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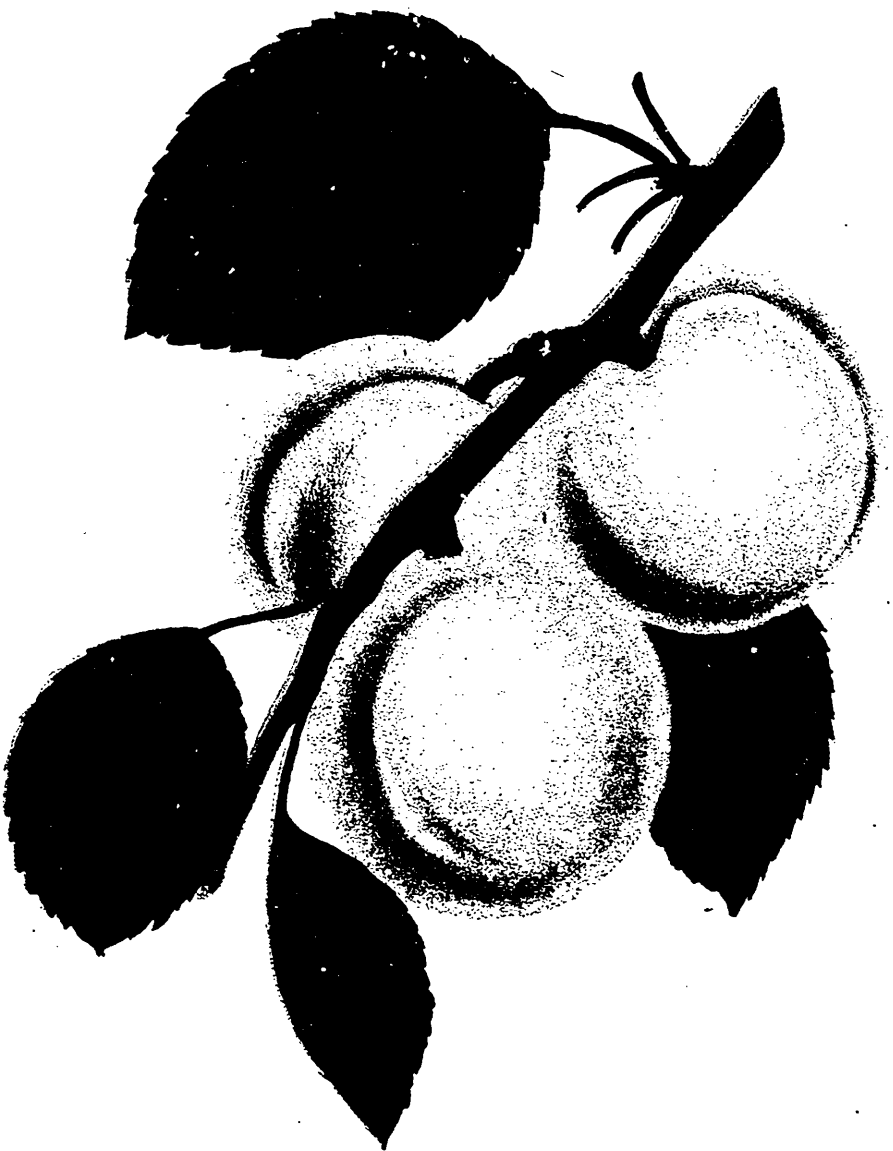
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APRICOT-RUSSIAN VARIETY NICHOLAS.

FOR CANADIAN HORTICULTURIST.

THE  
**Canadian Horticulturist**

XII.

OCTOBER, 1889.

No. 10.

**THE RUSSIAN APRICOT.**



IN England the Apricot is esteemed as one of the choicest of stone fruits whether for jams or for dessert, and its great beauty when well grown is much extolled. The number of varieties is not great, being limited to about ten or twelve, among which the Moorpark, Breda, Peach and Royal are prominent. It is usually planted about twelve feet apart, and trained to grow fan-shape along the walls of the gardens or of the gables of cottages, and like the other plants and trees in an English garden, receives far greater attention in the culture, pruning, thinning, etc., than do the fruit trees in the majority of Canadian gardens. The most suitable soil is a rather light, sandy loam, well drained; such as is also adapted to the peach tree.

In America, the Apricot is very little grown east of the Rocky Mountains, owing to the curculio, which has a special fondness for it and usually destroys the whole crop; but west of the Rockies, where the

curculio is almost unknown, nearly all the favorite English varieties are successfully cultivated. These have very few points by which they may be distinguished from each other, and the chief reliable ones are: The color, the shape of the stone and the taste of the kernels. All may be propagated, with more or less constancy from the pits.

Owing to the tenderness of all these varieties in our country and in the Northern States, a great point has been lately made of the introduction of the Russian stock to Kansas by the Mennonites for which every known excellence is claimed for them, as, for example: freedom from curculio, borer, black-rot, blight, etc. Now all this must be taken with some caution, although we have great hopes that from these will be ultimately developed a race of apricots suitable to our climate. The writer has some twenty-four of these trees, three years planted, and although they have bloomed freely, no fruit has as yet been produced. He has, therefore, no criticism to offer

as to the quality of the fruit, but some of them have not proved even hardy, for at least a half dozen have been winter-killed, and that in a peach orchard which has not been affected in the least by the cold.

Mr. G. C. Brackett, Secretary of the Kansas State Horticultural Society, says he paid a visit to the orchards of the Mennonites in Western Kansas, two or three years ago, and was rather disappointed in the condition of things; for while the trees themselves were perfectly healthy, and the fruit, when well grown, handsome and similar in quality to that of the well known English variety, the Breda, only rather more tart, yet much of it was so subject to the scab and the curculio that it was rendered worthless. Anyone, therefore, who buys trees of this

apricot, expecting that he will not have any curculio to fight with, is likely to meet with disappointment.

Still we hope that from this stock some constant varieties of real excellence and acknowledged hardihood will result. This is claimed for some half dozen kinds now being propagated, as will be seen on page 99 of this volume in Dr. Beadle's article, among which is included the Nicholas, described as a fruit of medium size, sweet and melting, which ripens about the middle of July. None of these six commended varieties have been tested in Canada, but we have made arrangements to have one of the most desirable included in our list for distribution in the spring of 1890, so that our members themselves in various parts of Ontario may test them and report the result.

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### SEASONABLE HINTS FOR FRUIT GROWERS.

**J**UST in proportion to the increase in value and importance of the apple crop in Ontario, will be the interest of our readers in the best modes of grading and packing the fruit for market. Some twenty-five or thirty years ago bags were used both for gathering and marketing apples, and no thought was given to separating them into grades, with respect to perfection of growth. Apples in those days brought us from fifty to seventy-five cents a bag, but were the same methods employed at the present time, our local markets would be quickly over-stocked with apples in no condition for shipment, and there would be no sale for them

except in such a season as this when we have an apple famine at home. But owing to the improved conditions, such as facilities for transportation and distribution, suitable packages for carrying fruit without injury in handling, shippers, commission houses, etc., better prices can now be obtained than in days of old, notwithstanding the largely increased acreage of apple orchards now in bearing in the Province. The farmer who neglects to grade his apple crop before offering it for sale is on a par with one who would offer his grain in the market without passing it through the fanning mill to separate foul seeds and other impurities from

the good grain. In Vol. II, page 196

#### A GOOD SORTING TABLE

was described and illustrated, and one which we have found to serve a most excellent purpose in lessening the tedious work of fruit packing.

A writer in *Popular Gardening* describes another one which has some advantages, especially that one of a provision for emptying the fruit into the bottom of the barrel without the least bruise, a difficulty which has to be overcome, when using the other packing table, by means of a basket.

In fig. 66 we copy the engraving of this fruit sorter, and here quote the writer's description of it:—

The support consists of four legs *b, b* crossing each other X shape, and held together at the middle by a wooden or iron pin. To the upper ends of these supports are attached

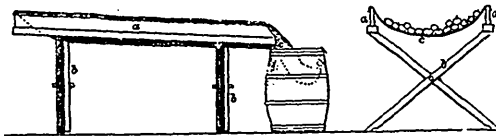


FIG. 66.—CONVENIENT FRUIT SORTER.

two light two-by-three bed pieces, extending lengthwise, each supporting a side-board *a* of inch stuff, four inches wide, with a similar piece across the back also.

The bottom, *c*, of the sorter is made of canvas, this being well tacked at the upper edge on the side and end pieces, with slack enough to form a trough three to five inches deep and hanging free from the sides, interiorly. The cross section view gives the right idea as to its form when ready for use. This canvas, it should be added, extends forward some two or more feet longer than the frame, for reaching down into the packing barrel, as shown by the dotted lines.

In using it, the extreme end of the canvas in the barrel is held up by an iron hook, which is attached over the rim of the barrel, thus forming a pocket into which the first fruit in the barrel falls, without injury; then when this pocket is full the hook is freed, and it is gently lowered to the bottom of the barrel and emptied. The front end of the sorter is of a height to allow of a barrel being set underneath, and the other is three inches higher to admit of the fruit being easily moved along the canvas as it is being graded. If more pitch is desired, this is secured by further tilting up the back end of the sorter. When not in use, this sorter can be compactly folded up by loosening the end pieces.

