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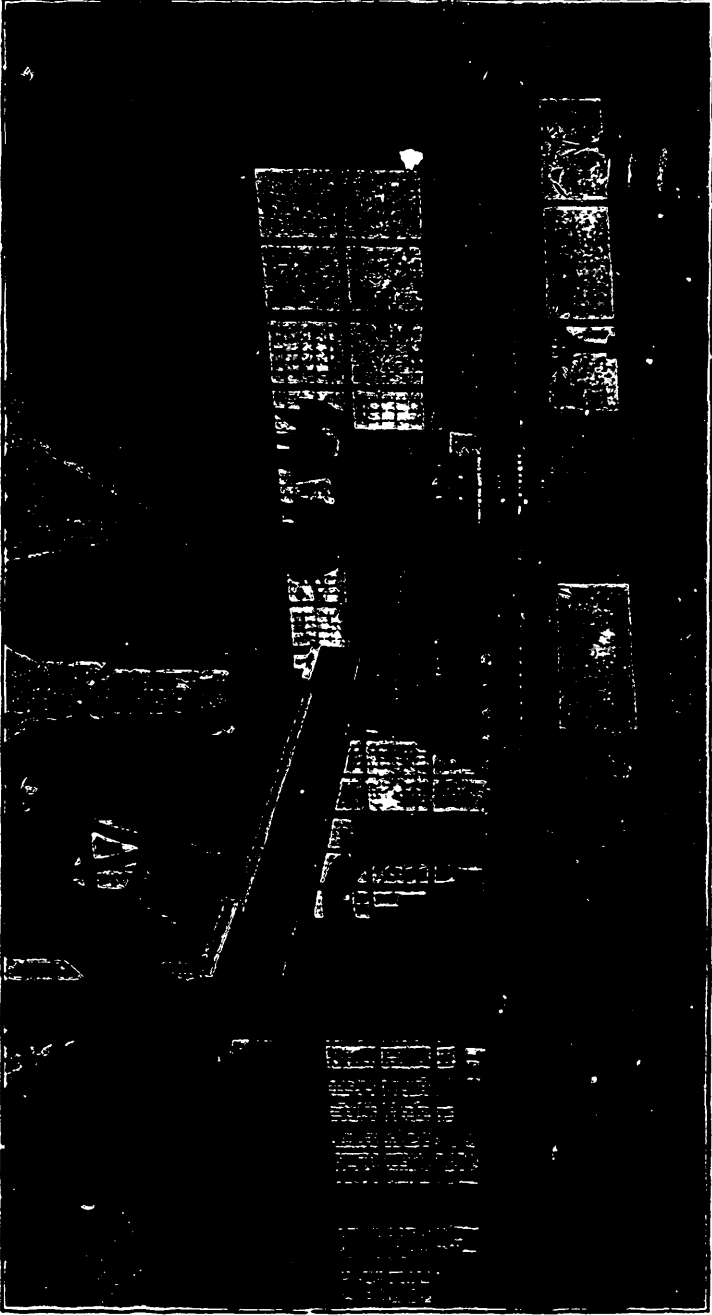


## NOVEMBER

THE mild October days are gone,  
Sweet nutting time, and kite time,  
With frost and storm comes slowly on,  
The year's long wintry night time.

But while the mellow light departs,  
The household draws together,  
And ever warmer grow our hearts,  
As colder grows the weather.

J. T. TROWBRIDGE.



### Canada's Fruit Exhibit at the World's Fair, St. Louis, Mo.

Probably no one feature of Canada's Exhibits at the St. Louis Exposition has attracted more attention or been of greater value than the display of fruit. The magnificent exhibit of preserved, cold storage and natural fruit has proved an eye-opener to hundreds of United Statesmen who had the impression that Canada was too cold a country to produce tender varieties of fruit. An interesting article concerning our fruit exhibits at St. Louis, written by Mr. J. H. Race, (who kindly furnished the photograph for this illustration) appears in this issue. A second article dealing with the same subject, and full of pride over the showing Canada is making, was received from Rev. Father A. E. Burke, of Allerton, P. E. I., just too late for publication.

# The Canadian Horticulturist

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VOLUME XXVII



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## THE BLACK ROT OF GRAPES IN OHIO

PROF. W. LOCHHEAD, ONT. AGRIC. COLLEGE, GUELPH.

AT the request of the Minister of Agriculture, I recently visited the grape districts of northern Ohio to ascertain the best methods of dealing with the black rot of grapes. In Ontario, in the Essex district, black rot has been more or less prevalent for some years, but no sustained effort was made to check the progress of the disease. The result was that fruit growers of that district found it necessary to pull out the vines and plant to other uses. Many of the old vineyards which were objects of pride five or six years ago along the Detroit river have now disappeared. In the Niagara region, where the grape industry is developing on a commercial basis, the black rot is beginning to be felt, and grape growers fear they will suffer the same fate as the Essex growers if they do not try to combat the attacks of the fungus.

Through the kindness of Prof. Selby, of the Ohio Agricultural Experiment Station at Wooster, I was directed through the vineyards along Lake Erie from Unionville on the east to Sandusky on the west. Besides, he gave me letters of reference to many of the prominent owners of vineyards in the Cleveland district, with whom I consulted regarding their methods of treatment. The results of the experiments these growers have conducted have been very gratifying. They were conducted on the cooperative

plan, that is, the owners and the Experiment Station worked together to control the disease.

Six sprayings are recommended by Prof. Selby for the Delawares, seven for Catawbas, and eight for the Concords. He states that the Catawbas and Niagaras are the most susceptible to rot; the Delawares quite resistant; and the Concords not so susceptible as the Niagaras, but less resistant than the Delawares. He does not believe that early sprayings are of much use, and he bases his belief on the results of sprayings carried on for three years.

### WHEN SPRAYINGS SHOULD BE DONE.

The first spraying is given when the new shoots are from one to two feet in length, which in the Ohio district is about June 1; the second spraying is applied about July 1 in an ordinary season. These two sprayings are considered the two most important, inasmuch as they come immediately before and after blossoming. Many of the grape growers told me that if they failed to spray on or about July 4 they almost invariably lost their grapes. The subsequent sprayings are given at intervals of a week or ten days, and the last for the Delawares is usually applied about August 1. The first four applications are made with Bordeaux mixture, and the remainder with either ammonia-carbonate solution or soda-bordeaux.

This question has been studied very thoroughly by Prof. Selby for the last three or four years, and he is of the opinion that grape rot will always be more difficult to control on sandy, open soil than on the heavy clay soil in the Cleveland region. In Ohio the fruit growers use their sandy, open soils for other purposes than grape culture, and there the rot is less severe on the heavy clay soils.

There are so many evidences of the good results of careful spraying, according to the recommendations given by Prof. Selby, that no further experimentation along the line of prevention of grape rot will be undertaken at present. He is satisfied that the methods in use at present will control the black rot every time. I may add that vineyards which were left untreated, or not carefully treated, show either total losses or a very large percentage of rotten grapes. Even the most careless of grape growers in the Cleveland region have come to the conclusion that they must get out of the business, or spray according to the formula given them by the Experiment Station, and which I have outlined. By the way, Prof. Selby does not think much of the dust sprayers, and he is a strong believer in the use of the

liquid Bordeaux as a fungicide, which he considers a fungicide par excellence.

There is no doubt that the black rot can be kept in check in Ohio, but it remains for us to prove that it can be held in check in Ontario. It appears that one of the best means of preventing this disease is to burn all the "mummy" grapes which would naturally remain on the vines all winter. These are probably the source of the contagion for the coming season, and too much care cannot be taken to have all such diseased grapes destroyed.

An important point that must be taken into consideration by grape growers is that the black rot is a very difficult disease to control, and that two or three sprayings are not sufficient. It takes six or eight sprayings to keep the disease completely in check and to get perfect grapes. As we know that Bordeaux will discolor the grape when it reaches a certain size, it is well to spray with the soda-Bordeaux or the ammonia-copper-carbonate solution for the last two or three sprayings. It remains for the Ontario growers to show that the black rot can be controlled in their own country under slightly different conditions from those obtaining in Ohio.

