

Our Export Trade in Fruits

# The Canadian Horticulturist

SEPTEMBER, 1907

Volume 30, No. 9

TORONTO

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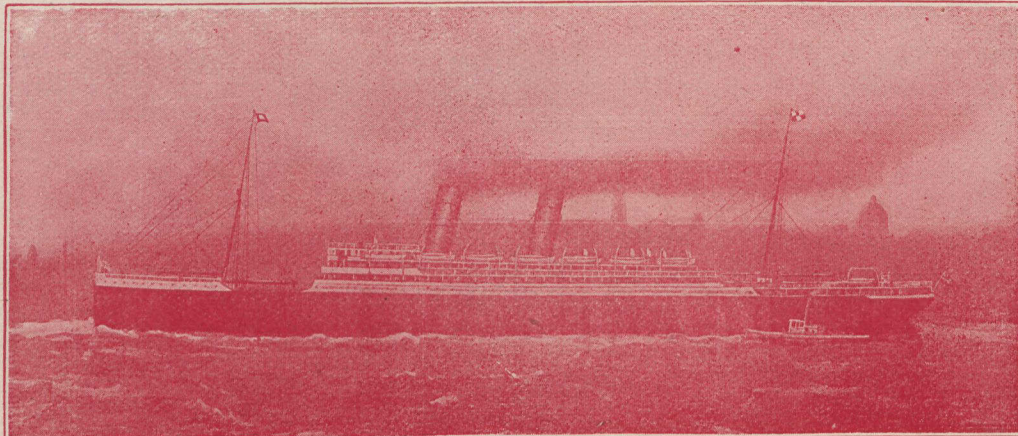
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Fri. Sept. 6	Empress of Ireland	Fri. " 23

FROM MONTREAL AND QUEBEC	STEAMER	FROM LIVERPOOL
<small>[According to Steamer]</small>		
Sat. Sept. 14	Lake Manitoba	Wed. Aug. 28
Fri. " 20	Empress of Britain	Fri. Sept. 6
Sat. " 28	Lake Champlain	Wed. " 11
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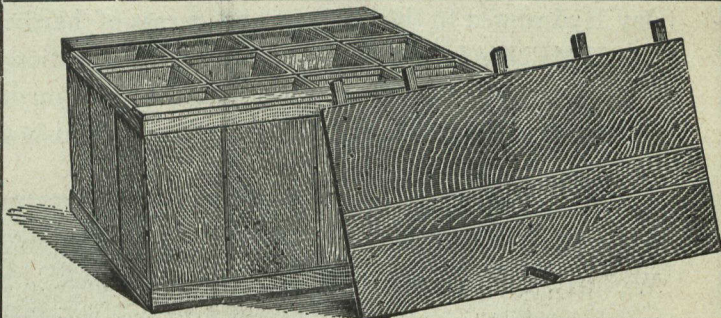
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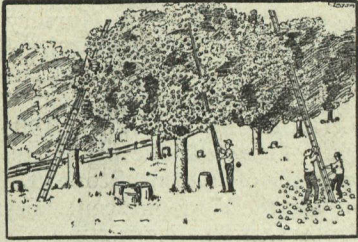
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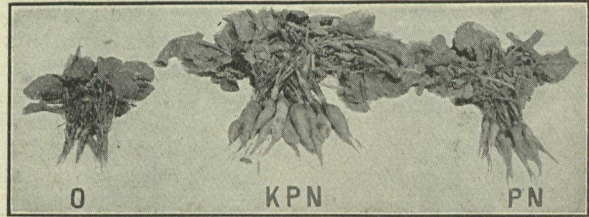
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The sample of Maynard plum came in excellent condition. I should say it is a most excellent variety—E. R. Lake, Botany and Horticulture, Oregon Horticultural College.

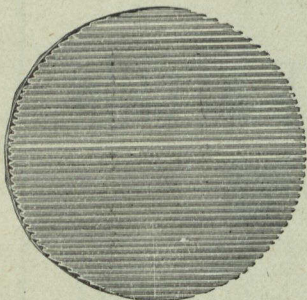
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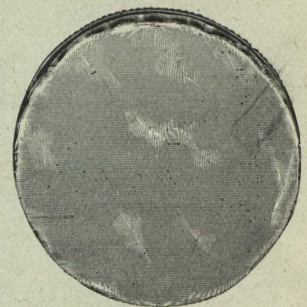
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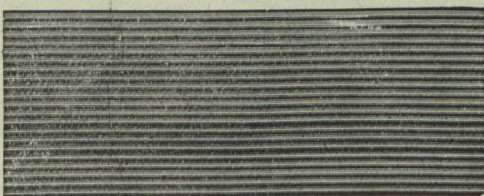
#### Corrugated Cap

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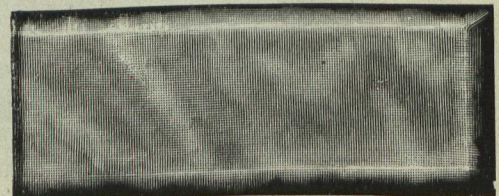
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## The Canadian Horticulturist Contents for September

Harvesting Apples in Ontario . . . . . Cover  
Photograph by Sallows

### Fruits and Fruit Growing

British Market for Canadian Fruit . . . . . 207  
Apples—From Grower to Consumer *J. A. McBride* 208  
Packing Apples in Boxes . . . *Alex. McNeill* 209  
Photograph by Sallows  
Marketing Peaches . . . . . 210  
Photographs by Pringle and Booth (pages 210 and 211)  
Harvesting and Marketing Apples *P. J. Carey* 211  
Pointers on Box Packing . . . *Robt. Thompson* 212  
Harvesting Blackberries . . . . *H. S. Peart* 212

### Flower Garden and Lawn

Perennials in Manitoba . . . *Dr. H. M. Speechly* 213  
Photograph furnished by W. T. Macoun  
Canadian Novelties in Gladioli . . . . . 214  
Lawn and Garden Hints for September . . . . . 215  
Protection for Perennials . . . . *S. S. Bain* 216  
Picking Fruits at Home . . . . . 216  
Odd Hanging Baskets . . . . . 218  
Making the Herbaceous Border . . . *E. Byfield* 217  
Photographs furnished by the author

### Vegetable Department

Blanching Celery . . . . . 218  
Greenhouse Lettuce . . . . . *F. D. Ghent* 218  
Marketing Melons . . . . . *W. G. Horne* 218  
Potato Diseases . . . . . *Douglas Weir* 219  
Fall Work With Potatoes : *W. A. Broughton* 219

### General

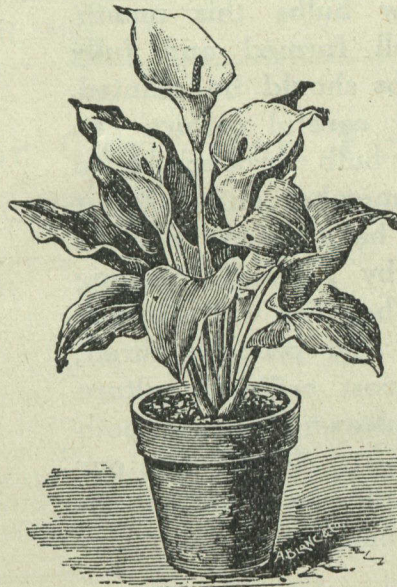
An Establishment that is a Credit to Canada . . . . . 220  
Editorial . . . . . 224  
Vegetable Crop Reports . . . . . 226  
Grants to Horticultural Societies . . . . . 227  
Fruit Crop Reports . . . . . 228  
Notes from the Provinces . . . . . 229  
Recent Bulletins on Orchard Pests *Wm. Lochhead* 231  
Fruit Growing in Pr. Edw. Island *A. McNeill* 233  
Preserving Fruits and Vegetables . . . . . ix

### INDEX TO ADVERTISEMENTS

Acetylene Lamp . . . . . 234  
Banks . . . . . viii, xii  
Baskets, Boxes and Ladders . . . . . iv, v, 232, 233, x  
Colleges . . . . . 230  
Commission Merchants . . . . . vii, viii, 226, 228, xi, xii  
Exhibition . . . . . v  
Fencing . . . . . 233  
Fertilizers . . . . . iv, v, 233, xiii  
Fireless Cooker . . . . . ix  
Flower Pots . . . . . xii  
Furnaces . . . . . 234  
Gasoline Engines . . . . . xii  
Greenhouse Material . . . . . xi  
Nursery Stock . . . . . iii, 229, xi  
Orchard and Garden Tools . . . . . 228, xii  
Paper for Fruit Wrapping . . . . . vi, 233  
Pianos and Organs . . . . . iv, xiii  
Real Estate . . . . . 226  
Roofing . . . . . xi  
Rubber Stamps and Engravers . . . . . xii, xiii  
Seeds, Bulbs and Plants . . . . . vii, viii, x, xii  
Spraying Machines and Insecticides . . . . . xiv, xv  
Steamship Companies . . . . . ii, 231, xv, xvi  
Typewriters . . . . . x  
Veterinary Remedies . . . . . xii  
Water Tanks . . . . . xiv

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# The Canadian Horticulturist

Vol. XXX

SEPTEMBER, 1907

No. 9

## The British Market for Canadian Fruit

Suggestions from a British Trader's Standpoint

"GOODS well bought are half sold," is a well-known maxim. We might say also that apples well picked are half packed. There cannot possibly be too much care given to the handling of the fruit in every stage, from the time it leaves the tree until the time it is well packed in the barrel. We have heard of fruit in some orchards lying about under the trees for days, and even weeks, before being collected and packed; such treatment renders it often unfit to stand shipping, and if it is exported, it mainly arrives bruised and dirty. There is a great deal in getting it to the store or packing house as soon as possible after it leaves the tree.

In grading, I would suggest that rather than make, say, a poor barrel of No. 2's, the grade should be kept well up, and a good barrel packed that will fetch good money, letting all "throw outs" go to the No. 3 barrel. There is everything in carefully sorting the fruit. If I were a grower, I should be inclined to make four grades of my fruit. All the "extra" and "fancy" I should most carefully select and pack in boxes (this box trade pays better than any); then go on in the selection of my No. 1's, 2's, and 3's. This might take a little more time, but it would well repay exporters who wish to make the best prices for their fruit, and who send it over on consignment terms, to fetch its full market value. Fruit well selected and reliable in packing will always fetch its price on this market.

As to "storing," it is obvious that we cannot offer suggestions from this side. The great aim, of course, from a market point of view is to store apples only for such a length of time as shall not detract too much from their appearance and soundness, and to use every means to prevent them from shrivelling; especially is this important in the case of Russets for the late trade.

### GOOD PACKING IS IMPORTANT

Now for the key to successful export trade, namely, *good packing*. To ensure a good "tight" barrel without bruising the fruit, is the work of an expert. No

grower should attempt to ship until he has satisfied himself as to his packers, as this is very often the dividing line between profit and loss and the rock upon which so many have foundered.

Experience leads me to say that, generally speaking, the Nova Scotian packers excel those of Ontario. It is with a desire to be one of the friends of the Ontario grower, that I thus tell him of what is, in some cases, one of his faults,

### Instructive and Practical

THE CANADIAN HORTICULTURIST is well edited and extremely instructive. Through its articles, orchardists of long experience as well as beginners learn more about the fruit industry and the best means of managing trees and securing crops than they do from the best books on fruit culture. The advice given in this magazine on the selection of varieties, according to latitude and elevation, is worth thousands of dollars to the planter who, too often, is deceived by tree pedlars.—Auguste Dupuis, Director Quebec Fruit Experiment Stations.

and as only our best friends can perform so delicate an operation, I herewith make the assertion.

### BOX TRADE WORTH GETTING AFTER

If the Canadian growers generally would study this special packing, and put all their "fancy" fruit into forty-pound boxes, they would find a fancy price awaiting them here, *with this proviso*, that *extra and fancy fruit only* should be packed in this way. The writer could find a splendid market for any growers who are disposed to go into this trade thoroughly, and invites correspondence on the matter, through the editor of THE CANADIAN HORTICULTURIST.

### TRANSPORTATION

Now a few words as to shipping. We heard very few complaints last season,

on the whole, of shipments arriving in bad condition. This is largely due to the care now exercised by the shipping companies. I must here say a word for the Thomson Line; their general business characteristics of promptness, politeness and push (on this side at any rate) make it a pleasure to do business with them, and their discharging and storage facilities at the Surrey Commercial Dock place them in the forefront as carriers of fruit and perishable products. I hold no brief for any shipping company but merely speak as I find, and of my experience of their capabilities in successfully handling this traffic.

Ever increasing care must, however, be given to protection from *frost*, at all points, especially during the latter part of the season, both during the time of storing and of shipping, and by both rail and shipping companies. I saw one of the finest parcels of Russets that came to this market last season, spoilt completely by frost; it was, of course, a very exceptional winter, but what a pity, after so successfully storing such valuable fruit all those months, to have them spoilt for want of a little more care on the part of someone!

Why do not the various associations in Ontario combine together in groups, and ship their produce to their own appointed representative over here, to dispose of on their account, as, and when, the markets are good, holding them in storage when the markets are fully stocked and the prices for the time being low?

The Surrey Commercial Dock Company would by arrangement allocate one of their spacious warehouses specially suited for storage purposes, and also keep it at a proper temperature for the storing of the fruit in its best possible condition.

Of course this storage facility could only be obtained by the combined action of the associations, which alone could guarantee a sufficient number of barrels as would pay the dock company in giving such facilities. But given this guarantee, they are quite prepared to study the interests of the trade in every way, and I have the assurance on this point



of the dock superintendent, whom I have seen personally in reference to this matter, and who assures me of their keen interest in the apple trade, and of their willingness to do anything to stimulate and assist it.

Here, then, is an opportunity for a combination of growers and shippers to so far *control their own market*, and there is no doubt that this is the thing to do, and that it will be done before very long is almost certain. If some such scheme is well prepared and organized, I believe that this is the system that will bring the exporter a bigger all-round net price for his fruit than he has yet secured.

To sell on f.o.b. terms is, in my opinion, to at once discount and depreciate the price of your fruit, as the buyer naturally must purchase at a price which allows him a big margin for risks.

In these days of quick transit and cool storage, refrigerator cars, and so forth, this risk is in reality now very small, but it is there, and the buyer covers it by the comparatively low price at which he buys, every time he makes a purchase. The grower no doubt loses this extra profit every time; whereas were *he* to take this, now, very small risk, and consign his fruit to reliable people on this market, I am confident that, on the whole, throughout the season, he would find himself a considerable gainer, by selling his produce on consignment terms, as against f.o.b.

Why not put this to a practical test this season and sell half your output on f.o.b. terms as usual, and send the other half to some reliable firm to sell for you, on consignment terms, and on a fixed rate for expenses, keeping separate accounts of prices secured under each system and comparing the results at the end of the season by the net prices as shown by each system of sale?

Just a few words as to the kinds of fruit that sell the best on this market, and that bring best prices. Golden Russet, Blenheim Orange, Cox's Orange, New York Pippin, Fancy Spy, Kings and all other Pippins, and so forth, are amongst those that stand in the first rank; with Baldwin, Greening, Stark, Wealthy, Fameuse, and so forth, running a good second; closely followed by Nonpareil, Canada Red, and Ben Davis, as good, useful apples of the cheaper kind.

Finally, I would impress upon Canadian growers the ever-increasing importance of the British markets as a profitable outlet for their produce. With our combined population of over 43,000,000 people, and our ever open door, the growing and exporting of Canadian fruit and produce generally should prove to be one of the most profitable of commercial pursuits, as the demand here is practically unlimited.—A British Canadian.

## Apples—From Grower to Consumer

J. Arthur McBride, with Geo. Vipond & Co., Montreal

THE apple industry of to-day, to be an intensive and perpetual "money-maker," requires a thorough study of the exacting demands of the consumers (householders) throughout Canada and England, as they are the people whose trade largely governs the markets.

The history of an apple from the tree to the consumer is varied and interesting. Frequently, through someone's ignorance or dishonesty (and neither in these enlightened days is excusable), there is great annoyance and loss of business to the wholesale dealers in the large distributing centres who are selling directly to the private individual through the medium of the retail dealers. The consumers' demands are very exacting, and unless fully complied with, either the goods are returned or a heavy reduction is made. It would be the broadest and most liberal education possible if more of our growers and packers would come in close touch with these people who demand so much in quality and also have their eyes wide open in regard to "market prices." The price must be within reach of all, otherwise the consumption is curtailed.

One cannot travel through the apple orchards of Ontario and Quebec to-day without feeling that there is great room for improvement in regard to the time and attention bestowed on them in pruning, spraying and cultivating the ground. The practical and experienced labor spent on a well-set-out orchard, will certainly yield the owner a handsome dividend on the fruit in proportion to the labor he puts into it.

The apple business, the last few years, has been developing on a firmer basis of packing and distribution. With the general growth of our country, and an improved quality of our apples, the results are certain to be satisfactory, but we must bear in mind that the quality (either good or bad) is remembered long after the price is forgotten.

The responsibility and future of the apple trade rests equally—and sometimes heavier on the packer than on the grower. The apples, being of good quality, will minimize his difficulties, but too great care cannot be taken to make the contents of the package agree with the grade marked on the cover.

The advantage of producing the No. 1 quality is brought very forcibly to our attention and also to our pocket-books, when the yield causes growers to pack a larger percentage of No. 2 goods than the market can profitably handle; consequently the over-supply is sold at a loss—which comes out of the packer or grower. The demands (except at a reduced price) is for the No. 1 grade of fruit. The packing, handling and trans-

portation charges are the same on all grades. The Canadian west insists on No. 1 almost exclusively, and the eastern markets will only handle a proportion of them. The great solution of the question is not to produce poor fruit. The grower, to be successful, will devote his time to good advantage on his orchards.

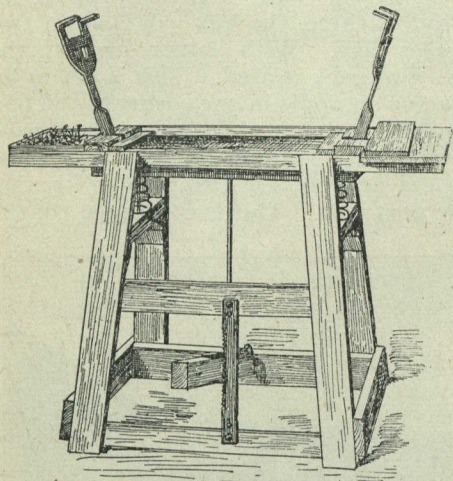
The Fruit Division at Ottawa, and the apple inspectors, coupled with The Fruit Marks Act, also the "Monthly Fruit Crop Reports," and so forth, are all doing a splendid work in the right direction to the mutual benefit of all concerned. They should have the hearty cooperation of every person who has an interest in the apple business. The Department's field of operation is large, and will undoubtedly be extended both in regard to more inspectors and general equipment. THE CANADIAN HORTICULTURIST'S suggestion that a fruit growers' conference should be held in 1908, similar to the one held in March, 1906, should have the fullest endorsement of every grower from the Atlantic to the Pacific. A Dominion conference should be an annual event.

Another phase of the apple business which is coming into prominence is the cooperative fruit growers' associations. While this movement is largely in its infancy, there has already been much good accomplished. The field of their labor is extensive, but with the most careful management and supervision of a responsible head, they should be a great influence for good in the apple-growing district. If the associations work along the lines of the California orange districts, with a central packing-house, uniform and experienced packing, with an established brand and reliable officials, they will command the respect and approval of all liberal-minded business men. Further, if these associations will live up to these requirements, they should place their apples on the market at a price (f.o.b. at the packing-house) that is regulated by the intrinsic present value of the fruit, according to the crop condition and general quality, and not base these ideas by some far distant, imaginary price which may be realized for a small portion of the fruit. Let the price be such that the dealers can make a reasonable turn-over and thereby establish a connection with him for the following seasons. The sales made in the early season, prior to storing last season, were the most profitable, and while there may be exceptions, the fall sales are usually the most satisfactory. The dealers are prepared to buy apples under these conditions and at a good price, which will remove the necessity of any uncertainty of the foreign commission markets.



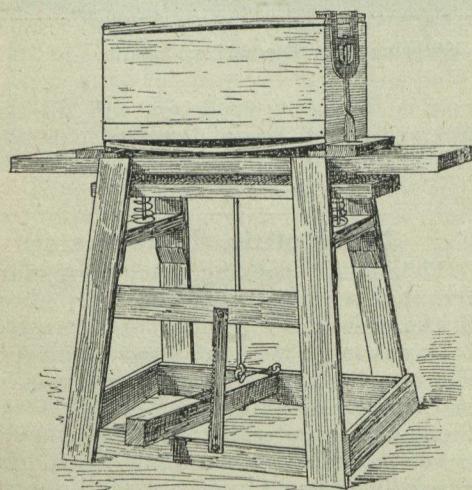
## How to Pack Apples in Boxes\*

THE basis of rapid box packing is good, even grading. The packer should have before him an even run in point of size, without which it will be impossible for him to do rapid work, or indeed do good work. Grading for quick, good work in box packing is,



Nailing Bench, Easily Made with Assistance of Blacksmith

of course, dependent largely upon size and color. It will not do to place apples of markedly different sizes in the same box. It is desirable neither for appearance nor for rapid packing. No accurate calculation can be made upon the style of pack, and no uniformity can be secured in the layers, if the sizes are markedly different. Nevertheless, it is impossible to secure in the apple perfect



Box of Apples on Bench with Cover in Place

uniformity in size and shape, but this inequality in size and shape must never be so great as to offend the eye of the fastidious customer. It is upon these very slight differences of size and shape, however, that the best qualities of a good pack depend.

It must not be understood that any good packer will associate two apples differing materially in size. The really skilful packer will take the very slightly smaller apples and use these at the ends of the boxes, the larger always going towards the middle of the box. But this difference in the size of the end and the middle apples is so slight that only the practised eye of the packer would detect it.

The skilful packer will also take advantage of the slight inequalities in shape. Very few apples are exactly symmetrical, whether you cut them from stem to basin or transversely. If then the packer finds that there is a slight slackness in a row of apples which he is packing across the box, he can usually make this perfectly tight by

boxes. This would exclude a very large part of the apples in eastern orchards. It may as well be understood, once for all, that the packer who has no higher conception of the box business than to think of it as a receptacle for scabby or wormy apples, had better pack his apples in barrels. He will get a much better price for them, and will not be lowering the reputation of the high-class apples that should be packed exclusively in boxes.

It may be well here to draw attention to another matter of observation, namely, that very few men who have been used to barrel packing ever succeed in the box trade. Rougher methods that have served them in the barrel trade are unconsciously practised when they take up the box trade, and failure is the in-



It is Bad Practice to Leave Apples in Piles on Ground in the Orchard

simply turning the specimens one way or the other. Of course, the opposite fault of being somewhat too crowded can be remedied by the same process. Thus the packer will build up a layer from end to end of the box with apples slightly smaller in the ends, with the larger ones towards the middle of the box, and yet the most critical customer would not be offended by any difference in the specimens.

