or at least delayed, by cultivation after the plants begin to head. At this time the ground should be undisturbed so that the roots may occupy the entire soil. Dry weather, and the compact nature of the soil after cultivation ceases, check the growth of the plants, and promote the formation of heads, providing the plants have attained a proper age and size. The influence of a firm soil in promoting heading is also seen in the success with which the cauliflower can frequently be grown after peas or other early crops. In autumn the first sharp frosts appear to be particularly efficacious in starting the plants to heading.

IRRIGATION.—After heading has commenced is the time when irrigation is most needed. An abundance of water at this time will aid greatly, both as to the quantity and quality of the product, particularly if some fertilizer is added at the same time. Irrigation is not often practised in this country, except in the arid districts of the West, and, occasionally, with the early crop, near a few of our cities. In Europe, where labor is cheap, it is often resorted to, even where the water has to be carried by hand. Early in the season, if irrigation is needed, once a week is frequent enough to apply the water, but while the plants are heading it may be applied with advantage every day if the weather is dry.

BLANCHING THE HEADS.—The value of cauliflowers for use or market depends almost entirely on their being white and tender. To have them remain in this condition until fully matured, they must be protected from the sun. Heads which are left exposed become yellow in color, or even brownish purple, if the sun is very hot. Such heads also acquire a strong, disagreeable flavor.

There are various ways of covering the heads, but it is nearly always done with the leaves of the plant. Early in the season, when the weather is dry and warm, the work may be done during the heat of the day by lapping the leaves, one after another, over the head until it is sufficiently covered, tucking the last

leaf under to hold all in place. Or the leaves may be fastened by a butcher's skewer, or any sharp stick. In Florida, orange thorns are employed for this purpose. Care must be taken not to confine the heads too closely, or they will grow out of shape, besides being liable to heat and become spotted. Later in the season, when the weather is cool and damp, the leaves will be too stiff to be bent down, and the head must then be protected either by placing over it leaves broken from the outer part of the plant, or from stumps from which the heads have already been cut, or by tying the leaves together above the head. The latter is the usual method, rye straw or bases matting being generally used for the purpose. Merely breaking down the inner leaves upon the head is unsatisfactory, as the growth, both of the leaves and the head, soon causes the head to be exposed.

The artificial blanching of the head is most important early in the season, while the sun is hot; and the field should then be gone over as often as every other day for this purpose, taking two rows at a time. Later in the season, during damp, cloudy weather, heads will sometimes reach full size and still be of good color though entirely exposed. It is unsafe to leave them in this way, however, as a little change in color seriously affects their market value. Covering the heads appears also to cause them to grow larger and remain solid longer than they otherwise would, particularly early in the season.

RETARDING AND ACCELERATING HEADING.—It will sometimes happen early in the season that one desires to retard the development of the head until the convenient time for marketing. For this purpose the plants may be lifted when the heads are nearly mature, and set under a shed or elsewhere in the shade.

It may be well here to remind those who grow only a few plants in a garden, and who wish to prolong the season, that several cuttings may be taken from a single head if desired. A portion of the head should be left each time. Occasionally, but not often, a stump will sprout and form a second crop. A method of accelerating the formations of heads, which is practised in Ireland, may also be worth recording. It consists in slitting the stalk from near the ground upward toward the heart, and placing a stick in the slit to prevent the parts uniting. The soil is then drawn up around the cut, and the plant staked to prevent it breaking off. It is said that plants so treated will form their heads from six to eight days earlier than they otherwise would.

COOKING.—Four rules, never to be deviated from, may be laid down; first, that the cauliflower is to be soaked in salt and water for at least a half-hour before cooking, in order to drive out any insects or worms that may be lurking among the flowerets; second (if to be boiled,) when ready for cooking, the vegetable is to be plunged into salted, thoroughly boiling water; third, it is not to be cooked a moment after it becomes tender; fourth, to be served as soon as done. Neglect of any of these points is sure to result in failure, while a careful following of them will give a wholesome, delicate dish, and one that will be eaten with gusto and remembered with pleasure.

A very simple method of serving cauliflower is with milk and butter, after the manner of cabbage, but a more elaborate white sauce generally accompanies it. This is the familiar drawn butter sauce, to which may be added a little vinegar or lemon juice to give piquancy of flavor. Sometimes this sauce is varied by adding milk or cream to the flour and butter, when it is called, "cream sauce."—*From, How to Grow Cauliflowers, by A. A. Crozier.*

THE FRUIT CROP.

As the season progresses it is becoming more and more evident that the estimates which have already been given in this journal are correct, and that the crop of apples and pears will be comparatively light all over Ontario. In a few counties about half a crop is reported, but, for the most part, it will not be over one quarter of the average, either in apples or pears. Fortunately, however, the sample will be beautifully bright and clean, a great satisfaction both to the grower and to the dealer, saving the former much waste of fruit and much labor in picking, and giving to the latter much more satisfaction in the sale of the crop. Under these circumstances it is quite possible that our fruit growers may find the proceeds of their orchards more encouraging than in those years of great abundance, when much of the fruit is inferior and has either to be rejected or sold at a low figure. At the present writing the Red Astracan and Early Harvest trees are breaking down with their loads of fruit, but these are almost the only varieties of which such a thing can be said. As there are not very many early apples grown throughout our country in a commercial way, the price of these will not average very low. Indeed, they are at the present time starting at a high figure, being quoted at 40 cts. per twelve quart basket in Toronto and from 50 cts. to \$1 in Montreal; while in barrels they are being sold at from \$3.25 to \$3.50. The "Trade Bulletin" seems to think that there is a good deal of humbug in our statements concerning the short crop in the Niagara Peninsula, because in spite of the statements last year that there was no crop in this section, there were harvested from it from eight to one hundred thousand barrels. This is probably an over-estimate of last year's apple crop, but, granting it correct, it simply shows to what an enormous figure a full crop would reach, should we ever be so favored as to have one. The whole country, from Hamilton to Niagara, is rapidly developing into one vast orchard and the importance of the industry in this section of country can scarcely be over-estimated. For instance, take Grimsby section, which is counted in many respects the fruit centre of this district, and look at the shipments by express during the year 1890, a year when there was really no crop at all, considering the number of orchards and gardens in this vicinity. That year the fruit shipments from this place by express were as follows: June, 1765 baskets; July, 4214; August, 3906; September, 6909; October, 3445. Total, 20,239 baskets!