## ORCHARD FERTILIZERS

W. H. DEMPSEY, TRENTON, ONT.

I FIND it increasingly difficult to obtain good wood ashes with which to fertilize my orchard. Until two years ago I was able to secure 50 to 100 pounds of ashes a week from the lake steamers stopping at Trenton, but since wood has become so dear the steamers have been burning coal, and that source of supply has been cut off. I am now thinking of buying some com-

mercial fertilizer which I have seen advertised in *The Horticulturist*.

I use all the stable manure I can secure. The ashes are sown broadcast whenever I can obtain any; the manure is carted on during the late winter and early spring and spread thoroughly. Orchards, the same as all other land on which farm crops are raised, require heavy fertilizing to keep them in good condition.

You should receive *The Horticulturist* promptly on or about the first of every month. Do you? If you don't, let us know.

I enclose \$1 for *The Horticulturist*, which is much improved of late.—(John Mather, Ottawa, Ont.)

## THE TRIAL SHIPMENTS OF FRUIT TO WINNIPEG

PROF. J. B. REYNOLDS, ONTARIO AGRICULTURAL COLLEGE, GUELPH.

THE object of these experimental shipments of fruit to Winnipeg was to find out whether or not tender fruits from Ontario could be placed in good condition on the Winnipeg market by freight carriage. Incidentally it was the intention to inquire into the whole matter of transportation, prices, and selection and packing of fruit, as well as the best construction of car for refrigeration.

In each car were carried apples, Bartlett pears, grapes, plums, peaches and tomatoes. The idea seemed to prevail among most of the fruit growers that in order to carry these fruits to Winnipeg safely they must be picked green and hard. The result does not justify this belief. A considerable proportion of the peaches were packed hard, green and undersized. A fair quantity of them, however, were, when packed, well

sized, well colored, and firm, in such a condition as No. 1 Crawford peaches are packed for use within a few days. These last were by far the most desirable when opened up at Winnipeg. In fact, after seven days had elapsed between loading and unloading, after a journey of 1,500 miles, and various shuntings at Allandale, North Bay, Fort William and Winnipeg, Crawford peaches were placed on the market from our shipment in better condition than any I have seen displayed in the shops in Guelph.

This is true not only of a chance few of the peaches shipped, but of all that had not been picked too green. A box of the primest of these peaches found its way into the hands of an acquaintance of mine, and on Monday, three days after the sale and 11 days after picking, I inquired as to the condition of the fruit. The reply was that a

few only of the peaches were then mellow enough for immediate use, and that the greater part of the box could be kept until the end of that week, that is, until 15 or 16 days after picking. Grapes shipped well, some of the Moore's Early only being off the stem. The varieties of plums were Reine Claude, Yellow Egg, Columbia, and



**An 80 Year Old Apple Packer at Work.**

That grower of many years standing, is Mr. R. D. Veale, of Mount Brydges, Middlesex County, who may be seen in this illustration standing with two baskets in his hands. Although over 80 years of age, Mr. Veale still attends to the packing and shipping of not less than 1,000 and 1,500 barrels of apples each year. The apples from Mr. Veale's orchard are shipped to London, England, by the Thompson steamers. The Baldwin apples have given Mr. Veale the best satisfaction with the Golden Russet next. There are 40 barrels of Baldwins grown in this section of Ontario to any other variety.

Grand Duke. These were beginning to soften, but were in good condition when sold. Of Bartlett pears the same may be said as of Crawford peaches, most of them were shipped too green, and those that were allowed to reach good size, and yet were picked firm, arrived in prime market condition.

Various causes contributed to these gratifying results, and the only accidental one was the weather, which was favorably cool. All other contributing causes were anticipated in our plans for the shipment. These were: A selection of good fruit, careful wrapping of peaches and pears, and packing in suitable carriers, boxes for everything, and for grapes and plums a bushel crate containing 12 trays, each tray holding about two and a half pounds; careful loading in the car, so that none of the boxes could move out of its place, and spacing the boxes so that air could circulate on all sides of each box.

As to cold storage facilities: Two cars were selected of quite different interior construction, the one having devices for maintaining air circulation, the other having none of these. It is probable that with warmer weather a defective system of refrigeration would have been detected, but the uniformly cool weather during the shipment made both cars equally effective. Upon this matter, therefore, the experiment is inconclusive. It must be borne in mind that the office of a refrigerator car is to counteract the effect of warm weather upon perishable goods. In a good refrigerator fruit will keep as well in warm weather as in cold. Provided our cars were good, the success of our shipment did not depend upon the weather.

#### THE PRICES REALIZED.

As to prices: Both cars were sold by auction, one on September 22, the other on September 23. The prices on the first day were: Crawford peaches, \$1.10 to \$1.25

per box of 12 quarts; plums, \$1.50 per crate of 20 quarts; grapes, \$1.50 to \$1.80 per crate of 30 pounds net; pears, \$1 to \$1.25 per box, half bushel; apples, 85 cents to \$1.25 per bushel; tomatoes, 55 cents to 85 cents per 12 quart box. On the second day there was rather an overload of pears, which went low accordingly. Prices were: Peaches, \$1.10 to \$1.25; plums, \$1.05 per crate of 13 quarts; pears, 70 cents to \$1.05 for XXX Bartlett. Flemish Beauty and XX Bartlett sold much lower. Apples, 85 cents to \$1.20 per bushel; tomatoes, 55 cents to 60 cents per 12 quart box.

Average net prices, including cost of package, but after deducting freight and commission charges, were: Peaches, 93 cents per box; plums, 75 cents per 13 quarts; grapes, \$1.14 per crate of 30 pounds net; pears, 75 cents per box; tomatoes, 44 cents per 12 quart box; apples 55 cents per bushel. In replies received from the growers who supplied the fruit, most of them express satisfaction with these prices. In the instance of plums and peaches prices are ruling high in Ontario this year, and the Winnipeg prices are not relatively high. It is satisfactory to know, however, that the peaches, sold on their appearance simply, without any reputation to help them, realized fully as much as the best California peaches on the same day. The auction method is liable to be panicky, but is on the whole, perhaps, as good a method as any for disposing of perishable fruits.

#### SHOULD WATCH THESE POINTS.

While our experiment was highly successful, I do not advise shippers to repeat it until they are fully apprised of the importance of attending to details, selecting the fruit at the right degree of maturity, packing and loading properly, keeping the car iced while loading, and filling bunkers before it starts, and marking way bill so as to insure re-icing in transit. With one exception I found that the various icing sta-

tions attended well to the icing. With increase of business, so that the icing of cars becomes a regular instead of an occasional duty, there is reason to expect that it will be better attended to in future. The same is true of despatch. A large volume of freight business in perishable fruits is therefore likely to correct present deficiencies in the

transport system. But with the fruit growers and shippers nothing less than co-operation in packing and shipping will remove the defects in that part of the undertaking. There must be uniformity in packages, in grading, in quality of fruit, and these cannot be secured by independent action but only by cooperation.

## NOVA SCOTIA FRUIT GROWERS IN A BIG COMBINE

**D**URING the past month items have appeared in a number of leading papers announcing that the Annapolis Valley Fruit Estates, Limited, has been formed in Halifax to engage in fruit culture on a large scale in the Cornwallis and Annapolis Valleys. In addition to apples, small fruits will be cultivated as well as potatoes and other vegetables. The company will also erect a canning and vinegar plant, and a barrel and box factory for the manufacture of fruit packages.

Desiring to gain as much information as possible about this enterprise for its readers, *The Horticulturist* wrote to a number of leading Nova Scotia fruit growers asking for particulars, and to Hon. D. Mackeen, of Halifax, who was reported to be financially interested. Some interesting replies have been received. A letter from Hon. Mr. Mackeen reads as follows:

"I am not interested to any particular extent, personally, in the company to which you refer. As far as I understand, however, this company owns some 3,000 acres of more or less highly cultivated land in one of the most fruitful apple growing districts in the Annapolis Valley. I am told that the capital required for fully developing this property into a fruit growing concern has already been raised.

"At present, I understand, the company has over 20,000 apple trees, and it is proposed to put out 30,000 new trees on the property. It is estimated that the present

yield from the property will be about 20,000 barrels, and this is only a very small proportion of the company's expected product from the estates."