It is perhaps not equally important to grade to color, yet this adds greatly to the appearance of the finished box. If then the packer has the choice, he will put the lighter-colored apples in one box and the highly-colored apples in another. Both boxes may sell equally well, but neither would have sold so well had the apples been mixed in color in each box.

It may not be superfluous to say that it is presupposed that no wormy or scabby apples are permitted to go into

avoidable result. Barrel packers, therefore, who do attempt the box business must divest themselves entirely of many habits and methods of work that may not have interfered with their being fairly successful as barrel packers.

### STYLE OF PACK

The simplest method of packing a box of apples is nothing more than the barrel pack practised with boxes. The face is placed upon the box by a method quite similar to that of facing a barrel, and the apples are then placed on the top of this face with no regard to regularity. It is needless to say that such a method of packing a box will result in absolute failure. It has been tried in eastern Canada many times, and always with disastrous results. The box is not nearly so well suited to this style of packing as the barrel, and consequently it is more difficult to get a tight package

\* Extracts from Ottawa bulletin, No. 19, entitled, "The Packing of Apples in Barrels and Boxes," by Alex. McNeill, Chief Fruit Division.



and if a tight package can be obtained, it is not acceptable to the customers.

#### PACKING IN TIERS

One great advantage of boxes is that close distinctions in size and color are easily made. Customers then can secure exactly what they wish with reference to these two qualities. The number of apples in a box can be determined almost instantly by the style of the pack, but this number should always be placed on the end of the box by the packer, when he completes his work. Apples, even of the same variety and upon the same tree, vary so much in shape that it is quite possible to get an almost endless variety of packs, all fairly regular. Some practised packers claim to distinguish sixty different styles of pack. This is quite possible, if we count not only the distinct varieties of pack, but also combinations of these varieties in the different layers of the box. It is not necessary, however, to be familiar with so many packs in order to be successful as a box packer. Familiarity with half a dozen or more will enable an intelligent person to pack successfully all common varieties, and, having learned to use these half-dozen styles of pack, the packer will have little difficulty in combining the features in these for the purpose of packing any odd size or shape that may present itself. In a general way, the size of the apples is indicated by the number of tiers or layers in the box. The box is supposed to be open, so that it is eleven inches wide and ten inches deep. If, then, three layers or tiers of apples will fill the box properly, that sized apple is spoken of as a three-tier apple. In the same way, if five layers or tiers fill the box, the size is said to be five-tier. The three-tier apples would be the largest that would be packed, such as the Alexander or overgrown specimens of the King and Spy. These may be so large that only forty-five will go in a box. It is possible to get a three-tier apple with sixty-three in a box. In the same way, a four tier apple usually contains ninety-six specimens, but it may contain as high as 112.

If the apples of one layer are placed in the spaces between the apples of the one below, there would be, say, four layers of apples intermediate in size between those that would fill the box in three layers or in four layers if packed directly over each other or straight pack. Such intermediate size would be styled a three and a half tier size. Similarly, the intermediate size between a straight four-tier and a straight five-tier would be spoken of as a four and a half tier. A packer soon learns to associate the number of specimens in a box with the particular pack which he adopts.

From the smallest Fameuse that should be packed, to the largest Kings

or Alexanders, there are between thirty-five and forty different sizes, each of which requires a different style of pack. But let the beginner in box packing take heart. These different styles of packing are really only modifications of two general types. The first is called the "straight" pack, where every apple but those in the first layer is directly over another. The second is called the "diagonal" pack, in which no apple is directly over any other which it touches. Usually, the apples in the alternate layers are directly over each other, but never in the contiguous layers.

The "straight" pack is modified by the number of layers in the box. When the box contains three, four or five

middle. The second would then be made with two apples, the third with three, and so on, until the tier is completed. The second layer would be commenced with two apples and alternated with three, as in the first layer. The first and third and fifth layers, and second and fourth, would be the same, and directly over each other. By commencing this pack with two apples, instead of three, the box will contain two apples less. With larger apples, the two-two pack is used. This is begun by placing an apple in one corner of the box and then dividing the remaining space evenly with another apple. Into these spaces are pressed two apples forming the next row. This is continued till the



A Busy Scene During the Peach Season—Shipping from Beamsville, Ontario

layers, each apple directly over another, the pack is said to be straight, three, four or five tier respectively. Each straight pack is again modified by placing the stem up or down, towards the side of the box or towards the ends. Even so slight a change as placing the stem one way in one layer, and the opposite way in the next, will sometimes make the difference between a tight and a slack pack. As there can thus be four or more modifications of each of the three packs, twelve or fifteen classes of apples, differing in size or shape or both, can be packed in this way.

The diagonal packs may be modified even more freely. A modification of the diagonal pack in common use is called the "offset." Place three apples touching each other, but leaving a space about the width of half an apple between one side of the box and the last apple. The next row of three would be placed so as to leave the space on the opposite side. A very useful diagonal pack is made by placing three apples in the first row, one in each corner and one in the

box is filled. Four layers will fill the box, the first being directly over the third, and the second over the fourth.

*Continued on page 218*

#### Marketing Peaches

Picking and packing peaches are matters that require the personal attention of the grower. These cannot be trusted to hired labor without strict oversight. The peach should be picked and packed as carefully as an orange; should never be poured from basket to basket; should never be bruised in handling; should be carefully assorted by grades, and put up for market with an eye to attractiveness. It is not strictly proper, however, to put red netting over green fruit.

There is just the right time to pick for market, and this is something to be learned by experience. A day too early, and the peaches are green; a day too late and they are over-ripe and will be soft and bruised and unsaleable before they reach the consumer. No fruit requires greater expedition and better judgment in picking and marketing.



# The Harvesting and Marketing of Export Apples

P. J. Carey, Dominion Fruit Inspector, Toronto

THE bulk of the apple crop of Ontario, except that in the hands of the cooperative associations, is now in the hands of the dealers or middlemen. As far as I have seen, the prices paid, if not in some cases, perhaps, as high as the demand should warrant, are such as should leave to the growers handsome profits for their labors.

In the principal apple-growing districts there are three methods of selling in practice: First, "lump" selling, a fixed price for all fruit on the trees; second, a fixed price per barrel for all fruit on trees; and third, a fixed price per barrel for selected fruit. The latter, although by far the most commendable, is practised the least.

The "lump" method is practised the most, which shows the strong desire on the part of the ordinary apple dealer to take a little shot at the game of chance and try to do the other fellow. The other fellow, or grower, too often gets the worst of it from the fact that his eye is not as practised as the dealers. The desire to gamble is not at all confined to the dealers. Many of the growers delight in a little gamble and, if they are bitten, say nothing about it.

The other method of selling at a price per barrel for all the product of the tree, including windfalls in many cases, is the safer one for the farmer, inasmuch as there is no gamble in the deal, and everything goes in the barrel. It is wonderful how carefully everything in the shape of fruit is taken from the trees and ground. I know, however, of a few exceptions to the rule, where men of public spirit will not allow rubbish to leave their orchards to be placed on the market.

These two methods of selling have little to recommend them. In the first place, they are not based on business principles, and the business man who desires to handle fruit, if he waits until he can see what he is buying, is left waiting and consequently is out of business. In the second place, by these methods, thousands of barrels of culls find their way into the fruit houses to be exported later, thousands of barrels of "stuff" that should never be placed on the market, except perhaps as a by-product. Shipping this kind of rubbish is sure to injure the trade, but there is a little consolation in the fact that the trade does not suffer now as much as in the days when the culls were sandwiched between two good "faces."

## A WARNING TO GROWERS AND DEALERS

Passing to another phase of the situation, I may say that, while the grower seems to be safe, having sold for a good

price, while the dealer feels that he is safe, from the fact that already he can turn over his "pack" at a handsome profit, and while from every indication this promises to be a good year for the apple man; yet, I would warn all concerned there is a possible chance for many a slip between now and March, 1908.

## ESSENTIALS TO SUCCESS

There are three great factors that figure in the success or failure of the season's operations. The first is the

barrels of our fruit go forward, either picked nearly a month too soon or, on the other hand, nearly a month too late. I have examined barrels of apples of the standard varieties, when one would be puzzled indeed to name the variety, unless guided by the name on the package. Such early picked apples have neither color nor flavor. The dealer who sells the Englishman a barrel of such fruit, is giving him a barrel of Canadian "Spys" or "Baldwins" in name only,



Picking Peaches in the Niagara District—Note the Well-Constructed Ladders

picking and packing; second, the weather conditions; and third, the transportation facilities. The first essential is a neat, strong package and the securing of good, experienced men to do the work. In my capacity of a Dominion Fruit Inspector, I have seen so many "packs" that I think I am able to say: "Show me the packages and the workmanship of a 'pack' and I will tell you whether the operator will make money in the apple business or not."

The next essential is to pick the fruit in season. I wish to draw special attention to the fact that thousands of

and is not taking the best way to secure him as a steady customer.

A large percentage of our fruit remains on the trees too late in the season. It is true such fruit has color and flavor, but at the expense of being more or less damaged by frost or wind storms. A large percentage of our apples were frosted on the trees last season, which had a great deal to do with its poor keeping qualities at the close of season.

## INFLUENCE OF WEATHER CONDITIONS

The heating of fruit packed in barrels in warm weather, has more to do with the bad condition in which our fruit



arrives on the other side, than all other causes combined. Shippers of fruit do not seem to appreciate this fact, as no special effort is made to cool the fruit before shipping. It is a common occurrence, especially in the month of September, to see carload after carload of apples going aboard ship in a heated condition, and showing a temperature of as high as eighty-five degrees, and large quantities of the fruit in the first stages of decay. It is needless to say that fruit shipped under these conditions can bring nothing but failure as a result. Experiments have shown that fruit packed and closed in a barrel in warm conditions, and placed in a low temperature, will take from six to seven days to cool at the centre; hence, the necessity of packing cool.

#### A WORD ABOUT SHIPPING FACILITIES

For the last season or two, shippers know too well of their troubles in securing proper cars for carrying fruit to the seaboard. The greater trouble is in the winter traffic, and it is a deplorable fact that thousands of barrels of our choicest fruit have been practically lost through being frozen while in transit.

The damage in this way is far-reaching. It is not only the actual quantity frozen from which we suffer, but when a ship arrives on the other side and traces of frost are found, the whole cargo often is reported frosted, when perhaps only a few cars are damaged, and as a consequence all shippers who are unfortunate enough to have apples on that boat will suffer.

The problem that is up to the growers and handlers of fruit to work out is the remedy or remedies for all the defects along the line of handling, in order that they may make the most of their great possibilities. The fruit growers of Ontario have within their grasp one of the best means of money making in the land if their operations are guided by common sense, application and honesty.

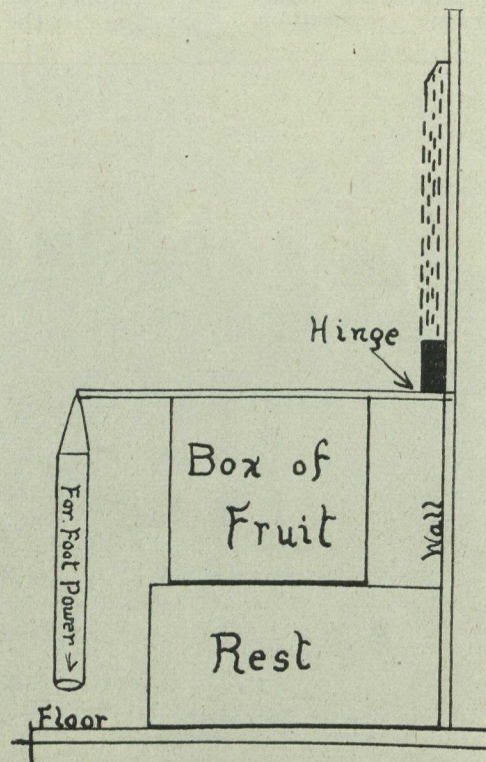
#### Pointers on Box Packing

Robt. Thompson, St. Catharines, Ont.

We hear expressions from some of our growers that box packing is not on the increase, but any one in touch with the buying public will testify that never before has there been so many enquiries for box fruit. I had much pleasure in looking over Mr. A. McNeill's bulletin on "Packing of Apples in Boxes and Barrels." Mr. McNeill evidently has taken a good deal of pains to gather all the information available and to present it in good form.

I wish to emphasize one or two points. First, as to the material in the box; the ends must not be lighter than five-eighths inches and three-quarters is preferable. The sides three-

eighth inches and the top and bottom one-quarter inch. If poor pine or poor material is used, it may be necessary to use one-half inch for sides, and three-eighths for top and bottom, but I would prefer to refuse such material. Second, the fruit, whether it be apples, pears or peaches, must be placed tightly in the box and well filled in the centre so as to have a good bilge. For the ordinary everyday commercial pack, especially for beginners, it will be better to use the three and a half or four and a half tier pack, made by placing the fruit of the second row in the space between the fruit below and



A Home-Made Nailing Bench and Box Press

Diagrammatic sketch of bench used in packing house of Mr. A. E. Sherrington, Walkerton, Ontario. A similar one could be constructed by any fruit grower. It is simple, cheap and efficient.

not directly on top of each other. This style of a pack not only is easier to do, but will remain tight better and carry the fruit in better shape.

Another suggestion I would give Mr. McNeill is that he start a movement to amend the Fruit Marks Act by adding to the box regulations that all fruit in boxes must be placed in tiers. My reason for giving this is that some of our fruit men are facing the fruit in the first tier of the box, and then pouring in the fruit, filling the balance of the box indiscriminately. I know of one place where this is followed, and the price the pack is quoted at is seventy-five cents a box for apples, and same place is offering barrels for \$2.25 for No. 1. Any person who has any knowledge of packing knows that at these figures the barrels will net the grower or packer more money, pro-

vided the boxes were packed properly, but when a quotation as above goes out as against \$1.00, or even \$1.25, as many apples in boxes are being quoted, the buyer will naturally think the low figure will be the cheaper, when in reality it is the dearest. To undertake to put fruit in boxes without layering at once shows that the packer has not the first idea of box packing.

#### Harvesting Blackberries

H. S. Peart, B.S.A., Jordan Harbor, Ont.

The blackberry deserves rather more recognition than it is receiving from professional fruit growers in southern Ontario. It succeeds best on sandy loams that are fairly well drained. The objection has been raised that it is difficult to harvest, but this objection does not discourage the grower who prunes his plants properly.

The blackberry is not ripe when it first becomes black. Many growers make a practice of picking as soon as the fruit turns black and some even earlier. This is a great mistake, as the best quality is not yet developed. The fruit should be allowed to remain on the plant for at least one day after it has turned black. For home use leave the fruit until soft. Pick only when dry. Pickers usually require frequent cautioning in order to prevent them from bruising the berries.

The berries should be picked into clean four-fifth quart or two-fifth quart boxes in which they are to be sent to market. The smaller size is gaining in favor as the fruit at the bottom of the box is not so crushed as in the larger one. Fill as full as the shelving in the crates will allow so that the package will present a full appearance when placed on the market. As with other small, soft fruits, only gift packages should be used. No other one thing detracts so much from the appearance, and consequently the ready sale of any product, as stained crates and boxes.

After picking, the fruit soon becomes brown and acquires a bitter taste if allowed to remain in the sun. The sooner it can be removed to a cool, shady place the better.

A good fancy trade may be worked up for blackberries in most of our cities, as the bulk of the fruit offered is inferior. A high-grade article will well repay the extra trouble incident to the establishing of a good trade with special customers.

Gather and burn the broken boxes in the berry patch.

A cover crop sown in the orchard this month will hasten maturity of wood in the fall and protect the trees in winter.



# Perennials: The Backbone of Manitoba Gardens

Dr. H. M. Speechly, Pilot Mound, Manitoba

(Continued from last issue)

HAVING glanced at some of our hardy perennials of the bulbous sort, we now turn to notice some of the many beautiful perennials which are fibrous-rooted. Perhaps the earliest



Artistic Gardening in British Columbia

beside them. These enlarge and increase until early June, when from their clumps of fresh green or bluish-green appear the columbine flowers; the earliest are white, then come the deep purples; the violets tipped with white, and last the exquisite spurred varieties. Oh, ye dainty columbines, how modest and coy are your hanging cups, how quaint the crooks with which ye shepherd the insects that search your recesses for nectar! It seems too fine a plant, does the columbine, to be hardy, and yet there is none more hardy. Yes, your garden in June lacks much, if you have no columbines. Mingle with the cultivated varieties some wild plants, whose red and gold are a fine contrast even though the flowers are so much the smaller. Mayhap the bees will cross the wild with the tame and give you a new hybrid. Often the wild meadow rue finds its way into the garden and seems half like a columbine, half like a maiden hair fern.

Now how do you raise arabis, alyssum, Iceland poppy, and columbine? Sow the seed this spring and they will bloom next spring; but Iceland poppies, if

to their best advantage both as to flowers and foliage. The leaves of bleeding heart, all the larkspurs, monkshood, the columbines and many others form the background not only for their own flowers, but also for those of other plants, notably the annuals. This is a fine trait of perennials. After coming to the footlights of the season during their own flowering period, they retire to the background as a contrast to the flowers yet to be provided by their later companions. Therefore, a planting arrangement of your perennials, paying due regard to their size and earliness or lateness of flowering, gives style to any garden. Most gardens have certain spots where a clump of bleeding heart or achillea or peony gives distinction to that spot.

## THE WHITE ACHILLEA

Every year people notice a mass of white achillea which is placed at a point calculated to catch the eye at a distance. A friend of mine was going to throw away some clumps of this plant as being too much of a weed, but I secured those same "weeds" at once in order to have a stock of them for giving away. What

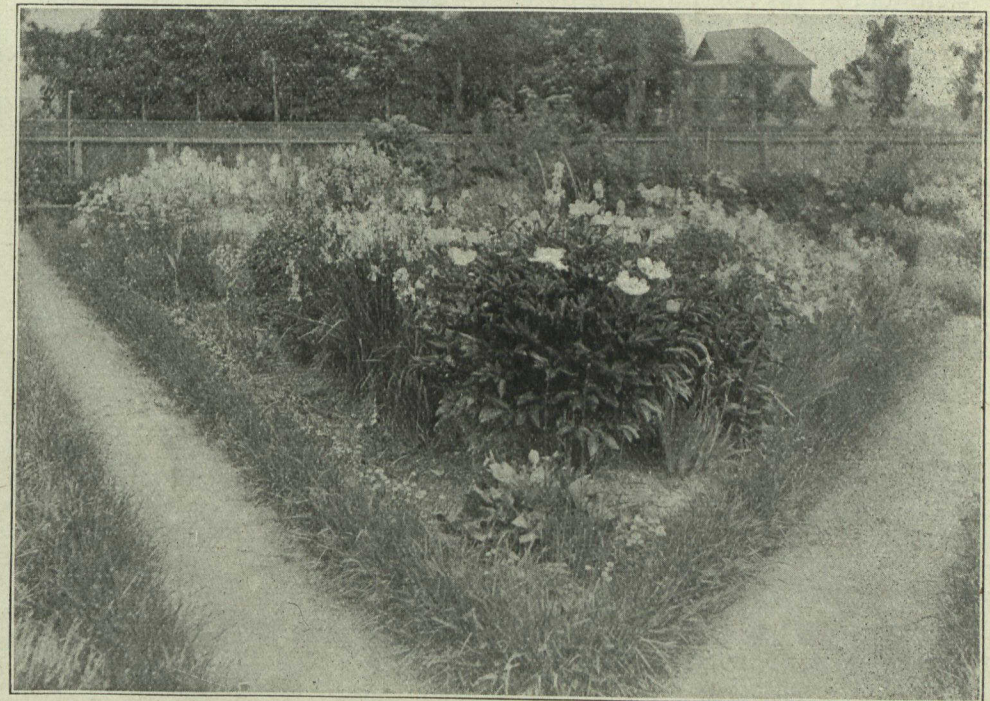
of these are the white *Arabic alpina* and the Iceland poppies. Both of these bloom quite early in May, in fact, soon after May 1. The scent of the former is practically sweet and aromatic, recalling childhood's days in Old Country gardens when bees hummed around great, massy clumps of white arabis in the genial springtime, after April showers had passed. Have you tried with arabis the silver-leaved rock alyssum, whose pale lemon-yellow flowers closely follow the arabis?

It does not do to smother arabis or alyssum with protection. Their own leaves form a mat over their roots much as do the leaves of pansies. I shall not here treat of pansies because they are so well known, but of course among early perennials pansies rank high.

Vieng in earliness with these and surpassing them in grace of form, if not in color, are the dwarf Iceland and Alpine poppies. First, dark woolly buds rise over the fern-like leaves in mid May; these burst, and casting their cases aside, shake out the crinkled petals until a cup is formed of white, cream, yellow, or an orange almost red. So these flowers bloom till August opens.

## ALL KINDS OF COLUMBINES

Soon after these poppies flower, or even before, queer little purple stems with purple knobs have been pushing up



A Perennial Triangle in Garden of Mr. J. B. Lewis, Ottawa

sown early in the spring, will bloom late in the summer. Grow the first three in clumps; but each columbine should have six inches all around if you would have the finest effect of flowers and foliage.

Here I would put in a plea for arranging perennials so that they may be seen

is achillea? It is a first cousin to the common Yarrow of our prairies. The white *Achillea grandiflora* is sometimes called "bridal rose"; but there is also a handsome red achillea; and yet another yellow variety, *Achillea sericea*.

Kept within bounds, achilleas are splendid garden flowers, being both



early and free bloomers and as hardy as rocks. You must watch their aptitude to grow out all round and into everything; in fact they tend to make rings by exhausting themselves in the middle and flourishing at their outside edges. This is avoided by cutting out the free edges and returning them to the centre if necessary, and by keeping the centre enriched with well-rotted horse manure.

Sweet Williams are beautiful spring perennials, but require a front place when associated with say Oriental poppies, scarlet lychnis and larkspurs. In fact, you can make a beautiful border by growing larkspurs further back, the dark blues behind and the light blues a little forward; then tiger-lilies and scarlet lychnis occupy a middle place; in front of these, place Oriental poppies and columbines; while in the front row Sweet Williams and Iceland poppies will intermingle with dianthus, pinks and pansies.

#### SHOULD PLANTS BE CROWDED?

One word about overcrowding your plants. An old-timer walked round my garden last summer when I happened to be out, and while appreciative of Nature's generous show of bloom there, he offered the legitimate criticism that I had overcrowded many of the plants. He did not know, however, that the overcrowding was partly deliberate. Unless a prairie garden is completely protected on the north and west sides—as, by the way, nearly every farm garden should and can be—that arch-fiend, a strong wind, will break down all unsupported plants. My garden is much afflicted by west winds, which swirl round the house and do more damage than any frost. I find it better, therefore, to be a little on the crowded side as a rule rather than to be horticulturally correct. Also last year I was experimenting with new plants, with whose habits I was unfamiliar, and so the crowding was partly involuntary. It is correct, however, to thin out your perennials so as to give them plenty of room unless they are very dwarf, or unless their habit is to grow in masses. Thus arabis and Iceland poppy grow in close masses, but larkspurs and peonies need lots of room.