#### AN EXCELLENT APPLE-PACKER.

One of the chief troubles facing the farmer who wants to pack his own apples is in the heading up of the barrels. To stamp the heads in place with the feet is no pleasant operation, a mode at first tried by the writer, but gladly abandoned when the much more convenient

method of using a lever press, such as is shown in fig. 67, was suggested by a friend. This latter is so simple in construction that any one can make it after seeing our engraving, and it needs no further description. Where there are only a few barrels to head, this press will answer all purposes, but as it cannot be handled to advantage by a single person, the screw press was found to be much more economical in a large orchard. It was used by apple packers for a long time, but has latterly been superseded by the apple packer (fig. 68), which we find to be the most convenient and speedy of any. This latter we

have been using for the last ten or fifteen years, and cannot conceive how anything more suitable to the work could possibly be devised. We

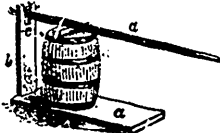


FIG. 67.—THE LEVER PRESS.

copy from the *Country Gentleman* a figure and description of this apple-packer, believing that there are many readers of this journal who would be pleased to have one made for their own use, if they only could learn how it is constructed:—

The cross-piece *a* is of hard wood, 22 inches long and  $1\frac{1}{2}$  inches square, under which is attached a 2 inch block 6 inches wide, 15 inches long. The vertical pieces *b b* are of rod iron 20 inches long,  $\frac{1}{2}$  inch in diameter, and pass through each end of cross-piece *a*, with nuts on the upper and lower sides. The rods *c c* act as clamps, are 15 inches long,

loosely riveted to each end of lever *d*; *d* is of band iron 1 inch wide,  $\frac{1}{2}$  inch thick. It is semicircular in shape, and acts as a lever with fulcrum at each ends of rods *b b*, where it is loosely riveted  $2\frac{1}{2}$  inches from either end. The operator places the block on head to be put in position, raises the lever, and fastens the clamps to chime of barrel, then by pres-

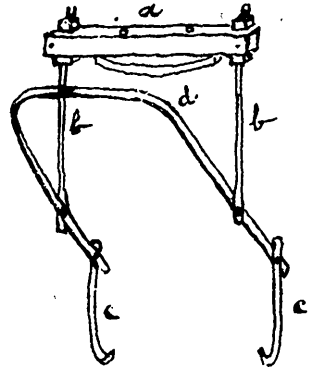


FIG. 68.—THE APPLE PACKER.

sure of foot on lever, the head is brought down, and both hands are left free to complete the operation. The above can be made by any good blacksmith for \$1.50.

### THE CECROPIA MOTH (PLATYSAMIA CECROPIA).

WE are just in receipt of a packet by mail (Aug. 23rd) containing an immense green cater-

ing, with an inquiry what it was. We give in fig. 69 an engraving showing it life size, so that any of

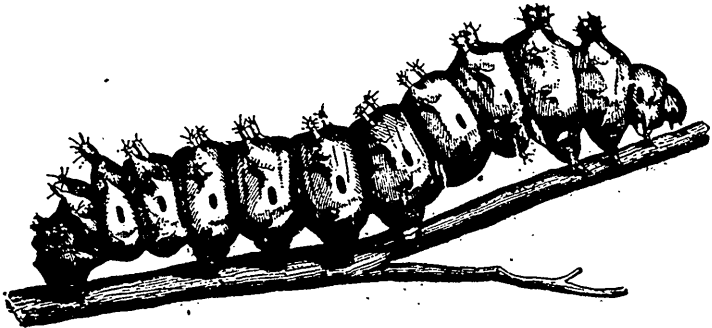


FIG. 69.—THE LARVA OF THE CECROPIA MOTH.

pillar, together with some plum leaves upon which it had been feed-

our readers may easily identify it. It is the larva of the Cecropia moth,

one of the largest and most interesting of all our native moths. The caterpillar is no dwarf, measuring as it often does some four inches in length, and being nearly as thick as a man's thumb. It looks rather pretty, with its pale green skin so beautifully ornamented with a double row of blue



FIG. 70.—COCOON OF THE CECROPIA MOTH.

tubercles along each side, and a double row of yellow ones along the back, excepting those near the head and tail which are coral red. As one might imagine from his size, this fellow is a voracious feeder and is not

over-partial to any one kind of tree; however it is most often found upon the apple and is able to defoliate a small tree in a short time. He has gone through several changes in exterior appearance, since he made his exit from the egg, and has now changed his clothes for the last time before his transformation.

It is worth the time for any of our readers who have an interest in the study of insects, to place one of these moths in a box and feed it a few apple leaves until it spins its cocoon, (see fig. 70) a rusty grey pod-shaped coffin, made of two layers of silk, in which it spends the time until its resurrection time, in the May or June of the coming spring. This cocoon is about three inches long, and sometimes the silk is unwound for use, but with much greater difficulty than that of the *Polyphemus* moth, which also belongs to the *Bombyx* or *Silkworm* family. Then, if one is so fortunate as to see it issue from its chrysalis, and develop into its beautified state, as we have done, he will feel amply repaid. Issuing forth from the smaller end of the cocoon it climbs up some convenient place where its wings may hang down, and gradually unfold their beauty; and, in the course of an hour, the insect will have developed to its full size, often measuring from five to seven inches from tip to tip of its wings. Our engraving, fig. 71, kindly loaned by the Entomological Society, is an excellent representation of this magnificent moth, which our readers cannot fail to recognize. The prevailing color of the wings is a rich brown, varied by a wavy dull-red band edged with

white, a kidney-shaped white spot about the middle of each wing, our enemies, and must be destroyed. Its large size, however, gives us so

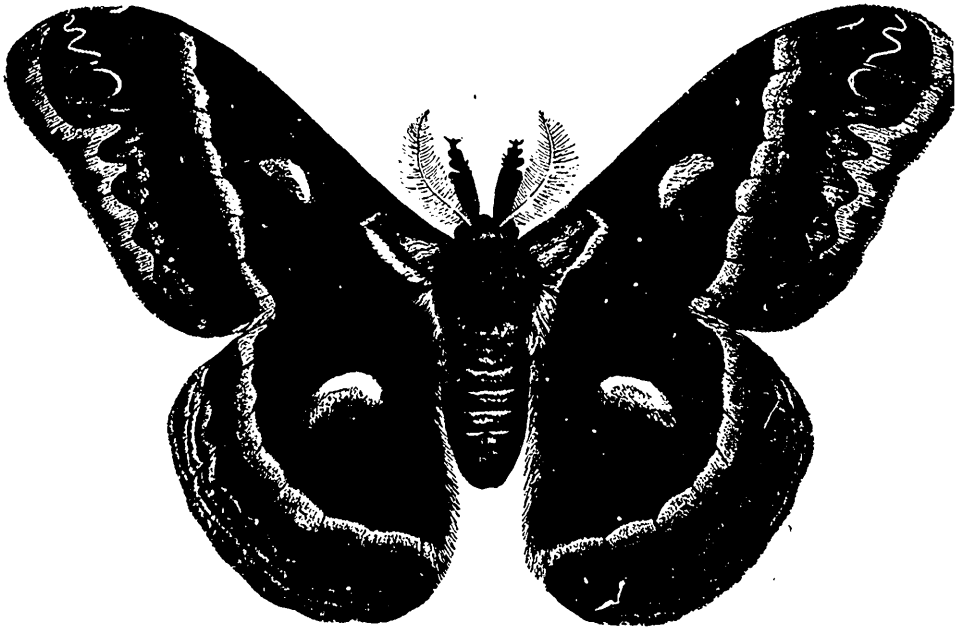


FIG. 71.—CECROPIA MOTH.

and other unmistakable marks. great an advantage over it, that there is little fear of its becoming a pest.

### SPRAYING PLUMS WITH ARSENITES.

AT the meeting of the American Association for the Advancement of Science, held at Toronto during the last week in August, this subject was taken up by Prof. A. J. Cook. He said:—

The arsenites and carbolized plaster will protect against the plum curculio if they can be kept on the tree or fruit. But in case of very frequent rains the jarring method will not only be cheaper, but much more effective. Again, as our wild fruits are more cleared away we

must have plums in our orchards to protect the apples from the curculio. When apples are seriously stung they become so gnarled and deformed as to be worthless. It will pay, then, to set plum trees near by or among the apple trees. Then we will escape mischief among our apples from the curculio, and will only need to spray our apples once, to destroy the codling moth, and can treat the plum trees three or four times with Paris green or carbolated lime in case we have only occasional



showers, or can jar the trees when the rains are very frequent. For the apples we can use London purple, one pound to 200 gallons of water. For the plums we must use Paris green, one pound to two or three hundred gallons of water. If the carbolated plaster is preferred, we use one pint of crude carbohc acid to fifty pounds of land plaster. This is thrown freely over the trees, so as to strike every plum on the tree which is being treated.

Care must be taken not to spray the plum trees until the blossoms are all fallen, as otherwise it will kill all bees that visit the poisoned flowers. He suggested that it be made contrary to law to spray the trees with arsenites before the falling of the blossoms. Respecting the injury done the foliage by the use of arsenites, he said: London purple is more injurious to the foliage than is Paris green, and white arsenic—arsenious acid—is more harmful than is either London purple or Paris green. This is doubtless owing to the soluble arsenic which is quite abundant in London purple and almost absent in Paris green. London purple may be used on apple, plum, cherry, pear and most ornamental trees, but on these should never be stronger than one pound to two hundred gallons of water. If the application is to be repeated, as it must be for the curculio, to prove effective, or if it is to be used in June or July, Paris green should be used, in the same proportion as above, or else we should only use one pound of London purple to three hundred gallons of water. I now think that this necessity is more due to time of application than to the fact of increased

quantity of the poison. If the arsenites are to be used on the peach, to defend against the curculio, Paris green only should be used, and that not stronger than one pound to three hundred gallons of water.

The injury done to the foliage is never immediately apparent. It usually shows somewhat the second day, but the full injury is frequently not manifest till the fifth day, and often not till the tenth. He likewise demonstrated that there is no danger of cattle being poisoned by eating the grass under the sprayed trees.

Prof. Clarence M. Weed, of Columbus, O., read a paper on a similar subject—remedies for the plum curculio. An experiment with cherries was made, spraying half an orchard with London purple (1 lb. to 160 gals. of water.) He then picked cherries from sprayed trees and unsprayed trees, and in every case there were more wormy cherries on the unsprayed than on the sprayed trees. The average was:—Unsprayed trees, eight per cent. of wormy cherries; sprayed trees, three per cent. of wormy cherries. The benefit from the spraying, hence, was 75 6-10 per cent. Experiments were also made with plums, when an orchard of plums was sprayed with London purple several times. An enormous crop was the consequence, although two untreated trees had their entire yield destroyed. He concluded that very much of the damage done by the curculio could be safely and cheaply prevented by the use of arsenites. Prof. Saunders, of Ottawa, expressed his opinion that Paris green was a better arsenite to use than London purple.