### FRUIT GROWERS NOT SANGUINE.

Two well known Nova Scotia fruit growers heard from do not appear to be very sanguine in regard to the success of the enterprise. The first one heard from, Mr. S. C. Parker, secretary of the Nova Scotia Fruit Growers' Association, wrote as follows:

"I would scarcely call this a cooperative scheme, rather a speculation enterprise handled by a professional promoter. The matter stands thus: A. H. Fair, an insurance agent, has secured options holding for 12 months on a block of country about two miles square, containing some 30 farms (options were secured on all save four or five, who held out). The purchase money is something like \$250,000; the other \$100,000 of capital is for plant and improvement. I presume the promoter proposes to make a stock company, and bond the concern to raise the required capital. This is one of the best farming sections in the valley, situated two miles from Berwick, directly under the North mountain, running two miles east and west, bounded by roads on three sides. Taking last year's crop as a basis a very glittering prospectus could be made. The promoter says they shipped 16,000 barrels of apples last year, which would net \$2 per barrel. The block probably grows 1,000 tons of hay annually, perhaps 20,000 bushels



of root crops, 10,000 bushels grain, probably 400 to 500 head of cattle and 100 horses. The promoter proposes to increase the orchard to an enormous extent, establish warehouses, and factory for handling the waste apples, grow nursery stock, establish a creamery, keep hogs innumerable, with all the equipment necessary to run such a plantation or ranch. The thing is all right in theory and looks well on paper, but an orchard requires 'the master's' hand to make it succeed, and I would expect if the thing is floated to see it sold out in ten years' time to pay the bonds."

A second well known fruit grower writes as follows:

"From what I can learn affairs are not in a condition where I think it would be wise for The Horticulturist to take much notice of this matter. I believe some options have been taken on certain farms, and the promoter is trying to sell stock, but I think it questionable if it really amounts to much. If the project assumes a businesslike appearance and seems likely to succeed, I will write you more fully later. The Nova Scotia Fruit Growers' Association has nothing whatever to do with it."

### KING EDWARD'S PORTRAIT ON APPLES

SAMPSON MORGAN, 8 RICHBOROUGH VILLAS, BROADSTAIRS, ENGLAND.

A CONSIGNMENT of apples from France was received recently by Messrs. Garcia, Jacobs & Co., of Covent Garden, whereon was depicted His Majesty King Edward VII. These novelties were sold by Charles M. Simons, Esq., one of the cleverest auctioneers in the market, and a member of the above named firm, who seemed to enjoy the extraordinary sensation created by the apples among the immense crowd of buyers in the spacious foreign fruit market, who were attracted to the sale.

Bidding was so fast and furious that no one could see what was paid for the parcel. When the auction was over the "King's fruit," as it was called, changed hands again and again until some one boasted that he had given 100d. for six of the apples. By the courtesy of Michael Garcia, Esq., the head of the firm, I am enabled to furnish Canadian growers with the method utilized to convey the portrait to the fruit.

The apples were of Peasgood Nonsuch variety. A photographic film was fixed on them just before they colored, and the foli-

age was fastened away from them to ensure full exposure to the sun. The portrait of His Majesty was chosen for these first fruits because the French peasants consider the entente cordiale greatly due to the tact and large heartedness of King Edward the Peacemaker. Doubtless in future years many will emulate the example of the ingenious French cultivator and produce portrait fruits. As advertisements and for exhibitions they would be very valuable.

Possibilities in this connection seem limitless, and next season we shall witness some interesting developments. Large orders for portrait fruits are sure to be placed this year, and faces as desired, whether of friends or notables, can be pictured upon apples to order. The fruit growers of Canada ought to take up the idea. The portrait of the raiser, with the emblems of the country whence the fruit came, appearing upon the central apple in the top layer of every package, would form an effective trade mark, and be a guarantee of the place of origin to the buyer and consumer.

We let our sheep run in the orchard last fall. It proved a success in keeping the mice away.-- (B. Moore, Grey Co., Ont.)

Do you like the changes we are making in The Horticulturist? If you do, tell your friends about them.

## NURSERIES WHICH ARE A CREDIT TO CANADA

NOT only fruit growers and florists, but Canadians the country over, may well be proud of the nurseries of Morris & Wellington, of Fonthill. Our great financiers and railway magnates are lauded as men of out-standing ability. Equally as great ability, if in another line, must be required to conduct an enterprise of the magnitude of these nurseries.

While the headquarters of the Morris & Wellington nurseries are at Fonthill, some 12 miles from St. Catharines, in the Niagara district, its operations extend from the Atlantic to the Pacific, and invade Europe as well. The business conducted by this firm amounts to the hundreds of thousands, while its agents are to be found in all the leading towns and cities of the Dominion. Every

ment of the nurseries is vested in Mr. E. Morris, the senior partner, the business end being conducted by Mr. Wellington. At the time of a visit paid the nurseries during the summer by an editorial representative of *The Horticulturist*, Mr. Morris was found to be a very busy man. This will hardly be wondered at when it is stated Mr. Morris is responsible for the successful growing of the thousands of different varieties of nursery stock, ornamental shrubs and trees and flowers handled by the firm, on its nine farms. These farms are all located within a few miles of Fonthill and contain over 800 acres, of which 600 acres are owned by Messrs. Morris and Wellington, and the remainder rented for a term of years.

The annual plantings are enormous. They

include some 400,000 young apple trees, 50,000 to 100,000 plum seedlings, 75,000 rose plants, 15,000 elm trees, and other varieties in proportion. At the time the representative of *The Horticulturist* visited the nurseries some 1,500,000 young apple trees, one to four years old, were being grown on the various farms, to say nothing of peach, pear, plum, cherry and other seed-



**The Finest Hydrangea Bush on the Continent.**

A portion of the lawn on the Morris & Wellington nurseries, at Fonthill, including one of the finest ever here be seen. The *Hydrangea Paniculata Grandiflora* bush in the center of the picture has for 12 years been recognized to be the finest on the continent. It is 18 feet in diameter and 10 feet high. The firm sells thousands of these bushes every year. They are sometimes planted as flower beds and cut yearly, although many prefer them growing as bushes, which is their natural growth. A hickory leaf tree may be seen in the background.

year large orders are sent to Europe, more particularly for ornamental shrubs and plants. So extensive are the operations, it has been found necessary to establish a special office in Toronto, through which the greater portion of the business is conducted under the name of Stone & Wellington.

A few facts about these nurseries may assist in giving some idea of the scope of its operations. Entire charge of the manage-

lings. When it is realized that, in addition to this nursery stock, thousands of trees and shrubs and flowers, of hundreds of varieties, are grown, some idea of the extent of the business may be gained. Long ago Mr. Morris realized that it would be impossible for him to personally look after the details of the growing of all this stock. Capable foremen were, therefore, selected and placed in charge of various branches of

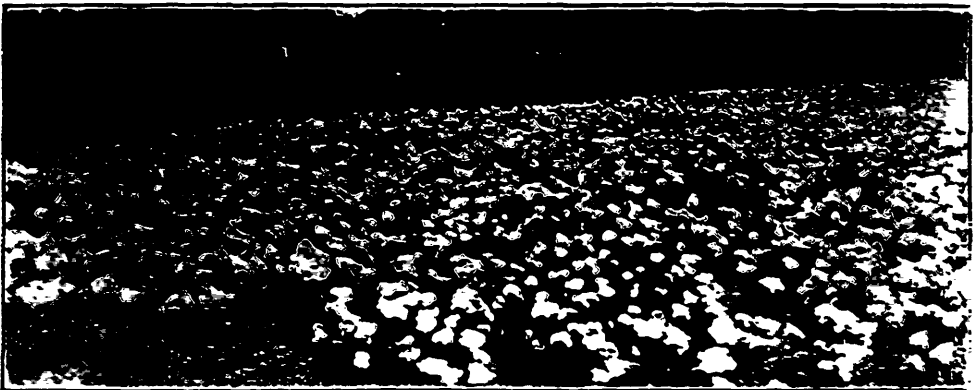
the work. A number of these foremen, as well as their assistants, have been with Messrs. Morris & Wellington for years and have bought homes of their own in the vicinity of the different nurseries. During the summer, which is the slack season, some 75 men are constantly employed, which number is increased in the fall and spring to 200. Twice this number could be utilized at these seasons, were they available. Of course these men do not include the office staff or the hundreds of agents scattered throughout the Dominion.