#### PLANT ACCORDING TO NATURE

Another point to make is this: Plant your perennials according to the nature of their natural habitat. The foxglove, for instance, grows in the wild state amongst thick shrubs and bushes, or tall plants. Plant the cultivated foxglove amongst your ornamental shrubs. You will then be surprised how well it will do and how fine it will look. The tall flower spike blooms from below upwards and looks scraggy if grown in an open spot, as the lower flowers fade and die away. But if grown singly or in clumps amongst bushes and other perennials

it will be particularly fine and effective.

One final word must be said about those tall background perennials, the larkspur, the monkshood and the golden glow. Of the various blues sported by the larkspur, I commend the light blue for earliness and delicacy, but the dark, deep blue with a white eye is the handsomest of the dark blues. Have them well back in your border. The monkshood is not so tall, but it consorts well with tiger-lilies, the French-grey of the one contrasting pleasingly with the

orange-red of the other. As a late free-bloomer the golden glow is invaluable, and being very hardy is a good perennial, but needs to be kept in bounds both as to roots and stems. Tie the growing stems to a stake six feet high in the early summer or the winds will break it down. If it is placed amid ornamental shrubs, these latter will hide the rather scraggy withered lower half of the stems in the late summer. Moreover, a background of green trees or bushes will give an extra charm to the yellow of its golden glow.

## The Gladiolus and Its Development

TO appreciate the advancement that has been made in the development and cultivation of the gladiolus within recent years, one should visit the trial ground of Mr. H. H. Groff, Simcoe, Ontario. Varieties, unknown

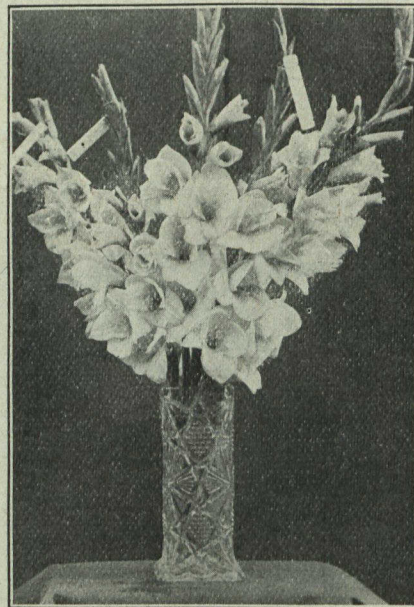
by a representative of the THE CANADIAN HORTICULTURIST. Their appearance would indicate that they will win popularity. Their size, rich color and sturdy growth will make them favorites. Another variety, La Luna, as its name implies, reminds one of the moon when rising, as the creamy petals gradually deepen into a rich yellow, and a red blotch in the centre completes the illusion. Blue Jay also gets its name from its appearance, as at first glance it resembles the bird of that name. Evolution is a beautiful shade of pink; its stems have a graceful drooping habit which, when placed in a vase, produce a pleasing effect.

There are hundreds of kinds of gladiolus at Groff's that are unnamed. New kinds are not given names unless they possess exceptional merit. Several years of repeated trials often pass before a new variety is pronounced worthy of a name and a place among the higher grades.

#### THE WORK IS INSPIRING

The work of improving the gladiolus was undertaken by Mr. Groff merely as a hobby. So enthusiastic has he become since the start, that now, during the season, he works from daylight until dark. Much work is necessary during the blooming season. Every morning at daybreak, clothed in rubber boots and apron, Mr. Groff can be found at work, determining the results of hybridizations of years before. The fascination of witnessing the birth of a new variety is so interesting that it is not surprising to find Mr. Groff so enthusiastic and earnest in his work.

In the work of originating a new variety, system prevails as thoroughly as it does in the after operations of cultivation and selection. When Mr. Groff enters the field for this work, he straps around his waist a leather belt, to which are fastened pouches containing labels of different kinds, books for registering new numbers as they are conferred on new kinds that are worthy, and for recording descriptions, knives, pencils, tweezers, and so on.



One of Mr. Groff's New Gladioli, No. 218

to the outside world, are there in innumerable quantities and striking magnificence. From the natural wild type to the world-famed Groff creations is a long step, but it has been bridged and crowned with success by years of hard work and many disappointments. Those who desire size can see corms that measure six inches in diameter, and bloom spikes that are six feet in height, with flowers that measure five and a half inches in diameter. Colors are there in endless variety. Almost any shade, tint, or marking that one could imagine is to be found. It would seem that existing gladiolus color charts are of little use, as they do not embody all the colors in Mr. Groff's collection.

#### SOME NEW VARIETIES

Two new varieties in scarlet, named Dominion and Empire, were observed



Long practice has enabled Mr. Groff to tell almost at a glance whether or not a variety, blooming for the first time, is unlike the others in his collection. If he is uncertain, he compares it with all others that bloom at that season. If it proves to be unlike them, and worth while, it is given a number. Labels of various colors and markings

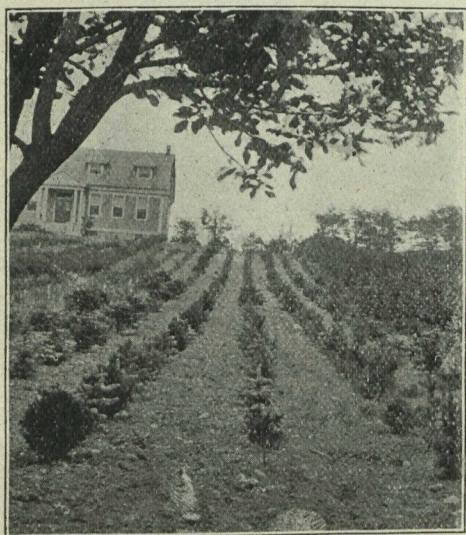
are used for different purposes, so that employees may know what to do with spikes so marked.

Much has been written about the beauty of orchids, their wonderful markings and delicate tints, but for growing in the ordinary man's garden, they are useless. Many of the new hybrids and varieties originated by

Mr. Groff surpass in beauty the orchids, and they can be grown in the gardens of the poor as well as in those of the rich. No greenhouses are required to coax them into bloom, and no particular care is needed. A profusion of color may be had throughout the season. Gladioli are becoming more and more popular each year.

## Lawn and Garden Hints for September

**S**UMMER is gone, and while the sun still is uncomfortably hot at times we will soon be glad of its warmth. Summer flowers, too, soon will be faded



A Variety of High-class Young Evergreens  
Growing in Nurseries of Brown Brothers Company

and dry, but not our pleasures derived from them. It is natural for some amateurs to think there is nothing to be done in the garden for a while, but those who look ahead know that in September, but usually towards its end, it is time to prepare for beautiful displays in the bulb beds for next spring. After the first frost, the making of bulb beds should commence. When preparing beds, dig quite deeply, pulverize the soil as fine as you can, and make it rich with well-rotted cow manure; the bed should be well drained.

Do not wait until time for making beds before ordering the bulbs, look over the catalogs, and send your order at once. By not delaying, you will profit in many ways: First, you will get better bulbs than towards the last of the season; second, you will get the bulbs in time for the best results; third, you will have the bulb bed ready for winter and the bulbs will get a good start and do much better when the blooming period comes. When the bulbs arrive, set them out as soon as you can. If the bed is not ready, keep them covered until wanted.

Indoors, bulbs may be planted for winter flowering. The favorites are: Roman hyacinths, narcissi and tulips. Other choice bulbs that you should try if you never have before are Easter lilies, oxalis, crocus, tritilea, ixias, and bahiana. Place the bulbs in well-drained pots and put them in a dark place for a time until growth is well on the way. Do not water too freely, except at the start, when the soil should be saturated.

### IN THE FLOWER GARDEN

When sweeping garden walks and drives, do so as lightly as possible, so as not to disturb the surface more than is necessary. Always sweep from the edges to the centre.

Go over the garden and gather all ripened seed that you wish to save. You may desire to grow plants next season from ones that were particularly attractive this year.

Manure for fall mulching of roses should now be procured, mixed with

Place them in a dry room for a week or two, when they can be packed in dry sand, and put in a temperature of 45 to 50 degrees for the winter. See that they are safe from mice and rats.

Bulbs of tigridias should be dug before frost, dried for a few days and stored away in dry sand in a warm room or cellar in a temperature of 50 to 55 degrees.

All plants growing outdoors and intended for house use this winter should be lifted and potted. Do not use pots that are too large and avoid watering too freely at the start. Examine closely for insects before taking them into the house. Many house plants also need re-potting, or a renewing of soil in the pot. If you have not arranged for potting soil for use later on, when it is difficult to get, do it now before too late.

Do not cultivate very much this month. It induces late growth that may be injured before it has time to mature.



Benches Containing Innumerable Varieties of Gladiolus used by Mr. Groff for Making Comparisons

a small quantity of soil, and turned occasionally to pulverize and get it in condition.

As soon as frost has touched the foliage, the bulbs of caladium, or elephant-ear plant, should be dug.

Perennials that have become too large, may be dug and divided. Take out all decayed or weak roots when this is done, as better plants will result. Most perennials that start early in the spring must be planted about



the end of September or first of October. Plant peonies, phlox, golden glow, bleeding heart, and German iris. Seeds of hollyhock, that grand old favorite, may be sown in rows and thinned out next spring, or transplanted as you desire.

Before heavy frosts come, secure a few evergreen branches and lay them over your pansies. On top of them shake a covering of dry leaves; this should be done so as not to allow the plants to thaw out before spring, which they would do if left uncovered.

#### WITH THE FRUITS

When webs of the fall web-worm are observed, either cut out the branches to which the web is fastened and burn or destroy the nest while on the tree by holding a lighted torch beneath it.

As soon as blackberries and raspberries are harvested, the old canes that bore fruit may be removed. It is thought in some sections, however that it is wiser to leave the old canes until spring, as they serve to catch and hold the snow, which protects the roots. It is better not to cut back the tops of this year's canes until next spring. Should they be injured by winter-killing, they can then be cut back to new wood.

Black raspberries may be propagated this month. If you have a particularly nice bush or number of bushes from which you wish to secure young plants, it may be done by tip-layering. The ends of the long canes will assume a snake-like appearance, bend over and go wandering for a fastening place on the ground. Place the tips beneath the soil, fasten them there by firming with the feet or by means of a clod of earth. They will take root and in the spring time be ready for transplanting.

Currants and gooseberries may be pruned any time in fall or winter. If desired, also, new bushes may be planted, but it is better to wait until spring.

#### THE KITCHEN GARDEN

By sowing salsify now, it will get started this fall. Then, if protected through the winter, it will be ready to grow as soon as the weather will permit next spring.

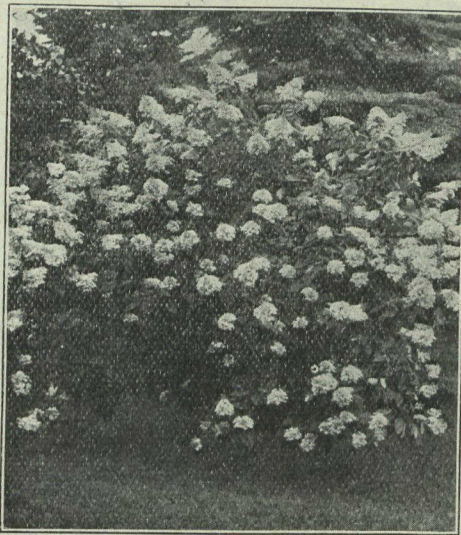
Make a sowing of spinach. Protect by a frame or other means during the winter. Have you ever grown Chinese mustard? If sown now, it will provide a salad plant for late fall use. It grows rapidly.

Continue to bleach the celery. It may be done either with boards or with earth.

Early in the month, sow winter varieties of radish. Harvest them before frost and store in sand in a cool cellar.

Harvest your potatoes early, or as soon as they are matured. By so doing, you will largely prevent scab and save them from white grubs and mice.

When danger of frost comes, gather all the remaining fruit from the tomato and squash vines. Tomatoes will ripen in a dry cellar. Store the squash in a dry atmosphere and in a cool temperature. If you intend to force lettuce indoors, sow the seed now.



*Hydrangea Paniculata Grandiflora*

As the plants require about ten weeks to mature, they will be ready for use about the middle of November.

#### Picking Fruit at Home

Do you know the proper time to pick fruit? It is something that cannot be told by word definitely. It requires practice and experience. There are a few general factors, nevertheless, that indicate how and when.

Most varieties of pears for home use should be left on the trees until well matured, but picked before they commence to turn yellow. No pear should be picked before it will separate easily from the fruit spur when gently lifted. When wormy pears commence to drop, the pears are ready for harvesting.

Peaches for home use may be allowed to ripen on the trees; for storing, they should be picked when fully matured and grown, well colored, yet firm, but by no means either over-ripe or green. Peaches that are picked too green will shrink rather than ripen, and they never attain their proper flavor.

Pick quinces when they are well matured and colored on the tree. If picked before they are ripe, they will not color well.

Plums for table use should be allowed to become fully ripened on the tree to obtain the finest quality. For

storing, pick when fully grown and well colored.

Early fall apples for home use or near market should be allowed to ripen on the tree; for shipping, pick when fully grown and well colored, but before they commence to soften. Late fall and winter varieties may be left until they ripen in the cool weather of the fall, but picked before there is danger of heavy windfalls.

#### Protection for Perennials

Editor, THE CANADIAN HORTICULTURIST,—In the August issue the question of protection for perennials was asked, and answered, but I think the full information asked for was not given. The cause of so much killing of perennials and other hardy plants in winter is caused by over-kindness, and from want of knowing how to protect. In this country most amateurs cover their border plants too soon, and too heavy. They naturally imagine that whenever the plant has gone to, what some think, rest, it should be covered and the warmer it is made the better. Now, let us take a closer look at this poor occupant of the soil. How would we like if our heads were put into a box and asked to live? And yet those plants are placed in somewhat similar condition, when covered over with manure or any close covering. We should remember that the work of the plant is not finished when its leaves die, or is killed back by the first slight frost. It still lives and breathes, and therefore should be allowed to have a chance to finish its season's work before it is wrapped up and smothered.

Never cover the plants until the regular hard frost has taken hold upon the soil, and just before the snow falls; indeed, I would rather cover after the first snow comes than before if the ground is not frozen.

In spring as soon as the snow is off the ground, this covering should be lifted off and shaken loose in the same place over the plants to give the atmosphere a chance to get in at the plants and the plants a chance to breathe the new breath of spring. Long before many think it, the plants are beginning to look upward in hope of soon seeing the sun which gives life. After all danger from frost is over, take away clean the winter covering which you shook out a few days before. I am satisfied you will lose less plants then in any other way.—S. S. Bain, Montreal.

The loss of a few cherries by the robin is little more than an equivalent for his friendly, cheerful spring morning chirp, which is worth something. I will not hold up my hand for the robin's destruction until he becomes more numerous.—W. Armstrong, Queenston.

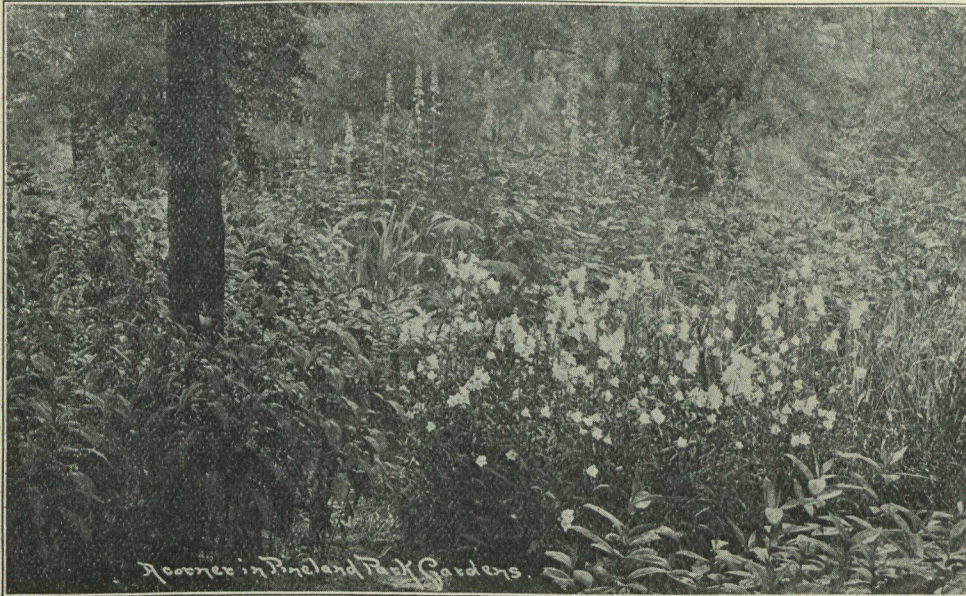


## Making the Hardy Herbaceous Border

E. Byfield, Toronto

UNLIKE the transient bed of greenhouse plants, here to-day—gone to-morrow, the border of hardy perennials is a thing of permanency. As its name implies, there is nothing

other shady, do not hesitate to choose the former. If the border runs east and west and can be flanked by a shrubbery on its north side, so much the better, as the green background adds largely to



All Kinds of Perennials Grouped for Best Effect

ephemeral, nothing transitory about it. The place it occupies is a reality, a solid reality, a lasting reality. Its life goes on from year to year, and its usefulness and satisfying fullness increases with the years. And because of this permanency, this long period of living, of growing, and of reaching forward to an ever fuller perfection, it is well to begin right, to lay foundations that will be sufficient to satisfy this permanent character of our hardy border.

Plants, like all other living things, demand the fulfilment of certain conditions, and the success of the plant life is in direct proportion to the granting of these conditions. Most of our plants demand plenty of sunshine, fresh air, soil largely made up of plant food, and sufficient moisture to keep the plant at all times in a condition of freshness. Given these conditions, the plant is likely to do well; withhold them, and it will languish. These then are the essential things to be considered in choosing the location and in the making of the hardy border.

### THE LOCATION

Where possible, choose a location offering an abundance of sunshine. If there is partial shade in some parts, this need not militate against the choice, as such space may be utilized with plants that get along well in, or require partial, shade. Where there is a choice of locations, however, one sunny, and the

effectiveness. A wall, or even a rough board fence, similarly situated, may, with a little ingenuity, be made to do duty in the same way by covering it with climbers or trailers.

### THE SOIL AND ITS PREPARATION

Most of the perennial plants are gross feeders with insatiable appetites, and send their roots deep down into the earth. This is a fact that has to be reckoned with from the start, and the more seriously it is recognized beforehand the less will be the disappointment afterwards. And as the largest borders occupy but a comparatively small space it will be wise economy to make this part of the work thorough. Our plan is to take out the soil bodily from the trench to a depth of two feet, laying the top soil to one side and carting away the rest. The top soil is then put into the bottom of the trench, and the remainder filled with equal parts of vegetable mould, good clay loam, and well-rotted cow manure, the whole thoroughly mixed. In a stiff clay soil it will be necessary to afford drainage. A good way to do this is to dig the trench deeper, and before putting in the soil place several inches of loose stones in the bottom, placing on these a layer of straw or leaves to prevent the soil from clogging the spaces between the stones. If the soil is sandy or gravelly, no drainage is required.

### SHAPE OF BORDER

The border may be of any width from three or four feet upwards. Avoid, if possible, a straight line front. A sweeping curved line is always more graceful and pleasing.

### ARRANGEMENT OF PLANTS

It is in the arrangement of plants in the border that the real skill and taste of



Hardy Herbaceous Perennials Growing in the Gardens of Mr. Byfield



the designer becomes apparent. Two objects must be kept in mind, the harmonious arrangement of colors and the placing of plants so that there will be a continuous succession of bloom in all parts of the border, new plants coming into bloom as that of those beside them disappears. Also, the taller plants should, as a general rule, be placed towards the back of the border, though it would be well not to follow this rule too rigidly. Anything like rigid uniformity produces a stiff effect, and in every way possible this effect is to be avoided. Hence, plants of medium height should be placed among the taller ones, and occasionally a tall plant might come well to the front, while low carpeting plants should be throughout the whole as well as at the front edges.

#### COLOR EFFECTS

Too much care cannot be taken in placing the plants so as to produce a harmonious blending of color throughout the border. Colors that clash must not be placed in close proximity, and harmony rather than contrast must be the rule. Also, colors should be massed so as to produce a certain dignity, but the masses should not be so large as to become wearisome. A little study will suggest a progression of colors, each harmonizing with and running into those next. Colors should not be arranged in geometric patches, but should overlap, or run into each other, avoiding anything like formal grouping and sharp lines of cleavage.

The following hints are from Kelway's Manual of Horticulture, and are of special value to any one laying out a hardy border:

"A progression of color in a mixed border might begin with strong blues, light and dark, grouped with white and pale yellow, passing on to pink; then to rose color, crimson, and the strongest scarlet leading to orange and bright yellow. A paler yellow followed by white would distantly connect the warm colors with the lilacs and purples, and a colder white would combine them pleasantly with low-growing plants with cool-colored leaves."

#### Odd Hanging Baskets

Many high-roofed verandahs seem actually to demand hanging decorations of some sort to relieve long stretches of bareness; yet, owing to their elevated and exposed positions, plants growing in the pretty, open wire baskets sold for such purposes dry out so speedily that they are often worse than useless for decorative purposes. There is no more distressing floral decoration than a dried-out hanging basket; the phrase "hanging by the neck until he is dead," admirably suits it.

An odd hanging affair that is war-

ranted not to dry out is made from an "elbow" of stovepipe painted green and suspended from the verandah roof by wires. During summer, petunias, nasturtiums, lobelia, tradescantia (which in real life is just wandering-jew) or oxalis, will all grow nicely from the open ends. I do not mean that all five should be planted in the same stovepipe. One kind to an elbow is all that is necessary.

#### Marketing Melons

W. G. Horne, Clarkson, Ont.

To realize good money for melons does not depend altogether on the quality. Often the inferior class of melon brings the fancy prices. Take for instance those shipped here from the United States. I saw, also, some of our own growing shipped last fall, by a neighbor of mine, that were simply rubbish alongside of good melons. The grower owned that they were no good, but as long as he could get fancy prices for them, which he was getting, he intended to ship them. The getting of good prices for such samples lies in there being a demand for melons and few to be had. Notwithstanding the getting of good prices for such inferior fruit, no one has any pride in shipping rubbish.

A man that has a good article to sell is proud of it. He is not afraid to meet the person he sold it to. He can give satisfaction in every way. To grow good fruit is pleasure. To sell good fruit is pleasure. To eat good fruit is pleasure. Adding the three together makes a three-fold pleasure, well worth our while trying to cultivate and bringing into effect. It is simply nothing more or less than a man's duty to do so.

