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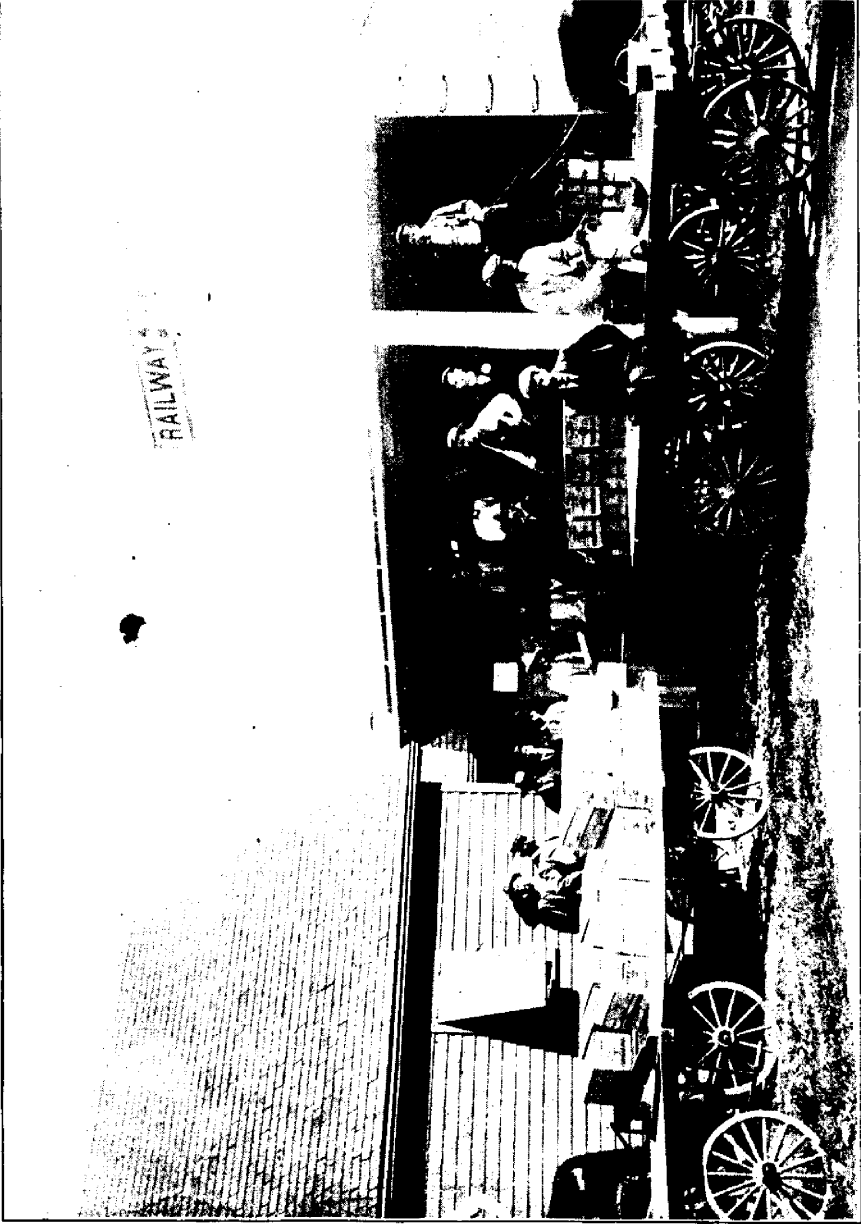
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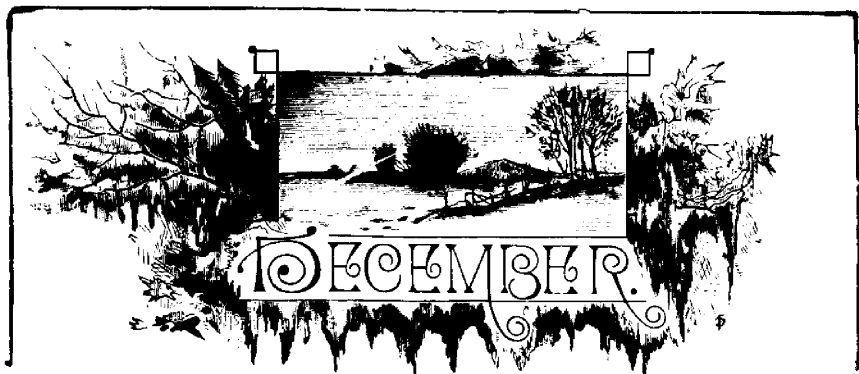
Shippers Loading First Car of Peaches for Foreign Market.

# THE CANADIAN HORTICULTURIST.

VOL. XX.

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No. 12.



## THE EXPORT OF TENDER FRUITS.

**A**T the Annual Meeting of the Ontario Fruit Growers' Association at Kingston, in December, 1896, the advisability of making some experimental shipments to Great Britain of tender fruits, such as peaches, tomatoes, pears, grapes and summer apples was fully discussed. An address was given by the Hon. S. Fisher, Minister of Agriculture, for the Dominion, to the effect that the Department of Agriculture was desirous of assisting Canadian fruit growers in this enterprise, and would like to know just what provision would be needed.

A committee was appointed to reply to his enquiries, consisting of L. Woolverton, W. M. Orr, G. E. Fisher, A. H. Pettit, and E. D. Smith. This Committee met and recommended that shipments go forward during the month of August, September, October or later, of at least one carload per week, and of three or four carloads a week during the month of September; that cold storage would be needed at the point of shipment, as well as on the railway cars; that

the varieties of fruit be as many as possible, and packed in the very best manner; that only the best stock be allowed to go forward; that an agent be sent to Britain to look after the interests of the fruit grower; that cold storage warehouses be erected at such points as can be agreed upon, where growers will furnish the amount of fruit required, and agree to buy over the warehouses at the end of three years provided the experiment proved a success.

At a meeting of representative fruit growers from Grimsby, Winona and Burlington, held at Grimsby on the 26th of January, two resolutions were passed, one asking for three warehouses, one at Grimsby, one at Winona, and one at Burlington, each place to provide one-third of a carload per week; and another resolution which while approving of the former, recommended as a preferable scheme, the erection of one warehouse by the Department, and the guarantee to the shippers of a fair market price for the goods.

The Department approved of the lat-



FIG. 1232.—PACKING FRUIT FOR EXPORT.

## THE EXPORT OF TENDER FRUITS.

ter scheme and decided to place one warehouse at Grimsby, providing growers there would agree to provide the necessary fruit to make up one carload a week, and buy over the warehouse, provided the experiment proves a success.

Nine prominent growers of peaches, pears, grapes, tomatoes, etc., agreed to the scheme, and on the 7th of September the first shipment was made, consisting of Bartlett pears, Crawford peaches and grapes, for Covent Garden, London, England.

Our frontispiece shows these nine shippers loading the first car of these fruits, and a corner of the warehouse.

In all seventeen carloads of our choice varieties were sent forward, the last car leaving on the 12th of October, mostly loaded with grapes. The two markets chosen were London and Glasgow. The result of the season's experiment has been of great value, although not without considerable loss at the first shipments. It has been proved that our Canadian Crawfords and Bartlett pears are just what the trade wants in England being identical with the favorite English pear *Williams* known in France as *Bonchretien*. Some half cases containing about 6 dozen each of this pear sent over on the steamer *Georgia*, arrived in excellent condition and sold about Oct. 1st for \$2.30 per half case, or the equivalent of about \$15.00 per barrel! This is sufficient to prove the market for such goods, especially for well-grown samples; while on the other hand, it has been proved that a second grade cannot be exported without loss. The first shipments arrived in an over ripe condition. This was not the fault of the growers, for the fruit was gathered very green, nor of the packing, as the papers state; for if the fruit men of Southern Ontario do not understand packing fruit, after a life-

experience, it is passing strange; but of the temperature in transport, which was from 40° to 48° F.—altogether too high to carry such tender fruits without change of condition. For this reason the Crawford peaches were over ripe, and unsalable, and the Bartlett pears were also over ripe. For these fruits the average temperature in the refrigerator should be between 33° and 35°.

The first packages used (see Fig. 1253) were too large for peaches and pears, and too expensive, being bushel cases, each containing eight wooden trays, in which it was very difficult to pack fruit closely, so that it would not move about when shaken. Toward the latter part of the season a half case holding about six dozen pears, was adopted, which proved much more satisfactory, for while a case of Bartlett pears sold for 15/7, a half case at the same sale brought 9/7. The temperature also of the later shipments was held somewhat lower, averaging about 38°. If this can be still further reduced perfect success will result. It will no doubt interest our readers to see some extracts from the account sales showing some of the lowest and some of the highest prices obtained for our fruit, viz :

Covent Garden, London, Oct. 21—  
(ex "Hurona," sold by Garcia Jacobs & Co.)