The *plum* crop in most sections is very small, and, although in a few places something above half a crop was reported, yet even in these, according to the latest information, the ravages of the curculio have reduced the percentage exceedingly.

The early *peaches* are beginning to ripen, but they are scarcely up to their usual size, and are dropping very considerably from the attack of the curculio. The yellows, too, is showing itself on many of the young trees, a disease which causes the fruit to be unmarketable, and is so rapidly clearing out many of our finest peach orchards.

A fairly good crop of *apples* is reported in the Annapolis Valley, the great apple producing section of Nova Scotia, but in New York State the apple crop is no better than it is in Ontario, and that means a general failure.

The following are some of the latest reports from our correspondents :

NEW YORK STATE—*Sir*,—The prospect is that there will be a very full crop of peaches in Western New York. Apples are a failure so far as Baldwins are concerned, and that variety being the leading one in Western New York, the crop of apples must be short. There is a very fair standing of Greenings and some other varieties. The crop of pears is a full average; crop of plums about two-thirds. The quality of the fruit, from present appearances, will be excellent.—S. D. WILLARD, *Geneva, N. Y.*

SIMCOE COUNTY—*Sir*,—Apples in this county will not be more than half a crop. Since my last report they have fallen from the trees to such an extent that, although there was a prospect then for a fair yield, they will not now average more than half a crop. Cherries, where not destroyed by the black knot, were very fine, and have yielded a full crop. Plums, badly damaged by the curculio, but will still be a fair crop. Pears are not much grown here; the blossoms were damaged by frost, and the yield will probably be light. Grapes, coming on well, but very few are grown in this locality. I believe apples will be very fine this year as to quality; they seem to be free from fungus and scab, and, so far, there are very few wormy ones. Fruit trees of all kinds look remarkably healthy and are making great growth.—G. C. CASTON, *Craighurst, Ont.*

Sir,—Plums will be from 65 to 70 per cent. of an average crop. The curculio is reducing it very considerably.—G. M. AYLESWORTH, *Collingwood, Ont.*

Sir,—Taking 100 as a full crop, the following is my estimate in this section:—Apples, 50 per cent. of average crop; pears, 10; plums, 100; cherries, 100; tomatoes, late, 100; grapes, late, 80. The grapes were backward in coming in bloom, and since the wet are sending out fresh bloom, which is something new. There are large quantities of wild raspberries being brought into the market and sold at from 75 to 80 cents per ten-quart pail. CHAS. HICKLING, *Barrie, Ont.*

PEEL COUNTY—*Sir*,—Small fruits are a very average crop; plums will yield about 40 per cent. of average; apples about 25; pears 20.—A. MORTON, *Brampton, Ont.*

PERTH COUNTY—*Sir*,—With the exception of strawberries, small fruits in this section have turned out an abundant crop. Cherries were far more than were expected; plums are hanging on the trees in great quantities. Early and fall apples will be scarce, but the crop of winter fruit promises to be fairly good, that is, enough for home demands, but very little for shipping.—T. H. RACE, *Michell, Ont.*

WENTWORTH COUNTY—*Sir*,—The apple crop is light; very few Baldwins, Greenings better than most other varieties; pears light, except Duchesse, which are very full; peaches full; early apples, very full; plums, full crop. From present appearances, grapes will be a very heavy crop and fine sample, very clean and healthy, no mildew on foliage and very little on fruit. Taking all varieties of grapes, the prospect could not be better.—M. PETTIT, *Winona, Ont.*

HURON COUNTY—*Sir*,—The prospect in Huron county for apples and pears is, generally, about one quarter a crop. Some small sections have a half crop, others bare and, I think, a quarter crop the outside figure now. The Ontario apple section wont give a quarter, taken all through.—A. McD. ALLAN, *Goderich, Ont.*

MIDDLESEX COUNTY—*Sir*,—By careful observation and inquiry in the north riding of Middlesex, the following is a fair estimate of the fruit crop in this part of the county. Apples, 40 to 50 per cent.; plums, 15 to 20; grapes, 40; pears, 15 to 20; raspberries, 50; cherries, 60 to 75.—W. M. DICKSON, *Parkhill, Ont.*

LINCOLN COUNTY—*Sir*,—As near as I can estimate the fruit prospects in this county, the apple crop will be about 40 per cent. I think the following is a fair estimate of the fruit crop: pears, 50 per cent; peaches about 80; grapes, most varieties, about 90; plums about 95; quinces about 75; apricots about 50.—J. H. BRODERICK, *St. Catharines, Ont.*

Sir,—Plums are a heavy crop; blackberries, the same; apples a short crop.—E. MORDEN, *Niagara Falls, South, Ont.*

BRANT COUNTY—*Sir*,—The following is my estimate of the fruit crop in the County of Brant:—Apples, 35 per cent.; Pears, 50; Peaches, 40; Plums, 50; Tomatoes, 100.—D. M. LEE, *Paris, Ont.*

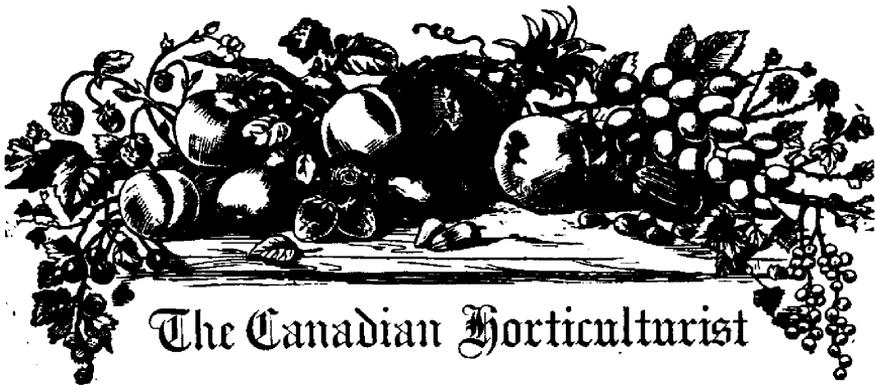
VICTORIA COUNTY—*Sir*,—Apples will be rather less than average, probable three quarters of average in this county. Pears not more than one half the average; plums, the best crop we have had for many years; grapes, little less than average. There is no scab on apples or pears, no mildew on gooseberries, injurious insects very few.—THOMAS BEALL, *Lindsay, Ont.*

