Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- ☐ Coloured covers/ Couverture de couleur
- ☐ Covers damaged/ Couverture endommagée
- ☐ Covers restored and/or laminated/ Couverture restaurée et/ou pelliculée
- ☐ Cover title missing/ Le titre de couverture manque
- ☐ Coloured maps/ Cartes géographiques en couleur
- ☐ Coloured ink (i.e. other than blue or black)/ Encre de couleur (i.e. autre que bleue ou noire)
- ☑ Coloured plates and/or illustrations/ Planches et/ou illustrations en couleur
- ☑ Bound with other material/ Relié avec d'autres documents
- ☑ Tight binding may cause shadows or distortion along interior margin/ La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure
- ☐ Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/ Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

- ☐ Coloured pages/ Pages de couleur
- ☐ Pages damaged/ Pages endommagées
- ☐ Pages restored and/or laminated/ Pages restaurées et/ou pelliculées
- ☑ Pages discoloured, stained or foxed/ Pages décolorées, tachetées ou piquées
- ☐ Pages detached/ Pages détachées
- ☑ Showthrough/ Transparence
- ☐ Quality of print varies/ Qualité inégale de l'impression
- ☑ Continuous pagination/ Pagination continue
- ☐ Includes index(es)/ Comprend un (des) index

Title on header taken from:/ Le titre de l'en-tête provient:

- ☐ Title page of issue/ Page de titre de la livraison
- ☐ Caption of issue/ Titre de départ de la livraison
- ☐ Masthead/ Générique (périodiques) de la livraison

☐ Additional comments:/ Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/ Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
						✓					

THE

Canadian Horticulturist

VOL. XII. *NOVEMBER*, 1889. NO. 11

THE WEALTHY APPLE.

ALTHOUGH a comparatively new apple, the Wealthy, on account of its beauty, productiveness and hardiness, has become quite famous. In 1874, according to the Report of the Minnesota State Horticultural Society of that year, it was a question in its native State whether this then new variety should be recommended for general cultivation or not, and probably very little was known about the apple, save by a few fruit-growers living about Excelsior; now it is widely distributed, and in the catalogue of the American Pomological Society it is double starred, as being commended for special excellence, by the Province of New Brunswick, and the States of Minnesota, Dakota, Iowa and Colorado.

The honor of originating this apple belongs to Peter Gideon, of Excelsior, Minnesota, who grew it from seeds of the Siberian Crab carried there by him from the State of Maine.

Our colored plate of this apple is claimed by the artists to be an exact representation of a carefully selected specimen grown in Pennsylvania; but fearing that it was an exaggeration, we had rejected the plate, until we had secured samples of the Wealthy from various parts of Ontario. Particularly fine specimens were sent us by Mr. A. M. Smith of St. Catharines, and by Mr. A. A. Wright, of Renfrew. Of these the former were the best in color, but only medium in size; while the latter, though grown so far north, were much the largest; one of them measuring about twelve inches in circumference, and so nearly the size of the one pourtrayed in this plate that we have concluded to use it. No doubt it is better, as a rule, to represent fruits according to their average size, instead of choosing out the very finest samples, and that course will be generally pursued by this journal, as our interests are wholly on the side of the fruit-growers; and yet by seeing the possibilities in our line, we may be led to inquire the reason of our own failures to produce the same, and be stimulated into greater diligence in

the cultivation of our own orchards and gardens.

In general, the Wealthy may be described as follows:—*Form*, medium sized, oblate, or roundish-oblate; *color*, whitish yellow ground, shaded with deep rich crimson in the sun, with obscure broken stripes and mottlings in the shade, sometimes entirely covered with crimson; *flesh*, white, fine grained, stained with red, tender, juicy, sub-acid, with a small core; *quality*, very good; *season*, early winter, keeping, under favorable circumstances, until the last of February. The *tree* is a fair grower, and the foliage handsome.

On account of its great beauty, perfectly clear skin, and excellence as a dessert apple, the Wealthy is worthy of commendation for planting in Southern Ontario in place of the Fameuse, which has become worthless through scab, a disease rapidly gaining ground among our very best varieties. How profitable an orchard would be, if planted with such varieties as Astracan, Duchess, Gravenstein, Cranberry Pippin, King and Wealthy,—all fancy apples, clear of this troublesome scab and commanding the very highest prices in both our home and foreign markets.

One of the special points of excellence about the Wealthy is its hardiness. Its only lack in this respect is a certain amount of unsoundness, or blight, in the trunk. This fault is complained of by Dr. Hoskins, of Vermont, a gentleman of large experience with the so called iron-clad apples, and also by Mr. Shepherd, of Montreal, a prominent member of the Quebec Fruit Growers' Association, who complains that out of sixty trees of this variety, planted ten years ago, he has lost twenty through this disease. To overcome this trouble it is recommended that the Wealthy be top-grafted upon some iron-clad stock, such as the Tetofsky, which is not subject to it. Barring this, the Wealthy is classed among the hardiest and most desirable kinds to plant in our cold north. Mr. A. A. Wright, an ex-director of our Association living at Renfrew, where the thermometer frequently sinks to 40° below zero in mid-winter, grows the Wealthy with great success. He writes "Plant any number of Wealthies." Mr. J. M. Fisk, of the Montreal Horticultural Society, classes it for hardiness with Haas, the Peach, and the Winter St. Lawrence.

The Wealthy apple has one other fault, which we must not fail to note, and that is the early dropping of the fruit. This begins in the latitude of New York as early as the month of August, and for this reason it is sometimes classed as a fall apple, especially in New York State, where the Fameuse is also so classed, but, grown farther north, it may be ranked as an early winter apple.

SEASONABLE HINTS FOR FRUIT GROWERS.

WINTER PROTECTION.

IN our report for 1888, page 15, some reference is made to the protection of raspberry bushes; and the mode that is practised in the Ottawa valley is described. The canes are allowed to grow as long as possible without cutting back, in order that they may be easily bent to the ground and held down with sods or a long pole or rail, laid over the tops in such a way that the snow will collect over them and afford a perfect protection. The objection we would have to this mode of training lies in the difficulty of cultivation with such long sprawling arms, and the loss of bearing wood which must result from cutting them in the spring. In the Wisconsin State Horticultural Society's Report we find another plan recommended which appears to be preferable for cold sections, and give the extract describing it, with an illustration which helps to make it plain.

The Ripon people have been very successful in the practice of laying Raspberry and Blackberry bushes down for winter protection. Their way of laying them down is by the help of a plow, which is run close alongside the row, the dirt being thrown away from the row. The surplus wood is removed from the bushes.

A man follows the plow with a spade and after loosening up the earth about the roots on the side towards the furrow he pushes the plants down and covers the top with earth. The roots are like ropes and will not break. Mr. Plumb thinks that this is the most economical way of protecting Blackberries. Mr. Stone's great success with Blackberries was accomplished on poor land. The manure and the cultivation were applied early in the season, and in that way strong canes were secured before winter. He thinks we should take the best protection for the bushes that we can get. The plowing between the rows does not materially increase the number of suckers. The plowing may be done as near as possible to the bush and no injury will result.

Mr. Tuttle stated that his Blackberries had been killed above ground

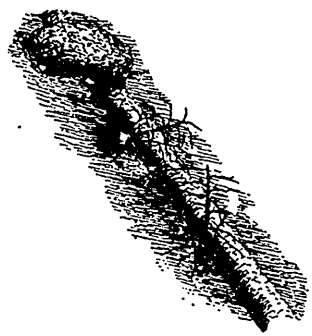


FIG. 75.—PROTECTION OF BLACKBERRIES.

last winter, owing to their not being protected. Mr. Hoxie was opposed to the State Society any longer giving countenance to the assertion that the Snyder and Stone's Hardy blackberries will do without protection. Mr. Plumb stated that he advised a neighbor, who was planting a patch of Blackberries, to keep them cut back to one foot. The neighbor kept them cut below two feet, and they proved a success, Mr. Tuttle stated that he had tried the same plan but met with no success. Mr. Jeffries had pinched the Stone's Hardy back,

but had not protected, it, and it had been killed.

The great importance of winter protection of strawberry plants is so well known to all growers and so often preached up by Horticultural writers that it is hardly worth while to emphasise it here, except to say that it is unnecessary to apply any covering before the ground has frozen, as the danger is in the constant succession of freezing and thawing, which often kills the fruit buds, and a good many of the plants themselves. Any loose covering will answer, such as straw, cornstalks or evergreen boughs; and any small fruit grower who has these materials in store and can spare them for the purpose, is losing money if he neglect the application.

VARIETIES OF FRUIT TRUE TO NAME.

In buying trees or plants for planting, it is wise to use every precaution to obtain them true to name. In nothing is it easier to be imposed upon than in this, and it is a very vexatious thing after waiting years for the fruit of an apple tree to find that it is some worthless kind, instead of the variety ordered. In the days when farmers knew little and cared less about the kinds which were best to plant, it was, perhaps, allowable to leave it to the judgment of the nurserymen, but now that through the reports of the Ontario F. G. Association, people know so well which varieties are most valuable, there is no excuse for those words which so often appear in the agent's order book, "If you have not the kinds ordered, please substitute some others equally good." The writer once planted eighty trees for Duchess of Oldenburg, and his disgust can be imagined, when, on their coming into bearing, they proved to be eighty Ca. bashea, a most unprofitable variety. Determined that he would secure the famous Duchess, he employed an experienced grafter, to top graft that variety, and lo! when they came to bear, they proved to be King o Tompkins, a good enough apple, but not what was wanted. He finally resolved to top graft the trees himself with Duchess, and lives in hopes of the correct thing some day.

It is very important that fruits exhibited at our fairs should be correctly named, for these exhibitions are the very best means of obtaining correct nomenclature throughout our country. To secure this end, only the best qualified men should be employed as judges, men able to correct misnomers for exhibitors. Better have one capable judge than three incapables. We are just in receipt of a Buffum pear for name, which the reader says has taken a prize for Beurre D'Anjou; and here is a clip from the *Orillia Packet* which explains itself.