**FRUIT GROWING IN A NORTHERN CLIMATE.**

By L. FOOTE, NEPEAU, ONT., NEAR OTTAWA.

**A**FTER twenty years' residence in the Ottawa Valley, in which time I have practiced a habit of close observation concerning fruit-growing, coupled with some experience, I would venture a few thoughts on the needs of that industry in a Northern climate. What is true here, is mainly so in the same isothermal lines of climate east and west of this, hence one feels that he has the agreement of a wide range of experience in what is needed to foster the fruit-growing interest, where so many discouragements must be surmounted.

One requisite is a class of nursery agents who will only sell such stock as will succeed in this climate. Hundreds of dollars of useless nursery stock has been palmed off on the farmers and would-be fruit growers of the Ottawa Valley, so that many are discouraged in the work of fruit-growing almost entirely.

There are some honorable exceptions, however, of agents who will only sell such varieties as they know will succeed with right treatment, and such win the confidence of the people and make good sales.

The "Experimental Farm" must prove a boon to the farmers and fruit-growers of the Dominion just in proportion as they appreciate and appropriate its benefits.

It has demonstrated the fact, that far more can be accomplished in the work of fruit-growing in this climate, than many thought ever could be, and yet the work of tree-growing is

but fairly under way. All kinds of small fruits are a decided success, and all who visit the "Farm" are forced to admit that fact. A great variety of ornamental shrubbery and forest trees is well under way, and a fine collection of flowers adorn the grounds and greenhouses.

One quality to ensure success in fruit-growing in this climate is *perseverance*. The would-be fruit-grower must be prepared to contend with obstacles; not dive into every novelty that is presented that might do well in a more southern clime, but venture upon a few well-tested varieties of each class of fruit, and plant for *mutual protection*. I plant a row of currants in line with a row of apple trees, and a row of grape vines four feet from each row of apples and currants, with a view of putting a tile drain between them. Hedge and tight fence protection around the fruit garden aid in retaining the snow late in the spring, which is much needed to prevent spring freezing. Tramping a snow mound around each tree prevents mice from barking the trees, and keeps back the flow of sap until the hard northern blasts are past in spring.

Winter protection is a prominent item to success in this climate. I have used pine boughs as a protection to strawberries, and prefer them to anything else, as they keep the snow up from smothering, and allow the vines more liberty to come on early in the spring. Straw or forest

leaves serve a very good purpose if evergreen boughs cannot be had.

Grape vines must be buried or a large percentage will freeze out.

The two-arm system of training is preferred to the fan-tail by those who have tried both. The renewal system is spoken of by some, but I know of none that have yet practiced it.

But how to protect my Russian Apricots, and Lombard Plums is the burden of my enquiries at present. I have thought of a wrap of twisted straw, with a fold of tarred paper over that, painted white to resist mice and reflect off the sun's rays; also have been advised to use a thin board casing around each tree, and I think I will try both to test which is best. Hardy apple trees such as Tetofsky, Wealthy, Duchess, Alexander, Scott's Winter, Yellow Transparent, and a very few others, go through our long hard winters with encouragement, but a dozen varieties of the apple, except the hardy crabs, is enough to venture upon even by the most sanguine fruit-grower. Small fruits may be gone into with a certainty of success.

The tests on the Experimental Farm in currants, gooseberries, raspberries, blackberries, and strawberries, show a marked encouragement, and anyone visiting the "Farm" and noting the result of the tests can go away with the assurance that in small fruits at least, he may venture with perfect impunity in this climate.

Of strawberries, I am testing about fifteen varieties, quite enough for the average fruit-grower, either for market or home use. Among them

are Wilson, Crescent, Sharpless, Cumberland, Triumph Dan Boone, Captain Jack, Maggie, Jessie, Bubach, Mt. Vernon, Ohio, Manchester, Charles Downing and Seneca Queen, all of which are a success. Last winter was a hard one on any damp ground owing to much rain falling and freezing, and many lost their strawberries, or a large percentage of them from this cause.

Taking all things into account, there is much to encourage the fruit-grower even here, where often five months of the year snow lies from two to five feet deep over the land. Apples grown here are of a good quality as a rule, being firm, juicy, and of a bright appearance, and good keepers if picked carefully. And now with reference to the *sanitary need* of fruit-growing and its more extended use through this country and I will close. It is a general practice with those pursuing the farming industry in the Ottawa Valley, to go to the lumber shanties in the winter, a practice which has greatly retarded the growth of farming interests. Life in the shanty is of a demoralising tendency to a great degree, both to body and soul. Strong tea, fat pork without fruit or vegetables, and that three times a day with dry bread, with a mixture of beans baked in grease, form the average diet of the shanty men. The result is: dyspepsia is quite a common complaint through the country. The practice of drinking a swallow of hot tea with every mouthful of food is very prevalent and correspondingly injurious. A free use of fruit is an

antidote to the above named practices. Let this be pondered upon and profited by our farmers, and the benefits of fruit-growing will be more apparent.

### FALL PLANTING OF STRAWBERRIES.

BY this we mean the transplanting of runners of the present year's growth, whether it be done in July or October. By care and skill it may be done as soon as the young roots are an inch in length, or even earlier. The rule is, however, that a plant is not old enough to set until it has branched roots; nor is it self-supporting until sometime later. For this reason it is necessary to remove one or more of the leaves when setting out very young plants in the summer, lest more sap be evaporated than the roots can supply. As the season advances, more roots are developed, and there is less risk in the operation. While it is true that the earlier the work is done, other things being equal, the greater will be the crop, it is equally true that plants set early in September, when there is more moisture in the air and soil, usually do better than those set in a hot and dry time. If delayed too late, the danger is that they will not get sufficiently rooted to enable them to resist the effects of alternate freezing and thawing. Young plants in the summer are comparatively tender and sappy, and much more easily injured than when more mature. If taken out of hard ground, the roots may be bruised or broken, and if exposed to the sun or wind for even a few minutes, many of the fine hair roots will be destroyed. For this reason it is not best to take up plants in a dry time. It is better to let them grow where they are until rains moisten the soil so that all the roots may be lifted without injury.

The later the work is done the closer should plants be set to each other, so that they may fill the row with roots and shade the surface with their leaves. If set twelve inches apart in the row in July, ten inches will be enough in August, eight in September and six in October. The sun should never be allowed to shine on bare ground between plants in the row during the winter or early spring.

The soil for fall-set plants should be rich, so that their roots may find what they need near by, for they have not time to go far after it. It is well to prepare the place a week or two in advance, so as to let the ground get settled. And it is very important that the crown of the plant be not covered.

If the weather be dry and hot after planting, so that the plants wilt, they should get *one* good watering in the evening and the soil should be stirred the next morning. If this proves insufficient, they should either have some shade during the heat of the day, or the first leaves that wilt should be removed to lessen the evaporating surface.

If it is desired to test a new variety, the fall is the best time to plant it, for the reason that it will bear the next season and enable one to decide as to its value and give ample time to greatly increase the stock.

Fall-set plants must be protected during the winter. Two inches of straw will answer. Of course the drainage should be such that no water can lie on or near the surface.

—M. CRAWFORD.

**FRUIT ROOMS.—HOW CONDUCTED AND MANAGED.**

THE veteran fruit grower, J. J. Thomas, in a recent number of *New York Tribune*, offers some valuable suggestions in regard to fruit rooms and their management.

For common capacity, says he, the leading and essential requisites are a building or room with non-conducting walls, and ventilating windows which may be opened on cool nights for the admission of cold air and be closed again for retaining this cool air while the temperature is higher outside in the daytime. In very cold weather in winter the windows are, of course, closed to prevent freezing. One or two thermometers are to be used and frequently consulted for maintaining an even temperature. Such a house, properly regulated, will keep fruit a few degrees above freezing through a large part of the year, except in summer, when there are no cool nights for filling the apartment with cold air.

In a building like this, regulated as described, winter apples, which commonly decay before the arrival of the warm weather of spring, have been retained in good condition until the middle of June; and our early winter pears, such as Lawrence and Nelis, have been kept in fair eating condition into February and March. This fruit-room may be a separate apartment in the basement of a dwelling; or it may be a building specially erected for the purpose.

If a separate building it may be placed on slightly descending ground and sunk a foot or two below the surface, but this is not absolutely essential. Erect the frame of six inch studs, or eight inch if the building is large, and cover the inside, as well as the outside, with building paper, the studs being placed just far enough apart to receive the strips of paper with a little lap. Then board up both sides, over the building paper.

This double wall will be hardly

sufficient protection against cold in the north; and additional protection is afforded by nailing vertical strips of lumber, an inch or two square, on every joist, adding another covering of building paper and another boarding. This will make three thicknesses of boards and three of building paper, and be sufficient to exclude hard frost without the addition of any sawdust filling, which, if used, will be liable to cause crevices by settling or to be disturbed by vermin. Use double doors.

Some fruit-houses have been built with two feet spaces filled with tan or sawdust, requiring useless labor and expense, as half that thickness would be quite enough in any case. The roof will be made in the same way as above described, with the shingles added. For small and very simple fruit-rooms or fruit-houses, windows placed on opposite sides, which may be opened to any degree either for the gradual or copious admission of fresh air, will be sufficient.

For a separate building, there should be a plank or board floor, with openings for the entrance of air from below, or there may be a slatted floor, which will always allow the entrance of the warmer air from the earth below and prevent the freezing of the fruit, in the same way that a basement is kept from freezing by the warmth of the earth. There should be ventilators in the underpinning of the building, which may be shut for the exclusion of warm air from without or opened to admit cool air in the night.

When cold air is to be admitted, the current for its entrance is caused by an Espy or Mott ventilator above the roof, which always produces an upward draft when there is any wind or breeze. A small fruit-room may occupy a portion of the basement of a house, if separated from the rest of the basement by a double brick wall,

and a double wall is provided outside above ground.