FRONTENAC COUNTY—*Sir*,—I have examined several of the largest orchards in this district, and find that, on the whole, there will not be more than half a crop of apples. Our Brockville Beauty trees are bearing an immense crop; Red Astracan and Duchess a fair crop; St. Lawrence also fair crop. Golden Russet and other winter varieties hardly half a crop. There were no "tent caterpillars" about this year, which is remarkable when you consider that last year they were exceedingly numerous. The plum crop was very promising, but the curculio has made sad havoc with them. Very few pears are grown here.—D. NICOL, *Cataraqui, Ont.*

PRINCE EDWARD COUNTY—*Sir*,—Apples are not more than one quarter an average crop, but the sample will be first quality, especially where spraying has been attended to. No spot to be seen. Pears are about one-eighth average, but the sample is good.—P. C. DEMPSEY, *Trenton, Ont.*

STORMONT COUNTY—*Sir*,—The prospect for fruit in this district is about as follows: Grapes, much damaged by late frosts; apples, half a crop, with few exceptions; bud moth and the leaf roller have been particularly destructive.—W. S. TURNER, *Cornwall, Ont.*

PELEE ISLAND—*Sir*,—Prospects good for a full crop of grapes. Catawba, 95 per cent. Concord and all other grapes 90 to 100. Young grapes lying on the low grounds were badly used up by the late frosts; old vines on wire not hurt.—E. WARDROPER.



The Canadian Horticulturist

SUBSCRIPTION PRICE, \$1.00 per year, entitling the subscriber to membership of the Fruit Growers' Association of Ontario and all its privileges, including a copy of its valuable Annual Report, and a share in its annual distribution of plants and trees.

REMITTANCES by Registered Letter are at our risk. Receipts will be acknowledged upon the address label.

NOTES AND COMMENTS.

FRENCH GRAPES came to London, England, about the 1st of July, and sold at 50 cents per pound. Such prices would pay Canadian growers!

LAWN GRASS.—Messrs. Steele Bros. criticize a paragraph of page 216 and state that Kentucky Blue Grass fit for lawn seed has been sold wholesale this season as high as \$2.75 per bushel, and that some seed in their mixture has cost them as high as 60c. per pound.

POTASH FOR INSECTS.—It seems that solutions of potash have been tried at the New Jersey Experiment Station, and found to possess merits as insecticides. Muriate of potash has been tried at the Popular Gardening grounds, near Buffalo, at the rate of one pound dissolved in two gallons of water and sprayed upon the currant bushes for the worm, and on the plum and cherry trees for the aphid. Two days after the insects were found to be entirely cleared off the foliage.

LIME used in connection with arsenites, has been proved by the Ohio Experiment Station to render the latter quite harmless to foliage. Mixtures were made of London purple and Paris green in water, in proportions of 8 ounces to 50 gallons of water in each case, and the same with two pounds of lime added. The applications without lime were injurious to the foliage, especially the London purple and water, by which nearly eighty per cent of the foliage was damaged; but in the cases where the lime was added, no damage whatever was observable. This is an exceedingly important discovery to us fruit growers.

KEEPING QUALITIES OF THE VERGENNES GRAPE.—Mr. Watson Orr, of Winona, placed on our table some bunches of this grape on the 23rd of June, samples of a lot which he was just placing on the market. They were in excellent condition, as plump and fresh as if just gathered from the vines. Although the quality of this variety is not rich, yet it takes well in the market on account of its rich amber color. It is probably the best keeping grape we have. Mr. Orr has not even kept a low temperature in his cellar. He first allowed the stems to dry, then packed the grapes in cork dust. He thinks he could keep them in fair condition until grapes come again.

MICHEL'S EARLY STRAWBERRY is well spoken of by Judge Miller, a prominent fruit grower of Missouri. He says: "This variety has come to stay. The berry is medium in size, pretty, firm, handsome in color; has a nice neck to pick or to hull; carries its fruit well up, ripens eight days before the Crescent, lasts nearly a month, and is in quality among the best; will probably do away with Crescent." We have it in our experimental grounds at Grimsby, and it bore its first crop this season. We are not particularly struck with it in the matter of size, but certainly it is remarkably early, and this particular merit may make it desirable for the market garden.

Since writing the above we notice this berry being criticized unfavorably in the R. N. Y., as being small, unproductive and very little earlier than Crescent.

HORTICULTURE AND AGRICULTURE, as a study in schools, may possibly be in place, but we have grave doubts concerning the beneficial results, unless taught practically. The tendency of our system has always been toward the theoretical; even natural sciences have been taught entirely from books, giving the pupil no opportunity to become actually acquainted with the metals or plants about which they study. And now gardening and farming is to be taught in the same fashion, and that by persons who perhaps do not know a peach tree from an apple tree, or a Jersey cow from a Durham!

In this respect France is far ahead of us, for she has now some 3,000 elementary schools where the teachers train boys in practical gardening. Would it not be better for us to leave it out of our lists unless we are prepared to undertake it in a similar practical manner?

A MARKET BULLETIN will be sent out during August and September to such members of our Association as will send a post card to the Secretary asking for it. Prices current of Toronto, Montreal, London, Buffalo, and the British markets will be quoted.

CUCUMBERS FOR PICKLES.

The variety of pickles is numerous, but the pickle which commands more respect than all others is the little green cucumber. Without entering on the discussion of the sanitary view of pickles in general, or the cooling cucumber in particular, it seems evident that people will have and eat pickles of some kind; and it is most generally the cucumber.

Those who make pickle-growing a regular part of the crop rotation, do not plant the seed before the middle of June, and not later than the 10th of July; preferably before the 25th of June. Planted at this time the plants come into bearing in August and September. Two advantages are gained by the late planting, the cooler nights of late summer are favorable to productiveness, and the ravages of the striped bug are mainly escaped.

A moist soil is essential to raising cucumbers in their highest excellence. The cucumber runs its career in about ten weeks from planting the seed, so the ground needs to be well cultivated and enriched. It is a hopeless case to expect a good crop of cucumbers from hard, poorly prepared soil. Give the plants a generous amount of fine, decomposed manure in the hill; and a sprinkling of phosphate after they are half grown, makes them antic in the race for distinction. I think it has been proven that the cucumber patch can be fertilized cheaper with stable manure and a good proportion of chemical fertilizer mixed, than depending wholly upon barn dressing.