Mr. Henry Overend, of Medonte, thinks he has got rather hard measure from differing judges at the East Simcoe Shows. Last year, he showed "Twenty Ounce Pippins," and was refused a prize because they were wrongly named, one of the judges stating that they were "Gravenstein." This year he was again disqualified, because he called them "Gravenstein" instead of "Twenty Ounce Pippins."

LIGHT FROM THE EXPERIMENT STATIONS.

SUCCESS IN PREVENTING THE INJURIES OF THE PLUM CURCULIO.

THE wisdom of organizing the various Experiment Stations in the States and Provinces is becoming daily more and more apparent. A subscriber, living in the Ottawa valley, writes that already the Experimental farm is giving a fresh impetus to fruit culture in that district, by showing what the possibilities in that latitude are. The scientific and the practical have been too long separated, and now, through these institutions, a union is being effected that promises to be of the greatest benefit to the farmers and fruit growers of the land.

In the Report of the Ohio Experiment Station, for 1888, we find the result of the most careful experiment with arsenites in preventing the injuries of the plum curculio, by Mr. C. Weed, the Entomologist. A young orchard of seventy-five cherry trees was divided into two parts, and one part carefully sprayed with London purple just after the fall of the blossoms, and again after rains; and a careful estimate of the result was made. It was fully demonstrated that, of the fruit on the sprayed portion that was liable to injury, 75 per cent. was saved by the treatment. When the fruit was ripe, it was subjected to the most careful chemical examination, and not the least trace of arsenic could be detected. It was, therefore, concluded that there could not be the east danger to health where the spraying was done at least three or four weeks before the time of ripening. Experiments with plum trees were also successful in giving, as a result, a heavy crop of fruit, while on trees not sprayed a large proportion were injured. Equal success seems to have attended spraying with lime; trees, on which the fruit was coated with lime, matured an immense crop of fruit.

Experiments with pear trees also resulted in a large crop of perfect fruit, free from injury by either the curculio or the codling moth. Even better results were brought about by adding, to the usual London purple mixture, fresh air-slacked lime, in the proportion of a half-peck to a barrel of the solution, and with less injury to the foliage. It should be observed that the good effects of the arsenites consists in killing the parent insect, while that of the lime simply in driving it away.

THE ROSF BEETLE.

In the eastern and middle states, immense amount of injury has been done to grapes, peaches and other fruits by this beetle, and no remedy except hand-picking has been so far known, until last summer, when in response to an inquirer, Prof. Weed, of the Ohio Experiment Station, recommended a trial of a liberal spraying with lime, a regular white-washing. The result was so successful that we quote from a letter of Mr. Dunbar, the experimenter. He said,—"A thorough application of the remedy devised by you was no doubt the means of saving me many dollars' worth of fruit, for which result I feel

profoundly grateful." Bugs appeared this year about June 12th. One application of a coal oil emulsion to a few grape-vines and rose-bushes killed most of the bugs which were there, but others soon came—remedy of no use. I then mounted my field force-pump on a forty gallon cask, set on a stone-boat. I slacked about a peck of lime for each barrel, and the motion of the stone-boat kept the lime in suspension. We soon had the vineyard thoroughly whitewashed, and well on to the fruit and under the leaves. I was disappointed at first in the apparent results, as the bugs continued to be quite numerous, but after a few days they cleared out, having hurt the grapes very little.

Finding the bugs injuring his peaches, he says; "I at once whitewashed the peach orchard in the same manner as the vineyard, with the exception of the west row, and the bugs all emigrated to that row in the course of a day or two."

So far the rose-beetle has done very little injury in Ontario, but it has appeared in some parts, and the knowledge of this remedy may prove useful before long.

A VISIT TO THE PRESIDENT'S HOME AT GODERICH.

By T. H. Race.

GODERICH is a town of about four thousand inhabitants, situated on a light sandy plateau, overlooking Lake Huron at an altitude of about 125 feet above the lake level. Though somewhat north of the latitude of Toronto, Goderich is situated in a section of country long noted for its fine and extensive fruit production. Not only in apples does the Goderich section excel, but as well in the choicer fruits, such as pears, plums, strawberries, etc. Approaching the town from the east, by the Grand Trunk Railway, one comes to the height of land, or what is known as a continuation of the Niagara escarpment, about four miles from Lake Huron. From this ridge the land gradually recedes to the westward till it terminates at the lake in a high bluff, averaging one hundred feet above the water. The section lying between this height of land and the lake is what is known as the fruit-belt, where the late spring and early fall frosts, so fatal to fruit to the east of the ridge, seems to have comparatively little effect. Why this narrow strip of land should enjoy comparative immunity from these blighting frosts, I will not presume here to explain, suffice it to say that the cause is well understood in natural physics.

Having accepted an invitation from our President, Mr. A. McD Allan, to visit the Great North-Western Exhibition, held at Goderich, on the 17th and 18th, and 19th inst., I was not only surprised at, but greatly pleased with the splendid fruit exhibit, embracing all the standard varieties of apples and the choicer

varieties of pears, plums, indoor and outdoor grapes. For variety and quality the pear and plum exhibit surpassed that at the Provincial in London, and I doubt if, even in a favorable year, there is another section in Ontario that could produce such splendid samples of the Pond's Seedling, Victoria, Coes Golden Drop and Washington plums, as were on Exhibition at Goderich; the first mentioned seeming to me more especially suited to the peculiar conditions of the section than to any other locality where I have seen it grown. But even this favoured section suffered to a greater or less degree from the terrible frosts of last May; and not only did the grape exhibit bear evidence of it, but it was a common remark that all the apples shown were lacking in color, as if grown only in sheltered parts of the trees.

The home of our President is situated in the southern suburb of the town, his residence being of brick, spacious and inviting from its outward homelike attractions, surrounded by premises two acres in extent. The grounds, immediately about the house, are neatly laid out in lawn and flower-beds and separated from the fruit garden and orchard by a well-kept evergreen hedge. The soil, at best, is not conducive to a rank growth of wood in either vine or bush and the terrible drought had told all the more severely on the well-cared for grape vines, and on the somewhat stunted raspberry, gooseberry and currant bushes. Pear trees were found on every hand well-loaded with ripening fruit; and the apple trees, numbering about a hundred, showed great care and thriftiness, being washed and scraped as smooth as a white beech. Being first shown through the premises by the children, it was not only a pleasure but a delight to find that every one of them was an enthusiast in fruit and flower culture, and the little chaps of five and seven years could name you every variety of pear or apple tree in the orchard as we came to them. But the pleasure of the visit was not all in the inspection of the outer premises. The generous and inviting hospitality of the household, the warm and genial disposition of the Fruit King in his own home, together with the cordial greeting, tendered you with such a natural and easy grace by his amiable wife, all combined to make you feel that you were a welcome guest; and you carry away with you only the most pleasing recollections of a most pleasant visit.

MITCHELL, *Sept.* 21*st*, 1889.

GOOSEBERRY MILDEW REMEDY.

SIR,—As Mr. Race has a rather positive opinion on the Gooseberry Mildew, and as it is a subject of some importance I write this that others may not be led astray by his very plausible theory. My opinion, backed by experience, is entirely at variance with his. The factors in the mode of cultivation are about the same; our soil is similar, he allows plenty of air and sunshine along with a supply of hardwood ashes, and so do I. The only point in which we differ in the two items is, that I give the ashes

every year, he once in two years. He claims success in the highest degree. I can claim ditto in this respect In fact no one in this part but will give me the palm in this line. From Mr. Race's remarks, three years seems to be the length of time he has been cultivating the varieties he writes about. Now Mr. Editor, I contend that three years is too short a date for Mr. Race to prove his theory to be correct Two years ago I might have written his article with as much confidence as he and still I would have been wrong. Before that time I did not know what mildew was. I have cultivated the Whitsmith for eight years, the Industry for three and I find the latter is very prone to mildew. The former runs a good chance of escaping five out of seven years. I will state what I believe to be the cause of mildew, and that is by heavy rains followed by hot sunshine. I will give a few facts in support of this. In the early part of this season, after the heavy rains, the bushes on the highest part of my plot were effected all of ten days before those of the lower part which were shaded by a high board fence. I enquired from six different persons, who got bushels of the Whitsmiths from me, if they had any mildew; only one of them had any, and that was on the highest part of the land, the shaded part escaping. Another of the number, whose garden I visited often and which is very much shaded, was entirely free from it. I account for mine being affected with it so much by the extra quantity of ashes with the rain stimulating the roots to great activity, causing rapid growth in the young wood, while old Sol's rays started fermentation. Mr Race talks of Nature's method, but I am inclined to think if he were to visit the woods and see how much the gooseberry was shaded in its native home he might come to think, after all, he was not following nature so very closely. With all respect to Mr. Race and his theory (which goes to show he is a thinking person), I humbly beg to differ from him for the reasons given, and I think time and observation will prove who is correct. After trying various methods to stay its ravages, I eventually succeeded The process was simple and inexpensive, but as I expect to make something from it I withhold it for the present. Thanking you for absorbing so much of your needed space.—F. W. PORTER, *Mount Forest, Sept. 23rd, 1889.*

SIR,—Having seen in Sept. No. of CANADIAN HORTICULTURIST a reference in August No. of a prevention of mildew on gooseberries. But as I did not receive August No., although enquired for several times at P. O. I did not see the article in question. But there is an article in Sept. No. from T. H. Race, Mitchell. Can you or Mr. Race kindly inform me how much ashes I could with safety use on sandy soil, as I have some eighty bushels of Whitsmiths, and they have mildewed for three years. I am anxious to know what will prevent it.—JOHN CLEMENTS, *Brantford, Ont.*

Facts are stubborn things, and we are always glad to chronicle them, especially when observed by practical gardeners like Mr. Porter. Still we fail to see any connection between the use of ashes and mildew, either in producing it, or in remedying it, except that by promoting a vigorous growth, more power of resistance is imparted to the plant.

The disease known as mildew is really due to a fungus parasite, similar to the powdery mildew of the grape, the spores of which are carried in the air, and, lighting upon a suitable host-plant, proceed to grow under favorable conditions, as moisture for germination, and afterwards dry hot weather for rapid growth.