Duchess pears,	\$1.64 to \$2.19	per bushel case
D' Anjou	1.34	"
Louise	3.90	"
Howell	54 cts. to 2 07	"
Bartlett	72 cts. to 3 00	"
Early Crawford peaches,	1.25 to 2.44	"
Wager	1.58	"
Centennial	2.44	"
Quackenbos plums	3.77	"
Plums (other varieties)	60 to 1.15	"
Tomatoes	1.28 to 1.71	"
Rogers grapes	97	per case 45 lbs.
Delaware "	55	"
Concord "	24c. to 74	"
Worden "	25c. to 36	"
Niagara "	12c. to 47	"
Assorted "	22c. to 2.68	"



FIG. 1253.—FIRST FRUIT PACKAGES FOR FOREIGN SHIPMENT.

## THE EXPORT OF TENDER FRUITS.

Glasgow, Oct. 15, (ex Kastalia):

Ribston apples	\$1.02 to \$2.50	per bushel case
Anjou pears	2.07	"
Flemish Beauty pears	2.00	"

Liverpool, Oct. 21, (ex Numidian.)

Crawford peaches	\$3.66	per bushel case
Tomatoes	1.25	"
Grapes, all varieties,	about one cent	a lb.

It is worth noting that about the date above mentioned, California pears and peaches cease to arrive in Great Britain, thus leaving Canada a special opportunity to capture the market for these fruits from the middle of October onward. It will therefore be worth our consideration whether we cannot hold back our Bartlett pears and Crawford peaches in cold storage in Montreal until about the 10th or 15th of October before forwarding them. Also whether we cannot grow such desirable late varieties of pears and peaches as will suit the British Market at the time above mentioned. The Louise pear for example succeeds beautifully in Southern Ontario, especially when grown as a dwarf; and the same may be said of the Duchess and the Anjou. Another magnificent late pear is the Clairgeau, which would be one of the finest for the export trade. Even the much abused Kieffer would export in fine condition.

*Tomatoes* have succeeded as well or better than any other fruit, so far as condition is concerned, and prices have been good considering that the variety *Ignotum* was too large to suit the English taste. Some smaller, round smooth variety would give excellent results.

*Grapes* have been a complete failure, the fruit having been almost given away, the very best not bringing more than one cent a pound, the cost of transportation. The salesmen write: "The grapes are of no use here, the peculiar flavor not being very palatable; and in quality they are in every respect inferior

to those grown in Spain and Portugal—thin-skinned, white, sweet grapes, which are brought here and sold from 4 to 6 cents a lb." A consignee in Liverpool, however, writes more favorably, and we hope yet to create a demand for our grapes that will ensure a profitable trade.

*Peaches*—In the export of this fruit there appears to be great possibilities both of loss and of profit. For example one shipment of one hundred and thirty cases of beautiful Crawfords reached Glasgow in such bad condition as to bring the shipper in debt \$73, besides the loss of his fruit valued at \$325, or a total loss of \$398; and another shipment of 40 cases sold at an average of \$3.66 per case!

*Early apples* were so great a failure this season that it was impossible to make up any cases fit for export. Next year, should the crop be first-class, some experimental shipments will be made, beginning with Red Astrachan and Duchess in August, Gravenstein, Ribston and Blenheim Orange in September; and Fameuse, Wealthy, King and Cranberry Pippin in October. These are all excellent varieties, of beautiful coloring which are bound to bring the top prices in any market.

Altogether we can report encouragement, although the season's shipments on the whole have been a serious loss. We have learned (1) to use smaller packages; with better ventilation; (2) the importance of lower temperature; and (3) that fruit should be placed in a cool room as soon as gathered, and cooled even before it is packed, in order to attain the best results.

With these conditions observed, we expect to report success next year, such as will lead to private enterprise in the export of our tender fruits.

## HOW I GOT STARTED IN SMALL FRUIT.

WHEN I first thought of engaging in fruit culture as an occupation for recreation as well as revenue, I decided that the small fruits were what I should first plant, that I might receive some income as quickly as possible, as they were quicker to come into bearing than the stone fruits.

I wished to learn all I possibly could concerning the methods of fruit growing, and I knew that the surest and most effective way was to begin at the bottom and work up. So I purchased a few plants of most of the small fruits and began propagating the plants.

The way I got started in currants and gooseberries was to purchase a few hundred two-year-old bushes of the most reliable varieties of a responsible nurseryman and set them in November, before the ground became frozen.

The soil where I set them was made as rich as possible with rotten barnyard manure. The ground was plowed deep and fined well. The plants were set six feet each way that I could cultivate both ways with a horse; the plants were kept clean all summer, and by fall I had a fine growth of new wood.

In the last of September I took what cuttings there were on the five hundred bushes and found I had nearly 3000 of them. These I heeled in, with tops down, for a few days that the cuts might callus.

The ground where I was to set my cuttings was prepared similar to the way

I prepared the ground the fall before, and made richer, if such a thing was possible, the ground was furrowed out into rows three feet apart and 7 or 8 inches deep. I stuck the cuttings along the rows at an angle of about 45 degrees and six inches apart, leaving about an inch or two to protrude above ground when the trenches were filled. The soil was tramped down solid about the shoots and left mounded up slightly that no water would stand about them.

When freezing weather came, I covered the ground with rotted manure, to protect the cuttings from heaving. As soon as spring came I started the cultivator and did not allow a weed to live the whole summer, and by fall I had a fine lot of year-old plants. These would have cost me over \$50, had I purchased them from a nursery, while as it was, they cost me less than \$10.

With the other small fruits, I did the same, buy a few, and from them propagate my own plants. The knowledge I have learned while performing this work, has more than compensated me for the extra time it took to grow the plants into bearing. I can say that I did not go at it entirely ignorant of the best methods, for I first spent considerable money for books and journals which treated fully upon this occupation, and am still reading all I can get hold of which will give me any new ideas.

B. A. Wood.

*Kalamazoo Co., Mich.*





## WORDEN.

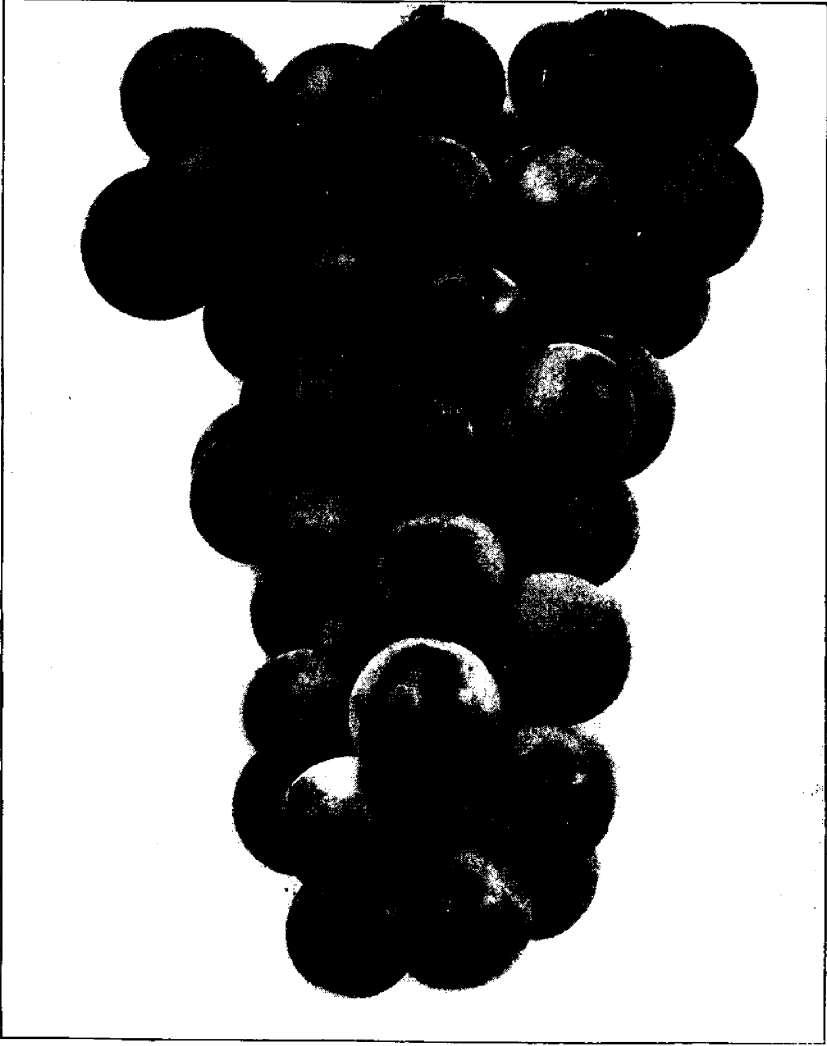


FIG. 1254.—WORDEN GRAPE.

**A** SEEDLING of the Concord, the Worden naturally much resembles that well-known variety, indeed the vines of those varieties are almost identical in character and appearance.