As soon as cucumbers of marketable size appear these should be pickled, as leaving them upon the vines exhausts the latter to the detriment of the crop. Where sufficient help can be procured for daily pickings, and is properly cared for, near a ready market, a crop of cucumbers for pickles is one of the most profitable crops a farmer can raise. A selection of the most suitable varieties, as in other specialities, is of much importance. Green Prolific is the first variety to name for pickling. Early Cluster comes next, then Cleveland Pickling, Early Russian, Early Frame and Boston Pickling.—*Vick's Magazine*.

GRAPE JUICE.—Select not-too-ripe grapes and put them into an agate preserving-kettle with one pint of water to every three quarts of fruit, and slowly bring to a scald, stirring them occasionally. Then dip out into a cheese-cloth bag, and drain over night. Strain the expressed juice through another bag, and add sugar to suit the taste; then bring to a boil, skimming frequently, and seal in heated glass cans, like fruit. This is pure, unfermented wine, suitable for communion wine. It is also recommended by medical men as an invaluable and unstimulating tonic. Other fruit-juices, for flavoring and beverages, can be preserved in the same way.

WHEN you hear a man on the street bawling out, "Ear yar resh s'rawbres ten sen squor," don't jump to the conclusion that he is indulging in Volapuk; he is only trying to sell strawberries in choice vendors' English.

✦ Question Drawer. ✦

A NEW TROUBLE IN VINEYARDS

SIR,—I am advised to write you concerning the strange condition which has come over my grape vines, which must be due to some disease. I enclose you some samples of the affected foliage, and would like to know the reason of their curious appearance. I noticed a year ago last summer that two vines of a certain variety showed a light color in the leaf early in the summer, and also on the fruit, before it developed properly. Then, towards fall, the leaves all wilted and fell off. One of these vines I cut out in October; the other is about used up this spring. The foliage came out as usual and looked healthy at first, but is now (July 8th) nearly all gone. What puzzles me is that all my other vines, with one or two exceptions, are turning pale in the leaf, and beginning to show signs of some trouble. I have examined the leaves carefully under a microscope and can find nothing to cause it, so I fear there is some trouble at the root. The vines have been bearing some ten years; the sub-soil is clay, well drained and very rich. I should be glad of any light upon this trouble, for I notice the same appearance on the vines all about town, and am afraid of a general loss of all our grapes.

J. B. FAIRBAIRN, *Bowmanville.*

SIR,—Nearly all the outdoor grapes in this section are infected with some new disease turning the foliage a yellowish color. I enclose a specimen leaf taken from a Concord vine in my garden. Could you give some explanation of this disease, and its cause?

D. FISHER, *Bowmanville.*

Having observed no such disease in our vineyards in the Niagara district, we have referred the samples and the question to Prof. Fletcher, Botanist, Experimental Farm, Ottawa, who writes as follows:

“The leaf of grape from Bowmanville is to hand. The yellow tint of the leaf is due possibly to an attack of Phylloxera on the root. This leaf does not show any mildew, but yesterday a similar leaf from the same place was referred to me, which shows a slight attack of the Peronospora. I think it would be well for your correspondent to examine the roots of his vine and see if they do not show the characteristic galls of the Phylloxera, which have so often figured in your reports and those of the Entomological Society of Ontario. I should also suggest the advisability of spraying this vine with ammoniacal carbonate of copper mixture.”

In order that our Bowmanville friends may be the better able to judge whether it is really the Phylloxera that is doing so much mischief in their vineyards, we give here an extract from Mr. Saunders' admirable work “Insects injurious to Fruits,” with the accompanying illustration: “During the first year of the insects' presence the outward manifestations of the disease are very slight, although the fibrous roots may at this time be covered with the little swellings; but, if the attack is severe, the second year the leaves assume a yellowish cast, and the usual vigorous yearly growth of cane is much reduced. In course of time the vine usually dies; but before this takes place, the lice, having little or no healthy tissue to work upon, leave the dying vine and seek for foods elsewhere, either wandering under the ground among the interlacing roots of adjacent vines, or

crawling over the service of the ground in search of more congenial quarters. During the winter many of them remain torpid, and, at that season, they assume a dull, brownish color, so like that of the roots to which they are attached that they are difficult to discover. With the renewal of growth in the spring, the young lice cast their coats, rapidly increasing in size, and soon begin to deposit eggs; these soon hatch, and the young ones shortly become egg-lay-

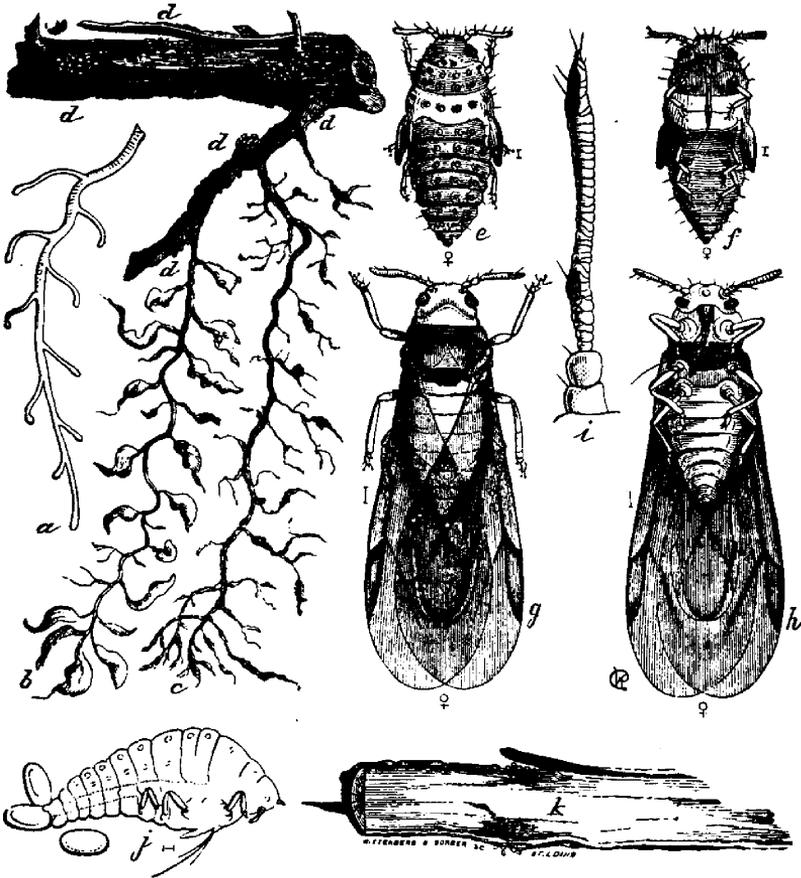


FIG. 46, SHOWING ROOT INHABITING LICE.