#### Apples in Boxes

(Concluded from page 210)

It is often possible to pack a certain size more than one way, and have the box in each case look equally full and appear equally tight. It will usually be found that one of these ways will take a few less apples than the others. In such cases, choose the pack that will take the most apples. This is not advised for the sole purpose of giving the purchaser the full quantity of fruit, but to ensure good carrying qualities. If one style of pack takes 172 apples and another 176 of the same size, which is quite possible, it is certain that there is space unfilled in the box for four apples. This space in the case of skilful packing may be so evenly distributed throughout the box that the difference in the size of individual spaces between the different styles of pack will not be noticeable. If the fruit does not stay long in the box, all the styles of pack may come out in good condition. But if the conditions are not just favorable, and the fruit is subject to excessive

evaporation and rough handling, the style with the most apples will stand up much longer than the other. After the apples have shrunk slightly, a very little shaking, such as would be experienced in passing over rough tracks or in shunting cars will cause the apples in boxes with the fewer specimens to adjust themselves into the spaces, and then the box becomes decidedly slack, and in due course wasteful.

#### Greenhouse Lettuce

F. D. Ghent, Burlington, Ont.

We sow lettuce about September 15 in a small greenhouse heated with hot water. It is transplanted the first time as soon as the second leaf appears. Place about two and a half inches apart each way, and leave without any artificial heat until about December 15, when the furnace is started.

When large enough to move the second time, it is transplanted into a larger greenhouse, which is heated by two hot water boilers. Some is transplanted to cold frames. It is planted ten inches apart each way, and will be ready for market at Easter.

#### Blanching Celery

The oldest, and perhaps most common, method of blanching celery is that of throwing earth around the plants; but this method has been done away by most growers because it almost always causes considerable rust, while, also, worms and insects from the earth get into the stalks, spoiling them for market.

Darkness is all that is required in order for celery to blanch properly. It makes no difference whether this is caused by earthing, tying paper around the plants, or by setting up boards along the row, so long as the space around the plants is made dark. The plan of setting up a board along each side of the row is an excellent one, and is probably in the most universal use, where any considerable amount of celery is grown, because of the ease with which it may be performed.

Where only a few plants are to be blanched for family use, the plan of tying heavy wrapping paper around them is satisfactory. Another good plan is that of making tubes of cardboard and setting them over the plants when they are about a foot high, the tubes being about eight inches in length. As the plant grows, the tubes may be raised and a little earth drawn around the bottom of the plant. Two-inch tile drains are even better, however, for this purpose than the paper tubes and will last for many years.

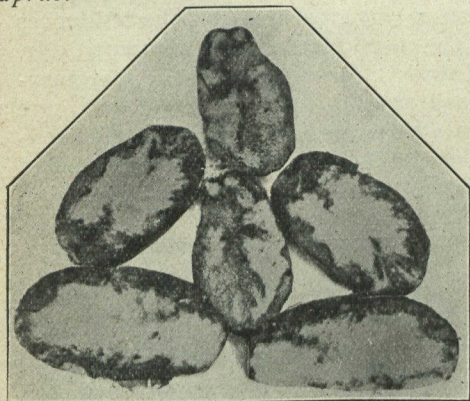


## Potato Diseases

Douglas Weir, B.S.A., Macdonald College

(Continued from last issue)

**A**NOTHER wet rot which caused considerable loss in the province of Quebec and was also reported from other parts of Canada, is the Bacterial Rot, caused by *Bacillus solaniscaprus*.



Bacterial Rot

Infected tubers in section. (From Abdruck aus dem Centralblatt für Bakteriologie, Band XVII, 1906)

According to Prof. F. C. Harrison, of the Macdonald College, Ste. Anne de Bellevue, (Abdruck aus dem Centralblatt für Bakteriologie, Band XVII, 1906), this rot was observed as being destructive, in several districts, as far back as 1904. Since then, it appears to be increasing rather than decreasing, and suspected specimens received from the provinces of British Columbia, Manitoba, Ontario and New Brunswick, proved, upon examination, to be due to this organism. The leaves of the potato plant, at first, become yellowish and droop; later, black areas appear on the stems, extending until the leaves, or it may be the whole plant, topples over and dies. The tubers have a bruised appearance and the flesh is soft; finally the soft areas become black and emit an offensive odor.

Insects disseminate the disease by carrying the spores about on their bodies, and flying from diseased plants to healthy ones, they inoculate the latter in eating the foliage.

The remedial measures consist in collecting and destroying infected tubers, selecting healthy seed potatoes, storing at a temperature below 45° F., and controlling the fungus diseases of the potato.

### LOSSES AND REMEDIES

When we endeavor to compute the loss to the country caused by insects and fungi in the potato field, we are confronted with most astounding facts. The actual marketable crop for Quebec and Ontario in recent years amounts to about 30,000,000 bushels per annum. In 1901, a good year, the yield was 37,000,000 bushels; but later years have

been less favorable. Dr. Fletcher, the Dominion Entomologist, in his report for 1904 (Experimental Farms 1904, p. 223) says: "In Ontario there was a large yield, but considerable rot appeared, especially on heavy soil or on low land; the extent of the loss is variously estimated at from twenty to fifty per cent.," or in money to the extent of something over seven millions of dollars.

Professor Lochhead, of the Macdonald College, conservatively estimates the loss from the Colorado beetle alone at ten per cent. An absolutely accurate appraisal of loss is, of course, scarcely possible. But it is no rash deduction, that but for the scourges we have been describing, the crop of 30,000,000 to 37,000,000 bushels, might easily have reached 70,000,000 bushels.

Anyone can easily compute the actual loss in dollars to the country, and form a fair estimate of the probable loss from year to year resulting from the existence of these most virulent diseases in so necessary an article of food. The matter is clearly one of vast economic

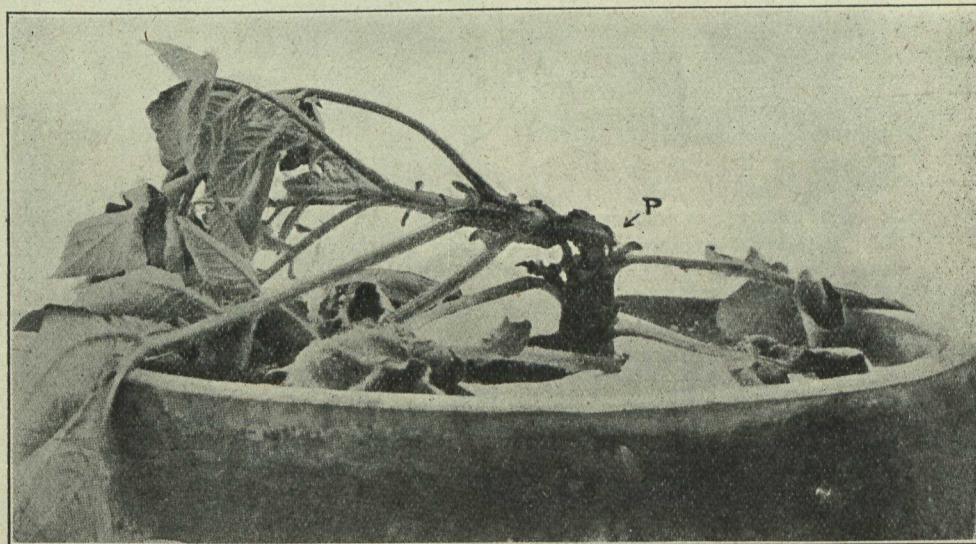
and the necessity of conducting further investigation by scientific methods, have led the Department of Biology in the Macdonald College to decide upon a thorough examination of these causes and remedies of potato infection. The results of these special researches will be duly published and circulated as widely as possible.

### Fall Work with Potatoes

W. A. Broughton, Sarnia, Ont.

As soon as potatoes are matured, they should be dug. Early varieties are usually sold at once. I have used a potato digger for eight years and could not now do without one. The Hoover digger is the best, as they can be used while the vines are green and heavy. In digging with this digger, 8 to 10 pickers are required. From 1,000 to 1,500 bushels can be harvested in one day if the crop is good.

The pits should be made in rows, one row for every 20 to 25 rows of potatoes, and about 60 or 70 feet apart in the row, so that the picker will not have far to carry the potatoes. The potatoes should be sorted when picked, the unsaleable ones being put into bags and carted off the field to be fed to hogs or otherwise disposed of.



Bacterial Rot

Showing how the disease has completely severed the stem at point of inoculation. (From Abdruck aus dem Centralblatt für Bakteriologie, Band XVII 1906)

importance and demands the most earnest and intelligent action on the part of all concerned; upon the grower the responsibility probably lies heaviest, and upon him we would earnestly urge the adoption of the following remedial measures:

- (1) The selection of seed from fields unaffected by diseases.
  - (2) The collection and destruction by fire of all infected tubers and plants.
  - (3) Regular, thorough and early spraying of the Bordeaux-Paris green mixtures.
- The importance of this whole subject

Seed potatoes should be either pitted or stored in a cool cellar. The pits should be covered with straw with about three inches of earth on top. When wanted for market, the potatoes should be filled into bags with a potato scoop. If they are to be stored until spring, they should be put in pits; but, if they are wanted during winter, they should be put in a cool, dark, frost-proof cellar.

Vegetable plants should grow quickly and continuously.



# An Establishment That Does Credit to Canada

**M**OST Canadians, who are interested in horticultural matters, have been accustomed so long to reading in United States publications about the immense size and the excellent management of United States nurseries that an impression prevails, with some at least, that it is desirable to purchase their stocks from the other side. That this is the case is evidenced by the fact that the number of trees and plants imported from the United States is estimated at over 500,000.

With the object of finding, at first hand, the status of some of our leading Canadian firms, a representative of THE CANADIAN HORTICULTURIST visited the Niagara District recently and, as a result of a day spent in the nurseries of Brown Brothers Company, Nurserymen, Limited, our pride in all things Canadian was considerably intensified. Without any desire to belittle the splendid nurseries in the United States, the visit makes it possible for us to say that we have in Canada as fine a nursery, although not as large as some across the border, as any on the continent, while its system of management is unsurpassed. Not only does this nursery hold its own with the United States firms, but, in common with some of our other nurseries, it possesses certain advantages, the importance of which can hardly be over-estimated. It is in a position to study the needs of growers at first hand, and to grow the kind of nursery stock that will meet them. The plants are acclimatized and thereby suited for growing in our climate and conditions. All nursery stock is fumigated according to law, but it is not subjected to a second fumigation, which often is injurious, as is stock purchased in the United States, it being required to be fumigated at the border. Canadian grown stock is best for Canadians. The representative of THE CANADIAN HORTICULTURIST who visited Browns' Nurseries saw unmistakable evidence of skill in growing, of close attention to the details of nursery management, and of much concern and anxiety in the matter of giving satisfaction to customers.

The offices and nurseries are located in Welland County. The post office is named after the firm, being called Browns' Nurseries. At this post office more mail matter is handled than at any other rural post office in Canada. This indicates the immense business that is done by this firm by correspondence.

## A VARIETY OF SOILS

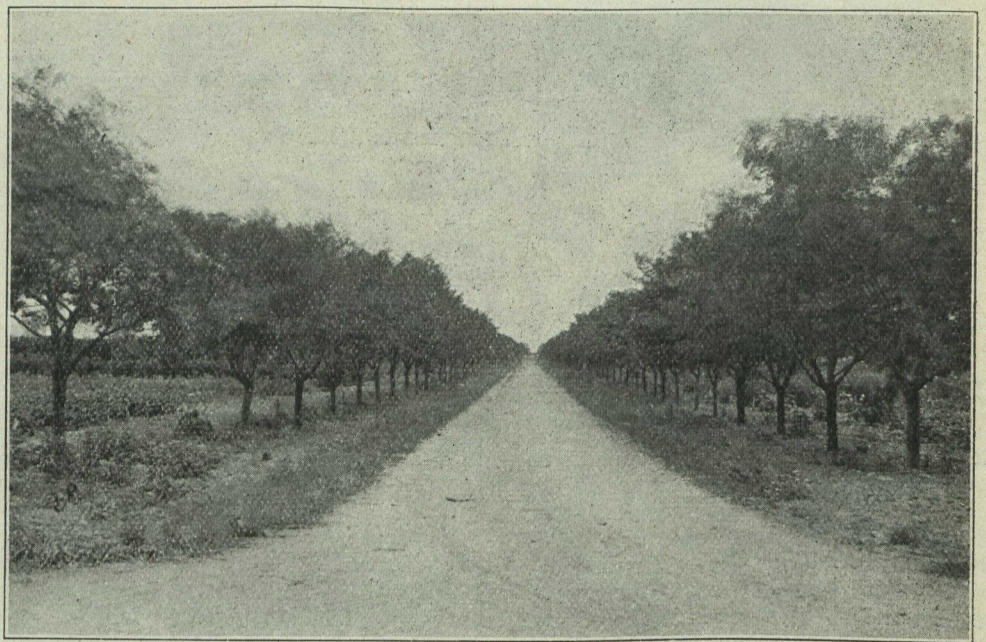
Browns' Nurseries were established in 1891. One hundred acres of land were chosen in an excellent location. The soil is of a desirable type. It induces

trees and plants to produce an abundance of fibrous roots. The proprietors of these nurseries are alive to the fact that nursery trees constitute a crop which occupies the land for a number of years, and unless the land is in good heart when the trees are planted, there will be little opportunity to raise a good product. With fruit trees, usually the age of the tree determines its saleableness; hence, it is imperative that the growth within the given time be rapid and strong. The soil that comprises the original 100 acres and some 500 acres that have been acquired since—making

mentals, as their value is determined by the size of the specimen, with little reference to age. Thousands of first-class ornamentals were to be seen in all stages of growth.

## WELL-APPOINTED OFFICES

To superintend the care and management of this great nursery, the residences of the president of the company, Mr. Edward C. Morris, and of the secretary-treasurer, Mr. David Z. Morris, are located on the home nursery. This enables the Messrs. Morris to keep in close touch with all the details of their im-



Entrance to Brown Brothers' Nurseries—Bordered with Half-Mile Rows of Cherry Trees

in all 600 acres—is of the character that produces this result.

The whole 600 acres, comprising seven farms, are devoted to the growing of nursery stock. No fruit or farm crops are grown, except such of the latter as are necessary to rest land that has been "treed."

## \$100 AN ACRE FOR MANURE

Thousands of dollars are spent annually on ordinary stable manure. On every acre of land, \$100 worth of manure, or practically manure equal to the value of the land, is applied before the trees are planted. This is an immense outlay. That it is worth while is evidenced by the health and vigor of the stock that Browns' Nurseries produce.

Within the broad area of these nurseries, there is a great variety of soils. Nursery stock of all kinds can be planted in the soil best suited for its production. Land that is not sufficiently strong for the growing of fruit trees, can be used successfully for the growing of orna-

mense business. The extensive and well-equipped offices also are situated at the central nurseries. The building is sixty by thirty feet, two stories high, with interior appointments in accord with the needs of an establishment that is up-to-date and progressive. The office conveniences are equal to the best in large cities.

The business of the firm has increased so rapidly that it has been found necessary to increase the office room twice. The original office was a small room, twelve by fifteen feet. The next one was twenty by thirty. This furnished accommodation for only a short time. The present commodious structure was then erected.

Having the main office located at the central nurseries is an advantage in many ways. Mail orders can be given prompt and careful attention, and the true condition of the stock available for sale can be ascertained readily. Prompt attention and quick dispatch can be



given orders received by long distance telephone. In order to handle all orders with promptness, Brown Brothers Company had the post office of Browns' Nurseries established. It has proven to be a great convenience to the firm as well as to farmers in the neighborhood.

So many hands are employed, it was found necessary to erect two boarding houses on the home nursery, one for those engaged in the offices and the other for nursery hands. Both are large, commodious, and fitted with all modern conveniences.

Surrounding the office is an acre and a half of fine lawn, on which shrubs and ornamental trees have been planted. This lawn is to be increased in area as circumstances demand. Although laid out and planted only four years ago, the grounds are fast assuming the appearance of a beautiful park. The offices and buildings are approached from the highway by an avenue of Montmorency cherry trees over half a mile long which, in the springtime at blooming and in midsummer when the fruit is ripe, present pictures that are suggestive of the good things that may be expected from the young trees in the nursery grounds on either side. The buildings crown an eminence from which may be viewed scenery that can scarcely be excelled in any other part of Canada. Visitors to Browns' Nurseries will be well repaid in the enjoyment of the scenery alone. An additional pleasure that is afforded, however, to say nothing of the practical aspect of viewing the nurseries themselves, is the hospitality of Messrs. Morris. The representative of THE CANADIAN HORTICULTURIST who visited the nurseries on this occasion was kindly driven about from place to place and entertained by Mr. E. C. Morris. Nothing is lacking in the courtesy extended by the firm to visitors.

#### THE FRUIT NURSERIES

In the course of our observations, one field was noticed that contained over 600,000 apple trees, saleable this fall. The trees were well grown and gave evidence that the various operations to which they had been subjected by the nurserymen had been properly performed. They were stocky and well-grown. "We intend," said Mr. Morris, "to head our trees lower in the future than has been the custom. There is no reason why the head of a fruit tree should be out of reach of the worker. Low-headed trees save labor and expense at spraying and pruning time. They will stand storm and wind better than those that are high. They shade the ground and thereby help to conserve soil moisture. The greatest advantage of all, however, and one that outweighs all the good features claimed for a high head, is that the fruit can be picked from the

ground, no ladders, or short ones at most, being required for the purpose." This question is one well worth consideration on the part of nurserymen and fruit growers everywhere. Expressions of opinion are invited for publication. It would seem that the growing scarcity of orchard labor would warn growers against the old practice of heading newly-set trees too high. Let us hear from our readers on the subject.

All kinds of fruit trees that can be grown in Canada are produced on these nurseries. In apples alone, 125 varieties are grown. All the standard sorts are grown and many new ones are under test. Brown Brothers Company are quick to try new varieties and to develop

ever have come under our observation. The entire lot was as even as trees can be grown. The trees were strong and vigorous. This firm is the largest growers of dwarf pear trees in Canada. Some excellent cherry trees, saleable this fall, were noticed, particularly a fine block of Montmorencys. In peaches, plums, cherries, pears and all kinds of fruits, all the leading varieties that are adapted to Canadian conditions and climate are grown.

#### GRAPES AND SMALL FRUITS

Large quantities of grapes, currants, gooseberries, raspberries, blackberries, and so forth, are propagated. Thousands of these fruits were seen growing on land best suited to their requirements and



Young Hydrangeas Growing on Brown's Nurseries—Offices in Background

those that prove worth while. The firm has introduced many new things in fruit varieties and ornamentals that are of much value to our growers, for profit or ornament as the case may be.

Some excellent blocks of young peach trees were seen. In their propagation, the usual custom of layering or stratifying the pits is not practised. They are sown directly in the rows where the trees are to grow. This practice usually is thought to be not good, as often a portion of the seedlings do not grow and, as a result, regularity cannot be attained in the rows. That the operation is successful with Brown Brothers Company, however, is evidenced by the even stand that results. In the budding of peach seedlings, as well as in the propagation of all kinds of nursery stock, great care is taken in the matter of propagating true to name. Brown Brothers Company pride themselves on filling the orders of customers with stock that is true to variety type and name. No substitution is practised without the consent of the purchaser.

One block of 30,000 dwarf Duchess pear trees were particularly deserving of mention. They were the finest that

care. The young grape vines were in first-class shape.

A new feature in the nursery was a patch of some 20,000 plants of the Herbert raspberry. This is a variety but little known to growers, and one that deserves a place, and a big place, in commercial plantations. "I believe that the Herbert is the best money-making raspberry that we have," said Mr. Morris. The representative of THE CANADIAN HORTICULTURIST saw a patch of them in fruiting at Brown Brothers' and has seen them growing elsewhere in Ontario. From observing their behaviour at various places during the past five years, the writer does not hesitate to confirm Mr. Morris' opinion. The berry is of the largest size, bright red, of good body, excellent quality and the bush is very productive. Its hardiness makes it especially valuable in the colder parts of the country.

#### ORNAMENTAL TREES AND SHRUBS

If there is one class of stock that receives special attention at Browns' Nurseries, it is ornamental trees, shrubs and vines. This firm is the largest growers of roses and clematis in Canada. Over 75,000 field grown roses



are propagated each year. Some excellent moss roses were seen. The variety that attracted our attention most, however, was the Baby Rambler, which was imported from France by Brown Brothers Company, and introduced by them to the growers of Canada. The plants were to be seen at various ages; the young ones were well grown; the ones in bloom presented a beautiful sight. This rose is rapidly becoming a favorite, as it is a free and lasting bloomer, and blooms from early summer until the snow comes in late fall. Large quantities are grown at these nurseries. About 20,000 plants of clematis are produced, half of which is *Clematis paniculata*. This species is hardy and rapid growing, often growing about fifteen feet in one season. The foliage is a deep, clear green, and the flowers pure white.

In lilacs, all the choicest varieties that can be found in the leading arboretums of America have been procured for propagation. Some forty varieties are on hand growing on their own roots, and trained to single stems instead of the bush form. When grown on privet roots, they are said to be more likely to sucker. Scores of other kinds of shrubs are grown in quantity, such as altheas, honeysuckles, dogwoods, weigelas, flowering almonds, mock oranges and so forth. For propagating the best sorts, cold frames are used.

Ornamental and shade trees are grown by the thousands. "There is an ever-increasing demand for trees for city streets and home grounds," remarked Mr. Morris. "Nearly every city, town and village has its horticultural society that encourage the planting of ornamental trees for beauty and comfort. They have done much to stimulate a desire for the products of the nursery." One of the finest of the trees to be seen was the Norway maple; about 10,000 were observed in a strong, healthy condition. It is hardy and especially adapted to planting by the seashore. Among other kinds were box elder (*Negundo aceroides*, Manitoba maple), many species of maple, elm, birch, beech, oak, poplar, catalpa, willow, ash, and so forth.

All kinds of hedge plants also are handled. According to the experience of the firm, *Berberis Thunbergii*, a shrub similar to tree box, is supplanting most other kinds, such as privet, thorns and evergreens for making hedges. It is prized particularly for its gorgeous color of foliage in fall; the berries are bright red.

#### EVERGREENS

Conifers, or what are ordinarily termed "evergreens," form a distinct

feature in Canadian gardens; some species are to be found almost everywhere. Brown Brothers Company grow large quantities. Before offering them for sale, they are transplanted twice, so that an abundance of fibrous roots will be produced. When preparing evergreens for shipment, the roots are imbedded in moss, and the whole is wrapped with burlap to prevent them being dried out and thereby injured. Large numbers of evergreens are imported from Holland. They arrive with the roots in a ball of earth; thus, they are suitable for planting for immediate effect.

#### HIGH-CLASS PERENNIALS

The fundamental feature of gardens, particularly those of amateurs, is the perennial border. The class of plants to be found in such are hardy, durable, beautiful and, at the same time, inexpensive. There is a charm about old-fashioned herbaceous plants all their own. Perennials are grown extensively at Browns' Nurseries. "The demand for this class of plants is growing rapidly," said Mr. Morris. "The demand is enormous. Canadians seem to be going back to the gardens of the old time. They are planting more and more each year the plants that their grandmothers grew, such as bleeding heart, iris, phlox, Canterbury bells, peony, lily-of-the-valley, pinks, and scores of others."