These conditions prevail in our Canadian climate, and this explains why the mildew is so much more wide-spread here than in England, where the continuance of moist and cool weather is unfavorable for its growth. As the parasites are external, they may be destroyed without much injury to the bushes, and the remedy that has been most commended in the past is the application of the flowers of sulphur. This should be applied as soon as the first leaves are fully formed, and repeated every ten days during the growing season.

Prof. J. C. Arthur, State Botanist of Indiana, has been experimenting with potassium sulphide (liver of sulphur) in solution, at the rate of

one-half and one-fourth ounce to the gallon, respectively, commencing May 3rd, or as soon as the leaves had begun to expand; and the application was repeated after every hard rain until June 24th, nine sprayings having been made in all. The experiment was made upon a row of the Industry Gooseberry containing five plants, and upon a plat of seedlings numbering 282 plants.

Toward midsummer the effect of the spraying became distinctly visible in the deeper green foliage and more rapid growth of the treated plants. On June 23rd, the two plants of the Industry Gooseberry that received the sprayings were noted as being entirely free from mildew with the exception of a trace of it observed on a single fruit, while the three not treated were badly affected. The fungus appeared as a downy coating near the ends of the new shoots, and also upon the berries. The new growth, as well as the crop of fruit, was very perceptibly greater on the treated plants.

In the latter part of summer, after the spraying had been discontinued, the mildew increased on the treated plants, showing clearly that the applications were beneficial, and also that they must be continued throughout the growing season to confer their greatest benefit.—EDITOR.

THE NEW STRAWBERRIES.

BY JOHN LITTLE, GRANTON, ONT.

AS I have been requested, since the close of the strawberry season, by not a few, to give my experience how the new varieties have done on my ground, I will do so in as brief a space as possible.

I have all the *old varieties* with the exception of a few discarded, viz:—Cumberland, Mt. Vernon, Manchester, Crescent, Capt. Jack, and a few Wilson.

1. I still admire the *Jessie*; it is so large, good, attractive and productive, that I still head the list with it.

2. *Eureka.*—I have fruited this variety for four years and I am still well pleased with it. Plant vigorous, strong, without any blemish; fruit, large and abundant, more profitable here than the Crescent in its palmiest days.

3. *Bubach* is a wonderful berry and succeeds everywhere. For near market it cannot be surpassed. It is popular too, and all should plant it.

4. *Summit.*—Berries large and late; it does as well here as usual; it is a favorite here on account of its size and flavor and lateness.

5. *Ohio.* It is a pity this berry is not a little larger; it is so productive, it stands up so well, is of such a bright color and very productive. We had berries from it a week later than Gandy's Prize.

1. *Haverland*, of the *newer varieties*, is very productive. I do not think I ever fruited a variety

giving more or larger berries, but it would not ship to a distant market.

2. *Logan.*—I must not forget this, though it is of earlier origin than the former. It is one of the most attractive berries we grow here. Its size, color and productiveness makes it valuable.

3. *Warfield* I have not fruited. It is a grand plant and from what I hear and read about it, it will drive the Crescent from the field.

This season after the berry-picking was over it became so dry and 'hot' that plant growth was kept at a standstill; but, since the late rain, they are making up for lost time.

If spared I will fruit more 'new varieties' next year, than on any former one since I began growing the strawberry. I am indebted to Mr. Crawford and Mr. F. Thompson, of the Cleveland Nursery Co., for what I have—no doubt many of them are valuable; also some from Mr. Townsend, the originator of Eureka, and Mr. Cleveland.

From Mr. Crawford: Saltillo, Ivanhoe, Lower, Marvell, Martha, Viola, Osceola and others.

From Mr. F. Thompson; Florence, Clingto, Bubach 132 + 24, and seven varieties of his seedlings.

From Mr. Townsend: seven seedling varieties.

From Mr. L. J. Farmer: eight varieties, seedlings.

Also a number from London, which I have fruited and not a bad one among them. To these I must add *Miami;* which the originator claims is the best variety in the world; also Stayman's No. 1, and last, but not the worst, *Shaw*, the plant that *bore* the eight berries, that filled a quart basket.

Don't you think, sir, that I have varieties enough to keep one man's attention pretty busy?

Oct. 9th, 1889.

THE CONDITIONS FOR LONG-KEEPING OF FRUIT.

IN what condition can fruit be placed to best preserve its good qualities and retard its decay? There seems to be two distinct active processes in the growth and development of fruit. The first is the growth —the collecting and building up of a compound of comparatively solid structure which is unpalatable and indigestible as an article of food. The second is the ripening process; a kind of organic ferment; a breaking down, softening, dissolving, rendering palatable, easily digested and valuable as food. In this change the volatile oils are generated, giving flavor and character to fruit. The time required in building up fruit preparatory to ripening has not been delegated to man to control to any great extent, whether a variety is to ripen in May, July or September. Yet if man cannot control the time of completed growth, he can, during this period, by good care and cultivation, increase greatly its size and value.

In the second stage of development ripening can be hastened or retarded, and when fully ripe, decay can be delayed. In the second stage fruit should not be left opened and exposed to atmospheric changes of temperature or moisture. Flavor is lost by evaporation. If the purpose is to hasten ripening, the fruit should be inclosed in a tight box or barrel, or wrapped in flannel, to prevent evaporation, and left in a warm room of uniform temperature.

The greatest advantage to the fruitgrower will result from checking too early maturity, and from preventing early decay after harvesting. His success demands a place for storage, with surroundings favorable for preservation. One condition is conceded by all—that the temperature, must be lower than that required for growth. That 32° is too low, seems to be the conclusion of those best qualified to judge. Fruit kept long at that temperature, although apparently unchanged, when removed soon sinks to decay, not apparently from over-ripeness, but from the permanent suspension of all active forces. The process of decay, not that of ripening, takes possession. California shippers of oranges have come to the conclusion that refrigerator cars do not pay; in fact that they have occasioned great loss. It seems that the conditions most favorable for the preservation of fruit without loss in quality would be secured by a store-room, having the temperature so low as to check (not wholly destroy) the forces at work in fruit, whether these forces be chemical or organic,—so low that spores would not be active; the air so damp that moisture would not escape, while the temperature and moisture should remain uniform. Apples, as well as potatoes, buried in the ground and so covered as to be protected from heat and frost, come out in the spring as fresh and bright as when buried in the fall.

Grapes, picked and wilted, then buried in stone jars three to four feet below the surface, will come out with stems green and fruit plump and bright. In these two cases the temperature remains more uniform than could result with atmospheric exposure. Cellars having springs in them or streams passing through them are noted for keeping apples and vegetables fresh, even until late the next season. The water acts as a regulator of both temperature and moisture. These methods of storage approach the conditions specified above, and the nearer the approach the better the result.

If these conditions are favorable for the preservation of fruit in all its stages of ripeness, the question arises: How may they be the best and most economically secured? The cream-

eries and milkrooms, now in use in the Western States, present the most satisfactory solution of the problem, as in them the above conditions are economically realized in their most perfect form. These rooms are inclosed on the top, bottom and sides with four dead air spaces, with double doors for entrance, and they are made as nearly air-tight as possible. Fresh air is supplied at the bottom through a subterranean passage about twelve rods long and eight to ten feet below the surface of the earth. This passage is two feet wide and one foot high, formed of stonework. Through it a constant current of air is passing into the room. The temperature of this air is controlled and regulated by that of the earth at the depth of the passage. Moisture is deposited if the temperature is increased, so as to give nearly a uniform amount in the room.

Prof. Arnold is authority for saying that while the extremes of heat and cold in these States vary from 110° above to 40° below, these rooms will not vary in temperature over five degrees during the year, uniformly remaining near 50°. The air is pure, and the room is perfect as a milk-room. Ventilation is perfect, with uniform temperature and moisture.

Such a building need not be expensive. It can be built of coarse lumber, the air spaces sheeted with building paper, while the stone passage can be put down for from five to eight dollars per rod, depending upon the hardness of the soil and the proximity of stone. We have no knowledge that any such appliance has been used for keeping fruits and vegetables, but it seems to present just the conditions necessary for retaining every valuable quality in fruits and in vegetables, and for checking decay.—*Am. Agriculturist.*

EVAPORATING FRUIT.

Advantages of an Evaporator.

I HOLD that every fruit-grower, no matter how large or how small, should have an evaporator of sufficient capacity to work up all of his second-class fruit of every kind—apples, peaches or berries, and sell nothing in a fresh or green state except strictly choice fruit—evaporate everything else. By pursuing this course, you will sometimes realize more from your culls than you will from your choicest fruit. For instance, two years ago, I received for my picked apples 33 cents per bushel and evaporated my culls, which, after counting out cost of evaporating, netted me 40 cents per bushel—7 cents more than my best apples brought me. You may ask why I did not evaporate all. Well, for two reasons:—1st. I did not know that I would receive so much for them. 2nd. If I had known it, my evaporator was not large enough. Last season I put up a new evaporator and prepared nearly 8,000 pounds of choice fruit and sold most of it at home for 10 cents per pound. One lot I shipped to Colorado brought me 11½ cents after paying freight. None of the fruit worked up would have been marketable in any other way, and would have been mostly wasted, but for the evaporator.

Another advantage in having an evaporator, is that you will have a finer lot of shipping fruit, you can afford to cull closer and will do it, when the culls will bring you very nearly, if not fully as much, thrown out, as they would thrown in, and you will, therefore, have a fruit package of a fancy quality, which will bring you more money. So you not only sell your culls for a good price, but receive more for all your fruit.

In seasons of full crops and dull markets, when prices are demoralized and fruit will bring scarcely enough to pay freight and packing, evaporate all, and pack in new clean packages, either barrels or fifty-pound boxes, and you can store them away until the market revives. If properly dried and put up, they will keep for any length of time. We are now using some we put up four years ago, and they are just as good as new. Great care should be taken in preparing the fruit for the evaporator, to thoroughly trim off all specked or bruised spots before placing in the evaporator, so that your fruit will have an even look. The price of evaporated fruit is now more per pound than any other farm product, and raspberries and pared peaches are worth more than any other food product from anywhere.