When first introduced it was thought to be superior to the Concord as a mar-

ket variety for main crop, but it has proved to be superior only in its earliness, ripening a few days in advance of its parent. Otherwise it is not equal to the latter, for its skin is more tender, rendering it unfit for distant shipment, while if left hanging it cracks open very badly, and at the same time loses flavor.

## KEEPING FALL AND WINTER APPLES.

*Origin*—S. Worden, Minnetto, N.Y., from Concord seed.

*Vine*; strong vigorous grower, with coarse stout foliage, dark green above, rusty underneath; very hardy, healthy and very productive, often yielding at the rate of three tons per acre.

*Bunch* large, compact, shouldered.

*Berry* large, black; skin tender, thin, with heavy bloom, cracks easily, flesh, sweet when well ripened, pulp tender,

and loses flavor soon after ripening; a poor keeper.

*Season*, middle to end of September.

*Quality*, third rate for dessert purposes.

*Value*, second rate for near market, and 4th rate for distant market.

*Adaptation*—Well suited to the Northern sections because of its early ripening.

## KEEPING FALL AND WINTER APPLES.

**I**N order to keep well, apples must be picked at the proper time. Care must be exercised in handling to prevent bruises, carefully assorting the ripe from the unripe, the perfect from the imperfect, and storing in a cool, dry place, with plenty of pure air free from all odors of decaying vegetables or other substances. The average fruit grower does not exercise enough caution in handling and assorting his fruit.

The degree of maturity will have much to do with the keeping qualities. A late fall or winter apple should be mature, but not ripe, when it is picked, if it is expected to be kept for any considerable time. The process of ripening is only the first stage of decay, and if this is allowed to continue before picking, till the apple is ripe, or mellow, this breaking down process has proceeded so far that it is a difficult matter to arrest it. As soon, therefore, as the stem will separate freely from its union with the branch, the apple is sufficiently mature for storing.

The proper temperature for keeping apples is as nearly 35 degrees F., as it is possible to keep it, and in order to maintain this, it will often be necessary to provide a separate place for storing the fruit, as the average cellar under the dwelling house is wholly unfit for this purpose. If the cellar consists of several compartments so that one can be shut off completely from the others and the temperature in this kept below 40 degrees, it will answer the purpose very well. If this cannot be done, a cheap storage house may be built in connection with the ice-house, by building a room underneath, having it surrounded with ice on the sides and overhead, with facilities for drainage underneath, keeping the air dry by means of chloride of calcium placed on the floor in an open water-tight vessel, such as a large milk crock or pan. In this way the temperature may be kept very near the freezing point the year round, and apples may be kept almost indefinitely.—American Agriculturist.

## THE ELBERTA PEACH.

**T**HIS is the first season that large orchards of Elberta have fruited around Rochester. Fruit growers here are wildly enthusiastic over this remarkable variety. The peach is extraordinarily large in size. The size of Elberta surprised everyone. It has not been proclaimed to be extraordinarily large, but it is far the largest peach marketed at Rochester this year. Even on the trees that received no cultivation whatever the fruit of Elberta was large and finely colored, golden-yellow skin covered with a bright crimson blush. There seems to be few, if any, cull peaches upon trees of Elberta. The fruit is uniformly large and handsome.

A remarkable peculiarity of Elberta is that the fruit can be picked long before maturity, and it will ripen up nicely, without rotting. I have yet to see the first rotten peach upon an Elberta tree. It is undoubtedly the best of all the peaches for long shipment. The Elberta is rather a longish peach, not so round as Crawford. Otherwise it might be mistaken for a Crawford. I do not think in quality it quite equals the

Crawford, but the quality is acceptable and good. The flesh is yellow and juicy, and it is a free-stone. The tree is a vigorous and upright grower, exceedingly hardy in bud; hardier than Mountain Rose, Stump or Oldmixon.

A peach grower near this city had several acres of Elberta in bearing. Most of the noted Pomologists of Western New York visited this orchard and were amazed at the quantity, beauty, and size of Elberta, which this orchardist was selling at double the price of ordinary peaches. This peach grower says he will set 12,000 trees of Elberta next year.

I take considerable pride in the success of the Elberta peach since I was among the first to call attention of fruit growers to this remarkable variety. Several years ago I visited with J. H. Hales the orchards of Samuel Rump, in Georgia, which is the home of the Elberta peach. There I saw the original Elberta tree. It was one of thousands of seedlings, and the only seedling out of the thousands that was considered of value. All the others were cut away and burned, this alone left to stand.—Green's Fruit Grower.

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## THE BURBANK PLUM.

**T**HE Burbank plum is again bearing a large crop of fruit this season as it did last.

This variety of the plum has a habit, as far as my experience goes, of setting four times as much fruit as the tree ought to ripen. Five-year-old trees on light sandy soil well fertilized, have borne crops for three seasons, and each season there were so many upon the tree that to have fine fruit thinning was necessary.

The Burbank is quite different from

some other varieties of plums; they hang to the tree and do not drop—so that a tree of this variety will carry to maturity a great number of plums, but if not thinned out very heavily the fruit will not be large.

This season I have seen the difference in thinning and not thinning in a marked degree. Some trees were thinned early, and in a week the plums were a third larger on these trees than others which had not yet been thinned.—The Central States Fruit Grower, St. Joseph, Mich.

## CONDITIONS OF PLANT LIFE.

IN dealing with the conditions of plant life it is well to dwell on the fact that each species and variety even requires conditions of its own for its best development, and that it is the object of scientific culture to discover and provide those conditions as nearly as possible. Thus, recent experimentation has proved incontestably that flat cultivation is incomparably the best for corn and potatoes. The old-fashioned and long continued ridge or hill culture destroyed many of the most useful fibres of the root system, for these extend out much farther from the plant than is usually supposed. It is now known also that frequent shallow cultivation will do very much to prevent the ill effects of drought in the case of all crops where it can be applied, and especially with fruits. The top soil thus kept loose acts as a mulch checking evaporation, and conserving the moisture beneath. The best results yet reached in apple culture have been attained by keeping the ground fallow, thus retaining all the fertility and moisture of the soil for the trees alone, and preventing the waste of this moisture from the open ground by frequent shallow culture. Thus the trees get the benefit of the immense quantity of moisture that would have been transpired through the leaves of the other crop, and besides the frequent stirrings of the soil have made the supply of plant food stored therein more soluble and more available for the use of the trees.

Another interesting discovery bearing on the conditions of plant growth has regard to the beet crop—a crop which is of exceeding importance since it not only yields three-fifths of the sugar supply of the world, but is becoming more

and more recognized as the best of cattle foods for dairy purposes. Innumerable analyses of cross sections of the beet root have shown that the secretion of sugar goes on to a comparatively small extent in the upper end of the root when that has been exposed to the light, and that consequently the value of the root both for sugar manufacture and for feeding purposes is very much increased when top of the root is kept covered by soil.

The processes of pollination are a source of never failing interest to young people. There are several facts of a practical bearing that will bear emphasizing in dealing with this topic. Thus, it will not do to take it for granted now-a-days that flowers that have both stamens and pistils are necessarily self-fertile, or even that any amount of cross-fertilization among plants of the same variety with perfect flowers will avail to produce a fair crop of fruit. Bartlett pears, for instance, are notoriously unproductive unless their blossoms are fertilized from some other variety. Yet Bartlett blossoms are perfect and produce an abundance of pollen, which, however, is for the most part impotent on Bartlett pistils. Several kinds of apples have the same defect.

Such facts as these are beginning to be known to all scientific growers. But why should they not be known also in every family that has a boy or girl studying Botany in our schools? It certainly would be worth while to take up many such facts in our classes if it were only to create a stronger bond between the family and the school.

Some interesting investigations have recently been made in connection with the wonderful production of pollen in

## CONDITIONS OF PLANT LIFE

Indian corn. We know, of course, that all wind-fertilized plants are very prolific in pollen, and that this condition is necessitated by the great waste involved in the process of wind-fertilization. But it has recently been shown to be probable that in the case of corn grown as we grow it, with plants in regular order in large masses, the amount of pollen produced is at least twice as much as is necessary for full fertilization. Now, the production of pollen is an exceedingly exhaustive process, and it would seem reasonable to suppose that the crop of grain might be increased if this waste of plant resource could be stopped. This has actually been shown to be true in some cases at least. In a series of experiments carried on at Cornell University during the past four years, the tassels or staminate flower clusters were removed from every alternate row at the earliest stage possible, with the remarkable result that there was an increase in the total crop on an average of the four years of over twenty per cent. The increased yield of the whole crop was entirely due to the increase on the detasselled rows, and this is readily explained by the fact that the plants here being relieved from pollen producing, all their energy was applied in the direction of seed-development.