Perennials constitute the backbone of all well-planned gardens. Peonies in particular are becoming great favorites. The collection of new peonies to be seen growing at these nurseries, embraces the choicest varieties, running through all the favorite shades of pink, crimson, yellow and so forth. In hollyhocks, there is on hand a large assortment of the most exquisite shades imaginable.

#### INDOOR PROPAGATION

To aid in the propagation of the best class of ornamentals, eight greenhouses are employed, with expert propagators in charge. Thousands of roses and clematis are started in these houses, including Baby Ramblers. Some 10,000 hydrangeas are propagated indoors. Many of the better varieties of grapes, particularly those with wood naturally light, also are started under glass.

In addition to operations incidental to the propagation of nursery stock, the greenhouses are used for the production of bloom for the Toronto market. About 20,000 carnations and 3,000 plants of chrysanthemums are grown for this purpose, and one house is devoted to violets. Bedding plants also are grown in large numbers.

#### LANDSCAPE ARCHITECTURE

In the planning of ornamental grounds amateurs sometimes are at a loss to

know what to do. They may know what they want, but many do not know how to produce the desired result. To aid those who desire assistance, Brown Brothers Company furnish plans and estimate the cost. The plans are drawn to scale. The positions of trees and plants suitable to the occasion are indicated by number. This feature of the firm's business has been welcomed by many home-makers in all parts of Canada.

#### VEGETABLE TUBERS AND ROOTS

A profitable vegetable to grow for market is asparagus. To meet the demand of growers for extra early and extra large kinds, countless roots are grown on these nurseries. That they are popular is evidenced by many testimonials from satisfied customers. Thousands of rhubarb roots also are grown. About eight varieties of potatoes are grown to the extent of about 3,000 bushels of seed tubers a year. These are disposed of mostly in small orders.

#### HOW THE STOCK IS WINTERED

For filling orders early in spring, and to protect the stock in winter, storage cellars are used. In the early years of the company's existence a small storage cellar, twelve by thirty feet, sufficed to winter over the stock. In a few years a larger one, 40 by 112 feet, was erected. By 1903, this also fell short of the company's requirements, and a large brick, frost-proof storage cellar, 100 x 160 feet, was built, in which to handle the different kinds of larger nursery stock. On being shown through this fine building and noting the great precautions that are taken to ensure the preservation of the stock in the very best condition, the representative of THE CANADIAN HORTICULTURIST felt that Brown Brothers Company are justified in claiming, as they do, that probably they have the best storage building for nursery stock on the continent.

The structure seems to be perfect in every detail. It is absolutely frost-proof, and the ventilation is such that the air can be kept clean and pure at all times. A driveway runs through the building, and the entrances are provided with double doors, which may be bolted and made air-tight if necessary. The temperature can be held at any point desired, and its control, as well as that of the atmospheric condition within the walls, is such that trees can be kept there in a most healthy and thrifty state for many months when necessary. As a further safeguard against loss of stock, the building is supplied with an efficient water system. If on examination the stock shows any signs of becoming dry, it is an easy matter to water it thoroughly and quickly.



Direct sunlight has an ill effect on nursery stock. This, however, is amply guarded against in this building. All the skylights face the north, and are covered with two thicknesses of glass, the outer one being extra heavy ribbed green skylight glass to soften the light.

The small nursery stock, and all imported lines, such as seedlings, evergreens and shrubs, are stored in the old building, which is also frost-proof. This building holds about 1,000,000 small stocks, packed in moss, while the new one will hold some 500,000 large trees, in addition to which there is room in each building for packing.

All packing is done under cover, so that the young trees are not exposed to sun and wind. This modern method has superseded the old one of heeling in outside, and digging as needed,

leaving the trees for hours exposed to the sun and wind before the packers get them into the boxes. With the present conveniences and accommodations, packing can be commenced in late winter, and shipments made as soon as spring opens, thus giving the purchaser the advantage of an early delivery. Brown Brothers Company was the first in Canada to use female help in packing and handling nursery stock. Women and girls are used also in the field for "sprouting" and hoeing. During the busy season the total number of hands employed is 125.

#### TRANSPORTATION FACILITIES

To handle the large number of orders filled each year, a gang of men is kept busy all winter making boxes for shipping. About 300,000 feet of lumber

are used for the purpose. For shipping purposes, a private railway spur, three miles long, runs from the T.H. & B. railway, to a point one mile from the packing sheds. The firm thereby is enabled to fill orders and ship them on the shortest notice. This siding gives direct connection with the M.C.R. at Welland, the C.P.R. and G.T.R. at Hamilton.

During the shipping seasons, carload after carload is shipped to the western provinces, to Quebec, to the Maritime Provinces, and to all points in Ontario. Stock from these nurseries finds its way into every township in Canada. Every care is taken by the firm to see that all stock packed and sold is of the highest grade and quality. Brown Brothers Company, Nurserymen, Limited, have an horticultural establishment that is a credit to Canada.

## OUR QUESTION AND ANSWER DEPARTMENT

Readers of The Horticulturist are Invited to Submit Questions on any Phase of Horticultural Work

### Rose Pot-Pourri

Will you kindly give me a recipe for preserving rose leaves?—C.B.M., St. Catharines, Ont.

Gather one peck of sweet-scented rose leaves and spread on blotting paper in the sun. Sprinkle them with a pint of salt. Turn them each day while they are drying. If you can obtain them, add carnations, lemon verbenas, and, indeed, any sweet-scented thing. When all are dry, put them in a jar and add one ounce each of clove, nutmeg, tonka beans, coriander seed and orris root. Add a little bergamot. Pour on this mixture an ounce of alcohol and a few drops of essence of rose and lavender. Let the mixture rest in the jar one week, during which time stir several times; then put it in the rose jars.

### Dahlias Changing Color

Why do dahlias change color? Last year, mine were pink and this year they are white and purple, and the flowers are not nearly as good in quality.—M. R., Toronto.

The flowers of dahlias and many other plants often change or vary their color and markings in the manner mentioned. It is usually caused by an excess of, or sometimes from a lack of, certain chemical compounds in the soil that affects coloration, and sometimes from a natural reversion of type. Changing the soil and other conditions will often affect the plants beneficially, and restore them to their original character.—Answered by Wm. Hunt, O.A.C., Guelph.

### Begonias From Seed

Can tuberous begonias be propagated by seed?—L. N., Amherst, N.S.

Tuberous begonias may be propagated either from seed or from tubers. The seeds are very small. They should be sown by simply sprinkling on the surface of the soil, which is best composed of leaf mold and sand. If possible, water the seeds from the bottom by setting the pots or box in water. When the soil is well saturated remove to a shady place. Do not allow the soil to become dry.

When the seedlings are large enough to handle, transplant them by setting the plants down to the seed leaves. Tuberous begonia seedlings should be transplanted three or four times before they reach the blooming period, and at each transplanting increase the amount of fibrous matter in the soil. The addition of a little well-rotted manure may be made at the last transplanting.

### Building a Greenhouse

I wish to build greenhouses for growing vegetables and flowers. At first, three rows will be built, 20 feet wide, each by 50 or 75 feet long, even span, with ventilators north and south of ridge. At one end will be the boiler and workroom. I wish to build so that the houses can be enlarged conveniently when necessary. Which is best for heating, hot water or steam? I have been advised to use boiler tubes, three-inch size for the hot water. Do you consider them satisfactory or not? Do you know of any houses in the vicinity of Toronto heated by them that I could visit? Would a threshing engine boiler be as economical as any other?—W.S.P., Newmarket, Ont.

In a small range of glass with short

runs by all means use hot water, as it is most satisfactory and does not need the attention steam does. By building your boiler and workroom at the north-east or north-west corner of your houses, you can double your range of glass at any time, and still not have to force your water any farther than you will with your present plans. Boiler tubes are used in some places. I do not know of any place near Toronto using them. They are not as satisfactory as two-inch pipe would be. A threshing engine boiler could be used, but would not be as economical as a heater built for the purpose.—Answered by A. McMeans, O.A.C., Guelph.

### For Fall Sowing

Will you name the best varieties of lettuce and radish for sowing in early September?—P.S.A., Perth, Ont.

For fall use, out of doors, Grand Rapids Lettuce is one of the best; for cold frame culture, use Tennis Ball. For radish, a good strain of Scarlet Turnip White Tip or Scarlet Turnip will do best.

I would strongly advise all owners of vineyards to spray their vines two or three times a year with the Bordeaux mixture. It not only prevents disease and fungous growth, but gives the vines a healthy appearance, and makes the fruit clean, bright and nice.—Aaron Cole, St. Catharines, Ont.



## The Canadian Horticulturist

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### The Only Horticultural Magazine in the Dominion

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August, 1906.....	4,220
September 1906.....	4,300
October, 1906.....	4,330
November 1906.....	4,775
December 1906.....	4,814
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February 1907.....	5,520
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#### Our Protective Policy

We want the readers of THE CANADIAN HORTICULTURIST to feel that they can deal with our advertisers with our assurance of the advertisers' reliability. We try to admit to our columns only the most reliable advertisers. Should any subscriber, therefore, have good cause to be dissatisfied with the treatment he receives from any of our advertisers, we will look into the matter and investigate the circumstances fully. Should we find reason to believe that any of our advertisers are unreliable, even in the slightest degree, we will discontinue immediately the publication of their advertisements in THE HORTICULTURIST. Should the circumstances warrant we will expose them through the columns of the paper. Thus, we will not only protect our readers, but our reputable advertisers as well. All that is necessary to entitle you to the benefits of this Protective Policy is that you include in all your letters to advertisers the words "I saw your ad. in THE CANADIAN HORTICULTURIST." Complaints should be sent to us as soon as possible after reason for dissatisfaction has been found.

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## EDITORIAL

### THE DOMINION CONFERENCE

From the number of letters that have been received at the office of THE CANADIAN HORTICULTURIST respecting the holding of another Dominion Fruit Conference in 1908, it is evident that our leading and most representative fruit growers are anxious that such should take place. While much was done at the last conference, the entire programme that was mapped out has not been fulfilled, and besides there were many questions that did not receive consideration owing partly to the limited time of the convention. Since then, also, new questions of a national character have arisen that should be attended to at once if their solutions are to be of value to the fruit industry of the Dominion.

It would seem that the Hon. Mr. Fisher should sanction the holding of a conference next winter. The cost of same is a mere bagatelle. The last one cost only \$2,000. When the fact is considered that the provincial government of Ontario gives a grant of \$1,800 each year to the Ontario Fruit Growers' Association, a local organization, surely the Dominion Government can give \$2,000 every two years to further the interests of fruit growers in all the provinces. It is to be hoped that an early announcement of a conference for 1908 will be made.

### SELLING APPLES BY WEIGHT

Mr. J. B. Jackson, Canadian Commercial Agent, Leeds, reports that the Hull and District Fruit Buyers' Association at their June meeting passed the following resolution:

"That all fruits, nuts and vegetables, generally sold retail by weight, shall also be sold by brokers, merchants, and importers on the Hull market by actual declared net weights only."

Mr. Jackson says that it is expected that within two years this system of "declared net weights" will become general throughout the kingdom.

This system of selling by weight appeals to our sense of fairness inasmuch as nine-tenths of the fruit is sold ultimately by weight. Nevertheless, there are many objections to insisting upon the weights being placed upon the barrels. As a matter of fact the dealers who buy at auction in Great Britain estimate with very great accuracy the weight of fruit in the barrels. This they are able to do because there is no attempt upon the part of Canadian buyers to misrepresent the weight of fruit in the barrels. The difficulty arises when they would be asked to state definitely what the exact weight is, and this difficulty is so great that we need not expect it in the near future. The apple operators who do the larger part of the Canadian apple business could not easily devise any scheme for placing the exact weight of the contents in each barrel on the outside. During the early part of the season the packing is done in the open orchard, where exact weighing is out of the question. The difficulty of getting cars and the rush of sending the fruit when the cars are obtained render it almost impossible to weigh the fruit at the station.

Although the barrels are nearly all uniform in size, there are differences of condition and material that would make it impossible to put an estimated weight upon the barrel at this end of the journey. A barrel that is slightly wet will weigh more in the gross than one that is dry, although the net weight of fruit may be exactly the same. If a barrel is made of elm staves it will weigh somewhat different from what it would if made of spruce staves; and every variety of apple has a different weight per barrel. It frequently happens that

the man who attends to the shipping of the cars is by no means an expert in apples and, therefore, would not be so competent to judge of the weight as the man who buys.

It can be readily understood that it would be a difficult matter to get the dealers on this side to mark weights on their barrels. The cooperative associations, from their system of working, could do it more easily. To this must be added the fact that the English buyers have no real grievance. No one is trying to deceive them.

### PRINCE EDWARD ISLAND METHODS

The fruit growers of Prince Edward Island are making good progress in the production of high grade fruit for home consumption and export. It is evident, however, from the observations of Mr. Alex. McNeill, Chief, Fruit Division, Ottawa, as recorded in an article on another page, that the Islanders are making some mistakes that are patent to every one acquainted with the best methods of growers in other provinces.

One of the defects in Island methods is the practice of allowing trees to be choked from the start with grass and weeds; indeed, in this respect, there appears to be but few orchards on the Island that have anything like a fair chance. More trees are ruined every year by want of clean culture than from any other cause. When the Islanders give their trees the same intelligent care that they give their potatoes and their corn, orcharding will flourish.

A second mistake is the practice of making the heads too high. The strong winds on the Island and the climate generally, make it absolutely necessary that every device should be used to protect the fruit as well as the trees themselves. Unfortunately, the idea prevails that a tree cannot be kept free of grass unless the limbs are started at a height of five or six feet. If the growers would keep the trees clean, after making this preparation for it, there would be some excuse for them, but few of them do. Up-to-date orchardists know that a limb can be started at a height of two feet or thirty inches, and yet offer no obstruction to cultivation. When those growers, who do not give proper attention to their orchards, observe these defects and others mentioned in Mr. McNeill's article, and remedy them, the fruit industry of Prince Edward Island should develop rapidly.

### AN IMPORTANT ANNUAL EVENT

When the Ontario Horticultural Exhibition was first proposed, some five years ago, there were many who predicted that it could not be made a success. It was claimed that the expenses would be very heavy and the interest taken in the event but slight. The argument was made, also, that our horticultural industries were of such small importance as compared with our other agricultural pursuits, that they did not warrant the making of an effort to hold such an exhibition.

Three exhibitions have been held. Each has surpassed its predecessors in the total number of entries made, in the general interest manifest, and in point of attendance. The fourth exhibition will be held in Massey Hall, Toronto, next November. Judging from the interest apparent already, it promises to far surpass the three former exhibitions on all the points mentioned.

At the first exhibition the fruit packed in boxes and barrels, that was exhibited, was for the most part a disgrace to the province. It showed that most of those fruit growers who were supposed to be experts, knew but little in regard to the packing of fruit. The exhibit was so disappointing, Hon. John Dryden, the then Minister of Agriculture, proposed publicly that his department should import experts from California to give the Ontario growers lessons in packing.

What is the situation now? At the last



exhibition, only two years later, there were almost five times as many entries of packed fruit, and there was scarcely a poorly packed box or barrel in the exhibition. The improvement manifest was wonderful, and alone justified every expenditure the Ontario Department of Agriculture has made to date in connection with the exhibition.

Since the first exhibition was held, the Ontario Vegetable Growers' and the Ontario Horticultural Associations have been formed and now hold their annual conventions at the time of the exhibition. These conventions, together with those held by the Ontario Fruit Growers' and Bee Keepers' Associations, have had the effect of making the exhibition the one big event of the year for those interested in the horticultural development of the province; we might say, of Canada.

No better evidence of the important position the exhibition now occupies need be cited than is afforded by the changed attitude in regard to it of the great railway companies. For the two first exhibitions, the best arrangements they would make for attendance from points outside of Toronto, was on the troublesome certificate plan. This year, as was done last year, they will run half rate excursions from all parts of Ontario on the two principal days of the exhibition, and will give half rates, on the certificate plans, throughout the rest of the week. In addition, they will advertise these excursions in the local press of the province at their own expense.

The rapid development of the Ontario Horticultural Exhibition is gratifying, because it proves the importance of our horticultural interests and the splendid progress they are making. It advertises our horticultural products as nothing else could. Already it is the best annual exhibition of the kind held on the continent. In time it will become as well known as the Royal Horticultural Exhibition held in London, England.

### THIS ISSUE MAKES NEW RECORDS

This number of THE CANADIAN HORTICULTURIST is exceptional in several respects. It is the largest issue that has ever been printed. It will be mailed to more paid subscribers than any other number since the present management assumed control. The value of the advertisements carried surpasses all records. With this number, also, we commence the publication of a sworn circulation statement which is given elsewhere on this page. This statement shows the wonderful growth that has taken place in the subscription list of THE CANADIAN HORTICULTURIST during the past year.

There is nothing of the mushroom character connected with this new circulation. It has been secured mainly because of the drop in our subscription price and through our premium offers, advertisements in other papers and by means of agents. It is a circulation that will stick. The management confidently expects that the paid circulation of THE CANADIAN HORTICULTURIST, within a few months, will reach the 8,000 mark, and that the average for next year will be considerably in excess of that figure.

The growth in our advertising patronage has grown in proportion. This growth has forced us to enlarge THE CANADIAN HORTICULTURIST several times this year to prevent our reading columns being encroached upon unduly. This has been done at heavy expense. We now have reached the point where we must either enlarge THE CANADIAN HORTICULTURIST permanently or advance our advertising rates. Were the former course to be pursued, the expense of publication would be increased so greatly it would force us to advance our subscription rates. This we are not prepared to do. It has been decided, therefore, to advance

our advertising rates on and after the first of next November. This action, we feel, is more than justified by the great increase that has taken place in our circulation. Until that date we will continue to accept advertising contracts at our present rates. Contracts now in force, and that may be signed during the next two months, which run on for one or more issues after November first, will not be affected by this advance in rates.

Our readers, we believe, will join in our feeling of pride in the progress that has been made. It is only one more evidence of the great development that is taking place in all lines of business in Canada from one end of the Dominion to the other. Soon, we hope to be able to introduce several more improvements in the paper, and to make it the peer of any other horticultural publication in the world.

We would direct the attention of horticulturists and their sons to the courses in horticulture that may be taken in the agricultural colleges of Canada. Guelph, Truro, Winnipeg, Ste. Anne de Bellevue and two or three smaller colleges or schools teach horticulture. These courses should be taken advantage of by fruit growers' sons in particular. No matter how well experienced a young man is in the matter of growing fruits, vegetables, or ornamental plants, he can gain much valuable information at these institutions. A practical horticulturist cannot be well informed without a fair knowledge of theory as well as practice. We would advise young horticulturists to take advantage of a course in the agricultural college of his province. These courses commence in September. To secure the full advantages, immediate application should be made for admission to the secretary or president of the chosen college.

The fruit growers of the Niagara District will do well to patronize the St. Catharines Horticultural Exhibit this month in every way in their power. The more the horticultural products of the district can be advertised the better it is for the district. The exhibition is held at a time when exhibits can be made to the best advantage. Such exhibitions draw attention to the fruit possibilities of the district, they attract fruit buyers, and they help to induce people to buy land and take up fruit growing. The residents of the Niagara District should rally around this exhibition and help to make it an even greater success than its promoters expect.

We are pleased to note, by circular just received, that a short course in fruit growing is to be given this winter at the Ontario Agricultural College, Guelph. This is a move in the right direction, and one that should be welcomed by those fruit growers of Ontario who cannot afford the time to undertake a regular course of study. As Professor Hutt will be assisted by such men as Mr. Alex. McNeill, Chief, Fruit Division, Ottawa; Mr. W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa; Mr. A. E. Sherrington, President of the Cooperative Fruit Growers of Ontario; and Mr. H. S. Peart, Director of the Ontario Horticultural Experiment Station, the course should be a valuable one.

THE CANADIAN HORTICULTURIST has received some letters from fruit growers, asking us why we do not devote more space to articles dealing with the question of heading trees low. As this is a subject of much interest and importance, our readers are invited to give their views. Letters on either low heading or high heading of trees, with the reason why one is preferred more than the other, would be read with much interest by the readers of THE CANADIAN HORTICULTURIST.

### Cooperative Growers Meet

A meeting of the directors of the Cooperative Fruit Growers of Ontario was held in Toronto on August 15. Among the resolutions passed was one dealing with a means of assisting associations that require such services in the disposal of their fruit. The secretary was instructed to ask the local associations for the names of all buyers or firms who send them orders that they cannot fill. The local associations are also required, as usual, to furnish the secretary with information regarding the quantity and kinds of fruits that they have for sale, so that the same may be communicated to responsible buyers. The executive decided, also, to appoint a man or firm to act as selling agent for any associations that desire to dispose of their fruit in that way.

A resolution was passed, also, instructing the secretary to communicate with one firm in each of the following cities: Winnipeg, Brandon, Regina, Calgary, and Edmonton, with a view to making arrangements with them to receive cars or smaller consignments that the associations, for some reason or other, may desire diverted; that is, should any association ship a car to any point in the west, and circumstances arise when it is in transit that make it necessary for the original order to be cancelled, such may be sent to one of the firms mentioned who would sell same to the best advantage.

### A Novel Feature

At a meeting of the directors of the Ontario Horticultural Exhibition, held recently, it was proposed to introduce a novel feature at the exhibition next November in the form of a hanging garden, which will be suspended from the roof of Massey Hall. This garden will be lavishly decorated with flowers and, hidden in the foliage, will be singing birds and other attractive features.

Arrangements are being made with the railways for the running of half-rate excursions from all parts of the province, as was done last year. Several thousand people from out of Toronto attended the last exhibition, and it is expected that the attendance this year will be much larger. Huron County Council, as well as a number of others, have made liberal grants to encourage the making of representative exhibits of fruits from their respective counties at the next exhibition. The Ontario Agricultural College, Guelph, will have a special educational exhibit of injurious and beneficial insects. Arrangements are being made, also, for an unusually attractive musical programme.

The 10th annual convention of the Canadian Horticultural Association was held in London on August 28 and 29.

The August meeting and flower show of the Ottawa Horticultural Society was marked by distinctive features of excellence, chief of which was a lecture by Mr. Alex. McNeill, Chief of the Fruit Division, Ottawa, who in a most entertaining manner described how the usually unsightly city back-yard may be easily transformed into a bower of beauty.

The Deming Company, of Salem, Ohio, manufactures all kinds of modern spraying apparatus, pumps, nozzels and attachments for the orchard, field, vineyard and garden. It is a well-known fact that fruit growers who have bought spraying machines and sprayed regularly and intelligently have the best and finest crops of fruit. The machines manufactured by The Deming Company are easily operated and cared for because they are simple in construction, well made, and will stand lots of wear and hard work. Canadian growers who want to own a machine that will do what is expected of it should consult the advertisement on the inside back cover and write immediately to The Deming Company for further information.



## Vegetable Crops Need Rain

**T**HE general outlook for vegetable crops in Ontario is not encouraging, report the crop correspondents of the Ontario Vegetable Growers' Association. All crops have suffered for want of rain during the past few weeks, and some have received a setback from cold nights and the ravages of slugs and cut-worms. The Ottawa district is the only one that reports favorably; in that locality, large crops of cabbage and celery are expected; potatoes there will be a good crop and of excellent quality.