To facilitate the proper management of the various farms, Mr. Morris, a number of years ago, connected them all by a private telephone system of his own. This was operated so successfully it was not long before other fruit growers and farmers in the locality desired to join the circuit. The outcome was that the Bell Telephone Company, which at first had rather opposed the move, stepped in and assumed control, with the result that upwards of 100 residents of the section are now enjoying the benefits of farm telephones. The yearly charge for these telephones is \$15. Thus, we see, the farm telephone system has already made a welcome invasion of Canada. By means

of the telephone Mr. Morris finds it possible to keep in close touch with his foremen and the work on the different farms.

The growing of the different lines of stock is greatly complicated by the special care which has to be given each. Soil adapted for one line of nursery trees or flowers may be entirely unsuited for others. For this reason the nine farms operated by Messrs. Morris & Wellington have each been chosen for their particular characteristics. On some, which are open and exposed, the hardy varieties are grown, while the tender species are produced in the nurseries that are more protected. Most of the farms contain several different soils. Each of these soils are in turn used for the production of the varieties of fruits and flowers for which they are best adapted. Long, and in some cases costly experience, has made clear to Mr. Morris the possibilities of these soils, and customers of the firm reap the benefit by receiving goods that have made a rapid and natural growth.

"We have found it necessary," said Mr. Morris, while speaking to *The Horticulturist*, in this connection, "to give the land, on which our stock is grown, frequent rests. Every year the crops raised are changed



**A Beauty Spot at the Morris & Wellington Nurseries.**

The illustration gives a small view of a block of two year hydrangea pan-white grandiflora growing in the nurseries of Morris & Wellington at Fonthill. This is one of the most useful plants grown, as it can be raised either as a plant or bush. The flowers are splendid for decorative purposes. When grown as plants the blossoms are larger and finer than when the hydrangea is allowed to grow as a bush.

from one portion of the nurseries to another, and every fifth year the farms are changed. In this way frequent changes of soil are secured. As a rapid healthy growth is necessary, the land must be kept rich, which means a heavy expense for fertilizers. From Toronto alone we purchase \$5,000 to \$7,000 worth of fertilizers yearly. As we do not calculate to grow culls 40 to 50 tons of fertilizers are used per acre. This results in a rapid growth and thrifty stock.

"The demand for new and rare plants is increasing rapidly. Most of it has sprung up within the last ten years, more particularly the last few years, until now it has become one of the most important branches of our business. I remember when we only planted 500 elms. This increased to 1,000, a few years later to 3,000, and last year I planted 15,000. It is no uncommon occurrence for us to receive an order for \$500 of ornamental stock from one man.

"This year we found it necessary, in order to fill the demand for rare shrubs, to make a special importation from Holland. Most of our seedlings are purchased from France, which in this line supplies the world. The stock is brought over in win-

ter and arrives in good condition, via New York, being transported in frost-proof cars. Our last importation included 100 different varieties of evergreens alone.

"When we purchase or lease a farm, for growing nursery stock, it is generally necessary to underdrain it extensively. Several hundred acres of our farms have been underdrained. Even when we only lease a farm for a few years we find it pays to tile it. On one occasion we leased a farm of 100 acres and did not think it necessary to underdrain it. We lost enough through not doing so to have more than paid the expense of putting in the tiles, and I never intend to take the same chances again. In this connection it is rather astonishing to me to see how little the value of under draining is appreciated by some men. One farm leased by me was thoroughly under drained and when the lease expired the owner was given the benefit of these under drains. He did not think enough of it to even keep the drains open."

The description of how these immense nurseries came to be established, as given by Mr. Morris, is a most interesting one. "Over 30 years ago," said Mr. Morris, "I



**Cultivating Young Peach Trees at the Nurseries.**

The careful cultivation that is given the nurseries of Messrs. Morris and Wellington, at Fonthill, is one of the secrets of the success of this firm. The illustration shows a block of one year old peaches being cultivated, no less than eleven men with cultivators being shown at work in this small block. Great pride is taken by Mr. Morris in his pure bred horses, as he has four pure bred stallions and over sixty horses altogether. Some of these fine animals can be seen in the illustration.

made my first start in this vicinity in the nursery business with 13 acres of ground. Previous to this I had been in business, but my health being poor I decided to start farming in this locality, where my wife had some relatives. The first year I planted an acre each of strawberries and raspberries. Some of my neighbors, who came around at that time, decided I must be nearly crazy, as they were satisfied that I would never be able to sell even a small portion of the crop. They even expressed pity for my ignorance.

"The following year, before I had received any returns from my first year's crop, to their amazement I increased my plantings to seven or eight acres. My sales from my first picking amounted to \$1,300, most of the fruit being sold right on the place. For most of it I received 15 cents per quart for all the small fruit. This price caused quite a sensation, and people immediately wanted to buy plants. It was in this way that I started in the nursery business.

"In the course of a year or two the business increased and I took in Squire Hills, and the firm became known as E. Morris &

Co., and continued in this way for several years. In later years Messrs. Stone & Wellington joined in with me. Finally the plantings were increased to 100 acres, including 50 of nursery stock. The firm has been known under the name of Morris, Stone & Wellington, during the past 25 years, but during the past two years, since the death of Mr. Stone, his name has been dropped from the firm."

The home farm at Fonthill is devoted principally to ornamental trees, shrubs and small fruits. Some of the fancy trees and shrubs grown are the Eagle Maple from Europe, choice varieties of Weeping Beech, Purple Beech, Fern Leaf Beech, Schewldi Maple, Rittenbachi Maple, Variegated Maple, Russian Maple, Weeping Norway Cypress, Maiden Hair tree and many others.

During the past few years Canada has rapidly forged to the front as a producer of many varieties of fruits and flowers. Much of the success of Canada's growers has been due to the active cooperation and assistance of such well known and reliable nursery firms as that of Messrs. Morris & Wellington.



### Shipping Nursery Stock at the Morris & Wellington Nurseries.

One of the busiest periods at the Morris & Wellington Nurseries, at Fonthill, is when the nursery stock is being boxed, preparatory to shipment. This work is done on a large space of land near the office of the main nursery at Fonthill. Surrounding this is a large grove of pine trees, which affords close protection to the men while at work. Some idea of the large number of men employed by this firm will be gained by the illustration.

ton, whose aim has been and is to please and satisfy their customers. The firm's large business has been built up as the result of hard work and careful management. More than once thousands of dollars' worth of tender stock has been destroyed by hail storms, extremes of heat, and cold weather, etc. In spite of this the management has

kept right on. Such reverses have in the end only increased the firm's usefulness by the valuable lessons they have taught. With its immense business, established reputation and years of experience the firm of Messrs. Morris & Wellington will undoubtedly play an important part in the further development of Canada's horticultural interests.

## DUNDAS COUNTY AS A FRUIT DISTRICT

W. T. MACOUN, CENTRAL EXPERIMENTAL FARM, OTTAWA.

THAT part of Dundas county within four or five miles of the St. Lawrence river, and in the neighborhood of Iroquois, Irena and Dundela, is a fruit district which has not been brought into public notice as much as it deserves. A recent visit at the orchard of Mr. A. D. Harkness, of Irena, the energetic director of the Ontario Fruit Growers' Association for that district, and that of Dr. Harkness, his father, as well as others in that district, proved most interesting.

The principal object of my trip was to see the orchards of McIntosh Red apples, and I was not disappointed. Between them Mr. Harkness and his father expected to have about 100 barrels of this delicious apple. The trees at that time were well loaded, and one tree was pointed out to me which would probably yield seven to eight barrels of fruit, all the apples being perfectly clean and of good size. The crop of Fameuse was also large and the fruit clean and large.

The method adopted by Dr. Harkness in the care of his orchard is to keep it in sod and top mulch with manure. The trees certainly looked well. Washing soda is used instead of lime in making the Bordeaux mixture for spraying, as it stains the fruit much less than the ordinary Bordeaux mixture, is easier to make, and appears to give quite as satisfactory results.