The same treatment must be given it as for a separate building, in maintaining a uniform temperature through windows on opposite sides, which are to be opened or closed as already described. Although less perfect than a separate fruit-house, it requires less care in attendance, and such fruit-rooms have kept winter fruit several weeks or even months longer than by common management.

In large fruit-houses, two stories high, the entrance should be through the upper story and down a flight of stairs, so as not to disturb the cool and equal temperature below in warm weather through the outside door.

Fruit for immediate or early use

may be placed on a series of shelves, one above the other, in the center of the apartment for the attendant to pass around to select ripening specimens. Long keepers, or such as Russets, which shrivel easily, may be headed up in tight barrels, where they remain till spring. An intermediate way is to put the fruit in flat boxes,  $1\frac{1}{2}$  feet square and three inches deep, one box placed above another, in piles two or three feet high. All are easily examined by setting the top one off, then the next, and so on, thus forming a new pile.

No large fruit grower, to make the most of his products, can hope to get along without such or a similar structure.

### TRIMMING CUTTINGS.

**G**ERANIUM slips root readily, if we only prepare them properly. Select a thrifty shoot, about three to five inches long. Cut off clean and smooth with a sharp knife, then remove the lower pair of leaves with a close cut, and trim the leaves left, so that



FIG. 72.

the cutting will resemble the one here illustrated. It is now ready for insertion in the propagating bed, or in a pot or box of sand. Sandy soil will do in absence of clean sand. Fuchsia and other cuttings are prepared in same way.—*Popular Gardening.*

## New or Little Known Fruits.

### Morse's Seedling Harvest Apple.

I again send you a sample of my Seedling Harvest Apple. My Seedling is about "neck and neck" with the Early Harvest, with a second or so in favor of the latter as a rule. But it can distance the old sort in vigor of growth, size, freedom from "spot," and the flavor pleases me better—and it also pleases most others better—but flavor is "a matter of taste." The fierce frost of May caused a few specimens to crack, but there are no spots, while Early Harvest near at hand on higher and more open ground, has the whole crop ruined by "spots"; other varieties subject to that evil have suffered more or less. The crop as a whole is a failure, very early and very late blooming are least injured. The frost, like lightning, struck whimsically, and though not at all a respecter of high or low as to the person, it was, as to locality and aspect. Some have apples, some pears, some plums, some peaches, some most of the above, yet very few an abundance of either; much of the fruit is badly blemished by the weather and insect enemies. The codling moth and curculio are a vast majority compared with the fruit, and where reductive influences are not in force about ten or so insects seem to have applied for each specimen. The "blight" prevails to a slight extent, is present in both apple and pear.

My premiums of later years, Yel-

low Transparent, Niagara Grape, Vladime's Cherry, Jessie Strawberry and Louise Apple, are all doing from fair to very good. The grape somewhat protected was cut to the ground by the frost, while a Concord, some twenty-five feet away and not at all protected, partially escaped and is bearing some very fine fruit.

I am sure the HORTICULTURIST is becoming more and more appreciated, and by the more progressive cultivators of both the useful and ornamental felt to be a *sine qua non*.—S. P. MORSE, *Milton, Aug. 21, 1889.*

*Reply by Editor.*

This apple comes to us in good condition on the 23rd of August, and fully bears out all that was said in its favor on page 213, of Volume XI. of this journal. It is not quite so attractive in color as the Early Harvest proper, and of course is out of comparison with such varieties as the Red Astracan and the Duchess of Oldenburg; but, in point of quality for cooking, we judge it to be superior to any one of the three.

### Seedling Pears.

I have sent you per mail, a box of my seedling pears for your examination. The tree that bore them is about ten or twelve years old and has now borne two or three years. This year it had about a peck on, last year it bore perhaps a bushel; the sample I sent you is about the average size.

The tree is an erect grower, thick

foliage, very healthy; the fruit is borne in clusters. I counted as I picked them, seven of those little pears to each cluster, for about a dozen clusters, but some had more on, some less, of this year's crop. Last year there were some branches completely covered with fruit; some spaces for two feet were almost solid packed with pears. I think they will beat the well-known little pear the Seckel. It think it well-flavored, sweet, juicy, neatly shaped with a short stout little stem which hangs well to the tree till ripe, not apt to be blown off by wind. For pickling it is just the thing and also for preserving or canning, or for eating fresh it is very good. I think a man could as easy eat a dozen of these as he could one of Clapp's Favorite.

Please report in the HORTICULTURIST what you think of them.—D. B. HOOPER, *Almira, Aug. 26th, 1889.*

*Reply by Editor.*

The package of pears came to hand in good order, but we cannot advise their propagation, as they are altogether too small to be grown for market purposes, and very few would plant pear trees simply for pickling pears. They are about the size of the Transcendent Crab. The quality is very good, but so is the quality of the Tyson which ripens about this time, and the Rostiezer is far superior, a pear hardly out of season yet, and these pears, though much larger than this seedling, will only command about 50 or 60c. per basket, while Clapp's Favorite and Bartlett, on account of their fine size, sell at nearly twice that sum. In these days a fruit must have some especial excellence to be worthy of commendation.

#### Scott's Seedling Peach.

I send you by mail a seedling peach grown on my grounds, Park Avenue, Chatham. Please tell me if it is a new variety, if not what is the name. The tree is young and only bore a few this year for the first. The balance on the tree are just ripe now.—J. L. SCOTT, *Chatham, Ont., Sept. 14th, 1889.*

*Reply by Editor.*

The peach is a magnificent one—equalling if not surpassing the Early Crawford in quality, and also resembling that popular variety in size and beauty of appearance. The skin is yellow with an exquisitely beautiful red cheek; flesh yellow, rich, juicy, and melting, and free from the stone; well worthy of propagation.

#### Wilder Early Pear.

Among the new fruits that promise well is the Wilder early pear, of which a very good drawing is here given. Mr. Vandeman, Pomologist of the U. S. Department of Agriculture, writes as follows concerning it:

“Among the midsummer pears there is none that pleases me more than this one, except that its size is rather small. But like the Seckel, what it lacks in size it makes up in quality, although it is larger than that variety. It is a chance seedling, found in Chautauqua Co., N. Y. The original tree was partially grafted with scions of Buffum in 1870, when it was young, and would never have borne any fruit except of this old variety, had not three of the natural branches been left. These bear profusely, and the fruit, when fully grown, is quite attractive. It does not rot at the core.

Size, small to medium; shape, pyriform, bell-shaped, irregular, a little angular; surface, smooth, pale yellow



ground with deep shading of brownish carmine; dots very numerous and small; basin, shallow, regular; eye nearly closed, sepals long and reflexed; apex rather abrupt, with a slight cavity; stem short; core closed, very small; seeds very small, narrow, pointed, dark;

**Seedling Plums from Owen Sound.**

SIR,—Knowing as I do that you take a great interest in fruit growing I submit to you by express to-day nine plums for your correction and opinion of the same.



FIG. 73.—WILDER'S EARLY PEAR.

flesh very pale, whitish yellow, fine grained and tender; flavor, sub-acid, sprightly, much like Bartlett; quality very good; season August, in Western New York."

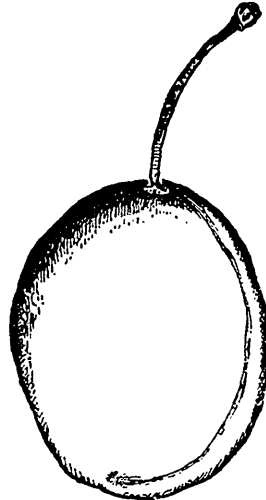
No. 1 is a plum that has been grown here for a number of years from sprouts without a name. I have shown it to the best judges in

this section and to Mr. Baron, of Toronto, and none were able to name it. Please name it if you can. You will observe it has a peculiar ring round the stem, which I have not observed in any other plum.

No. 2 is a seedling from Duane's Purple. The tree is healthy and appears to be a good bearer, this being its second year.

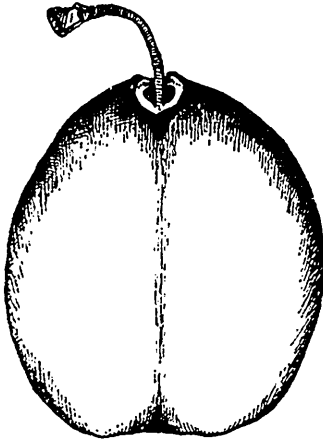
No. 3 is a seedling from Smith's Orleans. I have been growing the parent of this tree for a number of years until it died of old age. The tree has always been healthy, not subject to black-knot or any disease. The foliage is very dense, the leaves

No. 2 is a clingstone, with greenish flesh, and of rather poor quality, and under medium size.



No. 2.

No. 3 is a semi-cling, of yellowish flesh and very good quality. It is above medium size, and should it

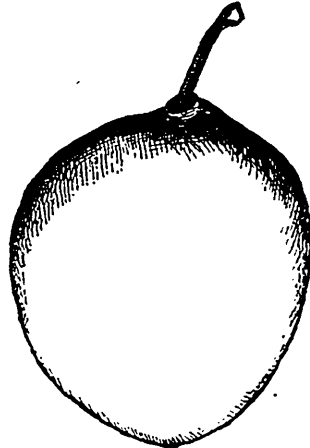


No. 1.

are thick, dark, green and leathery. I might also say the tree is an overabundant bearer. — R. TROTTER, *Owen Sound, Sept. 3rd, 1889.*

These are all dark purple plums, with blue bloom and moderately tender flesh.

No. 1 is a very fine dark colored plum, obovate, with a broad shallow suture half round; stalk curved, surrounded with a peculiar ring, very good in quality. It much resembles Bradshaw, from which it may be a seedling.



No. 3.

prove, as it appears, an improvement upon its parent, and an excellent bearer, it should be better known.

Nos. 1 and 3 appear to be worthy of cultivation.