Where there is a market for cider, a good cider mill can be used to good advantage in connection with the evaporator. There are a great many apples that are too small to pare and prepare for the evaporator, and these, with the cores and peelings, can be made into cider and thereby save everything. It is not what we make that makes us rich, but what we save; so save all the apples and turn them into money.

With the Eureka parer, a good active boy can pare and slice from fifty to seventy-five bushels per day; so that preparing the fruit for the evaporator is not the task that it would be with the old style apple parer.

In speaking of using the culls, I do not wish to be understood to mean green, wilty or tough fruit, but fruit that is fully matured and well ripened, and is first-class in quality; bruises, rotten specks or wormy defects must all be cut off before dried. Nothing will injure the sale of your fruit so much as to use an inferior quality, such as green or wilty fruit that is tough and leathery.—J. B. DURAND, *in Report of Missouri State Horticultural Society.*

Money in Evaporated Fruit.

THERE are four conditions on which depend success in the evaporating business:—Stock, help, experience and markets. I would not paint a high-colored picture of financial certainties attending the evaporating business, but the possibilities and the probabilities are such as to warrant careful attention. I could figure out marvelous results, but shall merely give the lessons which I have learned in the business. The first year I used an evaporator, I paid an average of 35c. per bushel for apples. My fruit boxed and ready to ship cost me 10¼c. per pound, and I received an average of 18c. This same fruit retailed at 25 to 30c. The net results of that season's work furnish a very pleasant paragraph in my financial history. What is true in all lines of business is true here. The more business is done the cheaper is the work accomplished.

My average cost of evaporating and boxing has been 3c. per pound. The rule for fuel is about one pound of coal to every pound of dried fruit. Even the cores, skins and trimmings are saved. Nearly one half of the apple goes into waste in this shape. I have nearly always dried this waste when not overrun with good fruit that was decaying, and it has paid my coal bill and sometimes a little more. It brings 1½ to 3½c. per pound. The principal market is Philadelphia, where it is made the basis for all kinds of jellies. Hereafter, when enjoying kinds of pineapple jelly, you may know that it is made from the waste of some apple factory. These parings are usually dried at night and require but little care. Cider made from this waste, if pressed out immediatly, cannot be distinguished from that made of whole apples.

The paring may be done by hand or power, according to circumstances. There are machines adapted to both methods. The hand parer used in the factories has a capacity of 25 to

40 bushels per day of 10 hours, according to the size of the apples and the expertness of the operator. The most economical speed is 25 bushels. A higher speed throws the fruit and makes considerable waste. The best power, aside from steam, is a wide-awake boy about 15 years old. The price paid is usually 2½ c. per bushel. I have not yet found a perfect parer, nor one that will stand through a season without constant repairing. Most machines in use pare, core and slice at one operation. Some machines pare and core only, the slicing being done by a second hand. This is more saving in fruit. Punched fruit, or apples punched to remove the core are not worth so much into 1 or 2c., as a great deal of the core is left in the apple.

As soon as the apple is pared the trimmer (usually a woman, as she will handle the apple quicker and be more particular to remove all the skin left by the parer than a man would be) cuts out any specks or other imperfection and separates the slices. Two women are needed to each paring machine and do 25 bushels or more per day. The average pay is 70c. per day.

The bleacher is a tight box about five feet high, three feet deep and two wide, connected with the chimney by a pipe. In the bottom is a vessel in which sulphur or powdered brimstone is burned. The apple is placed on trays, fitted to this box, and allowed to remain in the fumes of the brimstone two to four minutes. There is an ungrounded opposition among some people to evaporated fruit because of this process. The term "bleaching" is misleading. The apple is merely exposed to the fumes to prevent it from turning dark. This gives the apple its white, pleasing appearance by simply stopping the process of rusting, as when dried, fruit that is properly bleached will not show the least taint of brimstone. The main point in bleaching is to get the fresh fruit into the bleacher as soon as possible after it is pared. Some use salt water but the fruit always tastes of the salt. After bleaching, the apples retain their color and can be kept hours before drying.

When removed from the bleacher the fruit is spread upon trays made of wire or cloth and placed in the dryer. In some evaporators it is necessary to lay each slice separately upon the tray, which is quite a task; in others the fruit may be put upon the trays two or three layers deep, the different internal arrangement of dryers necessitating these different modes of preparation. The evaporator is a tower four to six feet square, 15 to 30 feet high, placed over a furnace. In this tower are the elevating machinery, dampers, etc., etc. The fruit is placed directly over the furnace, which should show 225 to 250°, and allowed to remain for five or ten minutes. It is then raised and another tray inserted and so on continuously through the day and night. With proper heat and a favorable day the fruit should be ready to come out in 2½ or three hours. Great care and considerable experience are necessary to know just when the apple is ready to be taken out. In my first experience, and the first experience of nearly every one, the fruit gets too dry and consequently loses very much in weight, besides lessening the nutritive quality of the apple. It ought to feel like a buckskin, not dry nor moist, but soft and velvety.

When taken from the dryer the apple is spread upon the floor in a darkened room. It should remain here for two or three days and should be thoroughly mixed daily. This allows all the heat to escape and the fruit to become equally moist throughout. It is what we call "sweating." Some of the slices will come out of the dryer quite crisp, others perhaps quite moist and by mixing upon the

floor for a day or two the moisture becomes evened up, and one cannot tell which was the crisp and which the moist apple. The favorite package is a box holding two cubic feet. One side is faced with large white slices. The fruit should all be put into the case with the hands and great care taken to remove all seeds and everything you would not care to find in your pie or sauce. It does not require much capital to begin the business even on quite an extensive scale, as dryers can be purchased for part cash, and commission merchants stand ready to advance money on your fruit.—*C. A. Wilcomb, in Farm and Home.*

New or Little Known Fruits.

The Pearl Gooseberry.

On Saturday, the 3rd of August, the writer in company with Mr. Leavenworth, the editor of the St. Catharines *News*, and Mr. Parnell, a member of our Association, responded to an invitation from Mr. A. M. Smith to visit his fruit grounds, and see a new gooseberry. A drive of three miles from St. Catharines brought us to Port Dalhousie, where, near the shores of Lake Ontario, Mr. Smith has some thirty acres devoted to peaches, pears and small fruits.

The Pearl is a gooseberry grown from the seed of Houghton crossed with Whitesmith, by Prof. Wm. Saunders, and worthy of special notice because, (1) of its good quality, (2) its size, (3) its productiveness, (4) its freedom from mildew. So far we have only the Houghton, Smith's Improved and Downing, which are proved to be mildew proof, although the Conn (or Autocrat) has not been known to mildew as yet, and in most cases the Industry is free from the fungus.

Now, with reference to these points, we will give the result of our observations. The quality is good, very like the Downing in this respect, as well as in color and marking; but in size, it averages nearly double that berry, and that in spite of the prodigious crop under which the bushes were laden. There was a row of some fifty or sixty fine bushes, two years planted; and most of them were literally bent to the ground with heaps of fruit. The average was about eight berries per inch of wood, and on one bush we estimated that there must have been at least 1,500 berries. We have had great loads upon the Smith, the Downing and the King Conn (or Autocrat) on our own grounds, but we have not seen quantity of fruit upon the bushes of any variety to equal that upon these bushes of the Pearl. Should this productiveness prove constant the berry will be of great value for the market garden. With regard to the mildew, all we can say is what we saw, viz.,—an entire freedom from it. One bush stood next a

Whitesmith, and while the berries of that bush were covered with mildew and utterly worthless, no trace of this fungus could be found upon the Pearl.

More About Simon's Plum.

Editor CANADIAN HORTICULTURIST.

SIR,—I see that my statement in your journal regarding the Simon Plum is being criticised considerably, and this in no way surprises me. The head of one of the leading lithographic firms of this country, told me in person not long since, and by letter formerly, that if they made colored plates of fruits true to nature in size and appearance the nurserymen would not buy them. They want them enlarged almost without exception. I can prove this by anyone whose business it is to make colored illustrations for the nurserymen. I wish to say, however, there are exceptions, and one that I just now know is the Wilder Pear as advertised by Charles A. Green, of Rochester, New York. In this case there is no exaggeration either in size or description, so far as I know. I think the same is true of the Idaho Pear being sold by a firm in Idaho. The Parker Earle strawberry as advertised by T. V. Munson, of Denison, is also true to nature.

FIG. 76.—THE PEARL GOOSEBERRY—(*Photo-graved for the* CANADIAN HORTICULTURIST.)

In regard to the statements of some of your correspondents as to the very large size and quality of the

Simon Plum I wish to say that I am always open to conviction. My present opinion is based upon the specimens I have seen, and I emphatically state that I have never measured one with a greater diameter than one and one-fourth inches. If the gentleman, growing such large and delicious specimens of this fruit, will send me samples next year I will take great pleasure in giving this variety the full benefit of all the good opinion it rarely earns. This much and nothing more. The illustration I criticised shows the fruit to be from two to two and one-fourth inches in diameter, and, according to the statement of A. B. Dennis, of Iowa, in your October number, the fruit grows in that State to twice the size of the illustration, which would make them from four to four and one-half inches in diameter. Perhaps the gentleman is talking about pumpkins. I offer $100 each for specimens of Simon Plum measuring four inches in diameter,—H. E. VAN DEMAN, *Pomologist, U. S. Dept. of Agriculture, Washington, D. C., Oct. 10th., 1889.*

PRUNUS SIMONI.—Three years ago we set out a row of Simon's plums, using one-year-old plants. Intending to train them laterally on wires, they were set at an angle of over forty-five degrees, putting nearly all the stem under ground. As they started upright shoots from the stem, they were permitted to grow with a view to test the bush plan. At this time they are bushes, rather than trees, with several stems, and with branches to the ground. In this form they have stood the recent test winters almost perfectly, and are now quite well loaded with fruit which is now (July 5) much larger in size than any plum and wholly free from curculio or gouger marks.