The orchard of Mr. A. D. Harkness is a young one of 15 acres, part of which is coming into bearing, most of the trees being Mc-

Intosh Red and Fameuse. They are looking very well. Both Dr. Harkness and his son make their own barrels, as they find this plan more economical, and they are always sure of having a supply of barrels when needed. A fine fruit storage and packing house is being erected by Dr. Harkness. His method is to get his fruit under cover as soon as possible after it is ready to pick, and then pack afterwards. Both Dr. Harkness and his sons are strong believers in the value of bees in the orchard, and there is a large apiary managed by one of the sons.

In striking contrast to the Harkness orchards was one visited within an hour afterwards. Here was seen the original McIntosh Red apple tree now many years of age, which a few years ago was almost destroyed by fire. One branch is still alive with a little fruit on it, but the tree has not long to live. Close to the old tree is an orchard of McIntosh Red apple trees, the trees of which were loaded with fruit, and the whole orchard containing probably over 200 barrels of this variety. While the fruit was of fair size, practically every specimen was spotted, and by picking time would probably be worthless. These trees had not been sprayed.

Other orchards were seen during the drive, most of the trees being McIntosh Red and Fameuse. Unfortunately, spraying is not very general in this district, and in most orchards the fruit promised to be more or less spotted.

## FIGHTING THE SAN JOSE SCALE WITH LADY BEETLES

GR<sup>EAT</sup> interest was manifested when it was announced, over a year ago, that the United States Department of Agriculture had made an importation of Chinese lady beetles, the natural enemy of the San Jose scale, to ascertain if the beetles could be utilized as a remedy for the scale. Since then little has been heard in regard to the importation.

Hearing that Prof. C. F. Hodge, of Worcester, Mass., had been conducting some tests with the beetle The Horticulturist recently wrote him asking for information. The following interesting reply has been received:

"My experience with the Chinese lady beetles has been so limited that I fear I can not be of much assistance to you. In May, the Department of Agriculture sent me 25 of the beetles to colonize here, but all but nine were dead on arrival. We released them on an infested tree in the middle of

an orchard of several acres, and I have always been able to find some of the beetles on the tree on my weekly visits. I have seen no evidence, however, of breeding, and fear the season has been too cold and wet for them to do well. Possibly all the females were lost. However, the trees are large and old and the beetles hard to find, but I still have hopes that a colony may show up later.

"August 4 I received six more from Dr. Marlatt, all in good condition. I have seen these mate, and so can tell the males and females apart, I think. I already have a number of eggs from these last, and hope to rear a colony in confinement. The beetles certainly eat the scales like a devouring fire. We have been tracking them on the tree by the paths of scales scraped off. If we can only get them acclimatized here I think they will prove of great value."

### Three Methods of Protection

FRANCIS WAYLAND GLEN, BROOKLYN, N. Y.

TH<sup>ROUGH</sup> the columns of The Horticulturist I observed last spring that the fruit growers of Ontario suffered heavily from the depredations of field mice. From 1846 to 1861 I was engaged in the nursery business at Rochester, N. Y. In that climate the snow often covered the ground before the surface was frozen. The mice then burrowed under the snow and attacked the trees.

We had three ways of dealing with the field mice problem. First, we tramped the snow very hard about the trees; 2nd, we wrapped waxed paper about the base of the trees with poison in the wax; 3rd, we sawed some pine timber, 1 3/4 square, and six inches long, and bored holes in them 1 1/4 inches in diameter, 5 inches deep, and filled the holes with dry Indian meal mixed with arsenic. We packed the meal very hard and laid one of these blocks by each orchard tree and in

the corners of the fences. In this way we saved our trees from destruction by mice.

### Transplanting Evergreens

PROF. H. L. HUTT, ONT. AGRIC. COLLEGE,  
GUELPH, ONT.

EVERGREEN trees may be planted later in the spring and earlier in the fall than deciduous trees, but our experience with both classes of trees is, that they are best planted early in the spring before growth starts. The ground is then usually in a moist condition and most suitable for the reception of roots. Trees properly planted at this time seldom fail. The later transplanting is done the more care is required to avoid injury from drought and exposure to hot sun and drying winds.

The circulation of the sap in evergreens is practically the same as that in deciduous trees. Roots take in soil moisture from the ground which is transferred from cell to cell, through the sap wood, to the branches



### Fameuse Apple Tree in Full Bearing.

A Fameuse apple tree in the orchard of Mr. Harold Jones, of Maitland, who may be seen in the illustration, is here shown. Last fall this tree, which was planted in 1857 and commenced to bear in 1888, yielded 13 barrels of fine apples. It is one tree out of many in an orchard of four acres which has been bearing continually since 1888. The average yearly returns for the four acres since 1884 have been \$800. By spraying, Mr. Jones has been able each year to secure 90% of high grade fruit free from scab.

and leaves, where it is acted on by the sun. The excessive moisture is given off through the leaves, and the prepared plant food returns just beneath the inner bark, forming the cambium layer, the maturing of which adds a new layer to the wood on the outside of the wood and a new layer of bark on the inside of the bark.

**A Most Effective Protection** against mice in the orchard is furnished by wrapping building paper about the trunk of the tree for one or two feet, tying it in place with stout cord. A few correspondents have used a light veneer, such as is used for making baskets, cut in pieces about 6 x 18 inches, and held in place by a stout cord. These cost about \$4 per 1,000, and will last many years.

### Keeping Snow Apples

We have a good crop of snow apples this year, but always have difficulty in keeping them until Christmas. Would like to know when to pick and what to do after that. I have had good snow apples in February bought from the stores here, and think we should be able to keep ours longer than we do.—(A Subscriber, Hamilton.)

A low temperature tells the secret of keeping apples a long time crisp and good. Our cellars are usually too warm. Snow apples should be gathered in October, before they become too ripe, and stored immediately at a temperature of 33 deg. F.—(W.)

**Gave Good Results**—In view of the general interest that is being displayed in the relative merits of the various power sprayer outfits being used in Ontario this season, it is interesting

to hear that Mr. W. H. Dempsey, of Trenton, who has been giving the Wallace Power Sprayer a thorough test, says it has given him perfect satisfaction. When carefully looked after, Mr. Dempsey says, this sprayer is no trouble to handle. On light land, with a small team, he has been able to keep up a pressure of 75 pounds. Labor being hard to get, he took the sprayer out alone and found he could cover more ground with it than three men could do with an old hand pump, which he used up to the present season. Mr. Dempsey is satisfied that power sprayers are required by growers who have large orchards.

We need a new electric railroad in our section; express charges are far too high.—(R. J. Lighthill, Lincoln Co., Ont.)



## CANADIAN FRUIT WINS HONORS AT ST. LOUIS

T. H. RACE, CANADIAN COMMISSIONER'S STAFF, ST. LOUIS, MO.

RECENT shipments of new fruit from Canada have greatly brightened up the exhibit at St. Louis. The apple display comprised a considerable number of varieties from the crop of 1903, still in excellent condition.

One thing, the Canada fruit exhibit at St. Louis has demonstrated is the superiority of the Canadian apple in point of keeping qualities. The Spys, Russets, Ben Davis, Canada Red, Scarlet Pippin, Cranberry Pippin, Lawver and Red Check Pippin, all to be seen in the Canadian exhibit at this time, are as bright and crisp as when they were put in cold storage. There are still, according to Mr. Knowlton, about 250 cases in cold storage after giving away nearly 100 cases on "Apple Day," October 4. Canada, in fact, was the only exhibitor who was able to contribute wholly from her stock of 1903 to that general give-away. And, it was not discovered by the thousands of people, who were sent off rejoicing in the possession of a good apple, that they were munching a Canadian fruit a year old.