ing mothers like the first, and, like them, remain wingless. After several generations of these egg-bearing lice have been produced, a number of individuals, about the middle of summer, acquire wings. These are also females, and they issue from the ground, and, rising in the air, fly, or are carried with the wind, to neighboring vineyards, where they deposit eggs on the under side of the leaves among their downy hairs, beneath the loosened bark of the branches and trunk, or in crevices of the ground about the base of the vine. Occasionally, individual root lice abandon their underground habits and form galls on the leaves.

In figure 46 we have the root-inhabiting type illustrated, where *a* shows a healthy root, *b* one on which the lice are working, *c* a root which is decaying and has been deserted by them; *d, d, d,* indicate how the lice are found on the larger roots; *e* represents the female pupa seen from above, *f* the same from below, *g* winged female, dorsal view, *i* the antennæ of the winged insect, and *j* the wingless female laying eggs on the roots; *k* indicates how the punctures of the lice cause the larger roots to rot. Most of these figures are highly magnified, the short lines or dots at the side showing the natural size."

There is another, but less destructive, form which produces galls on the leaves, and which are often seen, especially upon the Clinton grape and other varieties of that type; but, on the whole, the Phylloxera is far less to be dreaded on this continent, of which it is probably a native, than in Europe, where, since its introduction, it has threatened the wholesale destruction of the French vineyards, which are the chief dependence of the French horticulturist. Our American varieties of grapes seem to be much better able to resist its ravages than do the less vigorous European varieties.

WARING'S SEEDLING GOOSEBERRY.

I send you a sample of a seedling gooseberry which I raised and have grown for several years. The bush is an upright and strong grower, heavy cropper, very healthy, and has not shown any signs of mildew. It is also a very early variety, ripe berries being picked on the 12th of this month. It is also a pleasure to pick the fruit from this variety; it is almost entirely free from thorns, one can pick the berries without getting a scratch.

I have had a call from two gentlemen in the nursery business and several others interested in fruit growing, and one and all pronounce it to be a great acquisition to the gooseberry family; all are loud in their praises as to the quality and fine flavor of the berry, and being a gooseberry bush without thorns it is considered a very valuable variety.

I should esteem it a great favor if you will give me your opinion of the berries as to quality, flavor, etc. A description in the CANADIAN HORTICULTURIST might be interesting to fruit growers, and to our brother members of the Fruit Growers' Association of Ontario, and readers of the C. H.

43 Portland St., Galt, Ont.

This gooseberry bears out all that is said of it by Mr. Waring, so far as we can judge from samples. The form is oval, and larger than Downing; skin smooth, thin, transparent, almost white; flesh tender, sweet and excellent quality.

SUMMER PRUNING OF THE GRAPE.

SIR,—Would you recommend pruning grapes at this season, or after they have set? Would it injure the fruit to cut them back, say within two or three leaves or eyes of the fruit? They have grown so long it is well nigh impossible to tie them up, without cramping the growth of the bushes.

Wm. McM., Niagara.

Summer pruning of the grape is very little done by Canadian fruit growers, not because there is no benefit to be derived from it, but because few of them have the leisure to attend to it in a proper manner. The consequence is that the vineyards become a perfect mat of vines before the time of the grape harvest.

In spring pruning, the vines are usually cut back to within two eyes of the base. These two eyes will produce shoots of which, after they have made a little growth, the weaker should be rubbed off and the stronger one trained up. Now all that remains to complete what is called "summer pruning" is to first pinch off any side shoots which appear during the summer, and any suckers that come up from the roots; and, in the month of September, to pinch the end of the upright shoot for the purpose of maturing and strengthening it.

DISEASED PEACH LEAVES.

SIR,—I enclose you a peach leaf affected by some disease, and I would be obliged to you if you could give me any information concerning it. I think it is caused by an aphid which makes its appearance in midsummer and continues until the autumn, until every leaf is more or less riddled, and I am satisfied that it riddles the tree and exhausts the sap quite as much as the slug does the pear. The fly, when fully matured, has large eyes and nippers and is a very lively and voracious creature.

R. HOBBS, *Auckland, New Zealand.*

Reply by Prof. Fletcher, of Ottawa.

The peach leaves from New Zealand, sent me by the editor of the CANADIAN HORTICULTURIST, I referred to Prof. Byron D. Halstead, of New Brunswick N. Y., for his opinion on the species of rust on the leaves. He answers that it is the peach rust (*puccinia pruni opinosæ, pers*) in its uredo form. The same is abundant in California. The correspondent spoke of the leaves being riddled, but the leaves sent show no such condition, merely the rust clusters and some small dipterous larvæ. I should very much like to see the species referred to with large eyes and nippers; a few specimens would come easily by mail.

With regard to the dipterous larvæ referred to, I notice, in the February number of the *Agricultural Gazette* of New South Wales just received, a most interesting article on "Insect Larvæ (*Cecidomyia*)" eating rust on wheat and flax, to which is added at the end a note to the effect that the authors had seen larvæ on plum trees feeding on spores of *puccinia pruni*. The letter, coming in just as I had read this article, interests me very much indeed.

SMALL SIZED TREES.

SIR,—I received the trees sent out by the Association all right, but the Sari Synap was, poor thing, not fit to be called a tree. Its roots were not thicker than a horse hair, and not more than an inch and a half long. You ought to send out some first-class Russian apple trees of such a size as are sold by nurseries.

J. PEGG, *Kolapore.*

Occasionally we receive complaints from our subscribers concerning the trees and plants sent out by the Association, that they are either too small or they have not come to hand in good order.