Darwin discovered long ago that atrophy of seeds was frequently accompanied by a gain in size and quality of fruit. It is now an object of ambition among scientific fruit-growers to obtain by selection and cultivation varieties with small seeds or none. Recent triumphs in this direction are the California Navel Seedless orange, and the Lincoln Coreless pear. Great efforts are being made to reduce the size of the seeds in raspberries. In tomatoes the pulpy placenta and out-

side walls have been developed and the seeding quality discouraged until now two varieties have been produced, the Ponderosa and the Crimson Cushion, in which the quantity of seed is said to be less than one-third of that produced by the varieties in cultivation but a few years ago. We have long had in the market the seedless fruits of the Grecian grape currant and the Sultana raisin, and we know that as the result of being continually reproduced from cuttings alone the banana has lost the power of producing seeds. But our chief hope of improvement in this as in other directions is from natural variations shown either in seedlings or branches. Florists are always on the lookout for "sport" branches on their old standard sorts of roses for instance, and as a result we find distinct varieties being introduced nearly every year. Our young botanists ought to be instructed in such a way on these points that they could be on the lookout for useful variations and know them when they see them. Much good would result in the future if all young people could be so educated, and much good has been missed in the past because we and our fathers were not so educated. As a simple instance I may refer to the story of a neighbor of mine who says that when he was a boy, forty years ago, there grew on his father's farm a seedling apple of good quality that was almost coreless. Like the great majority of people he did not know the value of such a variation, but if he had that tree now it might be worth a good sum to him.

By continuous selection of favorable variations, by propagation from these, followed again and again and again by selection and propagation under favorable conditions of culture, mankind has

## CONDITIONS OF PLANT LIFE.

not only improved the quality of all our plant products, but he has also extended the season of some of our most delicious fruits and vegetables. We have moreover obtained varieties that may be successfully cultivated over much wider ranges of soil and temperature than the original types. No more interesting or useful object of endeavor could be set up before the minds of young botanists than some useful achievement of this nature. For instance, what a boon it would be for Manitoba if some one would develop a variety of Fyfe wheat, or something as good as the Fyfe, that would invariably ripen before the early frosts would strike it. The Ladoga Russian wheat matures early enough to escape the frost, but the bread made from it is of a yellowish color which much lessens the value of this grain in the market. It would be a benefit, too, to develop a tomato or a melon or a Lima bean that would mature anywhere in lower Ontario. He will be a public benefactor, also, who can by the production of earlier or later varieties of strawberries, extend the season in which we may enjoy this luscious fruit.

The development of some of our wild plants or fruits offers a wide field for usefulness. It is idle to suppose that mankind has exhausted the list of plants that might be made available for some one or another of our varied needs or pleasures. The work is going on in various quarters of the world, and young Canadians ought to begin to

take a hand in it. American horticulturists are now developing a viburnum (*V. opulus*), which is quite common in this country, too, and which is valuable as an ornamental bush, not only on account of its rich deep green foliage, but also because of its exceedingly beautiful red fruit clusters. To people of a practical turn of mind this viburnum will, moreover, be commended by the facts that the fruit yields a table jelly of surpassing excellence, and the bark contains a medicinal principle of great value. Americans have also recently introduced for garden cultivation a dwarf Juneberry which, they declare, produces bountifully a simple fruit which suits many people. There is yet a fine opportunity for some aspiring young Canadian botanist to develop a valuable garden fruit out of our common May apple. Most of us know what a rich tropical flavor the fruit of this plant has. But the fruit is small, and the fruit-bearing plants comparatively rare and unproductive. If some one would make a study of the conditions under which this plant thrives best, by judicious selection and cultivation he would probably be able in time to increase the productiveness of the plant, the size of the fruit, and the proportionate quantity of pulp it contains, without sacrificing its present fine flavor, and here would be an achievement worthy of fame. — From an address by A. STEVENSON, before the Woodstock Horticultural Society.



## THE SAN JOSE SCALE.

**T**HIS San Jose scale is the worst insect pest that has ever visited Ohio. It is worse than all other orchard pests combined, because of its deadly effects, not only upon orchard trees, but upon many ornamental trees and shrubs, as well as on rose, raspberry, blackberry and currant bushes. It is very minute and difficult to detect until it has increased and begun to cover the tree or bush with a gray, scurfy covering, while a single female insect may get under a bud and, while entirely concealed there, produce enough young to ultimately cause the death of the tree.

This insect protects itself with a covering shaped somewhat like an inverted plate, under which it lives and gives birth to its young. This scale covering protects the insect not only from the weather, but also from most applications that can be made for the purpose of killing it. It seems that, in the cases of many such applications, the mixture has to be made so strong that it will penetrate the bark and kill the tree or plant,

before it will penetrate this scale and kill the insect underneath. Kerosene will penetrate this scale and kill the insect, but can only be used with safety during cold weather when the pores of the bark are closed, and on the more hardy varieties, like the apple, and some of the more hardy ornamental trees and shrubs. This scale insect multiplies with such rapidity that in a few years, or about the time a young tree should come into bearing, it will have become so affected as to be nearly or quite dead.

All badly infested trees should be cut out and burned, and all others growing near them should be cut back, and treated in fall and spring with a mixture of two pounds of whale oil soap, dissolved in one gallon of water. All orchards that have been set within the last eight or nine years should be carefully inspected and if any trees are noted with a small gray scale thickly scattered upon them, at once send a sample to the Station for identification. —Bulletin Ohio Experiment Station.

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## VEGETABLES STORED FOR WINTER.

**B**EETS, turnips and other roots for early winter use, may be stored in barrels in the cellar, covering them with sand or soil to prevent wilting. Not a bad plan is that practiced by a friend of the writer's. He obtains enough thin turf from a meadow to make about four layers in the barrel. Then filling in some roots in the barrel he puts a layer of sod on top, then more roots and more sod until the barrel is full, finishing off with sod at the top. For spring use it is better to put these roots in a dry spot out of doors. Celery may be stored in

narrow trenches in the garden or else be packed in a cool cellar, having the roots rest on damp earth. Cabbage may be pitted almost like roots. The heads should be inverted to keep moisture and dirt from the inside parts. For family use, to store some in a barrel that is covered with earth and opening from one end, answers very well. In all the ways of keeping vegetables the main object is to preserve something like uniformity of temperature, with a fair degree of moisture to prevent wilting.—Vicks Magazine.

## A NEW STRAWBERRY.



FIG. 1255.—NICK HOMER.

Mr. M. Crawford, of Cuyahoga Falls, Ohio, sends us an engraving of this straw

berry, which he says was originated by Mr. John F. Beaver, of Ohio. Mr. Crawford describes it as follows :

The plant is very large and stocky, sending out plenty of very strong runners. It is probably not surpassed in healthy, vigorous growth and great productiveness by any variety. It has a perfect blossom. The fruit is of the very largest size, a giant among strawberries. It is never misshapen. Its only departure from the regular, roundish conical form is when, under high culture, it is somewhat triangular. It is dark glossy red, firm and of excellent flavor.

## WHITEWASHING PEACH TREES.

**A** RECENT bulletin of the Missouri Experiment Station discusses the winter protection of the peach. One of the most promising methods of preventing the buds from swelling, rendering them liable to destruction from cold weather, is whitewashing. It was found that the whitened buds remained practically dormant until April, while unprotected buds swelled perceptibly during warm days late in February and early in March. Eighty per cent. of the unwhitened buds escaped winter killing. Whitened buds blossomed three to six days later than unwhitened ones. Thermometers covered with material the color of the peach twigs registered, during bright, sunny weather, from ten to over twenty degrees higher than ther-

mometers covered with white material of similar texture, thus indicating that whitened peach twigs might be expected to absorb much less heat than those that were not whitened.

The whitewash used was four parts of water, one part of skimmed milk and enough freshly slacked lime to make as thick a wash as could conveniently be pumped through a Bordeaux spray nozzle without clogging. This wash was sprayed on the trees by means of a bucket spray pump. The first application was made the last of December, and three subsequent sprayings were necessary to keep the trees thoroughly coated until spring. The cost for material and labor is about 10 cents per tree, when done on a small scale.



# New Fruits.

## LOGANBERRY.

*N. B.—The Editor takes no responsibility for statements made by Correspondents under this head.*

I WISH to state through the columns of your journal my success with the new fruit called the Loganberry. Four plants set fourteen months ago have yielded, up to date, seventy-three three-quarter boxes of large, handsome

dollars, making an income of six dollars and fifty cents from four plants inside of fourteen months.

Others may have done better, and if so, they should let it be known. My neighbors join in pronouncing the Lo-



FIG. 1256.—THE LOGANBERRY. (One half Natural Size.)

berries. They are a little tart for table use, but for jelly they are as good as the best, and for pies they are better. No hard seeds, and the flavor is good. Plants are twenty feet apart, and trained on a wire trellis. Some canes send a branch each way to the next stake, making forty feet from tip to tip. Have sold berries to the amount of four dollars and fifty cents, and plants from slips, in March, to the amount of two

ganberry ahead of anything in the berry line, and will verify all my statements. Could hardly recommend them for field culture or for shipping, as they are very soft; but for home use I think every family that can should have a few plants, and give them good care.