As it has been said that the fruit has no value, I will state that in my opinion the authors of such statements have only tried it for dessert use, for which its flesh is too firm and its flavor not the best. When used for canning or stewing, it has the peach flavor without the peach bitter. When better known, I think it will be prized for culinary use on the northern border of the peach belt.—J. L. BUDD.

The Peach of South Africa.

SIR,—I have relatives who live in "Transvaal," the Dutch republic of South Africa, who tell me they have peaches of a very excellent kind, which when full grown and ripe weigh from nine ounces to one pound each They have sent a number of the peach stones from the above place to my son William, in Cape Town, to be forwarded to me, but as there is no express or parcel-post, my son has just sent me one in a letter and asks how he can send them, as there is nothing from Cape but letter or mail post, at letter rate it would cost much, so I suggested, as he was well acquainted with most of the captains and chief officers of the S.S. lines, he might pack them and send them to my son in England and so get them through him as best we could. I shall hear in due time if he has done so. I enclose you the one he sent. Should you feel at all interested in the stone or not, please let me know. My wife's sister wrote a good deal about this kind of peaches, telling of their weight and their beautiful color and flavor. —W. S. RAWBONE, 5 *Maitland Place, Toronto.*

This stone is being carefully planted, and should it prove in Ontario what it is in South Africa, our readers will soon know all about it. —EDITOR.

New Peaches—Centennial and Smith's Extra.

SIR,—Find herewith samples of Wealthy —extra size and medium, also sample of Centennial peach and also what I call Smith's Extra Late. It is about a week later than ordinary Late Crawford, in other respects similar. There is also one sample of Steven's Rareripe which we are picking now. It is Old Mixon in appearance, but ten days later A. M. SMITH, *1st Oct.* 1889.

The *Centennial Peach* is certainly of striking appearance, being very large; this specimen measuring over nine inches in circumference, roundish in form, of yellow skin with crimson cheek, the flesh yellow of good quality, but, unfortunately a clingstone. No doubt, however, that its

large size will make it popular in the market, coming in as it does about the first of October, when good peaches are scarce.

The *Steven's Rareripe* is a white fleshed peach, resembling in almost every respect the Old Mixon tree, but later, coming in about the first week in October; it is not quite free-stone, but would come under that class. The quality is excellent, and the tree productive.

Smith's Extra Late seems to be all he claims for it. This sample measures about eight inches in circumference, is yellow flesh and skin, a perfect free stone. It is of the same season as the others, and in our judgment a valuable market peach and superior to Centennial, except in size.

THE SPARROW NUISANCE.

SIR,—I send you a clipping from the *Star*, on the sparrow. You will see by it that the "old farmer" deals as harshly with the sparrow's friends as with the wee birdies themselves. We agree with him, however, that they are a nuisance, far more destructive than useful. Our American cousins are wide-awake in the matter, and I am told by one of themselves that a bounty of two cents for every one shot is now paid or proposed to be, as also a "sparrow day" to be appointed, when every one able to handle a gun is expected to go sparrow shooting. We would do well to follow suit. From the same source I learned that in the crop of one sparrow, he shot, he found sixty-four grains of oats.—JOHN CROIL, *Aultsville*.

DOWN ON THE SPARROW.

SIR,—Two parties write in favor of the sparrow introduced by some spooney into this country some years ago to please a lot of children and old women. These destructive birds are held up as being useful in Canada by two writers, one Chas. Hughes and the other "Aliquis."

The latter speaks of a proverb that the strongest man has a weak place somewhere. To come to the point I would say that both these men are troubled in their top garret when they plead for the safety of the most destructive bird that ever was made. The extermination of the sparrow in England could never be accomplished, there being such facilities for breeding under the eaves of houses, also in the stacks of grain, which stand sometimes for several seasons before being sold and the number of young ones in a nest is from ten to fifteen, with three and sometimes four nests in a year. Yet you find men who advocate the safe-keeping of these destructive pests, who know as much about the sparrow as the sparrow knows about them. I can inform these two if they want knowledge about the sparrow that they need not appeal to authors or books, but go and get information from the practical English farmer who can tell with certainty that they destroy millions of bushels of wheat while soft in the ear, for they won't eat anything that is hard. That being the case they then fly to the gardens, making destruction on the various fruits when nearly ripe, particularly white and red currants. They cut the bunches off with their bill and these, falling to the ground, are left to rot. Let these two enquire round the outskirts of our city and you will find the same complaint existing in Canada. Having been in Canada for thirty years I can say they have been the means of nearly exterminating all our pretty song birds. We also have in our woods the red squirrel. These little animals can't rest for them, for they pursue them in scores, driving them from tree to tree until they find refuge in some hole for safety. I hope and trust that the praiseworthy petition of Alderman Prefontaine will pass the board without a dissent.—RETIRED YORKSHIRE FARMER, AGE 73.

PLUM POCKETS—(TAPHRINA PRUNI.)

THIS disease is due to the presence of a parasitic fungus which attacks the young fruit, and by its growthwithin their tissues causes the peculiar development of the latter which finally results in the formation of the so-called "pocket."

The "pockets" (fig. 77) make their appearance soon after the flowers have fallen, attain their full size and drop from the tree towards the middle or last of June. At first they are more or less globular in shape, but as they grow older they become oblong or oval and frequently more or less curved. They vary in size, but as a rule are from 1 to 2 inches in length and from one-half to one inch in diameter. When young they are nearly smooth and can be distinguished from the healthy fruit by their pale yellow or reddish color. As they grow older the color changes to grey, the surface appearing as though it had been sprinkled with fine powder, and at the same time the "pockets" become wrinkled. Finally they turn black or dark brown, and rattle like bladders when brought in contact with any hard substance. Sections through the diseased fruit show that the walls are quite thick, and that in place of a stone there is a large cavity filled with fungous threads and air.

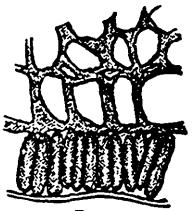
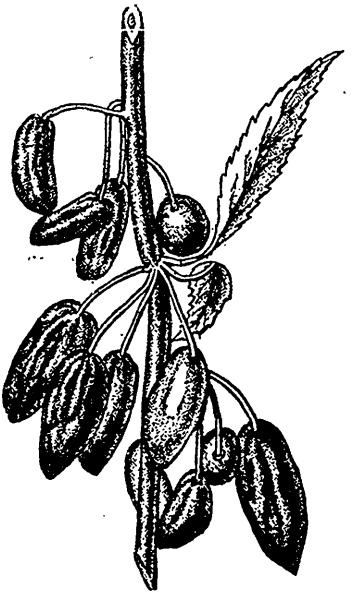


FIG. 77.

The fungus attacks the young branches and leaves, and when this occurs the injury is, of course, much greater than when the fruit alone is attacked.

The disease never sweeps over the country attacking all varieties of the plum alike, but, on the contrary, it often happens that a particular tree will bear nothing but "pockets," while adjacent trees of the same variety, grown under precisely the same conditions, show no traces of the disease whatever. As a rule, a tree that has once borne a crop of "pockets" seldom recovers, but continues with each succeeding year to produce a greater or less number of the malformations.

All plums are more or less subject to the attacks of this parasite, but it is usually more abundant on the red and purple varieties. It occurs also



"PLUM POCKETS." FIG. 78.

on the wild red and the beach plums, and on the dwarf, the wild black and the choke cherries.

A microscopic examination of one of the diseased plums will show that the fungus occurring within the tissues consists of three parts, namely, (1) mycelium; (2) asci; (3) spores or reproductive bodies. The mycelium consists of colorless septate filaments. These are particularly abundant

between the epidermis and cuticle, where by repeated branching and interlacing they form a net-work which is not more than one cell deep. The threads forming this net-work are composed of very short cells which soon start an independent growth at right angles to the surface of the pocket, forming small cylinders standing close side by side but apparently unconnected. They at first carry the cuticle upon their ends, but finally rupture it and appear on the surface. These bodies are the immature asci. Each "pocket" develops countless numbers of asci, and each ascus, as a rule, contains no less than eight spores.

The mycelium of the fungus is found in the smaller branches in early spring before the diseased fruit appears, which seems to indicate that it may live from year to year in the tree itself; moreover the annual recurrence of the "pockets" on the same tree furnishes additional proof of this fact.

The treatment suggested is to remove and destroy all the "pockets" before they reach maturity, and cut back the branches so as to destroy all the parts which are likely to contain the mycelium of the fungus.—B. T. GALLOWAY, in Annual Report of the U.S. Department of Agriculture for 1888.

USE OF FRUITS.

Danger in Swallowing. Cherry Pits and Grape Seeds.

IT is reasonable enough to suppose that whatever, in the way of seeds, passes into the stomach unmasticated, and on which the juices of the stomach cannot act, must be unwholesome. A diet of cherry-stones, which some children indulge in, is pernicious in the extreme, and a youngster in my neighborhood, who filled his stomach with a pint of cherries, swallowed whole, nearly lost his life in getting rid of that particular meal. Two people in my neighborhood have died within five or six years, from eating grapes, the seeds of the grapes getting into the appendix, which is the term commonly given to a small intestine, which leads from the large intestine. It is but a few inches long, and comes to an end like a pocket, or *cul-de-sac*. What its use is in the digestive economy has not been made out, but when a grape seed, or bit of oyster shell, or any similar unyielding substance slips into it in its passage through the body, the result, I believe, is uniformly fatal, and death ensues in four or five days, after intense suffering—cramps, inflammation and swelling of the bowels. No remedy avails anything—the pain finally ceases and then the end is nigh. I have known of three young men of brilliant promise, who have been slain by the grape seed—a post-mortem in each case revealing the cause of death. One child, whom I know, who is very fond of grapes, and still does not intend to be a victim to the seeds, chews the grapes and thoroughly masticates the seeds, while many adults eschew the seeds altogether, which method seems to the ordinary grape-eater as a very sorry one, indeed. But there is a great deal in habit, and the child who masticates the grape seed, and has never eaten grapes in any other way, enjoys them fully as much as any one

I know. Of course, we are never out of the reach of danger from some quarter, and "in the midst of life we are in death." Still, it is but the part of good sense to avoid unnecessary harm, if we wish to keep well. To be continually in mortal terror of some impending calamity is very unphilosophic—one might better die and be done with it. The best we can do is to do the best we know, and leave the outcome "with Providence."—*Miss Fisher, in R. N. Y.*

The Rind of Fruit Indigestible.