## POISONING THE PASTURE UNDER THE TREES BY PARIS GREEN.

**A**N important practical question which I have tried to settle this season—1889—concerns the danger of pasturing under trees which have been sprayed with the arsenites.

A gentleman wishing to spray his orchard, in which he was pasturing seventy-five hogs, consulted me as to the wisdom of doing so without first removing the swine. I told him I believed there was no danger. I said use a mixture, one pound of London purple to two hundred gallons of water, watch your hogs closely, and if any seem affected remove all at once, and I will be responsible for damages to the amount of twenty-five dollars. The gentleman did so and reports no damage.

In the following experiments I used the mixture of twice the strength which should be used, that the experiment might be the more convincing. I used one pound to one hundred gallons of water. In every case the spraying was very thoroughly done. Care was taken that every twig and leaf should be drenched.

In tree No. 1 a thick paper was placed under one-half of a rather small apple tree. The space covered was six by twelve feet, or seventy-two square feet. The paper was left till all dripping ceased. As the day was quite windy the dripping was rather excessive. In this case every particle of the poison that fell from the tree was caught on the paper. Dr. R. C. Kedzie analyzed the poison and found four-tenths (.4) of a grain. Tree No. 2 was a large tree with very thick foliage. Underneath this tree was a thick carpet of clover, blue grass and timothy just in bloom.

The space covered by the tree was fully sixteen feet square, or equal to two hundred and fifty-six square feet. As soon as all dripping had ceased, the grass under the tree was all cut, very gently, and very close to the ground. This was taken to the chemical laboratory and analyzed by Dr. R. C. Kedzie. There was found 2.2 grains of arsenic. Now as our authorities say that one grain is a poisonous dose for a dog, two for a man, ten for a cow, and twenty for a horse, there would seem to be small danger from pasturing our orchards during and immediately after spraying, especially as no animal would eat the sprayed grass exclusively. To test this fully, I sprayed a large tree over some bright, tender grass and clover. I then cut the clover carefully, close to the ground, and fed it all to my horse. It was all eaten up in an hour or two, and the horse showed no signs of any injury. This mixture, remember, was of double the proper strength, was applied very thoroughly, and all the grass fed to and eaten by the horse. This experiment was repeated with the same result. I next secured three sheep. These were kept till hungry, then put into a pen about a tree under which was rich, juicy, June grass and clover. The sheep soon ate the grass, yet showed no signs of any injury. This experiment was repeated twice with the same result. It seems to me that these experiments are crucial and settle the matter fully. The analyses show that there is no danger, the experiments confirm the conclusion.—*A. J. Cook, before Meeting of A. A. A. S. at Toronto.*

### THE FRUIT TREE PEDDLER.

**D**URING the spring months fruit tree peddlers get a large amount of free advertising, and this year is no exception. Already the customary wail is going the rounds of the press against the wicked irrepressible canvasser. It has become the fashion to pounce upon him at this season of the year, and the whole world of newspaper correspondents and agricultural writers, great and small, are emptying their vials of wrath on his head, and advising farmers to let him entirely alone.

One writer denounces the agent for carrying with him picture samples of fruit twice as large as life and colored in a corresponding manner, and then advises farmers to order direct from a trustworthy nursery. I have no fault to find with this; it is certainly better to purchase nursery stock direct from a trustworthy nursery than of a rascally agent; but, on the other hand, would it not be just so much more preferable to buy of a reliable agent than of an unscrupulous nurseryman? Those highly colored pictures are, with hardly an exception, furnished by the nurserymen themselves. Some of the most extensive nurseries in the United States deal exclusively through agents and supply their agents with sample books, as do a large majority of firms engaged in other business. The illustrations in agents' sample books are taken from the finest specimens of the variety of fruit which they represent, and are, of course, larger and finer looking than the real fruit grown in a scrubby grass-grown orchard.

As a rule they as truthfully represent the real fruit as illustrations in catalogues of nurserymen dealing directly with the purchaser; or of seedmen, agricultural implement manufacturers, and livestock breeders.

In the same article the writer accuses fruit tree peddlers of pulling up fruit trees by the roadside, or in some farmer's yard, and palming them off for first-class nursery stock, and for this reason farmers should shoot every fruit tree peddler who dared to set foot on the premises. Why not condemn every merchant because a few rascals among the number mix sand with sugar, or would it not be just as sensible to advise fruit tree peddlers to shoot farmers because, once in a while, one makes butter out of lard, and puts stones in his hay to get even with tricky hay dealers?

I favor any movement to clear the country of rascally lightning-rod swindlers, patent-right men, and fraudulent fruit tree agents; but I do not see why all representatives of nurseries, and book agents, especially, should be sat down upon as frauds by every one who has enough literary ability to get his name in print.

The business of selling fruit trees and books is an occupation of which no man need be ashamed. Many a deserving young man has received an education and gained a foothold in life by spending his vacation canvassing the rural districts in the interests of some publishing house or nursery. The honest, respectable book agent or fruit tree peddler is a friend of humanity. He has carried fruit and flowers, and useful knowledge, to the utmost parts of the country, and caused roses, beautiful shrubbery, and intelligence to bloom where once grew unsightly briars and weeds of ignorance. While we condemn fraud, evil, and rascality, let us not be too eager to depreciate the valuable service, or worth, of the honest, intelligent, trustworthy canvasser.—LINDEN, *in Husbandman.*

## Horticultural Miscellany.

### Russian Pears.

THE Bessemianka Pear (German "Samenlos," English "Seedless,") has gone through five winters, two of which were the coldest on record, in my grounds, without losing a bud. In each one of these winters, even the last, the thermometer has touched 40 degrees below zero; and in the two worst it was as low as that fully half the nights in January and February. These five year planted trees are now seven to nine feet high, and will bloom the present season. I have younger trees of fifteen other varieties, all of which Professor Budd of Iowa calls hardier than Bessemianka. I have been trying for twenty-three years everything called hardy among the older varieties of European and American pears, (including all the Maine and Western Vermont seedlings), with very little success; losing all of them in the two winters which left the Bessemianka unscathed. I have never yet seen the fruit of these new iron-clads; but from the account we have of them they will rate from "good" to "very good," none quite reaching the standard of "best" under the classification of the American Pomological Society. But they will give an extension of pear-growing at least 100 miles further northward.—*A writer in Orchard and Garden.*

### New Formulas of The Bordeaux Mixture.

THE following formulas, given to one of our grape-growers by Dr. B. T. Galloway, U. S. Mycologist, have been quite extensively experimented with in France for mildew, and have given very satisfactory results. Dr. Galloway advises that we try them, not only for mildew, but for rot also,

#### No. 1.

Sulphate of Copper.....4 lbs.  
Quick Lime.....1½ lbs.  
Water.....24 gals.

#### No. 2.

Sulphate of Copper.....2 lbs.  
Quick Lime.....¾ lbs.  
Water.....24 gals.

It has been found that the mixture does quite as well with the reduced amount of lime, and in two of the three places where experiments were conducted in France, these weaker mixtures did nearly as well as the old formulas, which had as high as twelve pounds of sulphate of copper. In the third place, they gave even better results than the stronger formulas. It was especially remarked that the weaker solutions adhered better to the vine. M. Millardet, the French experimenter, recommends also a formula, half way in strength between these two.—*Fruit and Grape Grower.*

### Green Fruit Preservation.

MANAGER BROWN of the State Board of Trade has in use a most excellent method for the preservation of the color and beauty of green fruits.

Liverpool salt is dissolved in clear water until the brine is strong enough to float the fruit. Let this stand over night, and then strain through a cloth until the liquid is perfectly clear. Place the fruit to be preserved in thoroughly clean wide-mouthed jars; fill to the brim with the brine and then close tightly. While this method for a long time perfectly preserves the bloom and color of the fruit, it, of course, unfits it for eating. Twigs with the fruit and foliage attached, when preserved in this way, are exceedingly attractive for exhibition purposes.—*Pacific Rural Press.*

**Grading Fruit for Market.**

FAULTY packing is causing considerable trouble and complaint in the markets of the East, as well as our local market. The principal cause of complaint is from ungraded fruit. Growers must grade their fruits if they desire to secure anything like a market price. Your packers should receive positive, imperative instructions to grade as to size. Small fruit distributed through a box or basket of otherwise fine, large fruit, will kill the sale. There is hardly a shipment made but what should be packed under at least three grades as to size. Dealers and buyers having a trade for handsome, large fruit will pay a handsome price for packages well graded; others having trade for medium-sized fruit will purchase the same at a reasonable price; while others having a cheap trade will purchase the small fruit at a low figure. The net results from shipments thus graded will be far greater than to pick and pack all sizes together, expecting that the large fruit will sell the small fruit. This is one of the greatest mistakes that the fruit grower can possibly make. The large, fine fruit will sell itself at a good price, the other sizes and grades will sell themselves; but, if mixed all in the same package, the large, fine fruit will sell for no greater price than the small or medium-sized fruit would in a package by itself. This is the true business, and growers and shippers have been informed of it time and again, and in the face of these facts and information they will pick, pack and ship 3,000 miles to New York without the slightest regard as to grade, and frequently, fine fruits ungraded, sell in the New York market for barely enough to pay freight and shipping expenses; whereas, if properly graded, would pay the shipper a handsome net profit. California fruits at the East this year are receiving a terrible "black eye" from faulty packing. It would pay Cali-

fornia fruit growers, through their various associations, to employ inspectors or graders, who should be called upon to inspect and pass all fruits packed for Eastern shipment, and the manager and despatcher of these fruits at Sacramento and elsewhere should be instructed not to show and forward fruits to the East that do not bear the inspector's stamp. Great injury is bound to result to the fruit growing industry of this state if more care is not exercised in the methods of packing, grading and style of packages used. Taking this season as a guide, unless some radical change is wrought, it is doubtful if growers generally will ever become packers and shippers to distant markets.—*California Fruit Grower.*

**Domestic Notes.**

THIS year all our fruit has been put up in one way, and that a very easy one. We make no pound-for-pound preserves, but can everything after this fashion. The fruit is peeled, or prepared in any way desired, and then packed into the bottles, with a sprinkling of sugar all the way through. The jars are then filled up with water and stood in the wash-boiler, with enough cold water to reach three-fourths up the bottles. The bottles are stood on boards to prevent them touching the bottom of the kettle, and the lids are put on, but not fastened. The boiler is stood on the stove and brought to a boil; it is left on for twenty minutes after coming to a boil. This cooks the fruit thoroughly; very soft fruit will do with a little less. When the jars are lifted out, a little boiling water must be poured into them, so as to fill them up, and they must then be sealed immediately. This is a very satisfactory way to do strawberries, peaches and pears.—*R. N. Y.*



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

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

#### Notes and Comments.

A VISIT FROM PROF. BURRILL.—It was with great pleasure that we entertained the celebrated microscopist, Prof. Burrill, of the Illinois State University, Champaign, Ill., for a day at Grimsby just after the close of the meeting of the A.A.A.S. at the halls of the University of Toronto. He is engaged under the U. S. Government in investigating the cause of the peach yellows, and should he succeed in defining the nature of this mysterious disease, we may next hope for some remedy. We visited several of the peach orchards of Grimsby, in each of which specimens of diseased trees were only too easily found, and he took away samples of the wood, fruit and roots of affected trees for careful microscopic study, promising that if any good should result, he would communicate it for the benefit of Canadian peach growers, through this journal.