F. W. BURR.

*California.*

[This fruit is one of great promise for the middle states. Professor Stinson, of

### NEW FRUITS.

the Agricultural College of Arkansas, recently told me that it promises to become a market fruit of importance in his section, and similar reports come from Massachusetts and elsewhere. The fruit is like a red blackberry, being solid and of a bright red color. The plant has the habit of the dewberry, but

the foliage and wood are quite peculiar. It is a vigorous grower, and roots freely from layers. In Minnesota it has not done so very well at the Experiment Station, but it is probable that state is beyond its successful limit of culture.—S. B. Green, in *Farm and Fireside*.

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### A NEW PLUM.

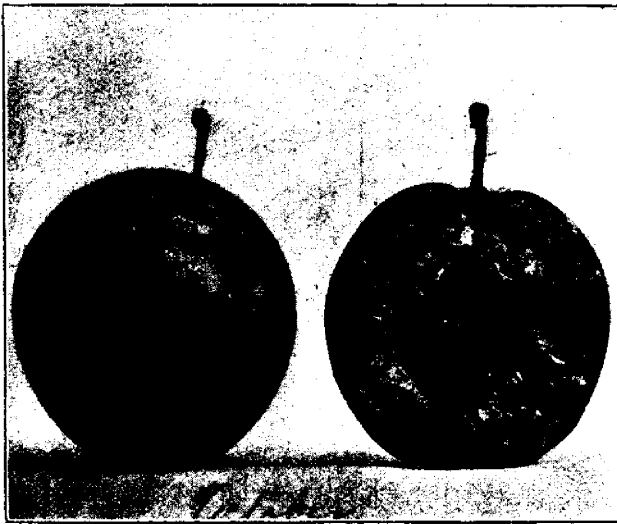


FIG. 1257.—OCTOBER.

WE give our readers an engraving of the "October" plum, an exceptionally late variety sent in to this office, October 20, 1897, by Mr. A. M. Smith, of St. Catharines, one of our Directors. The

fruit is of medium size, roundish; skin thin, dark purple, with greyish bloom; flesh dark yellow, tender, juicy; flavor rich, sweet, and very agreeable.

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### WINTERING PLANTS IN THE CELLAR.

Plants are placed in the cellar to rest, not to grow. Nothing is more harmful to them when thus stored away than water, and it should never be given unless to keep the soil from becoming dust dry.

In early spring if the buds on the plants are seen to be starting a little, do not give water which would only favor their growth, but keep as dry and cool as possible until time to take them out of the cellar.—*Vicks Magazine*.

## STRAWBERRY CULTURE FOR DECEMBER.

### WINTER PROTECTION.

**W**INTER protection should, at the North, be applied about the last of November; in this latitude about December 10th or 15th. A good rule is to apply it as soon as the ground freezes hard enough for a wagon to drive over fields without breaking through the frozen crust.

The chief object in winter protection is to lessen the heaving of the soil and the consequent breaking of the roots and rootlets of the plants. The stiffer the soil the worse the heaving, and the greater the necessity of protection.

The covering should not be thick enough to entirely prevent the soil from freezing, but to greatly lessen the freezing in the severest weather. Pine straw, a little less than an inch deep *after it settles*, is the proper depth in this latitude. It would have to be deeper in proportion as you went North.

In winter protection at the North the whole ground should be covered, beds, middles and all.

The varieties of material that can be used are almost endless. Where pine straw, or pine needles, as it is often called, can be obtained it is almost the ideal covering. Of all similar material it is the least likely to be blown off. Wheat straw, oat straw, marsh grass and other similar things are used. Corn-stalks can also be used, but as they do not lie close a much thicker layer will, of course, be necessary.

The great objection to oak and similar leaves is that they blow off so bad, which is also the case with oat and wheat straw unless they are cut up very fine. Yet such leaves and straw are often used and anchored in place by

placing on them small stones or a little earth at short intervals.

All available stable or barn-yard manure should be used for this purpose, taking the place of other material. If coarse it can be applied quite thick directly over the plants. If very fine it will be best to use it mostly around and between the plants and to put a coarser, more open material just over the plants. The effect of too close a material over plants is to bleach and make them tender.

Whatever covering is used it must be nearly all removed from immediately over the plants about the time that growth begins in the spring. The material can be left around the plants and between the rows, where it will serve the double purpose of keeping the berries clean and of conserving moisture then so essential to a good crop.

Whether winter protection pays or is even advisable south of the Mason and Dixon line is uncertain. I have experimented for many winters. Some winters it did good; some winters it seemed to be rather harmful. It certainly would not be advisable farther South where crickets and harmful insects harbor under it and feed on the plants. Besides, the warmer the climate the more danger of smothering and bleaching the plants.

But stable or barn-yard manure is excellent in any climate if properly used. I have never known any insect pests to harbor under it.

At the South it should be applied around and between the plants. Used in this way with a liberal dressing of hard-wood ashes (fifty bushels to the acre can be used), or 300 pounds of kainit in place of the ashes, and 300

## STRAWBERRY CULTURE FOR DECEMBER.

pounds of acid phosphate, a heavy crop of fine berries will almost surely be made. The fertilizer should be applied before the manure. It is also good to use without the manure.

### HOW TO PLANT.

Plow the land well and deeply, harrowing if cloddy. Sandy loam will rarely need harrowing. Run off rows three feet apart. Two and a half feet will do if land is scarce, though it makes plowing somewhat more tedious. Sow in the furrow cotton-seed meal at rate of 300 to 500 pounds an acre. Mix it with soil by running cultivator or plow down the furrows. List in this with a light furrow from each side. Work list down very low with hoes or a horse drag. Set plants fifteen inches apart, or eighteen inches if it is a stout-growing variety and the soil is very rich. Plant deep enough to cover roots well. Plants

can safely be set a little deeper in winter than in spring.

Other fertilizer can be used. I recommend cotton-seed meal as being less likely to damage newly-set plants should it come in contact with their roots. But there is but little danger of this in the cool, moist fall and winter weather.

Kainit and acid phosphate can be applied at any time afterwards around or between the plants, and in quantities above recommended.

I often use a ton of cotton-seed meal to the acre, applying it broadcast and harrowing it in well before listing and planting. Still a barn-yard manure can be used to great advantage if likewise broadcast and plowed in. Where plentifully used no other kind of fertilizer need be then applied.

O. W. BLACKNALL.

*Kittrell, N. C.*

## PEONIES.

**F**IRST, they are man-catchers. Our good brethren delight in their big, bold out-lines and rich, warm colors. I believe in remembering the men,— they are half the world, you know. Plant liberally enough of the peonies so that you can afford to share with your friends. Have a white, a pink and a deep red one if you have not room for more. Your husband's friends, the doctor and lawyer, the minister and the editor, will appreciate one of these grand posies, especially if arranged with a bit of the old-fashioned ribbon-grass that nature seems to have intended to go with the snowball and peony. Then give that big,

awkward neighbor boy one now and then, or that rough-jacketed workman; it will do them good, and you also.

The second thing I have learned about them is that if one wishes variety without duplication, he ought to purchase his peonies all of one dealer.

Some people say to starve peonies. Our finest specimens are in the full sun, with half shade a small portion of the day, and the beds are mellow and deep; besides, we give a dressing of rotted manure each year, and have from the first. We have always found that luxuriant foliage precedes abundant flowers, hence no starving for us.—Vicks' Magazine.

## THE ENGLISH SPARROW IN CANADA.

HOWEVER little attention may be given to the subject, one cannot fail to recognize the economic value of our Canadian birds. It will be obvious also, to even the most casual observer that changes have taken place among the feathered tribes in the last few years. Perhaps the farmer wonders why it is, that he hears so few early morning songsters this year, or why the bluebird never nests in the hollow gatepost any more, or maybe he wonders why the chimney swallow does not build her peculiar nest on the inside boards of the barn as he has remembered her to do ever since he was a boy.

It is a very evident and also lamentable fact, that our insectivorous birds are becoming scarcer every year. In answer to questions sent out by the Bureau of Industries in '95 re bluebirds, reports have come in from all parts of the Province that few have nested in any locality. In reply as to the cause of this state of affairs, authorities on the subject are unanimous in the opinion that the bluebird has been driven out by the English sparrow. This spring I saw sparrows forcibly evicting barn swallows and pewees which had built their nests under eaves. Nor are any of our small birds exempt from their attacks. Prof. A. J. Cook in his admirable work on "The Birds of Michigan," asserts that even "The kingbird (*Tyrannus tyrannus*) is one of the victims of the English sparrow."