THAT the rind or skin of all fruit is more or less indigestible, is a fact that should not be forgotten. We say all fruit, and the statement must be understood to include the pellicle of kernels and nuts of all kinds. The edible part of fruit is pecularily delicate, and liable to rapid decomposition if exposed to the at mosphere; it is, therefore, a wise provision of nature to place a strong and impervious coating over it, as a protection against accident, and to prevent insect enemies from the seed within. The skin of plums is wonderfully strong, compared with its thickness, and resists the action of water and many solvents in a remarkable manner. If not thoroughly masticated before taken into the stomach, this skin is rarely, if ever, dissolved by the gastric juice. In some cases pieces of it adhere to the coats of the stomach as wet paper clings to bodies, causing more or less disturbance or inconvenience. Raisins and dried currants are particularly troublesome in this way, and, if not chopped up before cooking, should be thoroughly chewed before swallowing. If a dried currant passes into the stomach whole, it is never digested at all. In the feeding of domestic animals this fact should be kept in mind. If grain and leguminous seeds are not crushed or ground, much of the food is often swallowed whole, and the husk or pellicle resists the solvents of the stomach, causing a considerable loss of nutriment. Birds, being destitute of teeth, are provided with a special apparatus for grinding their seed, namely, the gizzard. The indigestibility of certain nuts is partially due to the brown skins. Blanched almonds, on this account, are more digestible than those which have not been so treated.—*Popular Science News.*

Fruit a Perfect Food.

SOME people are afraid to eat fruit, thinking that fruit and diarrhœa are always associated, when, if they understood the true cause of the diarrhœa they would know that it was caused by eating meat. In hot weather meat putrifies very quickly, and during this process alkaloids are formed which are very poisonous, acting as emetics and purgatives. 'Tis true that fruit eaten green, or between meals, will interfere with digestion and cause bowel troubles, but use fruit that is perfectly ripe at meal time and only beneficial results will follow. Acids prevent calcareous degenerations, keeping the bones elastic, as well as preventing the accumulation of earthy matters. This is because of the solvent power of the acids; but manufactured acids are not as harmless as those which nature has prepared for us in the various kinds of fruit. Fruit is a perfect food when fully ripe, but if it were in daily use from youth to age there would be less gout, gall stones and stone in the bladder. Stewed apples, pears and plums are favorite articles of diet. For breakfast or luncheon, in the dining room or in the nursery, there are few table dishes more wholesome or more delicious than well stewed fruit served up with cream or custard. There are many persons, however, who cannot eat it on account either of the acidity of the fruit or the excess of sugar necessary to make it

palatable. Sugar does not, of course, countera t acidity; it only disguises it, and its use in large quantities is calculated to retard digestion. The house-wife may, therefore, be grateful for the reminder that a pinch, a very small pinch, of carbonate of soda, sprinkled over the fruit previously to cooking, will save sugar and will render the dish at once more palatable and more wholesome.—*Exchange.*

Apple Butter.

To forty gallons of good sweet cider, made from sound, ripe apples, use three bushels of select apples. The cider should be boiled down to one-third or a little less before putting in the apples, which should be pared clean, all specks, bruises seeds and seed cavities removed. They may be quartered, or cut into eighths, if very large. Stirring should commence as soon as fruit gets soft, and be kept up carefully until done. At all times prevent the flames of fire striking the kettle above the line of contents. When boiled down to ten gallons it will be done, and will be an article fit for a king. Put in earthen vessels, and when cold, dip clean white paper into good whisky or brandy, and lay it over the tops. In four months from making, if kept in a garret (the best place), the jars can be inverted on a floor or shelf without running out. Will keep for years, and if made with the right kind of apples, such as Rambo, Smokehouse or Bellflower, will become as smooth as cheese.—*S. Miller, in Vick's Magazine.*

Quince Marmalade.

Boil the Quinces until they are soft; then peel and rub them through a sieve or on a grater. To each pint of pulp allow one pint of sugar, and boil for two hours, stirring frequently. It is well to place the preserving kettle where there is no danger of burning, but where the boiling is continuous. The long boiling causes the color to become a rich red.

Quince Jelly from Parings.

Put the parings and cores in a kettle and neatly cover with cold water; boil until very tender, pour into a straining cloth tied over the top of a stone jar, let them drain untouched. To every pint of juice allow three-quarters of a pound of sugar, put juice in a kettle and let it boil, then stir in the sugar a handful at a time, boil twenty minutes and pour into glasses.

Cooking Fruits.

Fresh fruits should be cooked with boiling water. As sugar is rendered no more soluble, palatable, digestible, or nutritious by cooking and is, in the presence of some acids, changed to glucose by heat, and consequently is much less sweet, it should be added only long enough to dissolve nicely, before removing the fruit from the fire. Dried fruit should be washed and then soaked in cold water until no longer wrinkled in appearance, but until it has imbibed sufficient water to give the original rounded form, then cooked slowly in the water in which it was soaked. If cooked rapidly in boiling water without first being soaked, the cells are hardened by the heat and lose the power of imbibing water and the fruit comes to the table unsightly, unpalatable and indigestible.—*Clara S. Hays, before the Min. State Hort. Society.*

Fine Flavor in Fruit.

As the period for the ripening of large fruits is approaching, it may be well to remind inexperienced cultivators of the importance of high culture for the development of the finest quality. Some years ago two St. Ghislain pear trees bore fruit so unlike that they would not be re-

cognized as the same variety. There was almost no similarity in flavor. One tree bearing poor fruit stood in a thick grass sod; the other, with excellent pears, was kept well cultivated. Early pears as well as early peaches, on crowded trees, which ripen first on the tree, are much inferior in flavor to those which come later. The first are grown so thickly on the branches that they cannot sufficiently mature. Those which ripen later, after the early portion of the crop has been removed, have plenty of space to develop their fine quality. Hence the great advantage of early thinning. Take the Summer Doyenne pear, for instance. Those which are first ripe on densely crowded limbs are about half the size of those which ripen last, and strikingly inferior to them in quality. So with early peaches; the last scattered ones on the tree are commonly observed to be greatly superior in flavor to the first which ripen. These facts teach the importance of good cultivation, and of thinning the fruit on crowded trees, both of which operations will always repay the grower in large, beautiful and excellent fruit, instead of small, knotty and flavorless specimens.—*Albany Cultivator.*

* FLORICULTURAL *

Soot Water.

Soot water is highly recommended for plants. It is claimed that when made sufficiently strong and used in a clear state there is no other fertilizer, either solid or liquid, that is so well suited for amateurs' use as soot water, as it is gentle in its action and sustaining in its nature. This is not the case with the majority of concentrated manures, for if they are used slightly in excess, serious consequences are often the result.

When a regular supply of soot water is required there should be two barrels, says the writer who so strongly recommends it, or other receptacles, in which to make it. A cask holding about thirty gallons is suitable. In one of these place one peck of soot, and then fill up with water, and keep it stirred twice a day for a week. In ten days it should be ready for use, but it is necessary that it should be quite clear before using it or there will be a settlement of the solid matter on the soil. A better plan is to put the soot into a coarse hessian bag and place it in the water. Tie a strong piece of string to the mouth of the bag, and have one end of it fixed on to the edge of the barrel; the bag can be moved about in the water, for the purpose of mixing it with the greatest ease. As soon as one lot is ready another should be in course of preparation, so that with a little forethought a regular supply may be obtained.

Closing an article upon the subject a writer says: "As regards how and when to use soot water, as an old practitioner, I can only say that when given regularly when the plant is in active growth I don't know the plant that it would harm, but I have known it benefit a vast number. Even such delicate-rooted plants as Erica and Epacris I have kept in splendid health in the same pots for seven or eight years by the aid of soot water, and such plants as callas, camellias, azaleas and roses, may have regular supplies the whole year round. Such subjects as fuchsias, pelargoniums, cyclamens, primulas and ferns are gently benefited by it while they are in active growth. Plenty of soot water, whenever the soil about the roots is dry, will send green fly and other enemies to the roundabout; therefore I say, use it, and keep your plants healthy and your mind at rest. —*Western Rural.*

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.

The Idaho Pear.

A BOX containing two specimens of the Idaho pear have just come to hand, from Mr. John Evans, Secretary of the Idaho Pear Co. These samples were unfortunately delayed in the customs until one was entirely gone, but the other was just in prime condition, showing the rich golden-yellow skin of our colored plate in January No., and in every respect fulfilling the characteristics there given. (See page 2). Its large size, its delicious buttery flesh, melting and juicy, and its high flavor, equalling the Bartlett in this respect without its muskiness, must win for it a high place among our leading varieties of pears for market. This sample measures eleven inches in circumference.

Farmers' Institutes.

The following is a list of gentlemen who have been recommended as speakers at Farmers' Institute, on subjects connected with fruit culture :—

A. McD. Allan, Goderich ; A. M. Smith, St. Catharines ; T. A. Race, Mitchell ; P. E. Bucke, Ottawa ; John Croil, Aultsville ; Thos. Beall, Lindsay ; G. C. Caston, Craighurst ; A. N. Pettit, Grimsby ; M. Pettit, Winona ; Rev. Geo. Bell,* Kingston ; W. E. Wellington,* Toronto ; J. K. McMichael,* Waterford ; J. A. Morton,* Wingham ; J. M. Denton,* London ; E. Morden, Niagara Falls.

The Buffum Pear.

THE *American Garden*, for October, gives a very good photogravure of the original Buffum pear tree, still standing on the estate of Mr. Henry, Bedlow, Newport, R.I., and now about one hundred years of age. The tree is still very strong and healthy and bears most abundantly.