It was a privilege to look through his powerful instrument and see the minute microbes which cause the pear blight, mounted from diseased trees in our own orchard, and to listen to his explanation of their

mode of operations. He also showed us the microbe of the peach yellows, but says its habits are much the more mysterious, for while the blight microbe has the power to make its way by a kind of corrosion from cell to cell of the pear tree, no way for such progress of the former has as yet been discovered, and, notwithstanding this, it is found in all parts of a diseased tree.

We asked him if there could be any mistake in the statement that the microbe was the cause of the pear-blight. He said there was not; he had isolated some of them from the tree, and had caused the parasitic organisms to grow and increase in numbers, on a certain prepared gelatine, in a closed glass tube. He had then applied some of these microbes to a perfectly healthy tree, and blight was the result.

In reply to our inquiry as to best time for cutting off blighted limbs of the pear tree so as to prevent its spreading, he said that the microbe most frequently found entrance through the blossoms, and that the trees should be carefully examined at that time and all blighted blossoms cut away before the mischief

had time to spread. The tree should be visited every week or two for a few times in succession, and, by careful removal of all affected wood as far down as any discoloration of the inner bark was discernible, much of the injury to our orchards from the pear blight would be prevented.

He also stated that the blight of the apple and quince was due to the same cause as that of the pear.

**SIMON'S PLUM.**—A fine specimen of this fruit was sent into this office on the 6th of Sept. and was carefully measured. It was exactly six inches in circumference every way.

**THE WAGER PEACH** gives us a favorable impression this season. Trees three years planted are well loaded with fruit, ripening about Sept. 12th, along with the Old Mixon Free-Stone. The tree is a good grower, the fruit is of medium size, oval, with swollen point skin, fine yellow, with red cheek; flesh firm, yellow, of good quality. We believe that this will prove a valuable market peach for Ontario peach growers, and doubly desirable if, as some claim, it will reproduce itself from the pit, for by this means any one can grow his own trees at little expense.

**CONCORD GRAPES.**—The first shipments from Maplehurst Fruit Farm were made on the 18th of September, and continued regularly. No grape is giving such constant satisfaction under all circumstances and conditions. This season all Rogers' varieties have failed, and Niagaras have dropped, but Concord are laden with beautiful clusters. We find the results vary with the kind of soil. On a heavy clay loam they are earlier and sweeter, but small, while on rich sandy loam they are later, but very large berries. One we measured and found it three inches and a quarter in circumference, due partly to ringing.

**CAUTION ABOUT PARIS GREEN.**—A serious typical error escaped our notice on page 68, under the above caption. In our note the word "pint" should be "pail."

**MITCHELL'S NO. 1 TOMATO**, as grown on the grounds of the **CANADIAN HORTICULTURIST**, is equal to Acme or Hathaway in productiveness, rather larger and of a better flavor.

**EARLY GRAPES.**—Moore's Early Grape was ripe, on the writer's fruit farm, about the 1st of Sept., and the first basket was shipped on the 3rd of the month. The vines were loaded with fine sized fruit which was sweet and desirable for the table. It was sold wholesale in Toronto market at 8 cents per pound. Why grow any more Champions? Worden began ripening on the 7th, and on our vines is about equal to the Concord for productiveness. No Concord were colored on that date except a few which had been ringed for experiment, or had been tied too tightly to the trellises, in which case the same effect was produced. It is evident that ringing will cause earlier ripening and larger berries.

**IRRIGATION WITH TILE.**—Such a season of drouth as some sections of Ontario have just passed through will lead our gardeners to consider



FIG. 74.—MODE OF IRRIGATION WITH TILE.

favorably any proposed system for overcoming this serious drawback to their success. We notice in an exchange an easily worked plan for irrigating with tile. By means of the farm windmill, a tank reservoir may easily be filled, and thus the necessary



water and pressure for flooding small areas may be obtained. The water is distributed by means of common drain tile, using sizes from two to four inches in diameter; the larger for the main or distributing tile and the smaller for branches. The tiles are laid at a depth of about a foot or fifteen inches below the surface, the excavations being made by a plow without much expense, and the lines of tile are laid about ten feet apart. When the water is turned on, into the standpipe, it will fill the pipes to their extremities, which, of course, are closed, and a portion of the water, constantly escaping by the joints, will work its way by capillary attraction toward the surface of the soil. One acre is about the extent which may be thus worked under one system of pipes and machinery.

**THE YELLOW TRANSPARENT.**—Our top grafts of this Russian have borne some fruit with which we were much pleased, except with the size which was below medium. Its earliness gives it every advantage in the market, especially as the Early Harvest is no longer to be depended upon on account of the spot. Dr. Hoskins, of Vermont, has had some favorable experience with it, which we find published in the *Orchard and Garden*. He says:—"As to the other apples of this family, the fruit is very similar, when grown under identical conditions, though I find White Transparent smaller, and better in quality than the others. The whole family are more or less subject to blight, attacking not only the bark in the forks of the branches, but the limbs, much like pear blight. I regard Thaler and Sultan as identical, and they are both destroyed by blight in my grounds in a very few years. Y.T. is much more resistant to the disease, the majority of my trees escaping it altogether; but if allowed to over-bear, even it is short-lived, as compared with most

American varieties. The trees should have rich ground and surface cultivation; and I find 12 feet apart in the row wide enough, as they will not often remain profitable after reaching a size to meet at that distance. While they do last, however, no apple is more profitable. Even my culls netted nearly \$1.00 per bushel last year; and trees three to five inches in diameter gave from 4 to 6 bushels of perfect fruit, sold mostly as they ran at \$1 per 100, which is a little more than half a bushel, though of select specimens 100 will make nearly a bushel. They were all sold in the home market, this being a summer resort; but Boston dealers have told me that even lots of good size would easily net \$1.00 per half bushel crate in that city, as there is no apple there equal to it in appearance or quality at that season."

**THE CRANDALL CURRANT.**—Mr. L. H. Bailey writes in the *American Garden*, that he does not find any trace of hybridization in the plants of this currant, and regards it as a simple variation of the Buffalo currant. In his estimation it has some decided merits, especially for amateurs, promising a new and valuable type of fruit for our gardens. In jellies it is better than most other currants and is good in pies or as sauce. 't needs to be eaten fresh, because, after standing two or three days, the berries become tough and almost inedible. It is variable in size and in period of ripening, but may be easily gathered singly, like gooseberries and cherries.

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#### Our Winter Meeting.

THE next annual and winter meeting of our Association will be held in the city of Windsor, during the second week in December.

The meeting will be ably supported both by local fruit growers and by

our Directors, and a series of important topics will be discussed, such as "Fruit Exhibits at Fairs," "Judging Fruits," "Fruit Lists for Ontario," "Values of the Various Kinds of Apples," "Evaporation of Fruits," "Apples for Stock," "The Cultivation of the Peach," "The Cultivation of the Pear," "Grape Growing for Market," "Currant Culture for Profit," "The Fall Purchasing of Trees," etc. Now is the time to make further suggestions to the Secretary of such subjects as any member would like to have taken up and discussed, as the officers desire to make the meetings and the Report as full of variety and as interesting as possible.

The meeting is to be held in Windsor in response to the invitation of the North Essex Farmers' Institute, whose worthy Secretary, Mr. N. J. Clinton, takes a deep interest in our work.

The Windsor Board of Trade and the Windsor Vine Growers' Association will also co-operate with us. The Michigan Horticultural Society promise to send us some representatives, and the New York State Horticultural Society will probably be represented by Mr. S. D. Willard, of Geneva, N.Y.

In many places there seems to be an impression that only members may attend our meetings. This is a great mistake; our object is to

advance the interests of the Province by encouraging the industry of fruit culture, and unless we can get the ears of the public how can we do them any good? Will our readers please correct this error, and encourage the public, both ladies and gentlemen, to attend our meetings.

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### The Dominion Convention.

OVER a year ago it was agreed between the Montreal Horticultural Society and the Ontario Fruit Growers' Association that a Dominion Convention of Fruit Growers would be of great benefit to the Dominion, by discussing the capabilities of the various Provinces for fruit culture, the most hardy fruits and those adapted to the colder sections, Forestry, Economic Entomology, and various other subjects of general interest. The report of such a meeting would form a volume of great value for distribution by the Government in foreign countries, as well as throughout the whole of our vast Dominion.

The Minister of Agriculture, Mr. Carling, has given his approval to the scheme, and a vote of \$2,000 has been made to carry out the proposed convention. It will be held in Ottawa in February next, and the programme is now being arranged.