In general, the potato yield is expected to be only half a crop. Beets, carrots and turnips will give fair to good crops, while parsnips will be below the average. Early and medium cabbages are not plentiful, in some localities they are scarce. If rain comes, late cabbage and cauliflowers will be all right. The celery crop will not be large, and the stocks somewhat small. The onion crop will be much below average. In the Scotland district, Brant County, where onions are grown extensively, they have made rapid growth, but mildew has appeared and will materially affect the yield. Sweet corn will be fair. Melons will yield a good crop. The tomato crop will be very light. Growers probably will not grow as large an acreage of tomatoes next year.

### LAMBTON COUNTY

Sarnia.—Owing to drought, the outlook for late cabbage and cauliflowers is not so good as it was at the first of the season. Tomatoes are a good crop. Early potatoes are about a three-quarters crop. Late potatoes were badly hurt by frost, and will only be half a crop. Seed onions will be an average crop. Sweet corn is a good crop. Beets, carrots, squash

and melons are looking well, but need moisture.—W. A. Broughton.

### ESSEX COUNTY

Leamington.—Early tomatoes are all gone. The crop was small considering the acreage. They sold at 30 cts. per 11 quart basket, with large lots going at 25 cts. Some growers shipped to the large markets at 18 to 25 cts. Their net returns after express and commission charges were paid amounted at the most to 5 or 6 cts. Early potatoes are a poor crop; late may be better. Peppers are in good supply and selling at 40 cts. a basket. Musk-melons are ripening and selling at 75 cts. a basket. Rocky Fords are selling at \$1, eleven quart basket.—E. E. Adams.

### WELLAND COUNTY

Niagara Falls South.—Effect of dry weather is noticeable. Medium cabbage is scarce; late will be good if it rains. Early potatoes are small, and only half crop; late also will be half crop. Onions will be a fair crop. Late tomatoes cannot be more than half a crop. Sweet corn is scarce, and demand is good. Altogether the prospect for big crops is not encouraging.—Thos. R. Stokes.

### BRANT COUNTY

Scotland.—Cucumbers are not doing well. Turnips are looking fine. Onions have made rapid growth; mildew has appeared, and will materially affect the yield. Potatoes will yield a small crop. Cauliflowers are making a good growth, and promise a fair crop. Other vegetables are up to the average.—F. Smith.

### TORONTO DISTRICT

Potatoes are a light crop and small. Cabbages and cauliflowers are poor. Beets, carrots, parsnips, and turnips have been at a stand-

still for some time. Early celery is running to seed. Late celery will have to hurry up after the September rains to be worth taking up. If rain comes soon, the late cauliflower and cabbage will be all right. Tomatoes are a light crop and badly sun-scorched. Lettuce is light, and most of it running to seed. Beans are good and free from spots. Transplanted onions are good; seed Danvers, light. Rhubarb is in good demand.—Joseph Rush.

### HAMILTON DISTRICT

Tomatoes are coming in quite plentifully, but the yield will be only fair. Potatoes any all crops are badly in need of rain.—Jas. A. Stevens.

### HALDIMAND COUNTY

Burlington.—Prospect for late potatoes is discouraging; blight has been destructive. Late tomatoes promise only 25% of a crop unless weather conditions change. Factories are beginning to feel anxious about the pack; on the other hand, growers are talking of not planting more than half the usual acreage next year, and also of a substantial increase in contract prices. Melons, egg plants, peppers, onions, cauliflowers and all crops are suffering for rain. The onion crop will be shortened at least 25% by drought, and cauliflowers 20%.—J. A. Lindley.

### KINGSTON DISTRICT

Present indications point to a shortage in crops. Celery will be small. Late sowings of vegetables has been affected with the long continuous drouth. Potatoes are much below the average, both in size and quantity. Onions have been struck with the blight before half grown, which, of course, will result in scarcity. In fact, all vegetables sell at good prices except tomatoes, which sell at \$1 a bushel.—John Watts.

### RENFREW COUNTY

Ottawa.—Tomatoes are coming in very plentifully; the acreage is large, but only a

## THE CANADIAN PRODUCE SALES AND AGENCY CO.

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RANGEMENTS at Cheap Rates  
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## British Columbia Irrigated Fruit Lands

With Water Free

**T**HE Kettle Valley Irrigated Fruit Lands Co. are offering for sale a large acreage of their magnificent fruit lands; these have been subdivided into lots varying from 6 to 15 acres; many of these lots are along the river front and are beautifully situated. The soil is a rich sandy loam and produces the finest Apples, Small Fruits and Vegetables, all of which find a ready market at very remunerative prices in neighbouring market of the Boundary District, where there are immense mines and smelters employing a large number of men; the present payroll of this district is \$250,000 per month and the population is 10,000 and rapidly increasing. The Kettle Valley is about 30 miles east of the Okanagan Valley. The district is well served by railways, which will be shortly considerably extended. The irrigated lands are offered at from \$100 to \$150 per acre and there is NO RENT to pay for the water, of which there is a very abundant supply.

Write for Pamphlets

**W. O. Wright, Managing Director, Midway, B.C.**

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fair crop. Corn is fairly good. Cabbage is plentiful and the winter crop is better and larger than was expected. There is a large crop of celery. Beets, carrots and turnips are a good crop. Large parsnips had poor germination and crop is light. Onion crop is good and fairly large. Early cauliflowers were a failure, and late ones are not doing as well as they should. Potatoes are a good crop and of excellent quality.—T. Mockett.

PEEL COUNTY

Clarkson.—All vegetables are suffering from want of rain. Early potatoes are small and a light crop; late kinds are looking fairly well. Early corn is coming in freely; later varieties are not filling up well, and will not mature unless rain comes very soon. Onions are looking well. Pickling cucumbers look well and promise a good crop. Early tomatoes are a fair crop; late ones are looking well, but dry weather may cause them to rot. They are commencing to do that now. Melons are looking well, and may turn out a good crop, though late.—W. G. Horne.

Items of Interest

There will be two fruit canning establishments established in the Okanagan Valley, B.C., this year, one at Peachland and the other at Kelowna.

The Society for Horticultural Science will hold its fifth annual meeting at the Jamestown Exposition in connection with the 31st biennial meeting of the American Pomological Society, Sept. 24, 25, 26, 1907.

In various sections of southwestern Ontario, much was done to crops in late July and early August by the variegated cut worm, *Peridroma saucia*. The biological department of the Ontario Agricultural College, Guelph, investigated the trouble and suggested remedies. In another issue, a description of the pest will be published, with remedies.

The London, Hamilton and Toronto branches of the Ontario Vegetable Growers' Association held successful picnics during August. The president of the Ontario Association, W. J. Bushell, of Kingston, attended the picnics of the Hamilton and Toronto branches. All three picnics were favored by fine weather and large crowds.

At an orchard meeting held recently at Mr. John Robertson's, Inkerman, P.E.I., the question was asked, "Shall we use fillers in orchard planting?" Mr. A. McNeill, chief of the Fruit Division, Ottawa, replied: "Do not use fillers unless you are very scarce of land." This is a question of general interest, upon which the readers of THE CANADIAN HORTICULTURIST are requested to contribute letters for publication.

**The Kamloops District.**—Fruit is not at present produced in large quantities in the Kamloops District. There have been, however, many acres planted to fruit trees during the past few years which will soon be producing orchards. If we may judge from the productiveness of the old orchards in this district and the quality of fruit produced, Kamloops will soon be shipping hundreds of cars of fruit of the highest quality.—A. E. Meighen.

Read our popular premium offer on page vi., and secure free one Maynard plum tree, worth \$1.50.

"I have been using Absorbine for the last three months and have great faith in it. I first tried it on a colt that got his leg cut in a barb wire fence. It healed up, but began to swell. I applied Absorbine, and it removed the swelling in twelve days," writes Mr. F. O'Neill, Wolsley, Sask. Absorbine is a pleasant remedy to use. It does not blister or remove the hair and the horse can be used during treatment. Read the advertisement in another column.

Grants to Horticultural Societies

**T**HIS year, for the first time, the horticultural societies in Ontario have received their grants under the new act governing horticultural societies. In the past the societies received practically fixed grants, irrespective of the value of the work they were doing. This year the grant has been distributed on the following basis as described in the act:

An amount not exceeding \$8,000 shall be subject to division among the horticultural societies of the Province as follows:

(a) \$2,400 shall be subject to division among all the societies in proportion to the total

number of members in the preceding year.

(b) \$4,800 shall be subject to division among all the societies in proportion to the total amount expended by each society during the preceding year for horticultural purposes, as shown by their sworn statement.

(c) In addition to the above, \$800 shall be subject to division among the horticultural societies in cities having a population of 30,000 or over, in proportion to the number of members in the current year.

Divided upon the foregoing basis the grants to the societies this year have been as follows:

	No. of Members.	Grant on Membership.	Grant on Expenditure.	Total Grant.	Approximate Grant Received under the Old Act.
Barrie.....	65	\$25.00	\$35.00	\$ 60.00	\$ 71.00
Belleville.....	116	44.00	89.00	133.00	140.00
Bowmanville.....	91	34.00	71.00	105.00	82.00
Brampton.....	119	45.00	88.00	133.00	123.00
Brantford.....	53	20.00	90.00	110.00	138.00
Cardinal.....	68	26.00	70.00	96.00	140.00
Cayuga.....	102	39.00	56.00	95.00	104.00
Clifford.....	143	54.00	84.00	138.00	75.00
Clinton.....	105	40.00	79.00	119.00	78.00
Cobourg.....	82	31.00	70.00	101.00	140.00
Collingwood.....	140	53.00	73.00	126.00	71.00
Dunnville.....	100	38.00	46.00	84.00	New
Durham.....	57	22.00	50.00	72.00	59.00
Elmira.....	55	21.00	35.00	56.00	50.00
Elora.....	55	21.00	38.00	59.00	41.00
Fergus.....	63	23.00	47.00	70.00	42.00
Galt.....	104	39.00	94.00	133.00	91.00
Goderich.....	41	16.00	47.00	63.00	78.00
Grimsby.....	61	23.00	23.00	46.00	44.00
Guelph.....	93	35.00	94.00	129.00	105.00
Hamilton.....	171	64.00	147.00	365.00	350.00
Hespeler.....	80	30.00	70.00	100.00	70.00
Kincardine.....	135	51.00	72.00	123.00	61.00
Kingston.....	184	69.00	120.00	189.00	140.00
Lindsay.....	82	31.00	50.00	81.00	73.00
London.....	168	63.00	130.00	388.00	140.00
Midland.....	75	28.00	48.00	76.00	52.00
Millbrook.....	53	20.00	44.00	64.00	68.00
Mitchell.....	110	41.00	56.00	97.00	60.00
Napanee.....	57	21.00	79.00	100.00	140.00
Newmarket.....	67	25.00	80.00	105.00	61.00
Niagara Falls.....	58	22.00	37.00	59.00	52.00
Oakville.....	70	26.00	52.00	78.00	59.00
Orangeville.....	102	38.00	61.00	99.00	119.00
Orillia.....	76	29.00	63.00	92.00	60.00
Ottawa.....	273	103.00	250.00	690.00	350.00
Owen Sound.....	90	34.00	76.00	110.00	37.00
Paisley.....	116	44.00	65.00	109.00	48.00
Perth.....	127	48.00	106.00	154.00	123.00
Peterboro.....	166	62.00	71.00	133.00	115.00
Picton.....	97	37.00	47.00	84.00	78.00
Port Dover.....	60	23.00	61.00	84.00	61.00
Port Elgin.....	55	21.00	30.00	51.00	42.00
Port Hope.....	97	36.00	58.00	94.00	92.00
Preston.....	99	37.00	105.00	142.00	102.00
St. Catharines.....	287	108.00	304.00	412.00	45.00
St. Thomas.....	84	31.00	45.00	76.00	New
Seaforth.....	142	54.00	111.00	165.00	61.00
Simcoe.....	75	28.00	65.00	93.00	68.00
Smith's Falls.....	140	53.00	93.00	146.00	99.00
Springfield.....	126	48.00	52.00	100.00	62.00
Stirling.....	52	19.00	52.00	71.00	76.00
Stratford.....	161	61.00	105.00	166.00	93.00
Strathroy.....	140	53.00	72.00	125.00	84.00
Thornbury.....	56	21.00	24.00	45.00	31.00
Tillsonburg.....	65	24.00	34.00	58.00	48.00
Toronto.....	118	44.00	159.00	317.00	140.00
Vankleek Hill.....	57	22.00	28.00	50.00	New
Walkerton.....	60	23.00	52.00	75.00	85.00
Waterloo.....	152	57.00	101.00	158.00	123.00
Windsor.....	179	67.00	177.00	244.00	105.00
Woodstock.....	93	35.00	69.00	104.00	61.00
Colborne... Special Grant.....	6,368 181	\$2,400.00	\$4,800.00	\$8,000.00 \$140.00	\$800.00



Of the special grant to the four city societies Ottawa received \$337, London \$195, Hamilton \$154, and Toronto \$114. These sums are included in the total grant as given in the table. As a result of the new act six societies this year went out of existence. These societies, and the grants (approximately) that they received last year, are as follows: Aylmer \$74, Chesley \$63, Deseronto \$100, Lanark \$81, Renfrew \$140, Tara \$32, total grants, \$490. Most of these societies, including Aylmer, Lanark and Renfrew, were in the habit of turning their funds to their local agricultural society.

Three new societies have been formed during the past year, including Dunnville, St. Thomas and Vankleek Hill, whose grants this year amount to \$210.

It will be noticed that most of the societies receive considerable increases in their grants.

St. Catharines society jumps from a grant of \$45 to \$412, and not including the special \$800 grant to the city societies, it draws a larger grant than any other society. The four city societies, excepting Hamilton, get decided increases in their grants, the grant to the Ottawa society having been almost doubled, and to the London society, considerably more than doubled. The London society makes a splendid showing. Owen Sound, Kincardine, Seaforth and Windsor have their grants more than doubled. It is expected that at the next convention of the Ontario Horticultural Association, which will be held in Toronto at the time of the Ontario Horticultural Exhibition next November, representatives will be present from the societies that make the best showing and will give an account of the methods of work followed by their societies.

crop, and the late free-stone varieties will be scarce. Pears are only about one-quarter crop. Plums of the fancy varieties are scarce, but Lombards will be a good crop, providing they do not drop before harvesting. Thimbleberries are only a fair crop, and unless we get rain soon, the yield will be small. Muskmelons are doing well, and the yield will be large.—Jas. A. Stevens.

#### PEEL COUNTY, ONT.

Clarkson.—The dry weather is having a bad effect on all fruits. Raspberry crop did not come up to expectations; cherries have been a fair crop; pears will be medium; plums, medium; late and early apples promise a fair crop and will be clean and of good quality. Rain is badly needed just now. Owing to the drought, Lawton berries will yield a fair crop.—W. G. Horne.

#### CHATEAUGUAY COUNTY, QUE.

Chateauguay Basin.—Small fruits were damaged during the winter, and apples, on the whole, will be only half a crop. Some growers have a bumper crop. Buyers are holding off.—T. Reid.

#### HUNTINGDON COUNTY, QUE.

Maritana.—Apple crop is looking fine, although two weeks later than usual. For years, the Flemish Beauty pear has been light and poor in quality; this year, however, it is clean and plump, and the trees are heavily loaded. Buyers have not quoted any prices as yet.—Wm. G. Parham.

#### CHARLOTTE COUNTY, N.B.

St. Andrews.—Apples will be a medium crop this year. The early varieties are small and backward, and the later varieties scarce. Small fruits are scarce. Apples are bringing \$2 to \$3 a barrel.—Jules S. Thebaud.

#### QUEENS COUNTY, P.E.I.

Long River.—The prospects for an apple crop are not favorable. The crop will be light and none will be exported. On the other hand, it is altogether likely that some will have to be imported to fill the local demand. Plums are a full crop and free from pests; cherries, poor; small fruits look excellent and will bear heavily.—John Johnstone.

#### ANNAPOLIS COUNTY, N.S.

Bridgetown.—The apple crop will not be more than an average one. Nonpareils are grown quite extensively, but will be a light crop. No prices have been offered as yet. The value of spraying has been demonstrated in this section by the good quality of the fruit in orchards that were sprayed.—F. H. Johnson.

**We Want Names.**—We would like to have each subscriber to THE CANADIAN HORTICULTURIST forward us the names of a number of their friends who are interested in horticulture. This will not greatly inconvenience the readers of THE HORTICULTURIST, and will be appreciated by us. It will help us to introduce THE HORTICULTURIST to your friends.

## Fruit Crops and the Prospects

**P**RESENT indications point to an apple crop in Canada much below early predictions. The prospect has declined some. The yield of early varieties is much below the average. The demand is good, as in many districts early and fall apples are scarce. An average crop of winter apples is expected with quality good.

So far the orchards, with some exceptions, have been remarkably free of pests. Growers are confident of securing good prices this coming season. The fact that such apples as Maiden's Blush are bringing in the United States from \$3 to \$6 a barrel, and several other varieties from \$3 to \$4, would indicate that Canadian apples should bring good prices. Several of the Cooperative Fruit Growers' Association of Ontario have received enquiries for cars of apples for fall delivery, which also points to good prices in general. A letter recently received from the United States, states that they will have to look to Canada for their supply of apples this coming season. All these things point to a favorable season for our producers. The following reports from crop correspondents of THE CANADIAN HORTICULTURIST state the situation in the various centres:

#### VALE AND CARIBOO DISTRICT, B.C.

Lillooet.—Cherry crop was small; berry, very good; peach, a total failure; pear, very good; and apples, plums, and crabapple will be a good crop.—Darwin.

Peachland.—Prospects for an all-round crop of fruit are good. Frequent showers, together with irrigation schemes, have done wonders. Peaches are bringing \$1.25 to \$1.50 a 20-pound box, and apples, \$1.25 to \$1.50 a 40-pound box, f.o.b.—Jas. R. Aitkens.

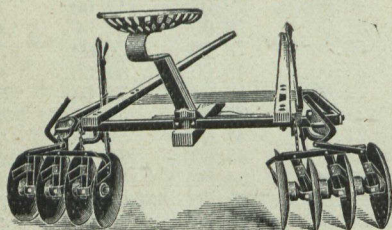
#### ESSEX COUNTY, ONT.

Leamington.—Fruit is scarce, being killed in May last. Raspberries are now gone. They brought \$3 to \$3.50 a 24-box crate. Blackberries were nearly all killed last October, and are scarce now, selling at \$3.50 a crate. Apples, pear, plums and peaches will have to be brought in to supply the local trade.—E. E. Adams.

#### WENTWORTH COUNTY, ONT.

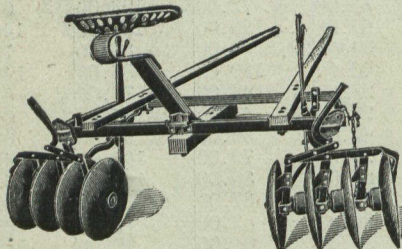
Hamilton.—The fruit crop is less than was at first anticipated. Grapes promise an exceptionally heavy yield, but all others will be a failure. Peaches will not be one-quarter of a

### BISSELL'S



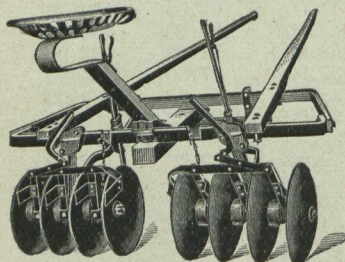
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It will pay any man to investigate the "Bissell" Harrows before buying. With us you get what you want. Some other places you take what they have. We save you money and give our customers the best satisfaction. It costs some folks a lot of money to find this out.

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## NOTES FROM THE PROVINCES

By our Regular Correspondents and Others

### Nova Scotia

Wm. Sangster, Falmouth

The apple crop is medium. Some orchards are a full crop, but trees that bore heavily last year have very few on this. Spys are a full crop in every orchard. Apples promise to be extra good, free from spot, and large.

Caterpillars are just as plentiful as last year, but cankerworms have made their appearance for the first time. As soon as noticed, the farmers gave an extra spraying and we hope it will not be seen another year. Strawberries were a small crop, but raspberries and blackberries a full crop.

Up to the present time there have not been any buyers in this locality. Mr. Howard Bligh has visited several orchards, but has not made any mention of prices. Advices received by me from London would cause me to think that Nova Scotia apples will be in good demand and that good prices will be obtained for clean, well-packed fruit.

### Quebec

W. Saxby Blair, Macdonald College

Judging from what I have seen of orchards in the locality around Macdonald College, I would place the crop as light for early apples and medium for fall and early winter. The Transparents are fair; Duchess, light to medium,

Red Astrachan, light; Fameuse, medium; and small for this season of the year; St. Lawrence, light; Alexander, medium; Wealthy, light to medium; Tolman, good; and Ben Davis, fair.

Pears are grown very little. Flemish Beauty, the one that does best, is carrying a medium crop. Plums generally are light. Indications are that good early apples will command a good price. Apples on the whole are small, but quite free from scab. Transparents at this date, Aug. 14, are just about ready for market.

### Prince Edward Island

Rev. Father Burke, Alberton

Whilst the small fruits, *i.e.*, the gooseberries and currants, are now ripe and a splendid crop; indeed, the strawberry return, because of all the plants lost last season, was not large. The abundant moisture favored the plantations that were not killed out, however, and our growers have made well out of what they were able to market. We have the late July market pretty well to ourselves, and as we close the strawberry circuit, there is no limit to our possibilities as to sales. Raspberries, wild or cultivated, are a fair crop, and now in the market.

The apple situation is not overpromising. We expected a big crop, but somehow or other it has not materialized. Some varieties are well loaded; others, scant. There were few, if

any, frosts in the time of bloom of the late varieties; still, after an abundant showing of flowers there is very little late fruit. The whole result in apples, early and late, will be below a medium crop.

There is an immense growth of wood for one season and not many insect pests. The trees should get a grand push forward and be ready to do good work next year.

Mr. McNeill finished his series of meetings. He found many splendid orchards and advised islanders to go heavily into fruit-raising. He also made a propaganda of cooperation with success.

### Montreal

The berry handlers here seem to like the 36-quart crates made at Oakville, with iron clip fastener at sides. They land fruit in good condition.

It is not an uncommon thing here to see 200 piles of bananas, 10 bunches in each pile—2,000 bunches, on the floor of the Fruit Auction Co., each pile numbered and ready for auction. It is a pretty sight, yellow and green mingled through each pile.—E.H.W.

### Manitoba

Jas. Murray, Supt. Expt. Farm, Brandon

While the fruit crop of this Province is of minor importance, we have, this year, an unusually heavy crop of wild fruit, including wild plums, Saskatoon berries, raspberries and strawberries.