The tree was a chance seedling, and took its name from Mr. David Buffum, who was then a tenant of the farm, and a horticulturist. We have a good many trees of this kind at Maplehurst Fruit Farm, most of them over thirty years of age ; they are vigorous growers, and very upright, almost suitable to be planted for ornament. They are good and regular bearers, and the fruit grown upon the standards is usually better than that grown upon the dwarfs. When well grown, the fruit is of medium size,

*Those marked with an asterisk have not yet signified their willingness to act.

well shaped and well colored. It wholesales for about 50 cents a basket when the Bartlett is worth 75 cents and sometimes brings $1.00 in Montreal.

The Annual and Winter Meeting

OF the Ontario Fruit Growers' Association will be held in the Music Hall, Sandwich street, in the town of Windsor, on Tuesday, Wednesday, and Thursday, the 10th, 11th and 12th of December, 1889.

Distinguished specialists in fruit culture are expected to be present from all parts of the Dominion, from New York State and Michigan, to take part in the discussions. Papers will be read by prominent local fruit growers. The following gentlemen have also expressed their intention to be present if possible, viz.: The Hon. Chas. Drury, Minister of Agriculture; Mr Wm. Saunders, Director of the Experimental Farm, Ottawa; J. H. Panton, M.A., Professor of Botany and Horticulture, in the Ontario Agricultural College, Guelph; Mr. T. T. Lyon, President of the Michigan Horticultural Society; Mr. C. W. Garfield, ex-Secretary of the American Pomological Society; Mr. S. D. Willard, representative of the New York State Horticultural Society, and others.

Local organizations, such as the North and South Essex Farmers' Institute, the Essex Vine Growers' Association, the Windsor Board of Trade, etc., will cooperate in contributing to the interest of the meetings.

All meetings are open to the general public, both ladies and gentlemen, who are interested in the fruit orchard and the fruit garden, and all may take part in the discussions, either by giving their experience in the culture of the various fruits, or in asking questions through the Question Drawer.

The Question Drawer will be in charge of the Secretary, and any one may contribute to it questions in writing; it will be opened at various intervals and replies elicited by the President and from those most competent to answer.

Special excursion rates will probably be granted from all parts of Essex county by the railway companies, and certificates enabling the holder to return home for one-third fare to any point of the Dominion will be sent by the Secretary to any one applying for them. These must be had in advance and signed by the station agent at the starting point, or they will be of no use.

Samples of fruits grown in the various parts of Ontario will be shown, and anything worthy of notice will be reported upon for the Annual Report to the Government, by a committee appointed for that purpose. Fruit growers in the county of Essex are particularly requested to bring in samples of their best varieties of winter apples, winter pears and grapes.

The members' fee of $1.00 will be received by the Secretary at any time during the meetings. This will entitle one to receive the CANADIAN HORTICULTURIST, a monthly journal for fruit growers, published by the Association; the Annual Report, containing the papers and discussions at the meetings, taken down *verbatim* by an able stenographer, and some tree or plant for testing. Copies of back numbers of these publications of the Society may be seen at the Secretary's table.

PROGRAMME.—(*Incomplete.*)

Tuesday Night.

8 o'clock.—Annual Meeting; President's address; election of officers; introductions and social conversation; appointment of committees.

Wednesday.

The morning will be taken up with meetings of directors and committees, and arrangement of fruit exhibit.

VARIETIES OF FRUITS, AND THEIR MERITS.

1.30 o'clock p.m.—"The Ontario Fruit List," presented by a committee. Discussion upon the same.

"Best selection of apples to plant in the county of Essex; three Fall, and six Winter varieties"; Allanson Elliott, President of the South Essex Farmers' Institute.

FRUIT EXHIBITS AT FAIRS.

Report of Committees on "Points for Judging Fruit." Discussion on the same.

Questions. (1) Should fruits exhibited be the *bona fide* growth of the exhibitor? (2) Is it best to have one judge or three? (3) How can fruits and flowers be labeled so as to be easily read by visitors? (5) In exhibiting single varieties of apples, would a peck be any better than a plate of each?

Evening Session.

8 o'clock p.m.—Welcome addresses by the Mayor of Windsor and others, Replies by the President of the Fruit Growers' Association and others.

UTILIZING SECOND GRADE FRUIT.

"Evaporation of Fruits," by Mr. L. B. Rice, Port Huron, Michigan. Questions and discussion.

"Apples for Stock," L. Woolverton, Grimsby, Ont. Questions and discussion.

What other profitable uses can be made of such stock?

Question Drawer opened.

The evening session will be enlivened by music and readings contributed by local talent.

Thursday.

THE PEAR.

10 a.m.—"My Experience in Pear Culture," by J. K. McMichael, Waterford, Ont.

"How to make the most of the Pear Orchards," N. J. Clinton, Secretary of North Essex Farmers' Institute.

Discussion.

Questions on pear culture. (1) What is pear blight, and what are the best means of checking it? (2) Are dwarf or standard trees the most profittable for the commercial orchard? (3.) What ten varieties are found most porfitable to grow in the county of Essex? (Three Summer, three Fall and four Winter.)

THE PEACH.

"Peach Growing for Profit," by Mr. James F. Taylor, Douglas, Michigan, Discussion on the subject.

Questions of peach culture. (1) What list or six kinds pay best in the county of Essex? (2) What are the best means of keeping out the borer? (3) What are the best size packages to use for choice peaches? (4) What is the best time and method of pruning the peach tree? (5) Can the yellows be cured? (6) Can it be carried from tree to tree by the saw and the pruning knife?

THE GRAPE.

2 o'clock p.m.—"How best to Prune a Commercial Vineyard in Ontario," by Mr. A. McNeil, Head Master of the High School, Windsor, also an extensive Vineyardist.

"Two modes of Pruning and tying up Grape Vines in France, with Practical Illustrations," by a French vineyardist, Mr. A. E. Tournier, Windsor.

Discussion on the subject.

Questions on grape culture. (1) What is the best mode of marketing the grape? Answer by Mr. M. Pettit, Winona, Ont. (2) What is the simplest way to make a small quantity of pure grape wine for home use? Answer by Mr. Ernest Girardot, Windsor. (3) What nine varieties of grapes succeed best in the county of Essex (Three black, three red and three white?)

TREE PLANTING.

"Fall Purchasing and Fall Planting of Trees," by T. H. Race, Mitchell, Ont.

Discussion.

THE PLUM.

What are the six most profitable varieties of plums for Southern Ontario, two of a color? Answer by Mr. S. D. Willard, Geneva, N. Y.

FRUIT SHIPPING.

Would it be wise to interview the railway companies regarding a special fruit train service, on the ground that the express companies are no longer competent to carry the ever increasing shipments of fruit in a proper manner.

8 p.m.—What kind of hedges are best suited for hedge in Southern Ontario? Answer by Mr. A. McNeil, Windsor, Ont.

"Fruit Rooms and Storage of Fruit," by T. T. Lyon, of Grand Haven, Michigan. Questions and discussion.

Question Drawer opened.

Closing addresses.

Music and readings by local talent will also be furnished to enliven this session.

QUESTION DRAWER

Treatment of Rhododendrons.

81. WHAT is the proper treatment and soil for Rhododendrons?—E. W. TAYLOR.

Reply by N. Robertson, Superintendent Government Grounds, Ottawa.

The main point is giving the root a light porous soil. Leaf mould in its lightest form is the best. The top does not seem to suffer from the heat of the sun, but the root does, and must be kept as cool as possible or no success can be met with. Some growers advise sawdust, that of the oak in preference to all others; this I have never tried, but the evidence given proves that, with this, more success was attained than with any other substance used, even pine sawdust. They are not hardy out of doors, even with protection in our climate, but the dwarf species, known as greenhouse varieties, are very beautiful, but require considerable space where they are grown, which is often an objection to growing them; a rather cool temperature suits them best.

Remedy for Rose Thrip.

82. CAN you inform me in journal or otherwise the name and cure for a small whitish fly that flies in and out among roses and other plants, eating the under surface of leaves, specimen included? The best cure I have found consists in holding a piece of sticky fly-paper under or near branches and giving them a slight tap when many of the flies are caught. They do not care for Paris green or tobacco.—E. W. TAYLOR.

This insect is properly known as a Leaf Hopper, and belongs to the family Hemiptera, genus Cicadellina, and is of late years very troublesome, indeed, both to rose leaves and grape-vine leaves. The remedy proposed by our correspondent would be very slow. We have used pyrethrum powder with complete success, puffing up the dry powder against the under side of the leaves when they are a little damp with dew. Perhaps a more economical plan would be to spray the leaves with a solution in proportion of two ounces of pyrethrum powder to a gallon of water.

Pear Trees for Sandy Soil.

83. I WAS thinking of getting some pear trees. Would you think it advisable to plant in sandy soil, and what kind is best. An answer will oblige.—JOHN CLEMENS, *Brantford.*

The pear is more liable to blight on sandy soil, and so far as we have observed has less color, but most kinds thrive very well in other respects. We have grown the following kinds on a sandy loam with good success, viz.: — Tyson, Bartlett, Howell, Beurre Brown, Bartlett, Belle Lucrative, Howell, Sheldon, Louise (dwf.), Duchess (dwf.), Beurre d'Aujou and Lawrence.

What is it?

84. I SEND you a natural curiosity by sample post, that grew on one of my crab-apple trees. Is it a pear, an apple, or a pair of apples.?—W. H. WYLIE, *Carlton Place, Ont. 11th October* 1889.

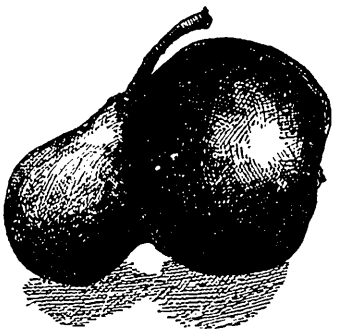


FIG. 79.

This is evidently but an abnormally shaped apple, as Mr. Wylie tells us there is no pear tree growing near it. It may interest our readers to see it, and therefore we have prepared the accompanying sketch of this curiosity.

Mixing Manure and Ashes.