The English or European sparrow (*passer domesticus*) was introduced into New York in 1850 and since that time they have increased so rapidly that now probably not a single village or town could be found in the whole of North America that has not its hundreds and

even thousands of them. The sparrow does not raise one or two broods a year as do our native species, but breed continuously throughout the season, and either eggs or young birds may be found in the nest any time from May till September. Some American ornithologists affirm that they have known one pair to raise as many as 30 young in a season. The food of the sparrow consists almost entirely of grain, which in cities is picked from the droppings of horses. Of late years, however, they have pushed into the country where they have made themselves notorious by nipping off the early fruit buds.

To ornithologists the sparrow is a peculiar enigma. In England the Rev. F. O. Morris, one of the best authorities on birds in Europe, classes him as a useful bird, and English farmers protect him for his insectivorous habits. Nor is he pugnacious there, for the little English robin an even smaller bird will put him to flight. It was in consideration of these useful qualities that the sparrow was introduced into America. But here his habits have proved to be just the reverse of useful, and American ornithologists are unanimous in condemning him for driving out native birds. No one seems to be able to offer any explanation of this change of habits in sparrows. The only thing approximating an explanation is that given by Mr. Darwin in his "Origin of Species," where he gives several analogous cases of imported species supplanting native ones.

However, the fact remains, that our native birds are becoming scarce, and that the English sparrow is the cause of the scarcity. What are our farmers and fruit growers going to do about it? In many of the States of the Union a

## AUTUMN LEAVES.

bonus given for sparrows' heads is doing much to thin their ranks, but in Canada as yet no legislation has been made in the matter. I would like to suggest that this subject be made a topic for discussion at our winter meetings of Institutes and Horticultural Societies.

In experimenting somewhat this year in protecting insectivorous birds, I have kept a gun in my barn and have shot, or shot at, every sparrow that showed his head on the place, at the same time putting up nests and protecting useful birds in every way possible. As a result I have noticed more swallows in the barn and more warblers, bluebirds, orioles, etc., in the orchards than I have seen

on the place for years, and more than one stranger has remarked to me on the number and variety of birds about my trees. Would it be too much to add that a heavy crop of plums, in an orchard where the curculio, in spite of our efforts, has always reigned supreme has convinced me of the profit of protecting native birds. I might say in conclusion, that I am confident that if every farmer and fruit grower would take the trouble to shoot off the sparrows about his premises, the present regime of back-aching spray pumps and nauseous insecticides would pass away.

WM. N. HUTT.

*Southend, Ont.*

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## AUTUMN LEAVES.

“PROBABLY not one person in a thousand knows just why leaves change their color in the fall,” remarked an eminent botanist the other day. “When the sap ceases to flow in the autumn, the natural growth of the tree is retarded and oxidation of the tissues takes place. Under certain conditions the green of the leaf changes to red; under different aspects it takes on a yellow or brown hue. The difference in color is due to the difference in combinations of the original constituents of the green tissues and to the varying condition of climate, exposure and soil. A dry, hot climate produces more brilliant foliage than one that is damp and cool. This is the reason that American autumns are so much more gorgeous than those of England and Scotland.

“There are several things about leaves, however, that even science cannot explain. For instance, why one of

two trees growing side by side, of the same age, and having the same exposure, should take on a brilliant red in the fall and the other should turn yellow, or why one branch of a tree should be highly colored and the rest of the tree have only a yellow tint, are questions that are as impossible to answer as why one member of a family should be perfectly healthy and another sickly. Maples and oaks have the brightest colors.

“People should be careful not to touch the gorgeous red and yellow autumn leaves of shrubs and climbing plants which are known to be harmless. Our two poisonous native plants display the most brilliant autumnal colors of any species in our woods and highways. The poisonous sumac resembles a group of young ash trees. The poisonous ivy resembles the harmless woodbine. Its leaves, however, have but three leaflets, while those of the woodbine have five.”

## PRUNING OF FLOWERING SHRUBS.

**I**N the winter season much of the pruning of flowering shrubs is performed, and usually the operation takes with it all the flower buds that should clothe the plant with a mass of bloom during the spring and early summer. This is because gardeners do not consider the flowering habit of the various shrubs with which they have to deal. To prune away in winter the young wood from a weigela, deutzia, mock orange, lilac or bush honeysuckle, takes with it all the bloom of the following spring. This is usually the case, however, when indiscriminate pruning is practiced.

There are very few shrubs that may be severely cut in winter. The hardy hydrangea, althæa, and some smaller shrubs, like the hypericum, form their flower buds on the young growths made in the summer of the same year they bloom, but nearly all other shrubs make their flower buds on the young growth made the season previous to their expanding.

The proper system of pruning is one that will induce an abundance of young wood, and this can only be accomplished by the trimming out of much of the two-year-old growth—that which has already flowered—cutting out the old shoots close to the ground, so that the new growth will push out from the root of the plant. If the bush makes too strong and rank a growth, a moderate amount of pruning in winter will not lessen the bloom to any extent, especially as the extreme ends of the young wood do not flower.

Summer pruning of flowering shrubs is practiced by some gardeners with success, after the plants have done blooming, but in this case it must be done with great care, as the cutting away of much wood when in full leaf tends to weaken the plant, while the object to be gained is to foster a strong and vigorous growth. It is an excellent time, however, for a moderate pruning.—Thomas Meehan, in *New Eng. Florist*.

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## RE-POTTING HOUSE PLANTS.

**T**HE best way to determine whether or not a plant needs re-potting is to carefully remove it, holding the hand over the surface and hitting the edge of the crock a light blow by bringing it down upon a table. Examine the roots, and if they are matted about the sides and bottom of the ball, the plant evidently requires fresh potting. Then carefully reduce the ball of earth to about a third of its original bulk; single out the matted roots and trim away all that are moldy and decayed. Probably the same pot may then be large enough, but if it requires a larger one it should be about two inches broader for a middle-sized plant, three

or four for a large plant. If the roots are not matted, but the pots are filled with fibers, keep the ball entire, and carefully plant it in a larger pot. At the top of a large pot, an inch, and of a small one, half an inch, should be left for reception of water, without danger of overflow. A little gravel, charcoal or pieces of broken pots should always be placed at the bottom for drainage. A plant newly potted must never be exposed to a strong sun. It should be watered and placed in the shade immediately and there remain till it is rooted, which may be known by its starting to grow.—*Farm and Home*.

## THE WINTER HOUSE-GARDEN.

WE cannot all have a greenhouse; we are not, all of us, wealthy enough to enjoy the luxury of a conservatory, but there are few of us who cannot have house-plants, if only a few. The true lover of flowers will not be restricted to the out-of-door garden during the summer months, although there is much said about the unhealthiness of in-door gardening.

While there are medical authorities to sanction this idea, still the weight of popular opinion is on the side of the flowers; and even many physicians maintain that even in dormitories, window-gardens exert no injurious effects unless there is lack of ventilation.

It is, at the same time, true, of course, that flowers in a close room have prejudicial effects upon those organizations that possess an aversion to them for which they cannot account.

The odour of the tuberose, for instance, make many people ill, and in such instances it is not necessary to state that those flowers producing such an effect should be banished.

For our window-garden we do not need a very commodious bay-window on the sunny side of a house, and the heat that is necessary to vegetable life is quite as good, been artificial, some say; but it is only reason to suppose that the sun is important to plants chemically as well as thermally. So, when it is possible, we should choose a window with southern exposure.

Seventy-five degrees by day, and forty-five by night, indicates the proper average. We must take care to provide the room with water in open vessels, so that a proper moisture may accompany the artificial warmth; if we neglect this, the flowers will fade and the plants cease to flourish.

Another precaution should be in regard to dust. When dust is allowed to settle on plants it closes the respiration of the leaves, and stops their breathing, for the leaves are the lungs of vegetation. If dust has accumulated by accident or thoughtlessness, it should be removed by a syringe immediately.

If plants are troubled by worms in the soil, the plants should be removed until the soil has been examined, bit by bit, and if the intruders are there, a little ammonia in a gallon of water poured over the earth will kill them, and give fresh impetus to the flowers.

For pot-plants the best combination is, one part sand, one of loam, one of leaf-mould, and a small quantity of compost.

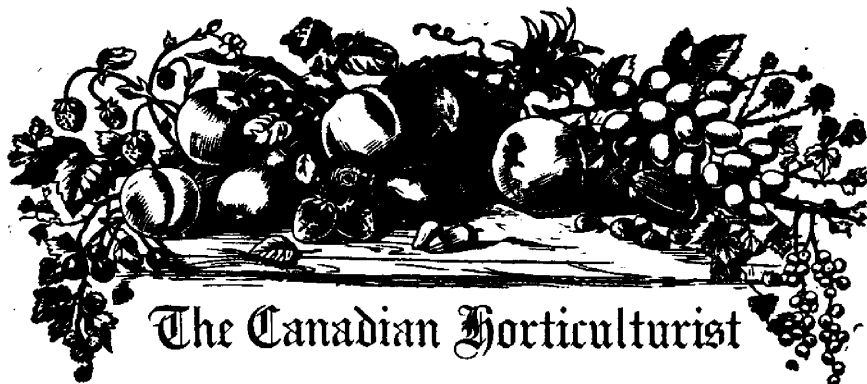
Geraniums, fuchias, and most analogous plants demand nothing more, while bulbs do better in a nearly-all sand soil. Vines need something richer.