On the Experimental Farm, and on other farms where these fruits are grown, cross-bred apples and crabapples are fruiting heavily. On this farm we have many varieties this year that have not previously borne fruit, and in all probability we will have a few varieties of good

## Fruit Trees

The Helderleigh Nurseries have long been famed for the excellence of their Fruit Trees. The stock is of undoubted quality and the trees are admirably grown for fall or spring planting.

## Vines

A splendid lot of well-ripened canes in one and two year olds.

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An immense stock of all the hardy varieties. Field grown stock with masses of fibre.

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quality. None of these fruits, however, enter in commerce, as the quantity produced is very limited. All the small fruits such as currants, raspberries and strawberries are very much better crops than they have been for years, as we have had not late frosts interfering with the fruit.

### The Okanagan Valley

H. Gordon, Vernon, B.C.

A considerable area of strawberries came into bearing this year for the first time. The crop was good, but probably over 50 per cent. of it was absorbed by the local demand. The price for the best was \$3.75 per crate of 24 baskets. The favorite variety is Magoon, prized for its good shipping quality. No growers appear to have planted late strawberries to succeed Magoon; there is an opening for late varieties, especially at present when the demand exceeds the supply greatly. A variety more suitable for the local trade than Magoon might easily be found; the qualities which adapt a strawberry for shipping are rather a detriment than an advantage for local sale. At present, however, a strawberry is merely a strawberry to the western merchant; quality, except in regard to size, goes for nothing. With the increased supply likely to be seen in the next few years, it is probable that merchants will be led to discriminate and offer higher prices for varieties of higher general quality than Magoon. A glance at the display in the local stores reveals the fact that much has yet to be learnt here in regard to picking the fruit, but taking it all round the strawberry harvest has been creditable to the growers.

The cherry crop was much below the average, and a very severe thunderstorm accompanied by hail did severe damage in some localities. It is feared that many orchards have been ruined for the season, but the storm was irregular in its course, and it is to be hoped

that time will prove that the many escaped while the few were injured. Such a storm is most unusual in this valley. As a general rule the reports from the apple orchards predict an excellent crop, whilst it is probable that the peach crop will still further enhance the reputation of the southern portion of this valley.

The Farmers' Institute recently advertised an evening lecture in Vernon, "On Fruit," by a gentleman from Victoria. No report of the meeting has appeared in the local press up to the present, and the writer has been unable to find anyone who attended. It is possible that the indefinite title of the address failed to attract those for whom it was designed; it is in any case certain that the fruit growers would attend such meetings in large numbers if they could anticipate with some degree of certainty attractive and instructive meetings addressed by persons entitled to speak with authority.

The need for an experimental station with a staff of such experts is being felt more and more. Meanwhile, discussions on important or topical subjects might be held with advantage; but neither the Farmers' Institute nor the local fruit growers' association, which exists only in name, makes any such attempt to assist its members.

### British Columbia

C. P. Metcalfe, Hammond

The long drought has at last been broken. Considerable rain has fallen, helping along the blackberries, fall and winter apples, pears and prunes. Plums dropped heavily before the rain came, and are now showing considerable plum rot, *Monilia fructigena*. Of the early apples, Yellow Transparents and Duchess were a very light crop. Red Astrachan bore a fair crop of clean fruit, though somewhat deficient in color. Gravensteins are showing up well, probably 80 to 90% of them will be No. 1. Cherries bore a light crop, but of excellent quality, the season

being conspicuous by the absence of rot. Crab-apples also are a good crop; Transcendent, 100%; Hyslop, 80%; Florence and Martha, 75%.

Prospects for another year in strawberries and raspberries are fairly good. Plants, canes, bushes, and so forth, seem to be recovering quickly from the unusually dry season, and are making rapid growth.

Special attention should now be given to the orchard and all cultivation should be gradually discontinued. Cover crops can now be sown to take up the surplus moisture and to check the growth of the trees. Trees are liable to grow too late in the fall in this Province, especially on the lower mainland, where we sometimes have a considerable rainfall during the month of September.

**The Packer Safety Fruit Wrapper.**—Buntin, Gillies & Co., Hamilton, are offering for sale the best fruit wrapper that has been put on the market. This paper is sold in four different sizes, and at prices that put it within reach of all fruit growers. An excellent factor about the paper is that it is finished smooth on one side and rough on the other, the rough side goes next the fruit, and is supposed to absorb any moisture on the fruit while the smooth side, being hard finish, resists the moisture from the outside and keeps the fruit dry. The light crops this year will probably induce the wrapping of fine specimens more than usual and should create a large demand for fruit wrapping paper. For full particulars see advertisement in this issue.

The Herbert is the leading variety of red raspberries. Fruit growers who have tested it under normal conditions have found it the variety most productive and profitable. Plants derived from the original stock are to be had at the Ottawa Nurseries. Read the advertisement on another page.

## A COURSE FOR YOUR BOY AT THE AGRICULTURAL COLLEGE

GUELPH, NEED NOT EXCEED \$100 PER YEAR

College  
Opens  
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A FEW OF "OUR" BOYS

WE HAVE THE BOY IN THE WINTER—YOU HAVE HIM AT HOME ON YOUR OWN FARM IN THE SUMMER. MAKE APPLICATION AT ONCE AS ACCOMMODATION IS LIMITED

Mention The Canadian Horticulturist when writing

G. C. CREELMAN, B.S.A., M.S., President.



## Some Recent Bulletins on Orchard Pests

Reviewed by Prof. Wm. Lochhead, Macdonald College

**I**NSECT and Fungus Enemies of the Grape east of the Rocky Mountains," by Quaintance and Shear (Farmers' Bulletin 284 U.S. Dept. of Agric.)—This valuable bulletin discusses such enemies of the grape as the root-worm, the berry-moth, the curculio, the leaf-hopper, the leaf-folder, the flea-beetle, the rose-chaffer, and the black-rot, the downy and the powdery mildews, the anthracnose, the ripe-rot, the bitter-rot, the white-rot, the crown-gall, the root-rot, and "shelling." Of these, Canadian vineyards are free from the root-worm, the curculio, and perhaps the crown-gall and the root-rots. The treatments recommended for these enemies of the grape are similar to those given in the O.A.C. and the C.E.F. bulletins. Regarding the cause of "shelling" of grapes, which is sometimes serious in the Niagara district, nothing definite is given. The disease may be due to an imperfectly known fungus operating in improperly pruned and trained vines. The bulletin is well illustrated, and the life-histories of the insects and fungi are concisely stated.

### SOMETHING ABOUT SOW-BUGS

"Notes on the Economic Importance of Sow-bugs," by W. D. Pierce (Bull. 64, Pt. II, Bureau of Entomology, U.S. Dept. of Agric.)—The sow-bug or "pill-bug" is a very common creature in dark, damp places, and in wet years may do injury to garden crops, flower gardens, vines, etc. On the other hand, it is a useful scavenger, but there is a danger that disease may be transmitted on account of this scavenger habit. "Cleanliness is probably the best preventive against sowbugs' inroads, arsenical compounds the best out-door remedies, and carbon bisulphide the best in-door remedy." Much interesting information is furnished regarding the habits and life-histories of three species, *Arma-*

*dillidium vulgare*, *Porcellio levis*, and *Metoponorthus pruinosus*, of which but little was known.

### THE CODLING MOTH

"Spraying for the Codling Moth," by J. W. Lloyd (Bull. 114, Illinois Agric. Exp. Station).—This is also a live problem in Canadian orchards, and the results of reliable experiments along the line of prevention of wormy apples are always welcome. The Illinois experimenters found that it pays to spray carefully and thoroughly with Paris green-bordeaux twice, at least, for the first brood, the first application being given when the petals have fallen, and the second a week or ten days later. A large percentage of the fruit will be saved, and the injury done by the second brood much lessened. Moreover, there is a decided advantage in late spraying for the control of the second brood. If but one application be made it should be done in early August, as this spraying will catch the majority of the worms before they burrow far into the apple. When it is remembered, however, that the worms of the second brood continue to appear for a period of four or five weeks, the wisdom of several sprayings becomes apparent. Some of our apple growers now make these applications for the control of the "scab."

### THE SAN JOSE SCALE

"Commerical Miscible Oils for Treatment of the San Jose Scale," by Messrs. Parrot, Hodgkiss and Serrine (Bull. 281, N.Y. Agric. Exp. St.)—The Geneva experimenters found that applications of proprietary miscible oils in the proportion of 1 to 20 or 25 of water, failed to give uniform results, and that when a stronger solution was used, such as 1 to 10 or 15, it did not give as good results as the boiled lime-sulphur wash and was much more costly. These results co-

incide with those from Ohio, and with those obtained by the Ontario Department of Agriculture, under the direction of the writer, two years ago.

### APPLE AND PEAR MITES

"The Apple and Pear Mites," by Messrs Parrot, Hodgkiss and Schoene (Bull. 283, N.Y. Agric. Exp. St.)—This bulletin represents an earnest study of the mites that thrive upon the apple and pear. Five species were observed and described, the leaf blister mite, *Eriophyes pyri*, being the most abundant. This blister-mite is frequently abundant on young stock in some of our Ontario nurseries. The best treatment is to prune carefully, and to spray during the late fall or early spring with kerosene emulsion diluted with five parts of water, with miscible oils diluted with 15 to 20 parts of water, or with sulphur wash.

On another page can be seen the advertisement of the new Gulline Folding Fruit Box. The illustration shows the box packed ready for shipment as well as folded flat for transportation to the packer. All parts are pivotally and permanently attached together, there are no nails to drive or take out, the four screws sent with each box serve to complete it for shipment. It is cheap and exceedingly strong, the sides and ends are recessed into the frame pieces, and the box is made of hardwood. The frames, which project all round the body of the box, serve as handles by which to pick it up; they also form an air space round the contents, regardless of how closely the boxes may be placed together for transportation. The surfaces are all sufficiently flexible to allow for the usual shrinkage of the fruit in transit.

Have you a Maynard plum tree? If not, let us send you one free as described in our announcement on another page of this issue.

# Dominion Line

## ROYAL MAIL STEAMSHIPS

"Alberta," new steamer, 14,000 tons, building  
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### MONTREAL TO LIVERPOOL

S.S. "SOUTHWARK" . . . . . Sept. 7th  
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S.S. "OTTAWA" . . . . . " 21st  
S.S. "DOMINION" . . . . . " 28th  
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Above steamers all carry passengers.

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(Avonmouth Dock)

S.S. "ENGLISHMAN" . . . . . Sept. 14th  
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Favorite Steamers for all kinds of perishable cargo having fan ventilation, cold storage, and cool air chamber.

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### Preservation of Fresh Fruit

Considerable interest is being taken in Melbourne over the invention of a local engineer, who claims to have perfected an entirely new and inexpensive method for the preservation for a long period of fruit and other perishable produce, reports Mr. D. H. Ross, Canadian Commercial Agent in Australasia. Very satisfactory experiments have been conducted for nearly a year, and as a result patents are now in contemplation for all countries interested in the storage and export of fresh fruit. The inventor states that the deterioration in fruit is largely due to evaporation, and he has devised a simple process by which the evaporation is greatly retarded. The experiments have been conducted in a chamber formed of insulated walls and roof, the special feature of which is a ventilator that saturates the air which passes through, thus giving such a humid atmosphere that the fruit cannot throw off moisture.

Fruit stored under such conditions for over

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Advertisements under this heading inserted at rate of one cent a word for each insertion, each figure, sign or single letter to count as one word, minimum cost, 25 cents, strictly cash in advance.

**PANSIES.**—100,000 ready after September 15th. Four Dollars per 1,000. T. M. Wood, Baltimore, Ont.

**WANTED.**—Persons to grow mushrooms for us at home; waste space in cellar, garden or farm can be made to yield \$15 to \$25 per week; send stamp for illustrated booklet and full particulars. Montreal Supply Co., Montreal.

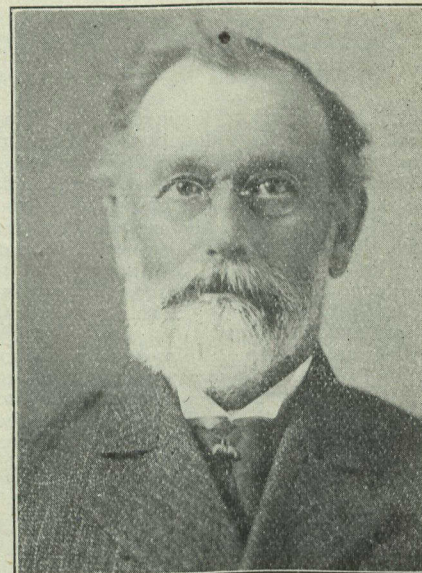
six months opened up in splendid condition. The merits claimed for the invention are its reliability, insignificant expense and simple operation, for no costly refrigerating machinery has to be provided. The process has been strongly recommended by a responsible officer in the Victorian Government's Department of Agriculture. There seems little reason to doubt that much more will be heard of this invention in the near future. Developments will be carefully watched and commented upon in a future report from this Canadian commercial agency.

### Well-known Gardener

A man well-known to the vegetable trade of Ontario is Mr. T. Wistow, of London, the subject of the accompanying engraving. Mr. Wistow came to Canada from Sheffield, Eng., in 1882. For some time he worked at the trade of a steel-worker, but for the last 23 years he has been a market gardener and florist.

Being a firm believer in organization of growers Mr. Wistow has been a member of the Gardeners' and Florists' Associations of London since its inception. For seven years he was its secretary-treasurer, and for the last ten years (with his colleague, Mr. T. Ball) has represented the association on the agricultural committee of the western fair. When the association decided to affiliate with the Ontario Vegetable Growers' Association last spring, Mr. Wistow expressed his intention of resigning office, but was urgently requested to take the position of secretary-treasurer for the new organization. He was elected also a director of the Ontario Vegetable Growers' Association and its vice-president.

At his home in London East, Mr. Wistow is working 10 acres of garden land. Being a believer in securing quality before quantity, he grows a general crop. In his own words, "I do not care much for the specialty business.



Mr. T. Wistow

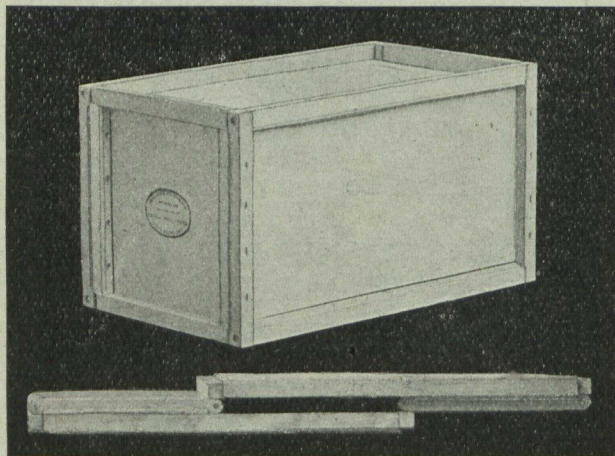
If vegetables are grown on a large scale, there is a tendency to lower the price of the article produced."

Would some of your western readers kindly tell the prospects for market gardening in Vancouver or Victoria, B.C? Reply through the columns of THE CANADIAN HORTICULTURIST.—W.A.B.

I was much pleased with a sample copy of THE CANADIAN HORTICULTURIST received a day or two ago. If I had known of your paper, I should have subscribed before.—J. E. Houghton, Crawford Bay, B.C.

# GULLINE'S FOLDING FRUIT BOX

The strongest, lightest, and most economic fruit box ever offered to fruit growers



In placing Gulline's Folding Fruit Box on the market we beg to call your attention to its special features:

The illustration shows the box packed ready for shipment as well as folded flat for transportation to the shipper. All parts are pivotally and permanently attached together, there are no nails to drive or take out; the four screws we send with each box serve to complete it for shipment. It is cheap and exceedingly strong, the sides and ends are recessed into the frame pieces, and the box is made of hardwood entirely. The frames, which project all round the body of the box, serve as handles by which to pick it up; they also form an air space round the contents, regardless of how closely the boxes may be placed together for transportation.

The surfaces are all sufficiently flexible to allow for the usual shrinkage of the fruit in transit.

The economy to be effected in storage room, and the convenience in handling them in the orchard and packing room is self-evident. Special machinery has been installed for the rapid production of Gulline Boxes. Orders should be forwarded immediately as the production for this season is limited to a few hundred thousand. We will be specially pleased to send a sample box and quotations to the cooperative associations. See our box and know our prices and you will not buy the old-fashioned, cumbersome kind.

THE FOLDING BOX CO., Limited, OWEN SOUND, ONTARIO

Mention THE CANADIAN HORTICULTURIST when writing



## Fruit Growing in Prince Edward Island

A. McNeill, Chief, Fruit Division, Ottawa

THE Department of Agriculture for the Province of Prince Edward Island, with the cooperation of the Provincial Fruit Growers' Association, arranged a series of orchard meetings which were duly held during the month of July. The Dominion Department of Agriculture responded to an invitation from Mr. Reid, Commissioner of Agriculture, and I was deputed to attend these meetings.

The climatic conditions of the Island are such as to render it somewhat hazardous to attempt to grow the popular winter varieties such as the Spy, Baldwin and Greening. These varieties are indeed grown in certain protected districts, but cannot be recommended for general culture. The high winds prevailing there are another factor which demands special attention. The excessive snowfall has to be reckoned with, as also has the very low temperatures which might be expected from its northerly situation. Notwithstanding all these circumstances, the Island produces most excellent fruit of at least a few varieties. I have seen their exhibit of fruit on three or four occasions, and can say without reservation that the finest box of apples I ever saw grown and packed in the Dominion of Canada, was a box of Baxters grown on Prince Edward Island and exhibited at the annual meeting of the provincial association in 1905. The Gravensteins exhibited at the same time and upon other occasions, show that this variety reaches perfection here. Unfortunately the tree is no healthier on the Island than it is in Nova Scotia, and consequently cannot be recommended for general planting unless it is carefully top-grafted upon hardy stock. The Duchess, Wealthy, Alexander, Wolf River, McIntosh Red, Pewaukee, Baxter, Stark and Ben

Davis are the varieties that can be confidently recommended at the present time. These are quite sufficient to form the basis of a splendid apple trade, and if the Island can grow no others—which is by no means the case—it might yet become famous as an apple-growing district.

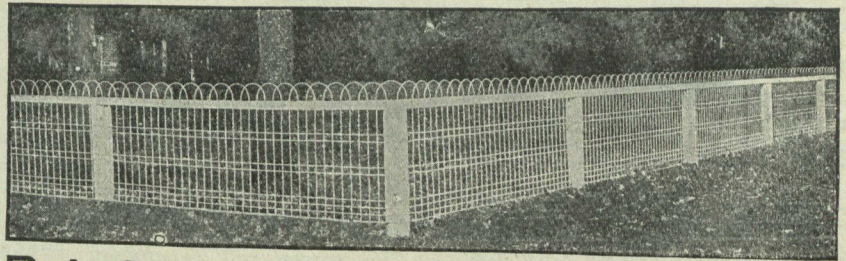
The Islanders are making a few mistakes in cultural methods. They allow grass to grow in the orchard and they start the heads of the trees too high. [NOTE.—These points are dealt with more at length in the editorial columns of this issue.—EDITOR.]

Varieties, of course, are a serious matter. The people naturally like varieties that have been successful in other provinces, and will not be satisfied unless they can grow everything that

has been grown everywhere else. It will take more education to persuade them that it would be a good thing if the commercial orchards of the whole Island were confined to three or four varieties.

Of course they have been experimenting with "fillers." To accentuate the evil, the standard trees are planted much too close. I have added my testimony to the evils of close planting, as well as to the very grave mistake of using "fillers" at all where land is cheap.

Closely connected with this subject of the use of ground comes the question of fertilizing. The prevailing opinion on the Island is that a tree cannot be grown without the use of a large quantity of either commercial or barnyard manure. Here again the popular notion is a mistake. I would undertake to plant an orchard on good Prince Edward Island soil, and grow the orchard, at least till it begins to bear, say to the age of five or six years, with the use



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The Acme style you see above costs only from 16 cents a linear foot. Handsome and durable for lawns, parks, cemeteries, etc. Any height or length. Gates to match from \$2.25. Write for catalog, or inspect this ideal fence. From us direct or any Page dealer.

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Recommended by Government Inspectors  
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8x 9....	10c per ream (480 sheets)
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of little or no fertilizer of any kind. To do this the whole ground would, of necessity, after the first two or three years, have to be given up to the trees. Of course, the better way would be to keep the space about the tree the first year clean for three or four feet, and increasing this

distance at least a foot a year until the trees occupied the whole ground. During that interval, low, late-growing crops could be grown between the trees, supplying sufficient fertilizer to make up for the plant food taken out by these crops.

The last great bugbear was the possibility of over-stocking the market. It was difficult to persuade the growers that for years to come they could not supply even the near-by towns of Nova Scotia, and when the needs of these had been met there was still the great Northwest and the markets of Great Britain ready and willing to take all they could grow.

The transportation facilities on the Island, while not all that could be desired, are quite equal, all things considered, to the rest of the Dominion, and will be very greatly improved as the fruit growers unite to demand better equipment and lower freight rates.

### Ontario Hort. Exhibition

Great arrangements are being made for the next Ontario Horticultural Exhibition. The directors have decided to hold the exhibition this year in Massey Hall, instead of in the St. Lawrence Arena, as was proposed at first, it having been found that the expense of preparing the arena for the exhibition was so great as to be impracticable.

A special effort will be made to add some striking features at the next exhibition. One of these may include a hanging garden suspended from the roof of Massey Hall, and hanging in front of the gallery and over the main floor. This garden will be covered with beautiful orchids and other flowers and would include singing birds, and possibly a fountain, with other interesting features.

The county of Huron has made a grant of \$75 to encourage an exhibit from that county and the Goderich Horticultural Society is anxious to arrange a large exhibit. Attempts are being made whereby the senior classes of the public schools of Toronto will be allowed to visit the exhibition as a class, accompanied by their teachers, during the mornings of the exhibition, free of cost.

The musical features this year will include the city bands of Toronto and of Hamilton for the evenings, while first-class orchestras will be engaged for the afternoons during the week. It is also probable that first-class lady and gentlemen singers will be engaged for the evenings at least. This, it is believed, will make a very

attractive musical program. A great effort will be made to secure Sir Wilfrid Laurier to open the exhibition. The prize list is ready for distribution. Copies may be secured by application to the secretary, H. B. Cowan, Toronto, Ont.

### Items of Interest

The Tillsonburg Horticultural Society has been very busy this season, as it undertook the restoration and beautifying of the Washington Grand Avenue Park, which it is making permanent with shrubs, perennials, bulbs and so forth. The society distributed about 500 packages of flower seeds to the school children.

The fruit prize list for the Ontario Horticultural Exhibition is practically the same as that of last year. Entries close on November 5. All fruit must be delivered at Massey Hall or the Toronto Cold Storage Co. on or before November 12. Write for a prize list and particulars to P. W. Hodgetts, Parliament Buildings, Toronto, Ont.

We have received a letter from Mr. A. C. Deayton, Bank Chambers, Teddington, S.W. London, Eng., who offers to correspond with any readers of THE CANADIAN HORTICULTURIST who desire information in regard to the London, Eng., market for apples. We have had considerable correspondence with Mr. Deayton and have found him well posted on British conditions. Mr. Deayton is interested in the handling of fruit in London.