85. I have a quantity of hen manure which I intend to apply to my garden and orchard; also some wood ashes. Do you advise applying them separate or mixed together.—J. C., *Aultsville.*

Reply by Prof. Panton, O.A.C., Guelph.

Do not mix hen manure and ashes, because a chemical change takes place and *ammonia* is freed.

The *lime* and *potash* of the ashes seizes the acid holding the *am.* in the hen manure, and the *am.* is thus let go into the air.

OPEN LETTERS.

he Catalpa Speciosa.

DEAR SIR,—As my apparent success spoken of in the *Horticulturist* and the Report of the Fruit Growers Association has, I believe, induced many to plant the Catalpa Speciosa, I think it but right to inform you that unhappily I have found that, while every one of mine has successfully stood our northern winters, the tree has such a drawback that nothing would induce me to plant another. I have, in addition to smaller ones, two with trunks measuring six inches in diameter, both of which have had the whole top half snapped off, completely destroying the trees, caused by heavy winds after rain, the immense leaves being saturated, making the trees top heavy. Every Catalpa I have has had more or less branches broken off in this way, and their shape spoilt, though they are mostly planted within high board fences, and protected with surrounding buildings.

I am sure that many of your readers will be sorry to hear so poor an account of what promised to be one of the most desirable shade trees we have in this country.—L. H. KIRKEY. *Collingwood, September* 17, 1889.

Northern Light Grape.

SIR,—Another year's experience with this beautiful grape fully confirms the fact it will ripen with Moore's Early when planted side by side on the same soil with the same exposure. The owners are very sorry that for several reasons the propagation of plants has not been so rapid as they could have wished. Owing to the heavy crops produced on the parent vine the wood of 1888 did not ripen sufficiently to ensure its growth so that the proprietors have only about three hundred plants on hand. It is intended to wait for another year or two before placing it on the market for sale. Amongst the few grapes that set well on the bunches this year at Ottawa was the Northern Light, Niagara and Moore's Early. As a rule other varieties gave imperfect bunches, though this did not occur in every locality.—P. E. BUCKE, *Ottawa.*

Mitchell's No. 1. Tomato.

SIR,—Will you kindly allow me to report on Mr. Mitchell's No. 1 Tomato through the medium of your valuable journal. I am not only well pleased with the latter but am proud of it, proud to see that Canadians can support such a paper. No. 1 with me were as good as any I have ever tasted in quality, uniform in size and as large as samples at Barrie show. But in my experience the chief point of excellence is their being two weeks earlier than any others planted. This is also Mr. J. W. Lee's verdict, also that of a neighbor.—S. SPILLETT, *Nantyr, October* 7, 1889.

The Ontario Apple in Nova Scotia.

SIR,—My Ontario tree has succeeded admirably here. The tree is hardy, a vigorous grower and an early bearer. In quality the fruit is only middling, but is *enormously* productive of large, sound, long-keeping apples,

which keep until July. I have no other late variety half as useful.—CHARLES E. BROWN, *Yarmouth, N.S.*

Golden Queen.

SIR,—This raspberry, which I received from the Association last year has done finely, and gave me a quart of as fine berries as ever I tasted, and that is the testimony of several others that tasted them. It wintered well, showing no signs of winter killing, although it is in an exposed place. It has made a vigorous growth, sending up many shoots which I intend to set in the Spring. This is the result from one bush, the others I received did not live. I think the Golden Queen has come to stay, and for a near market I think it will take the lead in a few years, as soon as its good qualities are known.—W. C., *South Livermore, Maine.*

OUR FRUIT MARKETS.

THE scarcity of *apples* is being more and more realized in Ontario, and, though prices have not yet advanced above quotations of last month, yet apple shippers feel confident of very high prices before the spring. Farmers in the Niagara peninsula even, who live on the mountain, and away from the favoring influence of the lakes, have no apples at all in their orchards, and drive twenty and thirty miles to secure a supply for their families.

Mr. J. F. Wilson writes that buyers are paying $2.00 per barrel at Chatham, for the bare fruit, and paying for barrels and packing extra; and no doubt they can well afford this price. Kings and other fancy stock are in especially good demand, and are worth from $3.50 to $4.00 per bbl. in our home markets.

Pears are no longer in great demand, dealers having for the most part laid in a good stock of Duchess, and few are being asked for by consumers.

Grapes are ruling higher than for many years, the lowest price received by growers being 4 cts. per pound for Concords in ten-pound baskets. They are now advancing again, and are worth about five cents for choice samples.

A few apples are going forward to the British markets, but not one quarter of the quantity that went over last year. The average net returns, so far, to Montreal men, amount to about $3.00 per barrel for winters, an encouraging result; but when we have a prospect of getting $3.00 per barrel right at home, we doubt the wisdom of risking the chances of any foreign market.

We subjoin a few market reports, which have come to hand:—

Bournemouth, England.

SIR,—Hearing your journal mentioned as the leading pomological organ of Canada, we beg to imform your readers of the scarcicy of good English Apples this autumn, and would remind that by shipping good sound fruit to England this year they are bound to carry all before them.

We would also add a word of caution, viz.: to avoid crushing the London and Liverpool markets by fowarding all goods to these centres, whilst the smaller, but none the less wealthy, towns are starving for good fruit.

The great markets are quite overwhelmed, although their demand is enormous, and it is certain that no one can make a mistake in scattering their consignments, (so equalising prices) whilst those who presist in sending to one market, often suffer heavy losses.

We ourselves are prepared to receive consignments and guarantee top prices. our trade being of the highest class, and no local fruit worth naming.—A. MAY & Co., 12 *The Arcade, Bournemouth, England 18th, October,* 1889.

Liverpool.

SIR,—Arrivals of Apples during the past week have been on a rather more liberal scale, although strictly moderate.

The greater part of the stock now arising from all ports, is in poor condition, which class of goods can only be realized at a discount, but fine, sound bright stock is in very great demand. We quote with a steady market :

Canadian Kings, 20s. to 25s.; Ribston, Pips, 21s. to 26s.; Various, 14s. to 19s. 6d; States Kings, 17s. 9d.to 25s. 6d; Baldwins, 12s. to 18d.; Greenings, 11s. 3d. to 17s.; Various 14s. 9d. to 20s.; large stock especially of red descriptions, finds eager buyers, of which quality we can strongly recommend shipping—WILLIAMS, THOMAS & Co, 10th *October* 1889.

Glasgow.

Messrs. James Lindsay & Son, Glasgow, cable their market as follows: Greenings, 14s. to 16s. or $3.40 to $3.89; Baldwins, 17s. to 20s. or $4.13 to $4.85; Kings, 20s. to 24s. or $4.85 to $5.83; BenDavis, 19s. to 20s. or $4.62 to $4.85; with a very active demand for good fruit.

The shipments to October 5th, 1889, aggregate about 43,000 barrels, against a total to same date last year of about 175,000 barrels, a difference in favor of last season of about 132,000 barrels. This week the shipments will probably be heavier than heretofore, the market abroad having improved and the late varieties of apples being in condition to ship.—OTTO G. MAYER & Co., *per Josiah Rich, New York, October 9th*, 1889.

London.

Messrs. W. N. White & Co., Fruit Brokers, Covent Garden Market, London England, send the following Apple Report: *The Wanda, S.S.*, from Halifax, Nova Scotia, arrived on Tuesday last, with 1,804 barrels, the bulk of which have been sold here at public auction this day. The fruit being in fine condition has realized high prices; Gravensteins, from 17s. to 28s. per bbl. Ribstones, a few barrels of very choice made the high price of 32s. to 40s. bbl; Emperors. 21s. bbl; Maiden Blush, 15s. bbl; Northern Spies, 16s. to 24s. bbl,.

These prices should convince all shippers that London can always pay a high price for choice fruit; and that Covent Garden is the best market in London, fruit being sold their by public auction and not by private treaty.—W. T. COSTIGAN & Co.

Montreal.

SIR,—The month has been a busy one in the fruit trade here. Apples—the receipts are unexpectedly large, but prices have been well maintained, as a great part of the stock has been bought for English account. Montreal has been exporting more apples than all the American ports put together this season. Good winter apples have sold mainly from $2.75 to $3 per bbl., and seconds $2 to $2.25 per bbl. About 15,000 bbls. Maine apples sold for Liverpool at $3 per bbl. here.

The receipts here during this month aggregate about 100,000 bbls. Other domestic fruits are about done for the season. Grapes—A few late lots of Concords have sold at 6c., per lb.; Delawares 8c. to 10c. Quinces very scarce, $6 to $7 per bbl. Pears—Beurre Anjou, $7 to $9 per bbl.; Sheldon's Duchess, etc., $5 to $7. Spanish Grapes are largely imported and now take the place of home grown.—VIPOND, MCBRIDE & Co.

Apples.—The receipts of winter fruit have been considerable, although not as large as expected. Large quantities are being put aboard steamers for British ports, large engagements having been made at 3s. Liverpool, London and Glasgow. The receipts of winter fruit from St. Catharines which were shipped as No. 1, only grade No. 2, causing great dissatisfaction, some lots received from the Niagara district having turned out the veriest trash. Owing to these poor receipts the market is dull and will remain so until they are worked off. Sales have been made of car lots of No. 1 winter fruit at $2.50 to $3, and No. 2 at $1.75 to $2. A lot of 1,200 fancy winter stock was sold at $3.25. Cables from Liverpool quote a lot of American Ben Davis at 16s. average, and a small lot of fancy Kings at 27s. Some very high prices are reported from London, ranging from 16s. to 24s., for Nothern Spies, and other choice descriptions from 32s. to 40s. per bbl; but it is thought that the shipment now going forward will soon reduce those aristocrate values. A cable from London says apples are booming.

Grapes.—Blue grapes at 5c. to 6, and red 5½c.

Pears.—The few varieties offering range from $3.50 to $6 per bbl.

Onions.—Sales of 5,000 are reported at 65c. to 70c per crate. Canadian $2.50 to $2.75.

Potatoes,—The market is easy with sales of car lots reported at 60c. to 70c. per 90 lbs. as to quality.—TRADE BULLETIN, *18th October* 1889.