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## QUESTION DRAWER

### The Brown Rot of the Grape.

77. I WRITE to you for information. My grapes just now are affected with a disease. I know not what to call it. They are now fully formed and by degrees are turning a dark colour and fall off the vine. On cutting them open they have a peculiar smell as if decaying. It is only the Rogers grapes that are affected so. Concord and other kinds I have are not so affected. Grapes are

but a small crop with me this year. You, perhaps, may be able to say what the disease is, and if any are affected in the same way up west, or perhaps some of your numerous subscribers may have some grapes diseased in the same manner. Our crops in this section of Canada are excellent. We have not had for many years anything like it.—JAMES ROSAMOND, *Almonte, Lanark Co., Ont.*

Reply by B. T. Galloway, Chief of Section of Vegetable Pathology, Washington, D.C.

The grapes are affected by what is known as Brown Rot, a form of the downy mildew which attacks the leaves. We send you a description of the disease. There is no doubt that the Bordeaux mixture, if used early enough in the season, will prevent the ravages of this parasite which seems to be the principal grape trouble north of and including New York state.

(1.)—DOWNY MILDEW, BROWN AND GREY-ROT.

These diseases are caused by a fungus known as *Peronospora viticola*. When the *Peronospora* attacks the leaves the disease is known as the downy mildew when it attacks the berries and destroys the pulp without forming external reproductive bodies it is brown-rot; when it occurs on the young fruit and covers the berries with its greyish conidia or "seed" grey-rot is the term applied to it.

Leaves affected with downy mildew show, upon the upper surface, greenish yellow or brownish spots of irregular size and shape, while opposite these discolorations, on the lower side, a downy, whitish, frost-like growth may be seen. In advanced stages of the disease, or after a heavy rain, the frost-like patches often disappear, leaving in their place light brown discolorations corresponding in size and shape with those on the upper side.

Brown-rot usually appears when the fruit is nearly full-grown and, as already stated, there is no external evidence of the presence of a fungus. Purplish brown discolorations appear as a first manifestation of this form of rot. Soon the entire berry turns brown, the pulp becomes soft and often shrinks, forming depressions, over which the wrinkled yet otherwise smooth and unbroken skin is stretched.

In the case of grey-rot the berries and often the pedicel are covered with a frost-like growth similar to that which occurs on the leaves. In fact the characters of this disease are so well marked that a further description is useless as it cannot well be mistaken for anything else.

(II.)—THE POWDERY MILDEW.

This mildew usually makes its appearance toward the middle of summer and continues until frost. It attacks the leaves, young shoots and fruit, covering them with a powdery meal-like growth altogether different from the downy mildew, also differs from the latter in that it occurs abundantly on the upper surface of the leaves where it forms mealy white patches of various sizes and shapes. Occasionally it is spread out quite evenly over the entire surface, resembling in some respects the delicate web of a spider. Fruit affected with the powdery mildew shows on the surface a coating of whitish, meal-like dust; this rapidly increases in thickness and soon the berries shrivel, the skin cracks, admitting other agents of decay, which soon finish the work of destruction.

Wine Making.

78. Would you kindly answer the following question in your excellent publication, viz., how to make a fair quality of wine from say from 3 or 4 gallons of grape juice? I have good receipts for large quantities with proper appliances but not in small quantities. I have made a good wine from red and white currants in small lots.—A. J. COLLINS, *Lis-towel*.

In reply to our correspondent we cannot do better than to give the following quotation from an exchange:

"The grapes are allowed to ripen well before being gathered, when the juice is expressed and bottled immediately. The bottles are filled to the brim and then placed, up to

their necks, in vats of water within ten degrees of the boiling point.

"When the must and water are of the same temperature, the corks are forced into the bottles, expelling some of the fluid to make room for themselves. This part of the work must be very carefully done, as the least measure of air remaining between the cork and the liquid will cause fermentation. As the liquid is in a heated state when the cork is forced, it will contract as it cools, leaving a space between the cork and the liquid; but if the cork is, as it should be, thoroughly air-tight, this vacancy will not be an atmospheric chamber and will not injure the liquid. If fermentation should set in, it can be driven off by reheating the wine. The bottles are then placed on their side in a cool place and then the organic particles in the must be allowed to settle.

"This settling may last any length of time the manufacturer chooses, but sufficient time must be allowed, for foreign substances must be allowed to settle on the sides of the bottle. Then it is decanted into other bottles leaving the sediment behind. These second bottles must also be brimful and heated up to the same degree as before and corked in precisely the same manner, using sealing-wax to exclude air. The wine is then allowed to cool in the ordinary way, and must be kept in a cool place. It will keep as long as it is kept free from contact with the atmosphere."

#### The Ailantus.

79. WILL the Ailantus stand the winter in this latitude without protection?—W. W. H., Toronto.

The Chinese Ailantus, or Tree of Heaven, is quite hardy at Grimsby, and probably would be at Toronto. In planting it we would caution our enquirer to choose the pistillate tree and not the staminate, for the flowers

of the latter are anything but heavenly, and are very injurious to the lungs of some persons.

#### Aloe and Agave.

(SEE QUESTION 74.)

Reply by Antoni Simmers, Toronto.

(1) Technical name of "Devil's Tongue"—*Chamorlirium*. (2) Proper cultivation of "Devil's Tongue" is the same as that given below, with the exception that we do not cellar these plants but endeavor to keep them growing throughout the winter indoors. (3) Proper cultivation of "Variegated Indian Aloe"—generally grown in pots, consisting of loamy soil mixed with sand to prevent the soil from souring; add to this say half a pound of bone meal as a fertilizer which will be found beneficial. The plant should be kept in moderate moisture, and placed in any location, shady or otherwise, will thrive. During winter we cellar them and keep occasionally watered to sustain life. The cellar should be one frost-proof. (4) Proper soil for "Dew Plant" is a sandy loam well enriched with manure. (5) Technical name of "Dew Plant" is *Mesembrianthemum Crystallinum*.

#### Tigridias and Wisterias.

80. THE Tuberous-rooted Wisteria and Tigridia which I received as premiums are making a fairly good—but not very thrifty—growth. I have them growing in pots but out doors. Will you kindly inform me how they are to be preserved through the winter. Must the tubers be taken up and dried and stored away as we do those of the Gladiolus, or had they better be left in the earth as with the Japan lily. If the latter, should the pots be put in the cellar or not? Should they be left quite dry or watered? An answer to these questions in the next number of your valuable magazine will oblige.—ELIZABETH TRIGGE, *Elcucu Oaks, Cookshire, Que.*

Reply by Herman Simmers, Toronto.

In reply to questions sent by your subscriber, I am pleased to answer as follows, viz.: The Tigridias are

treated in precisely the same manner as the bulbs of *Gladiolus*, taken up in the fall and dried, and kept in such a manner until the spring, when they may be planted the same time

as the *Gladiolus*. The Tuberous-rooted *Wisteria* bulb is quite hardy and may be left in the ground all winter, without any danger of their freezing.

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## OPEN LETTERS.

### Apples a Failure in Huron Co.

DEAR SIR,—I duly received the numbers of the *HORTICULTURIST* and also the Report, and since reading them I am sorry that I did not join your Association long ago but "better late than never." We have had a good crop of small fruits and in such a year as this when the apples are a total failure, a succession of strawberries, raspberries, etc., for table use and canning purposes will no doubt supply a part of the deficiency.

I was very much pleased with the Report. It is well worth the subscription price alone.—A. S. DICKSON, *Seaforth, Aug. 24th, 1889.*

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### *Prunus Simoni*.

SIR,—I notice your remarks in the September *HORTICULTURIST* about *Simoni's Plum*. I find it hardy here. It fruited with me this season, measuring over 6 inches and resembling cut; flavor excellent and a grand perfume.—W. A. HAMILTON, *Collingwood.*

SIR,—According to California journals, "the *Prunus Simoni* develops into a handsome, oblate, deep purple plum, much larger

than it appears in the engravings of the fruit grown elsewhere," etc.—T. B. JENKINS, *Horticulturist, Rochester.*

SIR,—I have read with interest your July and August numbers. I am somewhat interested in the discussion on the *Prunus Simoni*. The plate in the July number has been shown to an agent representing a nursery at Iowa City, thirty miles south of here. He informs me that instead of being overdrawn, as Prof. Van Deman tells us, in the August number, it does not much more than represent one-half the actual size of the plum as fruited by a Mr. Coughman, at Iowa City this season. He represents the fruit beautiful and fine for canning. Notwithstanding the discredit thrown upon the fruit by Prof. Van Deman I shall plant in the spring at least 50 trees of it.—A. B. DENNIS, *Cedar Rapids, Iowa, Sept. 11th, 1889.*

Wickson's work on California fruits, in the portion devoted to plums, says that *Prunus Simoni* has a "sweet, rich, aromatic and delicious pine-apple flavor." This will surprise any one familiar with its worthless character, which can hardly be so greatly changed when cultivated in California.—*Extract from Country Gentleman.*

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## OUR FRUIT MARKETS.

### High Prices for Apples.

OUR remarks upon the value of apples in the last number are being more than sustained. In fact, except in a few favored sections, there are very few apples in the country. In some counties bordering upon the southern shore of lake Ontario, and the northern shore of lake Erie, especially in Essex and Kent, a fair

crop is reported, but on the whole there will probably not be one-third of last year's crop in all Canada, and the percentage in New York state and Michigan will be very little higher. Indeed Chicago apple buyers have already been operating quite freely in Western Ontario and as early as the first week in September had secured some 20,000 barrels at \$2

per barrel, f.o.b., for fall apples, and \$2.50 for winter apples. Montreal men have also been in the field, and some of them have been contracting heavily, so that a lively competition is at work to bring up prices to an unusual scale. It is even stated that quite recently the sum of \$3.25 per barrel was paid for 1,000 barrels of winter fruit f.o.b.

We think, therefore, that there is every encouragement for those of us who have an apple crop to expect high prices for our stock right at home, and we do not advise great haste in selling, unless outside figures are to be had.