Officers and members of the agricultural and horticultural societies of Ontario, who may be in Toronto during the Canadian National Exhibition, August 26 to September 7, are notified that a representative from the office of the superintendent of these societies will be present in the tent of the Ontario Department of Agriculture, located near the cattle judging ring on the grounds, from Friday, August 30, to Friday, September 6. Every one connected with these societies is cordially invited to make this tent his headquarters at the exhibition.

In the October number of THE CANADIAN HORTICULTURIST we purpose giving a diagram of a hardy herbaceous border, showing an arrangement of plants suitable to our Canadian climate. The arrangement will be such as to give a harmonious blending and progression of colors and a succession of bloom in all parts of the border throughout the season. Mr. E. Byfield, who contributes the article in this number on "Making the Herbaceous Border," has the work in hand, and is preparing it as a sequel to his present article. It is intended that the diagram will be of special interest, and will contain many helpful suggestions to those of our readers interested in that class of plants.

At this season, fruit growers are busy making preparations for the apple harvest. To secure best prices, they must pack their fruit properly. To do this and to prevent bruising in the box or barrel, paper in various forms may be used. Paper for wrapping apples, pears and peaches is carried in stock by G. P. Read, 199 Duane St., New York City; also cushions for boxes and barrels and corrugated caps. Read his advertisement on another page.

The importance of marketing fruit in perfect condition is being impressed upon the fruit growers of Canada. In years gone by, it was the custom to climb the tree and shake the fruit down; now the careful picker takes a ladder and goes up and picks the fruit. Ladders for this purpose must be light and strong. The Berlin Woodenware Co. will exhibit ladders at the Toronto Exhibition that are ideal for fruit picking.

Enclosed find my renewal subscription. The readers of your magazine get full value for their money.—E. Ruggles, Bridgetown, N.S.

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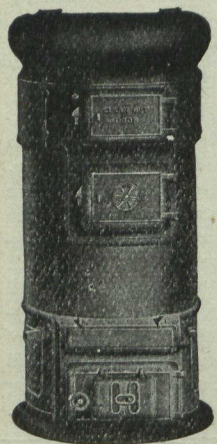
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## Preserving Fruit and Vegetables

**G**OOD plum preserve is made as follows: Peel the fruit, and take equal amount of fruit and sugar. Place a layer of sugar, then a layer of fruit and so on in a stone jar. Let them stand over night and pour off the juice and boil. Skim well and drop the fruit into this hot syrup, cook slowly till clear, fill up the jars and seal hot.

### PLUM MARMALADE

Boil the fruit till tender and run through a sieve, add same amount of sugar as pulp and cook slowly till it thickens. This may be sealed in this state, or it may be spiced and used with meats. One-half plum pulp and one-half crab apple pulp makes a better combination than all plum; or apples may be used instead of crab apples, but they do not give the firmness that the crab apple does.

### GOOSEBERRY PRESERVES

The berries should be picked when they begin to show signs of ripening. Stem carefully, drop them into cold water and let them come to a boil. Remove from fire and pour off the water and when the berries have cooled drop them into boiling syrup made by using just enough water to liquify the sugar, and seal. The berries will stay quite whole and if the operation has been carefully done, will keep for years. Gooseberry preserves as above may be used in the place of cranberry preserves.

### GOOSEBERRY CONSERVE

Take three pounds of gooseberries, three pounds of granulated sugar, one pound of stoned raisins, three large oranges; grind the skin and use the pulp and the juice. Put all together and cook slowly till thick. Seal hot.

### CANNING TOMATOES

Have the tomatoes of a uniform ripeness. Pour boiling water over them to remove the skins. When peeled, place in a granite kettle and heat slowly without adding any water. A sprinkle of salt may be added. Boil for one-half hour and seal hot.

### TOMATO CHILI SAUCE

Take twenty-five large ripe tomatoes, four white onions, three green peppers with the seeds removed. Slice the tomatoes so as to take out as many seeds as possible. Chop the onions and peppers fine and mix the three ingredients together. Heat three cups of cider vinegar and dissolve in it two cups of white sugar and two small tablespoons of salt. Pour this solution over the mixture and cook slowly one hour. Seal hot.

### MUSTARD PICKLES

Take one quart of ripe cucumbers, cut in pieces one inch long, one quart of small green cucumbers, one quart of small white onions, one large head of cauliflower. Scald all in weak brine, and then place in weak vinegar water. Bring two quarts of cider vinegar to a boiling point. Take one small bottle of French mustard, six tablespoons of dry mustard, and one-half cup of flour. Add a little vinegar to the dry mustard and flour to make it into a paste and then add the French mustard. Dissolve two cups of sugar in the hot vinegar, also two tablespoons of tumeric, one-fourth teaspoon of red pepper. Add the mixed mustard paste to the hot vinegar carefully and strain if lumpy. Pour this boiling hot over the mixture and seal. If the brine water did not make the mixture salt enough more salt may be added.

### CANNED CORN

Cut the kernels lengthwise and scrape the heart of the corn remaining on the cob. Fill the cans and jars and press the cover down hard so as to make it as tight as possible. Put the rubbers on the jars and screw the tops on tightly. Place in a steamer or in the cold water bath, and cook steadily for three hours, then take off the steamer and tighten the cover

without removing them. Let cool in the steamer, and again tighten the covers, but do not remove the tops.

### STORING PRESERVED FRUITS, VEGETABLES

The keeping qualities of preserved fruits and vegetables is greatly impaired by being stored in full daylight. This is especially true when glass jars are used. The jelly will soon become cloudy and dark when thus exposed. Marmalade and other preserves are apt to sour and become mouldy. No matter how well the fruit has been put up and how carefully sterilized and sealed, slow changes in the preserve will take place which sooner or later work their destruction.

The careful housekeeper will keep close watch over her preserved fruits and if indication of spoiling appears, the tops should be removed

and all foreign substances removed and tops again replaced, after which the jars should be re-sterilized by placing them in a pan of cold water with cover over and then gradually apply heat until the boiling point is reached.

### FRUIT JARS

The main point to bear in mind in selecting jars is, that the tops or covers fit tightly, as the fruit will not keep in leaky jars. Jars with large mouths or mouths of the same size as the rest of the jar are preferable to jars with small mouths, as it is much easier to put in the fruit and to take it out. A clear glass jar is preferable to one of colored glass as one can watch the keeping qualities of the preserve much better.

Canada's commercial agent in Leeds reports that South Africa is finding a good market for peaches in England. He is of the opinion that a large business can be done by Canada in pears and peaches if packed in boxes with two trays to a box.



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Then—after the thirty days' test—if you're NOT pleased with it in every way—if it hasn't won its way into your favor and convinced you that you don't want to keep house without it—you can send it back to us—we'll pay all the transportation charges both ways and refund every cent of your money—so the test won't cost you a single penny.

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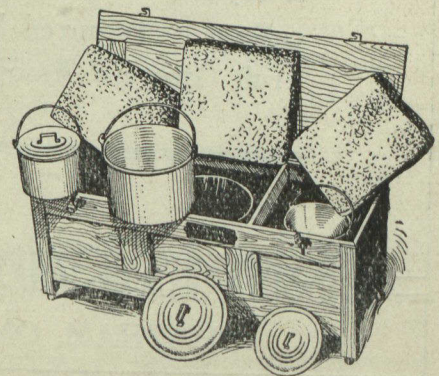
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## Horticultural Literature

In the fall the fruit grower and gardener begins to think of his winter reading. With this in view, we present herewith a few of the books listed in our book catalog. We will send any of these books postage prepaid on receipt of price:

Title	Author	Price
Strawberry Culturist.	Andrew S. Fuller.	.25
Hedges, Windbreaks, Shelters and Line Fences.	E. P. Powell.	.50
Landscape Gardening.	F. A. Waugh.	.50
The Window Flower Garden.	Julius J. Hendrick.	.50
New Rhubarb Culture.	J. E. Morse.	.50
Cabbage, Cauliflower, and Allied Vegetables.	C. L. Allen.	.50
Asparagus.	F. M. Hexamer.	.50
Tomato Culture.	W. W. Tracy.	.50
The Practical Fruit Grower.	F. A. Waugh.	.50
Dwarf Fruit Trees.	F. A. Waugh.	.50
Field Notes on Apple Culture.	Prof. L. H. Bailey, Jr.	.75
Chorlton's Grape Growers' Guide.	Wm. Chorlton.	.75
Cider Maker's Handbook.	J. M. Trowbridge.	\$1.00
Barn Plans and Outbuildings.		\$1.00
Fumigation Methods.	W. G. Johnson.	\$1.00
Fungi and Fungicides.	Prof. C. M. Weed.	\$1.00
Home Floriculture.	Eben E. Rexford.	\$1.00
Peach Culture.	J. A. Fulton.	\$1.00
Small Fruit Culturist.	A. S. Fuller.	\$1.00
Fruit Harvesting, Storing, Marketing.	F. A. Waugh.	\$1.00
Grape Culturist.	A. S. Fuller.	\$1.50
The Fruit Garden.	P. Barry.	\$1.50
Plums and Plum Culture.	F. A. Waugh.	\$1.50
American Fruit Culturist.	Jno. J. Thomas.	\$2.50

Other books relating to horticulture are listed in our book catalog, which we will send free on request.—Address, Book Department, THE CANADIAN HORTICULTURIST, Toronto.

## Ventilate the Barrels

*Editor, CANADIAN HORTICULTURIST.*—As an Englishman recently settled in Canada, I naturally find many new things to claim my attention. Having for the past 12 years had a personal interest in the fruit trade, more particularly at Covent Garden Market, London, I find great interest here in all matters pertaining to fruit and fruit culture.

I have been greatly impressed by the superiority of the apples grown and stored here over those exported in barrels to England with which I have been long familiar. Taking Ben Davis as an example, I find the skin clearer and better colored, and the flesh much more crisp, juicy and full flavored. The question naturally arises as to why this is so.

A comparison has suggested a reason for this difference, *i.e.*, there are now arriving in England each spring, commencing early in April and continuing for three months or more, large consignments of apples from Tasmania, and these are just perfect in fragrance, juiciness and flavor. By the side of these Canadian and American barrel apples make a decidedly poor show.

The Tasmanian apples are packed in ventilated boxes, each box containing about 40 pounds of fruit, and each apple is separately wrapped in paper. If barrels were also ventilated a marked improvement in quality would result therefrom. Prices might be enhanced thereby to the extent of half a dollar a barrel or even more. It is possible that a system of ventilation has been tried, but I have never come across a single example. It should at least be well worth a careful trial.—A. Knight, Marchmont.

THE CANADIAN HORTICULTURIST is the best and cheapest publication of the kind that I know of. There is no paper as good in Europe. May it have a great future.—Martin Winkler, Brighton, England.

# APPLE BARREL STOCK

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### Southern Ontario Apples

Ed. THE CANADIAN HORTICULTURIST: I read with interest the discussion in your paper on southern Ontario apples. Mr. James E. Johnson has covered the ground so thoroughly that there is little left for me to say, but I cannot understand Mr. McNeill's attitude in his letter in the July number. He said: "I quite agree with Mr. Johnson that if proper care is taken of these apples, they can be kept fairly well into the winter season." I find nothing in Mr. Johnson's letter to warrant that statement. He said plainly that he bought apples in Norfolk County in 1900 and 1902, and sold them in April and July the following years at one dollar a barrel more than he sold apples which were bought in another district. If Mr. McNeill would visit our markets in April, he would find quantities of any winter variety from ordinary cellars.

Mr. McNeill also said: "As a matter of fact, neither farmers nor apple buyers will go to the trouble of taking proper care of these apples." Does he wish us to believe that had these uncared-for apples been early fruit instead of winter varieties they would have sold better? However, he is mistaken in saying that the farmers will not take care of these apples. The fruit growers of Norfolk are tilling, pruning and spraying their orchards. Last fall we realized more than the mere pittance of 50 cents a barrel for our third grade, which was delivered at our canning factories. We think it very unfair to have all our apples classed with these job lots. The Norfolk Fruit Growers' Association shipped 4,000 barrels last fall and expect to ship a great many more this fall of the finest sample ever barrelled in Ontario.

In the fall of 1906, a Brighton buyer came through this section very early, bought all the small orchards by the lump, and graded them firsts and seconds, a sample which we thought a shame and disgrace to the county, and far from the Fruit Marks Act. This same man is back

again this year and has bought, in July, all the orchards that could be bought and paid higher prices. Now, if the Fruit Division wishes to improve the keeping quality of Southern Ontario apples, why not stir up the inspectors?

We sincerely hope that in a short time the Norfolk Fruit Growers' Association will extend over the whole county, shut out lump buyers, and prove the keeping qualities of our apples.—  
R. R. Waddle, County of Norfolk.

### Gathering of Pomologists

Arrangements have been perfected whereby a congress of horticulturists will occur at Jamestown at the time or near the time of the American Pomological Society meeting, September 24-26. Immediately preceding it will occur the meeting of the Society for Horticultural Science and the Maryland State Horticultural Society. Immediately following, with the first session beginning on September 26, will occur the convention of the National Nut-Growers. This combination of horticultural events will assure the largest gathering of horticulturists the country has ever seen since the days of the World's Fair at Chicago.

The program of the Pomological Society is well prepared. In addition to the leaders in scientific research in pomology and the prominent orchardists, the Pomological Society will be favored with representatives from Great Britain and Europe. Delegates from the Royal Horticultural Society of England, the National Society of France and leading fruit growers and plantmen of Germany are expected. All fruit growers who expect to visit Jamestown should plan to attend this great series of meetings. The heated period will be over at the time, and numerous attractions should conspire to make the occasion one of pleasure and profit. For information apply to John Craig, Ithaca, N.Y., secretary, or L. A. Goodman, Kansas City Mo. president.



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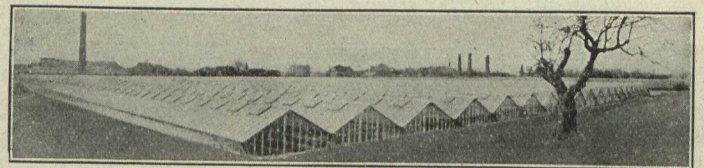
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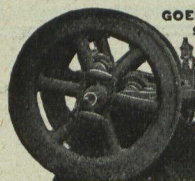
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Horticulture at Macdonald

The orchards and gardens of the Horticultural Department of Macdonald College cover about 70 acres, of which 60 acres are cultivated crops at the present time. The orchard extends over about 25 acres, and contains the leading hardy apples, some cherries, pears and plums; the latter mostly of Americana origin. The commercial part of the orchard is so planted that upwards of 50 cultural and fertilizing experiments can be conducted across the orchard, using three trees of each variety for each experiment.

The variety test orchard of five acres is made up of four trees of a kind. This part of the orchard will doubtless present a more or less broken appearance, owing to some sorts under test not proving suitable or hardy.

The orchard is so laid out and roads so constructed that one driving along the roads can get full view of all the different varieties growing, and the various culture methods adopted.

At the present time the orchards are sown to peas, potatoes and beans. A strip of ground three feet at each side of the tree is kept cultivated, so that all of the trees have had similar treatment. No manure has yet been applied, except in the variety test orchard, which was mulched last winter with manure. The intention is to manure the whole orchard this fall, and next spring to start all culture and fertilizing experiments.

Twenty-one acres are in potato crop this year. The bulk of the area is from seed that was on the farm when purchased, and the name of the variety is doubtful. Those sorts in acre lots that are doing best are "Irish Cobbler," "Money Maker" and "Carman No. 1." The potatoes, from the seed of which we have not the correct name, have made an uneven growth, due partly to the seed not being properly matured last fall when dug, and partly to dry rot to which this variety is very susceptible. Care was taken to plant only good, disease-free seed, but with the greatest care some diseased ones are missed and get planted. It is the intention to discontinue this variety.

A series of interesting experiments are being conducted on plots one-third of an acre each, using the home-grown seed, by planting medium whole potatoes, small whole, medium cut in two through the seed end, large tubers cut to three eyes, and large tubers cut to two eyes. It is the intention in the future to follow this line of experiments, having in view the getting of information as to the best cultural and fertilizing methods, and the most practical way of selecting and planting the tubers.

The bugs have been unusually plentiful this season and the fact that they have had many showers, rendered it necessary to spray five times with Paris green. The season, too, has been exceptionally favorable to the development of blight, and although the vines have been sprayed three times with Bordeaux, still blight is noticeable, although very well under control. The indications are that only a medium crop will be harvested.

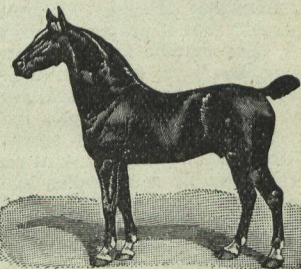
An area of over an acre is given up to squash, melons and pumpkins, which did well until a heavy wind-storm, accompanied with rain, and followed by bright, hot sun, blighted the leaves, giving the patch the appearance of being touched by a light frost.

Over an acre is devoted to turnips, one acre to carrots and one-third of an acre to beets and parsnips. The area in cabbage is about one and one-half acres, of which one acre is in early cabbage, the most of which has been marketed. The "Paris Market" is the earliest of the ox-heart type, followed in a few days with the "Early Spring," the best early variety of the drumhead type. The late sorts are mostly Danish Roundhead. One acre is in onions, which are doing well.

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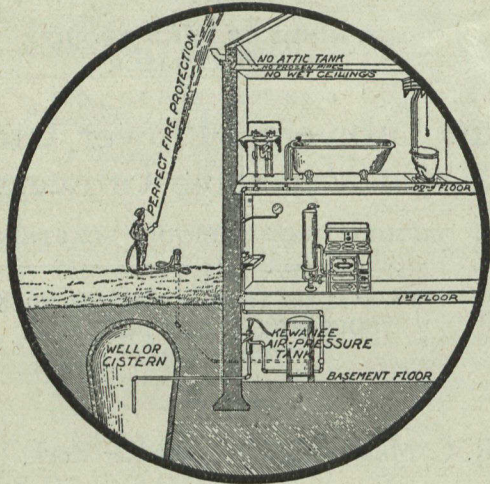
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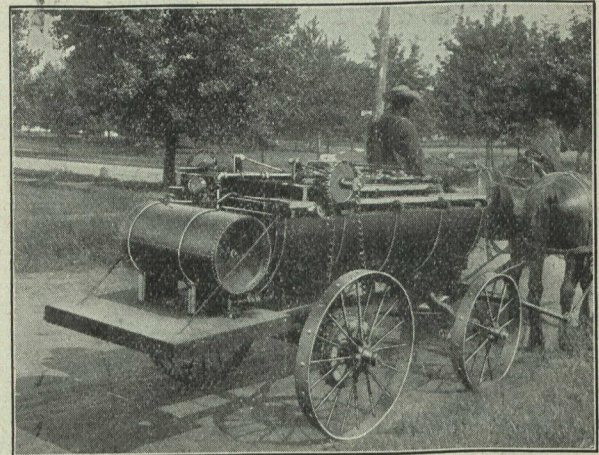


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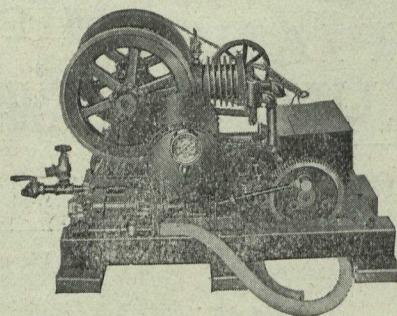
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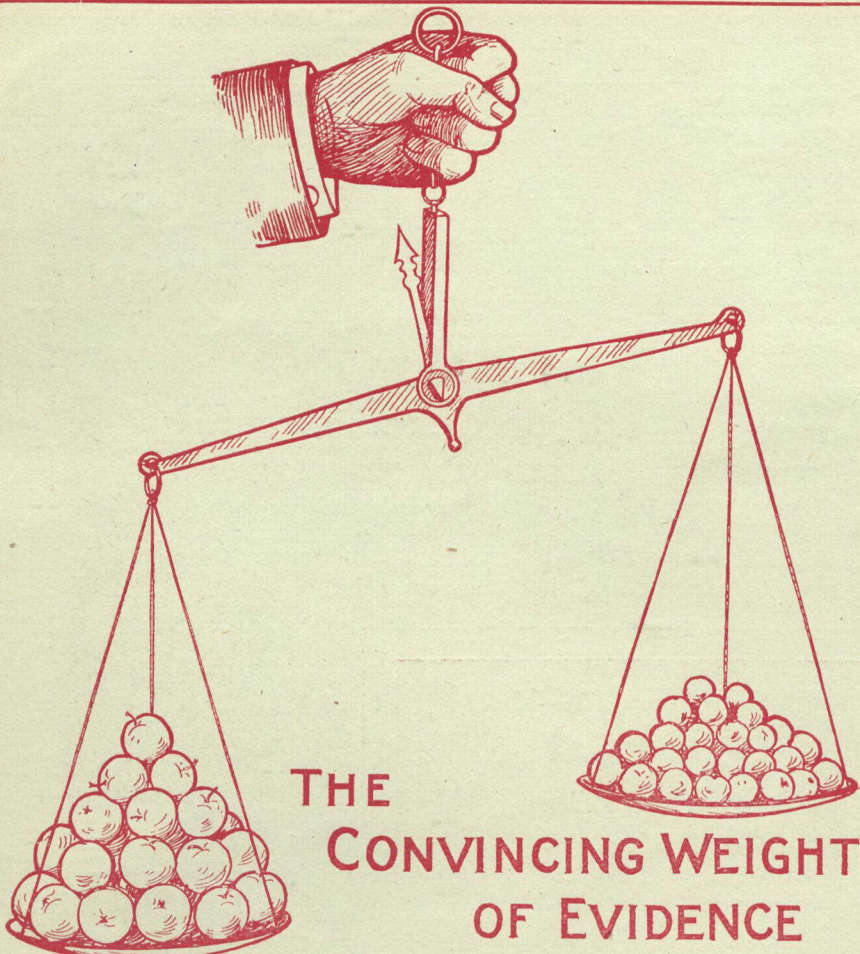
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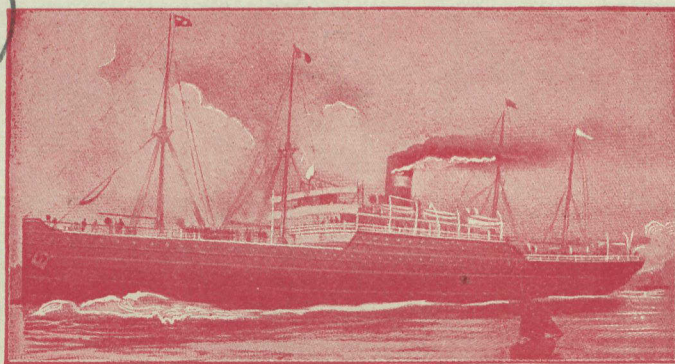
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