Kitchen odours are not healthful to plants, choking them, and stopping their respiration. If, therefore, we must have our house-garden in a room adjoining the kitchen, we must take great pains to change the air frequently, but taking equal care to see that they are not chilled by the too great and sudden change of temperature.

The *Speciosa Fuchsia* will fail to bloom if kept growing all the year round. Let it rest during the summer, if you desire it to blossom during the winter. It needs to be kept dry during September, and at least half of its top to be cut off; then re-pot it in the fall, give it more water, and keep it in a shady place. An east window is best.

It requires a soil of leaf-mould and sand, and the pot—make sure it is a twelve inch one—must have the best of drainage. Great care and close attention is needed to make this plant a success.





## 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.

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**LOCAL NEWS.**—Correspondents will greatly oblige by sending to the Editor early intelligence of local events or doings of Horticultural Societies likely to be of interest to our readers, or of any matters which it is desirable to bring under the notice of Horticulturists.

**ILLUSTRATIONS.**—The Editor will thankfully receive and select photographs or drawings, suitable for reproduction in these pages, of gardens, or of remarkable plants, flowers, trees, etc.; but he cannot be responsible for loss or injury.

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**DISCONTINUANCES.**—Remember that the publisher must be notified by letter or post-card when a subscriber wishes his paper stopped. All arrearages must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given. Societies should send in their revised lists in January, if possible, otherwise we take it for granted that all will continue members.

### Notes and Comments.

THE PEOPLE OF ALGOMA seem to be interested in fruit culture. They claim that their climatic conditions are so modified by the waters of the lakes, that many fruits can be grown for export, and that a fruit experiment station should be established in that part of Ontario in order to determine what fruits may be grown successfully, and thus save the settlers there many years of wasted time in testing varieties. St. Joseph's Island has been mentioned as a desirable location for such a station.

QUEENSLAND (Australia), according to Farming, is waking up to the advantages of agricultural education. The Minister of Agriculture, the Hon. A. J. Thynne, has established an agricultural college at Galton, and arranged for several experimental farms elsewhere. He is also about to establish another

experimental farm in order to make experiments in fruit culture, and particularly with regard to insect pests. It is understood that this farm will be started at a very early date, and that it will be in a neighborhood convenient to Brisbane. Within the last twelve months Sir Patrick Jennings has started a private experimental station of his own at Westbrook, Darling Downs.

FARMING, our excellent contemporary journal, which stands to the farmer in much the same relation as this journal does to the fruit grower, has made a new departure, and become a weekly. It is fresh and bright, giving prominence to all the latest matters of interest to the farmer, which it also discusses in a most intelligent manner in its editorials. We commend Farming to all our readers.

## NOTES AND COMMENTS.

Mr. J. F. SEARS, B.H., has accepted an engagement with the Nova Scotia Fruit Growers' Association. Mr. Sears is a graduate of the Iowa Agricultural College, Ames, Iowa, and will take up the work as director of the Nova Scotia School of Horticulture at Wolfville. Professor Faville, who has had charge of the work for some years, and who has been very successful, resigned last-summer to take up similar work at one of the leading American experiment stations.

—

THAT GREAT FRENCH PRESERVING PROCESS which was so lauded by interested persons at the World's Fair, consists according to Prof. Saunders, chiefly in the use of sulphur. Recently also a package of the powder was examined at the Indiana Experiment Station, and the compound was found to contain sulphur, charcoal, nitrate of soda, cane sugar, and common salt; thus:—

Cane sugar,	14.20 per cent.
Salt,	1.42 "
Nitrate of soda,	1.36 "
Sulphur,	57.63 "
Charcoal, moisture and in- soluble matter,	25.64 "

The essentials of the directions for the use of this material were that the compound should be burned in a closed space and the fumes arising from the burning be absorbed by water placed in suitable vessels, and that the fruit in some cases should also be exposed to the fumes. Finally the fruit was to be placed in the water which had absorbed the fumes of the burning compound and the vessel closed. The burning of the compound would result in the production of sulphur dioxide, also known as sulphurous acid, as one product, and it is this substance which exerts the preservative action in the process. The

other ingredients are merely to aid in the burning of the sulphur.

This sulphur dioxide is an intensely poisonous gas and its use prohibited as a food preservative in European countries. When the gas is absorbed by water sulphurous acid, a powerful therapeutic agent, is formed. There is no doubt that its preservative action will be effective, for it is one of the best antiseptic and bleaching agents. But there are grave objections to the indiscriminate use of powerful therapeutic agents in food. The parties having the material and rights for sale state that the material or process is covered by a patent. On inquiry at the U. S. patent office it was learned that the patent with the number said to belong to this process was issued for some sort of machinery and had no relation to this subject.

—

THE BRITISH WEEKLY has it that Mr. Kipling has not changed his opinion of the Canadian climate in spite of the endless exclamatory periods after "Our Lady of the Snows." It would seem that he is indeed wedded to his idols, for he has contributed the following skit to "Wee Willie Winkie," the juvenile periodical edited by Lady Marjorie Gordon, the daughter of Lord Aberdeen:—

" There was once a small boy of Quebec,  
Who was buried in snow to the neck.  
When asked : ' Are you friz ?'  
He replied : ' Yes, I is, F. F. #  
But we don't call this cold in Quebec.' "

—

PROGRAMMES are out for the meeting of our Association at Waterloo, on the 15th and 16th, and may be had on application to the Secretary at Grimsby. A large and important meeting is expected.

## NOTES AND COMMENTS.

PRICE OF APPLES never ruled higher, so far as we know, than this season. Some very high prices, according to the Fruit Growers of London England, have been made in Liverpool during the month of November. Spys for instance, went up to 24s. 3d. per barrel, Newtowns to 31s. 6d., and King Pippins to 32s. The latter were Canadian, and proves the superior nature of the Canadian fruit against the American. Such prices have not been known for years. Greenings actually went up to 22s. 6d., Spys to 26s. 9d., and various odd sorts ranged in value from 12s. to 28s per barrel. Money is being made freely at these prices.

Pears.—The same journal, speaking of pears says :

“French Duchess are worth from 3s. 6d. to 5s. 6d. per case, and crates from 6s. to 14s. Of course the latter contain a large quantity, cases running from 40 to 48, and crates as high as twelve dozen. The California fruit is remarkably fine. Glout Morceau are making the highest prices, ranging from 8s. 6d. to 10s. 6d. Easter Beurres are worth from 7s. to 8s., and Winter Nelis the same prices per half case. The quinces from the same country are very good, making from 9s. to 12s. per three to four dozen package.

“The California pear trade will develop into a big business and we are satisfied that these growers have a great future before them. The English markets can take all the choice fruit they can send across, and it is to be hoped the shippers will keep up the quality of their shipments.”

We do not see why our friends in California, three thousand miles farther away than we in Ontario, should capture the English market, when we have equally good Bartlett pears, and when the Dominion is ready to give us the cold storage necessary to put our fruits there in the best condition.

THE ONTARIO AGRICULTURAL AND EXPERIMENTAL UNION holds its 19th meeting at the O. A. C. Guelph, on the 8th, 9th and 10th. An interesting popular programme will be given on the even-

ing of the 8th and the two following days will be given to addresses and discussions, of especial interest to farmers.

CANADIAN PEARS seems to be highly appreciated in England—Messrs. Wood, Omerod & Co., of Edinburgh write : “We were present yesterday (Nov. 3rd) at sale of (Canadian) grapes, pears, etc., at Glasgow. Pears made a pleasant surprise, and were in nice order. We bought the first parcel of five cases offered, Beurre d’Anjou and made a profit on them here ; they sold at 15s. per case of about 54 pears at auction. We do not hesitate to say that these will become a common export, if care be taken. The condition of nearly all the samples left little to be desired, and the quality was good.

THE GERMAN APPLE MARKET is said to be a good one for Canadian apples and we are informed that the Hon. John Dryden, Minister of Agriculture for Ontario, has just forwarded samples of our finest commercial varieties for exhibition at an exhibition now in progress at Berlin. The following quotation for our apples in Hamburg were given by a firm there under date of Nov. 2nd :

Baldwin...	up to 24.25	marks,	equal to \$5 77
Ben Davis..	“ 25 25	“ “	“ 6 01
Greening..	“ 18.25	“ “	“ 4 35
Wine sap..	“ 22 25	“ “	“ 5 30
Spy.....	“ 18.75	“ “	“ 4 83
G. Russet..	“ 18.25	“ “	“ 4 35
N. Pippin..	“ 23.25	“ “	“ 5 54
Kings.....	“ 17.25	“ “	“ 4 11
Cannons...	“ 17.50	“ “	“ 4 17

The average quality of the sales was poor. Price for good fruits are very firm and prospects are very favorable, the demand being strong.