Regarding the first complaint, it needs to be thoroughly understood by all

that nothing but small sized trees and plants can be sent out by mail. Some time ago the Association attempted the plan of distributing large sized trees, sending them to one person in a town and trusting to him to distribute to the others, but this work was not satisfactory, because frequently they were left in this person's garden for a long time without being delivered. We are willing in the future to send large sized trees, where any special agreement is made for their distribution on arrival; otherwise, sending small trees by mail is, on the whole, more satisfactory. The Sari Synap could not be furnished in large sized trees last spring, for it was only one year since the scions had been received from Russia, and nothing larger than yearling trees could possibly be obtained. We shall do our best to give satisfaction to all, and, where failure occurs, to make up at the succeeding distribution.

BARK LICE.

SIR,—Several of my neighbors' orchards are dying with bark lice; the trees are utterly covered with them, even to the tips of the twigs, and they are now spreading over the new growth. What can be done to prevent the spread of this pest?

JOHN FOTHERGILL, *Marnock.*

The best insecticides for the destruction of the bark louse have been frequently given in the columns of this journal. One of the simplest is a strong mixture of washing soda and water applied to the branches with an old broom, and if a sufficient amount of soft soap is added to bring the mixture to the consistency of paint, it will be still more effective. Kerosene emulsion is another effective remedy for the bark louse; but any of these applications will be less useful if applied at any other season than in the month of June, when the young lice are young and tender, and, therefore, easily destroyed. In the leisure of winter time the trees effected should be well scraped, thus removing a large number of the lice and a considerable portion of the scaly bark, in which they hide. By this means the tree will be prepared for the applications of the remedy when the proper time comes.

BLACK KNOT,

SIR,—I notice that Prof. Farlow, of Harvard University, has successfully used red oxide of iron with linseed oil as a paint to destroy black knot on plum trees. Would not a liberal dressing of copperas around our plum and cherry trees fortify them to some extent against the attack of fungus by absorbing some of the iron, or would plum and cherry trees not absorb it?

Again, would not iron sprayed on the trees in the early spring, before the foliage appears, be destructive to the fungus spores which might be blown upon them?

SUBSCRIBER.

The plum and cherry trees would not be likely to absorb a sufficient quantity of iron to prevent the spores of the black knot from growing upon them, for

trees will not take up more than a certain percentage of this element from the soil, even though it be very abundant there; but spraying the trees with sulphate of iron in early spring has not only been highly recommended, but has proved itself to be a valuable remedy for black knot. This substance is used in the proportion of one pound to twenty-five gallons of water, and, although too strong to be applied when the foliage has developed, it can be safely applied while the trees are yet in bud, and will serve to destroy, not only a large number of the spores of the black knot, but also of the scab, mildew, rust and other fungi.

LICE ON APPLE TREES.

SIR,—My young apple trees are covered with young insects or lice, or whatever they may be called. They seem larger than lice and are quite green. They cluster by the new growth, and neither Paris green nor kerosene emulsion seem to do any good. The trees are otherwise very healthy.

E. B. E., *Peterboro', Ont.*

The insects which are troubling the trees referred to by our correspondent are without doubt the apple tree aphides or plant lice, which, during a dry season, are sometimes so abundant as to seriously interfere with the vigor of the trees by sucking out all the juices of the young growth. Paris green has no effect upon them whatever, as they do not eat the substance of the leaf, but merely suck from the interior. The most effective remedy is kerosene emulsion, and if the application made by our correspondent was not effective, it must have been because the proportion of kerosene was not great enough. A formula which would be sure to be effective in the most troublesome cases is the following: "Soap, one-half pound, dissolved in one gallon of water, heated to a boiling point, when two gallons of kerosene are added and the whole mixture stirred rapidly until an emulsion is formed." This will keep for some length of time, and when required for use should be diluted in the proportion of one part to nine parts water. This emulsion is found to be very convenient for many purposes, as for instance, brushing the wood work of the hennery, cleansing animals affected with lice, and for the destruction of the squash bug.

SUMMER PRUNING CURRANT BUSHES.

SIR,—My currant bushes have thrown up wood very high. Should they be cut back, and when?

Wm. McM. *Niagara.*

The principal work of pruning the currant should be done in the autumn or in the early spring, but, in order to produce large sized berries, some gardeners pinch off the ends of the stronger growing shoots, about the middle of June, with the object of causing the plant to expend its energies in developing large sized berries.

PEAR LEAF GALL MITE.

SIR,—I enclose to your address some diseased pear leaves, and a letter from Mr. James Fletcher, Dominion Entomologist. The trouble on these pear trees we have noticed for a number of years, and as it did not directly feed upon the fruit, we have not as yet tried to eradicate it, but now it has become so general in pear orchards in this vicinity, there is scarcely a pear tree whose leaves are not, more or less, seriously injured. I have also received some pear leaves similarly affected from Mr. McFall, of Boulton, which shows that this pest is widespread.

J. K. MICHAEL, *Waterford.*

Mr. Fletcher's reply

The pear leaves which you enclose have been injured by an insect which is a very minute mite. The corky blotches on the leaves are the galls of mites belonging to the Phytoptus. Under a glass these appear as shown here, much enlarged. Each gall is a swelling with a tiny hole in the top through which the young mites leave the gall, and attack the leaf in other places. These pass the winter beneath the scales of the buds.

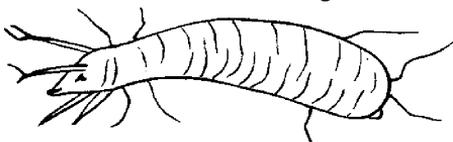


FIG. 47.—ADULT MITE, MUCH ENLARGED.

So far, I am sorry to say, there is no easy remedy known. Prof. Comstock, of Cornell University, suggests picking the first leaves which show the characteristic spots in the spring, and pruning off the young wood where the mites usually spend the winter. I am of the opinion that spraying the leaves in early spring just before the buds open, and again just after, with kerosene emulsion, would destroy many of the mites. To every ten gallons of kerosene emulsion, after dilution, two ounces of flowers of sulphur might be added.

DISEASED FUSCHIA LEAVES.

SIR,—I send you some diseased leaves out from my Storm King fuschia. Can you give me the cause and remedy? This disease does not seem to hinder the growth of the plant, or blooming, but causes a very shabby appearance.

ELIZABETH TRIGGE, *Cookshire, Que.*

Reply by Prof. Fletcher, Entomologist, Exper. Farm, Ottawa.

The insects affecting these leaves are a small scale-like larvæ of an Aleyrodes, which belongs to the Homoptera, or plant bugs, and comes between the Coccidæ, or Scale Insect, and Aphides, or Plant Lice. If your subscriber examines closely she will find also in the leaves some lovely little white lice with four wings, into which the scale-like insects on the leaves soon would have changed.