The finer fruits, so-called, such as peaches, pears and grapes, have arrived throughout the season in pretty good shape. There are some very fine peaches and grapes on display from Mr. L. Woolverton, of Grimsby, and some excellent pears from Mr. W. Warnock, of Goderich. The last named contributor also sent with his consignment a mammoth squash weighing 403 pounds. We had a good sized squash before, from Mr. W. Rennie, weighing 305 pounds, which was attracting a good deal of attention. The one from Mr. Warnock is proving an eye-opener to the Americans down here, and they are beginning to believe now that Canada is really a country of big

things. A squash is not a fruit, and it was the fruit exhibit that I started to write about. During October, Mr. Knowlton has been removing much of the fruit preserved in jars, from the tables and replacing it with the fresh stock arriving. He found that it had discolored so much as to be unattractive, and thought it better to put it out of sight and replace it with something more sightly.

The state of Wisconsin is making a very showy display with the Northwest Greening, the McMahan White, Wolf River and Alexander, all good show varieties without much quality. This Greening and the McMahan seem to do particularly well in Wisconsin, as the Ben Davis does in Arkansas. My observation is that the Ben Davis grown in Arkansas is superior in quality, to that grown anywhere else in America, and almost equal in size to that grown at the Pacific Coast.

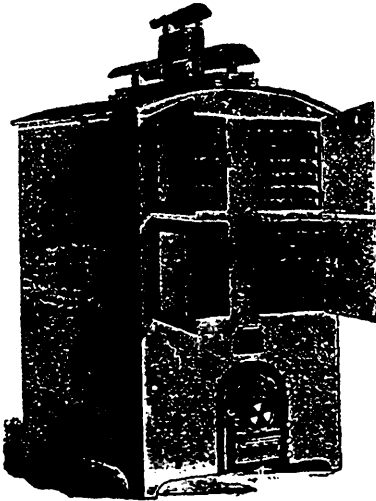
The awards for the exhibits in the palace of horticulture have not been announced yet, but I understand that the committee on awards has recommended a grand prize for the general make-up, arrangement and comprehensive collection of the Canadian display, and a gold medal for general quality of apples.

We are frequently asked the question what Canada is making such a "great spread" down here for, and our answer is, to draw attention to the wonderful resources, capabilities and productiveness of our country generally, and to attract settlers to our Northwest provinces especially. In the furtherance of that great and patriotic purpose the Canadian fruit exhibit and those who have had charge of it have contributed no small share.

Apple buyers do about as they please. Very few growers ship their own fruit, therefore the majority realize small profits, which are discouraging, and lack of interest and little attention to cultivation result.—(C. L. Olmsted, Wentworth Co., Ont.)

The Horticulturist is one of the best monthly publications I know of. Its reports on the fruit markets of the Dominion and also the English market are worth more than ten times its subscription price to any fruit grower.—(John Spencer, Henrysburg, Que.)

## UTILIZING OUR SURPLUS APPLES



Zimmerman Fruit Evaporator.

**M** cCARTHY, of the North Carolina Experimental Station, publishes a bulletin on the above subject which contains some good hints. Among other things he describes an evaporator suitable for farm use. He says:

The possibilities for expansion in apple growing are almost unlimited. When a fair profit is assured, as it must be by the general introduction of improved evaporators, and modern methods for utilizing the lower grades of fruit, we may look for a great increase in orcharding, and as a result, greater prosperity for the mountain region, where our best apples are grown.

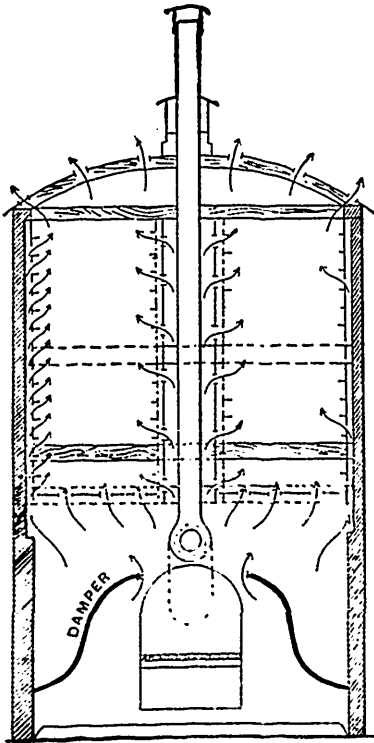
The experience of practical apple-growers seems to show that on a commercial scale no evaporator will pay which turns out, in a day's run of ten hours, less than 300 pounds of dried fruit. In practice it is customary to keep the evaporator going night and day during the season.

One of the best evaporators for farm use is the Zimmerman, made by the Blymer Iron Works Co., Cincinnati, Ohio. This machine is built entirely of metal, and is therefore fire-proof. There are several

styles on the market, differing mainly in size, but no one who evaporates for the market should buy a smaller machine than the No. 3, which consumes about twenty bushels of fresh fruit in ten hours. This machine costs about \$100. The No. 4 will work up 30 to 40 bushels in ten hours, and costs about \$170.

In large factories it is customary to bleach the fruit after peeling, by submitting it to fumes of burning sulphur. But such fruit is not as wholesome nor palatable as that un sulphured. If the fruit is dropped into a tub of weak salt brine as soon as sliced it will not discolor, and while retaining all the natural flavor of the apple, will appear in the dried state nearly as white as the sulphur-bleached fruit. The brine is made by boiling for ten minutes one pound of clean table salt in 16 gallons of water. Carefully skim off the scum which rises, and allow the water to cool before using. The fruit is simply dropped into the salt bath and allowed to soak about five minutes. It is then removed, drained for a few minutes and placed in the evaporating trays. The salt does not taste upon the finished product. A fresh bath should be provided every four hours.

The trays upon which the fruit is placed are bottomed with galvanized iron wire. The fruit is placed upon these in a thin layer. Wood is always used as fuel in the portable evaporators. The length of time required to dry the fruit differs with the different varieties of fruit, and with the temperature and other factors, which can be determined only by practical experience. The fruit is properly dried when it does not show moisture when broken. It must not, however, become so dry that it will snap or crackle when broken between the fingers. After removing from the evaporator the fruit is piled on a clean floor three or four feet deep, and allowed to sweat for several



**Zimmermann Evaporator, Sectional View.**

days. It is then ready to be boxed. The best grade is always sent to the market in new boxes, lined with white paper. Cheaper grades are marketed in new barrels. The cores and parings may be dried and packed in barrels. There is a large demand for this grade for manufacturing into jelly. But as a rule the North Carolina farmer can make more by fermenting the cores and parings and making vinegar out of them.

Apples which are too small to evaporate can be profitably worked into other merchantable products.

#### APPLE BUTTER AND MARMALADE.

There is a good local demand for these products. In making apple-butter and marmalade the fruit, without paring, is sliced or chopped, and boiled until soft in an old-fashioned heavy, iron kettle. Place the chopped

fruit in the cooker, and cover with juice of same fruit. Plain water will do, but this entails more work in evaporating the water. Boil until the fruit becomes soft enough to be easily run through a colander or sieve. Pass through colander to remove seeds, skins and cores. Add sugar to taste. The amount of sugar required depends upon the variety, natural sweetness, and ripeness of the fruit used, and also upon the judgment of the operator, and the demands of the trade. Usually in making apple marmalade, to every 100 pounds of apple paste from the colander, 30 pounds of sugar is added. Cook again until the marmalade is reduced to the desired constituency. Usually 100 pounds of fruit and 8 gallons fruit juice, to which is added 30 pounds granulated sugar make 110 pounds finished marmalade.

Fruit butter differs from marmalade only in being spiced, and using only 20 pounds sugar to 100 pounds fruit. Both these products keep well in ordinary covered wooden pails, if kept in a cool, dark place. The best marmalade is made from crabs.

#### JELLY.

Pure fruit jellies have become scarce and high priced on the market. The preparation of jellies can be profitably carried on in connection with canning fruits. Fruit too ripe for canning can be utilized for jelly making. The fruits best suited for jelly making are apple, pear, peach and plum. The currant also makes fine jelly.

To make jelly, only sound, fully ripe fruit may be used. Apples and pears are first grated, and then crushed in a press, preferably of the hydraulic type. The juice as it runs from the press is filtered through a horse-hair sieve, or a layer of finely chopped and well washed oat or rye straw. Sugar enough—ordinary granulated sugar is best—is added to bring the density of the juice up to twenty degrees on the saccharometer.