TRITOMAS.—To-day (Nov. 23) we have received from Messrs. Webster Bros. Hamilton, nearly a dozen fine spikes of Tritoma Uvaria grandiflora, which we have opened out and placed in vases for

## NOTES AND COMMENTS.

house adornment. Mr. Webster writes: "This is the true large flowering variety it is propagated only by division of the roots and is immensely superior to those raised from seed, as well as producing larger and better flowers, we have found it to produce about twice as many as any variety of tritoma we ever grew, the best flowers are considerably larger than those we are sending, we find they have all been picked. The flowers sent are from plants growing in the nursery rows, they will probably flower for two weeks yet before cut down by frost, the roots are not entirely hardy here but winter well if given a little protection."

MR. JOHN CRAIG, Horticulturist at the Central Experimental Farm, Ottawa, has resigned his position, with the intention, we understand of further pursuing his studies in horticulture at Cornell University. We had hoped to have secured him as lecturer to our affiliated societies during the coming winter, and all will much regret his absence, which may be only temporary.

APPLES AND CROWS. — A flock of crows migrating to the south one day recently attacked the apple orchard of Uriah Samon, Wolfe Island, and cleared

it of thirty barrels of apples, leaving nothing but the cores.

DECEASE OF MR. JOHN LITTLE.—On the 17th of November this noted strawberry specialist passed away at his home at Granton Mr. M. Crawford of Cuyahoga Falls, Iowa, an intimate friend of his, was at Granton at the time of Mr. Little's death, and writes us a full account of this sad occurrence. Reviewing his life, he writes that Mr. Little was a native of Belfast, Ireland, where he was born in 1814, where he was engaged by the Government as civil engineer, but after his marriage he came to Canada and settled on the farm of 300 acres at Granton, which he has occupied for 53 years. About 25 years ago, when visiting a friend who was picking some nice strawberries, he became enamoured with this healthful fruit and his interest has deepened ever since. He has raised many seedlings and has tested nearly all the new varieties that have come into the market during the last quarter of a century. The Woolverton and Saunders are among his best named seedlings, and two others not yet named are thought to be very desirable. His business will be continued by his daughter, Miss Ellen, who has assisted her father for years in filling orders.

## PRUNING LILAC AND WEIGELA.

Both lilac and weigela bear their flowers on their young or green shoots, and if pruned in autumn the bloom will be much reduced. These plants need very little pruning, as a rule, beyond cutting away any dead wood or unnecessary

branches, but if at any time it should be thought desirable to shorten or head back the branches, the proper time for doing it is immediately after the plants have finished their blooming.—Vicks' Magazine.

## ❖ Question Drawer. ❖

### Windbreaks.

971. SIR,—I intend planting a hedge on the West and North side of a young orchard. What kind would you advise me to plant? Some say the borers work in the Spruce and Pine; would they also trouble the apple orchard? Would you recommend the Balsam Fir?

J. A. T. ISLINGTON.

A great many kinds of trees, both deciduous and evergreen, have been utilized to good advantage as windbreaks, but of the evergreens, there is none known in Southern Ontario so satisfactory as the Norway Spruce. It grows very rapidly, bears cutting well, thickens up closely, and is withal so graceful in form, that it surpasses every other. In 25 or 30 years the tree will attain a height of 30 or 40 feet, and its lower branches will spread out for a distance of at least ten feet, in every direction.

The Balsam Fir is not nearly so suitable, being inclined to thin out around the bottom, while the Norway Spruce always remains close and thick. We have seen the Scotch Pine used for the same purpose, but it is rather inclined to irregular habit, and is, withal, a slow grower.

When visiting the Fonthill Nurseries last summer, we were shown some fine samples of windbreaks, well grown up, and of quite a variety. One was a double row of Larch and American Arbor Vitæ; another of Larch and Austrian Pine mixed; another a single row of Arbor Vitæ, but the finest of all we saw there was a fine hedge of the European Larch, well grown up to be a most excellent windbreak, and an object of beauty as well. This tree is a rapid grower, and in time becomes valuable for timber.

## \* Open Letters. \*

### Pear Blight.

DEAR SIR,—As frequent enquiries are made for the cause of the pear blight that played such havoc with our pear orchards last year, and as no one seems to give a satisfactory answer, permit me to offer a suggestion. It is quite clear to my mind that the severity of the attack in 1896 was indirectly due to the severe frost of May, 1895. This frost did much damage to many pear trees as well as other varieties of fruits, and set them back at least a month, in some cases six weeks. When the following winter set in these trees had not fully matured and hardened their timber; that is, the partitions of the minute cells of which a tree is composed, were tender, and not sufficiently hardened to resist the attacks of "Jack Frost." The cells having yielded or burst the sap could not follow its natural channels. The result was disease and in too many cases, death of the tree. This is

my theory, but I do not claim to have absolute proof of the same, but experience has taught me that trees whose timber has been fully matured are much less subject to blight and other disease than those whose timber has not become properly hardened.

THOS. HAMMOND.

Aylmer, Ont.

### The Magoon Strawberry.

DEAR SIR,—Among our variety tests of new strawberries, the Magoon ranks the best; it is quite easy to see that it is a different type from the usual run of strawberries, as the foliage has a beautiful crinkled appearance. This berry is an Oregon seedling; it surpasses the sharpless in rank, luxuriant growth; the fruit is of gigantic size, and what is more, the flavor is equal to that of the finest wild strawberry; the color is a clear cherry red,

## BULB CULTURE.

and the berry is very firm; one of the best characteristics is, that it will stand wet weathers splendidly; there are many varieties of berries that the least bit of wet weather, or a few hours rain, will destroy. I sometimes think the Magoon would stand a week's wet weather, if not too ripe. The Magoon is the most productive new sort that we have ever tested. The Mexican strawberry we believe to be the most productive of all the well tested sorts. The record of the Magoon strawberry is very good, single plants by high culture, have yielded during the season, 9 lbs. of fruit. The Magoon is also a very safe berry, as it will stand extreme heavy frosts, and still yield a good crop; the heavy foliage helps to protect the blossoms wonderfully. As a shipping berry, this sort equals the Dollar strawberry, and this sort is the standard

of excellence, as a long distance shipper. The blossom is perfect, and the foliage free from rust; these plants form enormous stool plants, and are at their height at three years of age. We wrote a short time ago, an article on the Mexican strawberry. A couple of horticultural editors in America, because they had never heard of this berry, at once condemned it. For their benefit, and the ones who read their papers, we would state that the Mexican strawberry is cultivated by at least 5000 strawberry growers in the west, and that all the leading seed and plant companies on the Pacific Coast, sell and advertise plants for sale. People who condemn anything without knowing the least thing about it, are not very reliable persons to edit agricultural papers.

S. L. WATKINS.

*Grizzly Flats, Cal.*

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## BULB CULTURE.

**W**E think the best time to start this subject of growing bulbs is when you get the bulbs in the fall. We will give the readers of *THE HORTICULTURIST* a few hints of our methods. Having selected the stock you intend to grow for the coming season, get some good loamy soil which can be materially improved by mixing in a liberal quantity of sharp sand. Next select a suitable sized pot, and after washing clean and soaking it in clean water for a few minutes, place a stone or piece of broken pot over the hole in the bottom of the pot. Fill the pot three-fourths full with the prepared soil, then place the bulbs in and fill the pot within an inch of the top, pressing the soil firmly around the bulb. The hyacinth, tulip, crocus, allium and ornithogalum must, after potting, be well watered, and then be set away in a place which is dark and quite cool. Leave them there to form roots, this will take from eight to ten weeks. It is necessary that these instructions should be fully carried out if good results are to be secured. Leave the bulbs in the dark until the soil is filled with roots and they will then be ready to make a strong

and healthy growth as soon as they are brought to the light and warmth. Before taking the plants from the cellar see that the soil is full of roots. If it is not full, and the bulb is sound, leave it until roots are formed. Examination can be made by inverting the pot and slipping the ball of earth out without disturbing the bulb. The Mexican lily, narcissus, calla, and freesia, should, after being potted in the usual way, be watered thoroughly and set in a cool place. It is not so necessary that these should be placed in a dark place, but for the others four to six weeks in the dark is an absolute essential to success, because if the root system is not fully developed, the flowers will be a failure. If it is impossible to get loamy earth, any ordinary garden soil will do. If manure is added be sure it is thoroughly well rotted manure, as new manure will prove fatal to your bulbs. Add a little sand if the soil is lacking in that constituent. The last mentioned lot of bulbs must not be too freely watered until they have made some growth.—H. Townsend, of Desoronto Hort. Soc.



**G**OD save our Gracious Queen,  
Long live our noble Queen,  
God save the Queen!  
Send her victorious,  
Happy and glorious,  
Long to reign over us,  
God save our Queen!