If the plant is growing out of doors, I would suggest a very weak kerosene emulsion; if a pot plant indoors, I think a couple of good washings with soap suds, in which a little tobacco has been steeped, would answer.

SUMMER PRUNING OF ROSES.

SIR,—Some of our roses have thrown up very high shoots. Should they be cut back, and when?

Wm. McM., *Niagara*.

Mr. Ellwanger, in his book on "The Rose," advises the pruning of roses early in the spring, emphasizing the importance of attending to it while the plants are dormant and before the sap has pushed towards the upper buds. The chief objects of this pruning are for the formation of symmetrical plants and to promote the formation of bloom buds. He advises a severe pruning of delicate growers, and a moderate pruning of vigorous growers. Besides this pruning in March, he says that summer pruning is desirable with many varieties of hybrid perpetuals, as soon as the June blossoming is over, in order to induce the formation of flower buds later in the season.

SUMMER PRUNING.

SIR,—Should I do any summer pruning of young vines, or should I leave them alone the first year until fall?

E. B. E., *Peterboro'*.

Young grape vines should by all means receive attention during the first year of their growth. The proper way is to allow only one shoot to grow up from the root the first season; all others should be rubbed off. This one shoot should be trained up to a stake, that it may acquire an upright habit of growth.

THE WHITE SPOTTED RICHARDIA.

SIR,—The Spotted Calla received this spring is growing finely, but there are seven small shoots, also, coming up from the bulb. Should these be permitted to grow now, and detached later on? or ought they to be broken down at once so as not to weaken the larger one?

A. SMALLFIELD, *Renfrew*.

These suckers may be removed at any time when repotting the plants, and used for propagation, which is very easy. It will not be wise to disturb the plants at this season of their removal. The term Calla, so commonly given this plant, properly belongs to a European marsh plant, *Calla palustris*.

A FRUIT EVAPORATOR.

SIR,—How and where might I get a fruit evaporator?

E. B. E.

We have received no catalogues of any Canadian manufacturer of evaporators, but we have received several from the States. One of these is from the American Manufacturing Co., Waynesboro', Penn., and another from the Zimmerman Machine Co., Cincinnati, Ohio. We would advise our correspondent to write to one of these firms.

PEACH TREES WITH APPLE TREES.

SIR,—Would you recommend peach trees to be planted alternately with apple trees, and to be cut out after ten or twelve years' growth?

S. DOBIE, *Manchester, England.*

This is the usual custom in Ontario, where peaches succeed and the soil is suitable. The apple trees are planted thirty or forty feet apart each way, and the peach trees between in the rows, and one additional row of peach trees between the apple tree rows. In this way we get, say, fifty apple trees and one hundred and fifty peach trees to an acre. The peach trees die out in the course of fifteen years, more or less, leaving the ground entirely to the apple orchard. Of course peach trees must have light, well-drained soil. They do not grow well on clay land.

IMPERIAL MEASURE.

SIR,—I have read a good deal in your journal regarding the spraying of fruit trees, and the proportions in which the poisons should be mixed. When giving a formula, do you understand that the imperial, or some other measure, should be used? Would you please enlighten us?

W. J. RICHARDSON, *Oshawa, Ont.*

We take it for granted that the authorized measure is the one which would be understood by all our readers as the one to be used.

AMBER CAP RASPBERRY.

SIR,—I mail you to day a bunch of Amber Color Cap Berry, a seedling; let me know what you think of it. The bush is very hardy and a very large yielder; taste of berry I think, far ahead of any Black Cap.

JACOB SEGMILLER, *Walkerton.*

This appears to be an excellent bearer and of fair sized berries, but in our opinion the color would not take in the market as well as either red, black, or yellow.

BUDDING YOUNG TREES.

These questions by Mr. John Fothergill, of Marnoch, are answered by Mr. John E. Morris, of Fonthill.

1. Can apples, pears, cherries, plums and peaches all be successfully budded? Yes.
2. What kind of stocks can they be respectively budded upon other than their own? None, excepting Pears for dwarf, which are budded on Angiers Quiver.
3. What time should each of the above-named kinds be budded? Apples, pears or plums, last of July or fore part of August; cherries, middle of August; peaches, latter part of August.

* Open Letters. *

THE FRUIT GARDEN AT NIAGARA.

SIR,—You will be pleased to know that the peach crop here will be fair, though not large. Plums and pears are very heavy and pretty free from curculio, while grapes never looked more promising.

The grape beetle attacked them when coming into leaf, destroying some vines in this vicinity. We destroyed the most of them, but those which escaped deposited their eggs on the leaves, which soon developed into small brown worms, and these were most destructive. I at once applied the Bordeaux mixture, which has proved a good remedy both for this and for the thrip, which has also been troublesome. I have applied the mixture to my apples, and, I think, with success. I am very much pleased with your annual report, so hand somely bound and set up.

W. McM., *The Rectory, Niagara.*

APPLE PROSPECTS IN ENGLAND.

The season for Tasmanian apples being just over, I post you a few of our catalogues which will give you a fair idea how prices have ranged. The cases contain a bushel or a trifle over. On looking at prices the cost must be considered, and this you will understand from the fact that the freight alone is 4s. 6d. per case. They arrive here from Hobart, Tasmania, in the mail steamers, stowed in cool chambers. The apple prospects here, as far as indications go at present, are most favorable for an abundant crop, and as far as this market is concerned, means, we shall not require to import any till well on in the month of October or November.

Covent Garden Market, London, Eng.

J. B. THOMAS.

THE APPLE PROSPECTS IN BRITAIN.

SIR,—In our desire to keep you "*au courant*" as to the apple trade and its prospects we now address you. Since we last had this pleasure the Tasmanian apple season has finished entirely in accordance with our earlier advice to shippers. 140,000 cases have been shipped this season, embodying a period of about ten weeks. The crop in Tasmania being very backward, the last consignments reached here the beginning of this month. As a natural consequence soft fruit being on the market, apples suffered in price to a considerable extent; the bulk of sales per Port Victor averaging 7/- to 9/- per case.