The sweetened juice is then at once run into the boiling pan. A better grade of syrup and jelly can be made in a pan or boiler which excludes the air and prevents the formation of caramel. The ordinary pan as used in boiling sorghum or maple sap for syrup is equally suited for jelly making. The best form of pan is a long covered and ventilated wooden trough, having heavy copper steam pipes running lengthwise of the box. The steam in the pipes must be under a pressure of not less than eighty pounds. The South Allen Evaporator, made at Mt. Gilead, O., is of this type, and gives good satisfaction. Whichever pan is

used, the heating surface must be hot enough to keep the juice boiling vigorously from start to finish. The scum thrown up by the boiling juice must be carefully skimmed off. Not more than eight minutes' boiling should be required. Longer boiling darkens the product, and also reduces its sweetness. The degree of condensation required to jelly differs with different fruits. Usually, in making apple jelly, five parts of juice make one of jelly. To one hundred pounds of clear juice is added about twenty pounds of sugar. The product is forty pounds of sweetened jelly. This can be sold at a handsome profit.

### Cause of Apple Spot

A. W. PEART, BURLINGTON, ONT.

IN the October issue of *The Horticulturist* Mr. R. J. Messenger takes issue with the opinion I advanced to *The Horticulturist* in relation to the apple spot, viz., that "clean cultivation tends to promote the scab." Mr. Messenger erroneously assumes that this opinion is based on one or two isolated cases pointing in that direction. On the contrary it is a growing conviction founded on the experience and observation of many years.

In my opinion there are several other conditions which tend also to promote the spot, such as the variety of apple under consideration, crowding of trees, lack of free circulation of the air, unsuitable soils, etc. The Snow and Holland Pippin appear to have a strong predisposition to the scab, while the Golden Russet and Blenheim Pippin are comparatively immune.

Last year the cold wet season was chargeable with the prevalence of the spot. This year, which has probably been colder and wetter, the apples are very much cleaner in this district. And so it goes. It does not seem that the bottom of the question has yet been reached. Fruit growing is still in its ex-

perimental stages, and opinions given on very many of its problems must necessarily be tentative rather than positive.

### The Apple Package

FOR soft early apples the barrel is quite out of the question. It holds too many, and they crush each other as they ripen by their own weight. Besides, no one wants a barrel at a time of such perishable stock. At one time we thought the half-bushel package best for Astrachans, and put up our crop for export in such boxes, but the buyers advise the bushel box as best for all apples. Fortunately our association at its last meeting agreed on a box 10 x 11 x 20 inches, inside measure, for the use of Ontario fruit growers, and this will no doubt suit the Northwest trade for early apples. British Columbia apple shippers, who are competing with us for the Northwest trade, will probably agree to a bushel box of the same size, as indeed it differs very little from the box already in use in that province. This box is offered us at about \$12 a hundred, a price not exceeding the cost of the barrel package for the same quantity of fruit.—W.

## DISEASES OF THE GRAPE

PROF. W. LOCHHEAD, ONT. AGRI. COLLEGE, GUELPH.

HERE are several diseases which are more or less commonly known in our Ontario vineyards. The most common disease this year has been the downy mildew, or, locally known as brown rot. This disease produces a thick white felt on the under surface of the leaves, stems, and fruit. The treatment outlined in this issue for black rot will prevent the action of downy mildew, but fewer sprayings may be required.

The bird's-eye rot or Anthracnose was occasionally observed this season, but is not doing much injury. It yields readily to treatment by spraying, and should not be feared when spraying is regularly practised. It is important that the diseased wood should be removed.

Occasionally the powdery mildew does some damage to our grape crop. It forms a cobweb-like growth on the upper surfaces of the leaves, and occasionally does considerable harm to fruit. Spraying with the Bordeaux will prevent injury from this disease. In spite of the presence of these pests it is clear that none of them can compare in damage with the black rot, which is extremely difficult to control.

### THE MILDEWS OF GRAPE.

Regarding the mildews of grape, the downy mildew, or the brown rot as it is called in some districts, is by far the more difficult to treat, inasmuch as the threads of the fungus live within the tissues of the plant, and only come to the surfaces to fruit. Besides, a thick-walled winter spore is produced within the tissues of the leaf, and this is very difficult to destroy unless measures

I GROW A FEW STRAWBERRIES and find that the Williams is the most productive, but that Bubach is better in quality and more suitable for table use. I always put on a heavy mulch of straw in the fall to protect the plants in the winter.—(Dr. McCallum, Smith's Falls, Ont.)

are taken to plow the leaves under deeply or to burn them carefully. The powdery mildew which forms the cobweb-like growth on the upper surfaces of the leaves and fruit was this summer the cause of considerable destruction in the Grimsby district. At one time it was supposed that the cause of the rotting of the grapes in this district was the downy mildew, but after examination I found that the most abundant fungus present on the leaves and fruit was the powdery mildew. This is a surface-feeding fungus and can readily be controlled by frequent sprayings.

The white rot, which Prof. Selby, of Ohio, alludes to in one of his early bulletins, is in all probability a phase of the black rot, and he thinks he made a mistake when he called it the white rot, for he has not been able to find it in late years.

Many of our fruit growers have come to the conclusion that dust spraying would be a very effective method of dealing with the fungous diseases of the orchard. They feel that this method of applying a fungicide could be used in weather which precludes the liquid application. This view is not held by Prof. Selby, who has had a great deal of experience with spraying operations and is one of our best informed authorities on the diseases of grapes, as he believes dust spraying will never be as successful as the liquid spray. The fine mist produced, he believes, is far more penetrating than the fine dust of the dust sprayer. Our orchard men should not run hastily into the dust spraying before more is known about its merits.

In growing carnations I generally use a top dressing of wood ashes and bone meal mixed with soil. I put some salt and quite a lot of lime in this. The salt serves as a food for the carnations and also prevents rust. The lime acts as a combatant to insect pests.—(H. Neal, Ingersoll, Ont.)

## Advice for a Beginner in Grape Growing

A party who has purchased 60 acres of land in the Niagara district with the intention of raising fruit on an extensive scale, including 10 acres of grapes, wrote recently to Prof. H. L. Hutt, of the Agricultural College, Guelph, asking for information in regard to the growing of grapes. The questions asked included the cost of posts and wires, number of vines per acre, the years required before the vines bear, the price of good vines, average price of grapes per ton, etc. The following answers were given by Prof. Hutt:

There are a number of your questions which could be answered far more satisfactorily if you would consult some of the leading fruit growers in your section.

Grape vines are usually planted in rows ten feet apart and the vines ten to twelve feet apart in the row. From this you can easily figure out the number of vines required per acre, according to the distance decided on.

Whether two or three wires are used for the trellis will depend upon what method or training you intend to adopt. The Kniffen System requires but two wires, while the Fuller or renewal system usually has three wires. I believe most of the growers in your neighborhood are growing on the latter system, although the former is an excellent one, and one which I rather prefer. These two systems you will find fully described in some of the recent numbers of *The Canadian Horticulturist*. This is a journal you should take if you are not already doing so.

Vines often begin bearing the first or second season after planting, and if well managed should be able to bear a fair crop the third and probably a full crop by the fourth year. The average yield per acre varies considerably, not only with the varieties, but with the attention given them. Three or four tons per acre is not an unusual yield for Niagara and Concord, and it often goes far more than this.

I cannot speak definitely with reference to price of vines. Usually we can get first-class vines in quality for \$4.00 per

hundred. The price which can be realized per ton varies so much, not only with the season, but with the variety and the grower, that it is not safe to give figures. I think you would learn far more along this line from growers in your neighborhood than from any other source.

The cost of maintaining trellis is not usually a heavy one. If trellis is properly put up at first but little labor and expense should be required to keep it in repair from year to year. The market for grapes is wide, as they can be shipped long distances if properly packed. I have no doubt that the Northwest will soon afford an excellent market for all of the grapes that we can supply, but the most serious drawback so far has been the excessive cost of transportation. This has been considerably lowered recently, which will materially add to the profits of the fruit grower. Prices for grapes have been low for some years past on account of the heavy crops, but this year they are likely to be much higher than usual on account of the lateness of the season, slow ripening of the fruit, and also the loss of a large portion of the crop from grape rot.