#### Prices of Pears.

If apples are bringing a surprisingly high price what shall we say of pears, which have sold during the latter part of September at a higher figure than was ever known in Canada? Bartlett pears went up to \$15 per barrel, and even \$20 has been paid for some of fine quality. Fine Flemish Beauty pears have been selling as high as \$6 to \$10 for No. 1 quality..

#### Great Britain.

SIR,—As usual at this season of the year, we beg to give you a summary of the most authentic reports we have been able to get, as to the crop of Apples in the United Kingdom. Up to date we have reports from 94 different parts, and these may be classified as follows:—Total failure, 13; very poor, or almost a failure, 38; very partial, or under average, 24; average, 17; above average, 2; Total 94.

There are some districts from which we have not yet received any special report, but we have no hesitation in placing above figures before you as representing the general crop of this country. If we should later on receive any advices that lead us to believe otherwise, we shall at once inform you.

From the above statistics it will be readily seen that the Home Supplies will be very small, and, therefore, the prospects for shipments from U.S.A. and Canada are correspondingly good. We, however, again call your attention to the advisability of not shipping small or common fruit, as if any

quantity of this class arrives, the result will certainly be unsatisfactory.

The crop in Belgium and Germany is reported good, but light in France.

We look for a good demand for fruit of good size and quality, but again advise our friends that they *cannot be too careful in their packing.* J. C. HOUGHTON & Co., *Liverpool, 28th Aug., 1889.*

SIR,—Messrs. J. C. Houghton & Co., Liverpool, cable that about 500 bbls. Apples ex "Umbria" met with a fair demand today and the following prices were realized: Kings, 25s. to 26s.; Baldwins, 12s. 6d., to 14s. 6d.; Greenings, 10s. 6d., to 13s. 3d.; Hubbardsons, 12s. 9d., to 15s.

Messrs. James Lindsay & Son, Glasgow and Edinburgh, cable that they have realized the following prices in their markets: Maiden's Blush, 21s. to 24s.; Cranberry Pippins, 16s. to 20s.; Kings, 21s. to 28s.; Baldwins, 15s. to 16s.

The shipments for the week ending September 7th amounted to 6,366 bbls. from all ports to all ports, including 1,700 bbls. from Halifax to London. OTTO G. MAYER & Co., PER JOSIAH RICH, *New York, 11th Sept., 1889.*

SIR,—The apple season of 1888-9, although resulting in the largest arrivals that have ever been received in this country, cannot be looked upon as a satisfactory one, as the low prices caused by the supply so much exceeding the demand, must have been very disastrous to shippers. The first shipments were received in August; the invariable results of these early shipments is always disastrous, and this season proved no exception to the rule. Fall fruits never arrive in a condition to command high prices and come into competition with arrivals here from Lisbon, Oporto, and France, and the bulk of our own growths, which are mostly of early varieties. By the time the Winter Fruit, arrive here these shipments cease, and the demand for American Apples fairly sets in; but during the past season they came in such quantities that the prices never ruled high, and the great rush made by Canadian shippers to get their stock here before the close of navigation—combined with large shipments from New York and Boston, caused such a congestion of apples on the market that prices dropped steadily, until they got to a point when there was very little margin over freight and charges, and the stock was not cleared away until after the Christmas holidays. From that out arrivals still continued heavy, but we were able to use them all at prices ranging from 10s. to 15s.

The total arrivals into the U.K. were 1,491,382 barrels, which was far in excess of any year since the large crop of 1880-1, when the quantity was 1,328,805. For the previous four years, say from 1884-5 to 1887-8, the average of seasons was 775,264 barrels.

From reports we receive from all parts of Canada and the United States the crop for the coming season will be from 50 to 78% of an average one. This fact, in conjunction with an unusually light domestic crop, should enable us to get good prices for what are sent over here.

The crops of soft fruit in this country and the continent have been light, and, with the price of sugar abnormally high, the manufacture of preserves has not been excessive, which will operate in favor of good prices for apples during the coming season. GREEN & WHINERAY, *Liverpool, Sept. 4th, 1889.*

SIR,—Several small parcels of New York apples have been realized on this market at: Kings, 18s. to 20s. 6d.; Baldwins, 9s. 6d. to 14s. 6d.; Greenings, 12s. to 12s. 6d.; Various, 12s to 14s., the quality and condition of the fruit on the whole was poor, especially the "Baldwins." With moderate supplies of good fruit we anticipate better prices, but inferior and smaller grades will return poor results.

You will have noted our opinion on prospects from our circular letter.

As regards fall fruit we strongly recommend all shippers to send *only* the best keeping qualities of good size.

During the season should you desire it, would be pleased to keep you posted with the movements of this market. WILLIAMS, THOMAS & Co., *Liverpool, Sept. 5th, 1889.*

### Philadelphia.

SIR,—The *apple crop* failure in the Ontario "Lake region" of New York means a short Eastern supply this season, and the general quality was never poorer from worm and blight. The eastern crop is generally reported short and faulty—Nova Scotia about fifty per cent. of last years.

Since peaches are about done, our market already feels the effect of *scant supply of desirable apples and pears*—receipts of common and poor stock prevailing and pressing for sale, while strictly *choice high colored eating fruit is scarce and readily salable at top quotations* :—

Blush apples, Gravensteins, etc., \$3.00 to \$3.50 bbl.; Snow, \$2.75 to \$3.25 bbl.; 20 oz. Bellefleur, etc., \$2.50 to \$3.00 bbl.; Pippins, \$2.00 to \$2.50 bbl.; Mixed, common, \$1.00 to \$2.00 bbl.

Fancy bright Bartlett pears, \$6.00 to \$7.00 bbl.; other kinds and grades, \$3.00 to \$4.00 bbl.

Plums 30c. to 75c. per 6 qt. basket, according to quality.

Grapes are in light demand and dull, at 25c to 35c. per 10 lbs. for Concord and 40c. to 60c. for Delawares and Niagaras.

Whenever we can serve you please to order us. PANCOAST & GRIFFITHS, 11th Sept., 1889.

## OUR BOOK TABLE.

REPORT OF THE COMMISSIONER OF AGRICULTURE OF THE UNITED STATES FOR THE YEAR 1889, WITH COMPLIMENTS OF J. M. RUSK, SECRETARY.

This report covers over 700 pages and includes much that is of interest to the fruit grower.

### THE PLUM CURCULIO,

for instance, is fully described and illustrated in its various stages of growth and operations upon the cherry and plum. The various plans for combatting it are described, and the one of spraying with Paris Green commended as a desirable addition to the list, though not likely to become as great a success as in the case of the codling moth, because (1) the beetle prefers to work upon

the smooth cheek of the plum where the poison is less likely to adhere, and (2) because the larvæ, eating directly from the flap, does not come in contact with the poison as does the larvæ of the codling moth.

It is evident from this statement that the writer has no idea of poisoning the mother moth before she deposits her eggs, the possibility of which was demonstrated on page 38 of the present volume of this journal. It is evident that much of the failure to save the plum crop by spraying has resulted from an ignorance of the fact that the curculio will eat the foliage of the plum tree, and consequently the poison was applied too late to accomplish the best results.

Many of the fungi are fully described, such as Potato Rot, Black Rot of the Tomato, Brown Rot of the Cherry, Leaf

Blight and cracking of the Pear, Apple Rusts, etc. In speaking of the best

#### NEW FRUITS

Mr. Van Deman recommends the *Jeffries* as the choicest early apple known to him; a chance seedling from Pennsylvania. It is medium in size, skin smooth, yellow, profusely covered with carmine stripes and crimson splashes. Season, August and September in the middle states.

Of pears, he speaks favorably of the *Wilder*, a small pear of excellent quality, which originated in New York State, and which ripens in August in that state. Of the *Idaho* he says it is of real value, and recommends it for extensive trial. He describes this pear as follows:—"Size of fruit, 4 to 4½ inches in diameter; shape, a little flattened, tapering slightly both ways from the centre, quite irregular, depressed at the stem; surface rough and uneven, yellow or straw color, with a faint blush or brownish red on the sunny side, and a few bronzed blotches; dots minute and dark and very numerous; basin, deep, flaring, very irregular or ribbed, and thickly covered with fine brown dots; cavity, medium abrupt, irregular; stem, stout and rather long; core very small; seeds few; flesh, almost white, fine grained, buttery, melting, lacks the grit so often found in pears; flavor, sweet to mild sub-acid, rich and aromatic, juicy; quality, very good; season, September in Idaho.

The book is well illustrated with expensive colored plates, illustrating the subjects treated of, and is a volume well worthy of preservation for future reference.

TRANSACTIONS OF THE IOWA HORTICULTURAL SOCIETY for 1888. Secretary, Geo.

Van Houten, Lennox, Iowa. A volume of 494 pages, with many interesting papers and discussions, from which we hope to draw material for the benefit of our readers.

PROCEEDINGS OF THE FOURTEENTH ANNUAL MEETING OF THE AMERICAN ASSOCIATION OF NURSERYMEN held at Chicago, 1889. Chas. Green, Rochester, Secretary. This Report of 114 pages proves this Association to be a live body. The interests of the nurseryman and the fruit grower are more closely allied than some seem willing to admit, and their presence and aid in our discussions are almost indispensable.

NOVA SCOTIA PROVINCIAL CROP REPORT, July, 1889. This crop report does not pretend to the exactitude of a census, but is intended to give the public immediate and valuable information concerning the crops at a time when it would be most useful, leaving it for the census to give complete and exact returns of the actual crop harvested. Of Annapolis county, one of the principal apple growing regions, for instance, this Report gives the quality of the winter fruit about an average of former years, but the quantity about 50 per cent. of the usual average. Kings and Gravenstein, however, promised a full crop.

T. C. ROBINSON'S Fall Catalogue and Price List of Small Fruits, Grapevines, Fruit Trees, and Selected Ornamental Shrubs, Owen Sound, Ont,

WILLIAM BROTHER'S TROPICAL SEED CATALOGUE, for Planters, Agriculturists, Horticulturists, Nurserymen, Seedsmen and Florists in all parts of the world. Heneratgoda, Ceylon.