Tasmanian fruit is of very fine quality, but it has not the keeping properties of Canadian fruit. This fruit is never likely to seriously interfere with your growth as the arrivals do not commence until yours are practically over. A serious matter with the owners of this fruit, is the fact that a case containing 36 to 40 pounds of fruit cannot be placed on the market under a cost of at least 6/- to 6/6, without any allowance for the cost of the fruit. The Tasmanian growers have combined to ship next season 170,000 to 300,000 cases. Their representative writes us they are well pleased with our advice and sales. Next season he will be here to superintend the sales, which is satisfactory.

The crop both here and on the Continent, namely France, Belgium and Germany, is now decided unless storms should arise. In France the crop is very partial. Bordeaux, one of the principal districts advise us that the crop is bad; in other countries from which we get autumn and winter supplies, promise a large supply. The quality of this fruit is poor in comparison with yours. There will certainly be a good demand for winter stock but shippers will have to face the certainty that fruit will have to be sold at moderate prices. It will have to be handled carefully, selected and tightly packed. Shippers should establish a particular brand as their own for their best fruit; if by any chance they are compelled to pack any they have their doubts about, they should brand them differently.

We shall keep you well posted as the season advances, and in the meantime.

Yours faithfully,

GARCIA, JACOBS & Co.



GORDON.*



BEAUTIFUL boy, with golden hair,
 Tell me what thou see'st there ;
 Gazing on the western skies
 With those far-off earnest eyes.

Just such an earnest, wistful smile
 Had sainted Gordon of the Nile!—
 Fond wishes crave a nobler field
 Of fame than what a sword can yield.

God make you worthy of your sire,
 To wield the pen with patriot fire—
 I see in that broad, massive brow
 The genius that fills it now.

I see in your angelic face
 Early tokens of God's grace,
 And trust 'tis God's eternal plan
 To make of you a noble man!

Long may his mother live to see
 How divinely sweet is he ;
 A golden radiance covers her
 As she clasps her Gordon Lorimer!

GRANDMA GOWAN.

*Three year old son of the editor.

Our Markets. ❧

CANADIAN FRUIT GROWERS' MARKET BULLETIN.

NEW YORK CITY.

The week opens with clear cool weather, business generally in produce lines rules quiet, and prices of fruit (apples especially) rule low. Currants in light supply and selling 8c. to 10c. per qt., huckleberries 9c. to 11c., blackberries 6c. to 10c., raspberries 3c. to 5c. per cup, Bell pears \$2 to \$2.75 per bbl., peaches 25c. to \$1.50 per basket, apples 75c. to \$1.50 per bbl., fancy do. \$1.75 to \$2, potatoes \$1.75 to \$2; onions \$3, cabbage \$3 to \$5 per 100, tomatoes 75c. a crate, watermelons in heavy supply and selling at 15c. to 20c.

G. S. PALMER, 166 Read St.

BUFFALO.

Below, we give you a report of our market, as near as possible from actual sales: Potatoes \$1.50 to \$1.75 per bbl.; apples, best goods, \$2.50 to \$3.00 per bbl.; inferior, \$1.75 to \$2.25; peaches, 75c. to \$1.00 per basket, per crate, \$1.50; black raspberries, 10c. to 12c., reds 10c. to 11c.; huckleberries, 7c. to 9c. per lb. When plums are ready for shipment let me know; can handle a car load quick. Ship Red Astrachan apples if good, sound stock will bring top price.

MONTREAL.

The fruit trade last month has been very brisk in this city. The receipts of Southern tomatoes, apples, pears and melons being unusually heavy this summer.

The prices ruling at to-day's market, are: Canadian raspberries, 8½ to 9c. per quart; Canadian raspberries, 65 to 75c. per pair; Canadian cherries, \$1.00 to \$1.25 per basket; apples, N. Y. State Astrachans, \$3 to \$3.50 per bbl.; apples, Southern, \$3 to \$3.25 per bbl.; apples, Canadian, 40c. to 50c. per basket; peaches, Canadian, \$1 to \$1.75 per basket; California plums, \$2.25 to \$2.50 per box; California peaches, \$2.25 to \$2.50 per box; California pears, \$3 to \$3.25 per box; California apricots, \$3 to \$3.25 per box; Southern tomatoes 30c. to 50c. per box. We hear from almost every part of the country a report of good fruit crops. We judge that at least peaches, plums, and summer and fall apples will be abundant in supply, and very moderate in price. The crop of winter apples reports are conflicting, but, on the whole, we expect to see a fair crop. We strongly advise all shippers not to send to this market *inferior* harvest and other apples, nor apples that have been packed a few days. The money is in fresh-packed, fair-sized, good fruit. The local crops around Montreal has very largely increased during the past five years, and to a great extent supplies this market with very fine apples.

VIPOND, McBRIDE & Co.

TORONTO.

Raspberries are somewhat scarcer to-day, and prices are up a little. An error in the typographical changing of figures got the quotations of foreign peaches opposite native peaches while the figures for California peaches were left unaltered, thus giving a mistaken height in price. Those peaches selling at 75c. per basket are very poor stuff, badly infected with yellows, while even at \$1.25 the sample is not above extra choice. The general price for ordinary grade peaches is 90c. to \$1 per basket. Apples, native, per basket, 40c. to 45c.; apricots, Cal., per 4 basket crate, \$2 to \$2.25; bananas, per bunch, \$1.50 to \$2; beans, per basket, 20c. to 25c.; blueberries per basket, 90c. to \$1; cherries, per basket, 65c. to 75c.; cucumbers, per dozen, 40c. to 45c.; currants, black, per basket, \$1.50 to \$1.60; currants, red, per basket, \$1.10 to \$1.25; gooseberries per basket, 80c. to \$1; lemons, per box, \$5.50 to \$6; oranges, Val., per case, \$6 to \$8; oranges, Mess., per ½ box \$2.50 to \$2.75; peaches, Cal., per box (225), \$1.85 to \$2; peaches, native, per basket, 75c. to \$1.25; pears, Cal., Bart., per box, \$4 to \$4.50; pears, hog, per basket, 50c. to 60c.; plums, Cal., per 4 basket crate, \$3.50 to \$3.75; raspberries, red, per box, 8c. to 11c.; raspberries, black, per box, 7c. to 10c.; tomatoes, per small basket, 40c. to 50c.; tomatoes, per large basket, 80c. to 90c.; tomatoes, per crate, 75c. to \$1.50; watermelons, apiece, 20c. to 25c.