### Ever-bearing Strawberries

PROF. H. L. HUTT, ONT. AGRI. COLLEGE,  
GUELPH.

**D**URING the past ten years nearly 400 varieties of strawberries have been tested at the Ontario Agricultural College, among which were a number that have more or less of the ever-bearing habit. None, however, have ever been found which were considered worthy of recommending on account of this peculiarity.

In favorable seasons many of the varieties in general cultivation will bear a second crop, but there is seldom enough of these berries to be of value. As the fruit comes in at a time when strawberries are out of season, and the market full of other fruits, it is not usually a profitable crop.

## GAS PROOF PLANTS

WM. HUNT, ONT. AGRIC. COLLEGE, GUELPH.

THE question is often asked "Are there any plants that are proof against the harmful effects of coal gas?" To this question only one answer can be given, viz: "That no plant life can long resist the perishing effect that an excessive amount of coal gas has on plant life in general."

There are, however, some plants that will endure this evil for a longer period than others. Generally speaking, plants that are natives of countries where a dry, arid temperature prevails for a great part of the year are among the best gas resisting plants that we have. The class of plants known as succulents, or plants that have the power of retaining moisture in their growth and leaves for a great length of time without being given a supply of water at the roots, are almost invariably the best plants to resist the fumes of coal gas. Unfortunately, these succulent plants are not usually of a very graceful or decorative character, although some of them are very pretty and effective as window or house plants.

Among the best and most ornamental of these plants that will grow in an atmosphere where the fumes of coal gas are prevalent, are the Sansevieras or Bowstring Hemp plants, natives of tropical Africa and the East Indies. The variety most commonly known to plant growers, and in fact the only one usually offered by commercial florists is the *Sansevieria Zeylanica*, a native of the East Indies. This variety is one of the best gas resisting decorative plants that we have. It will resist the fumes of gas for a very long time, and given proper treatment will grow and flourish much better in the dry, arid atmosphere of a dwelling house, than it will when treated as an ordinary window plant, or grown in a greenhouse and given ordinary greenhouse treatment.

As a proof of this, I was under the necessity some 18 years ago of supplying plants to place on the top of some ornamental

pedestals standing in a large dining room, where eight to 20 gas jets were burning almost every evening during the year. An imitation log fire place in the room was also frequently lighted with gas, so that there was no question about the fumes of gas being prevalent. Two plants of *Sansevieria Zeylanica* about 18 inches in height in five-inch pots were placed on the top of these pedestals in 1886, and were kept in the same position until very recently. The plants were only removed about every two or three weeks to a sink to have a thorough watering and to sponge the leaves. The growth of the plants when finally removed was over three feet in height, and instead of two or three leaves as when placed there, four or five additional leaves had been added to each plant.

Keeping the soil in which the *Sansevieria* is growing in an almost dry condition, and giving the plant a rather light sandy soil to grow in, with plenty of drainage at the roots, are the main essentials necessary to be successful with these gas-resisting house plants. A wet sodden condition of the soil will be sure to have a bad effect and soon kill the plants. Too much water usually accounts for the indifferent success many plant growers have with these and almost all succulent plants in windows or greenhouses. It is only when the plants are kept in a high tropical temperature that most of the succulent plants grown in greenhouses will live and thrive in a moist atmosphere.

The tallest plants in the centre of the accompanying cut of a small collection of succulent plants shows a small specimen of the *Sansevieria Zeylanica*. The leaves of these plants are very prettily marked, which has sometimes led to their being called the Zebra plant. The *Sansevieras*, like most succulent plants, are very slow growing. This peculiarity, and the fleshy moisture retaining nature of their growth and leaves ac-

count chiefly to their dislike to an over supply of moisture at the roots.

Amongst other succulent plants that have a very nice appearance in a window are varieties of the Agave. A small plant of the variegated type of *Agave Americanus* is shown in the cut. The two silvery marked, rosette shaped plants are variegated varie-



#### Gas Proof Plants.

ties of the *Echeveria* or *Cotyledon secunda glauca*, whilst the larger and darker colored rosette shaped plant is the *Echeveria metallica*. Another plant seen in the collection is the *Gasteria maculata* or Hound's Tongue plant, with its long spotted leaves branching out from either side of the centre of the plant. Another odd looking plant showing a long flower spike is the *Africa imbricata*; this is also a very enduring window plant if not given too much water.

Many varieties of *Aloes*, *Haworthias*, as well as some varieties of *Cacti* make splendid plants for resisting the fumes of gas, but like most of the plants before mentioned are not of a very highly decorative or graceful habit. At the same time they are very useful to form the basis of a collection of window or house plants and are a very interesting class of plants, as well as very enduring, when given proper treatment. When relieved here and there with a pot of bulbs in flower or a plant or two having more graceful foliage, they have a unique

and attractive appearance in a window. The chief reason so few plant growers succeed in the culture of many of these succulent plants is from giving the plants too frequent and too copious waterings.

Among the more popular and better known decorative house plants that will endure for a time the baneful effects of coal gas are some varieties of palms, *aspidistra*, *begonia* or ferns.

Varieties of the Phoenix or Date palms will withstand gas for a longer period of time than most kinds of palms. *Phoenix rupicola*, *P. spinosa*, *P. sylvestris*, and the true date palm *Phoenix dactylifera*, being about the best varieties to withstand the dry arid atmosphere of the house. The *Kentia* and *Latania* palms, owing to the thinner texture of their leaves, succumb quicker to the effects of gas fumes than do the Phoenix palms, although the latter are not as graceful in appearance as are the *Kentia* and *Latania* palms.

*Aspidistra lurida* is one of the best house plants we have amongst foliage plants. Its hard glossy green leaves, if kept sponged frequently with clear tepid water, will resist for a long time the effect of gas fumes. The rubber plant, *Ficus elastica*, is another good enduring plant for the house. Frequent sponging of the leaves of these two last named plants, as well as those of the palms is necessary, if the most enduring and pleasing results are to be attained in their culture.

Amongst *begonias* the most enduring is *Begonia manicata aurea*, *B. manicata* and *P. sanguinea*. None of these *begonias*, however, will flower successfully where there is the slightest indication of coal gas fumes. Their foliage, however, is very attractive and enduring.

The Boston Fern is one of the hardest and most enduring ferns for the house. *Pteris cretica* or the Cretan fern, *Pteris Wimsetti*, *Pteris Hastata*, *Aspidium Tensi-*



mense and *Aspidium coriaceum* or Leather fern, will also keep in good condition much longer than many other varieties of ferns in the house.

There are some other plants that might be mentioned as being particularly adapted to endure for a length of time the baneful effects of coal or illuminating coal gas. Those I have mentioned, however, are

among the most enduring of our window and greenhouse plants.

In conclusion I would strongly advise those who live in dwelling houses where the fumes of gas is quickly fatal to plant life, to at once remedy the evil; for where plant life cannot exist in a fairly good condition for a reasonable length of time human life is certainly more or less endangered.

## SOME CANADIAN WAYSIDE FLOWERS

CHARLES H. K. BAILLIE, WINONA, ONT.

WITH the advent of a new by-law in this part of Ontario, urging the destruction of wayside weeds, one is tempted to suggest that there are many so-called wild flowers which are worthy of cultivation. There are many indeed classed as weeds which would never have had such an appellation had they at some time kept within bounds and not escaped for a wilder and freer life. There is no doubt that many are emigrants, the seeds of which have been carried away from their native habitat, either in consignments of hay or fodder, or perhaps intentionally to grace some garden or to be planted for their usefulness. This year, with the approach of spring, I was tempted to visit the mountain side west of Grimsby, and the wealth of the earlier flora was somewhat surprising to one fresh then from the English woods.

There I found the beautiful Dog's Tooth violet, the Yellow Erythronium, a change from the much cultivated mauve variety. There were the Hepaticas, and a variety of violets in three or four different colors, which covered the ground in all directions. All these, and many others of the spring flowers, have their own peculiar and sometimes very unsuited names amongst the children, but even if classed as "superior weeds," they are surely worthy of a corner in the "Garden" at a time when color is so welcome after the one continual glare of

winter's shroud of white. With the summer, and its crowd of garden bloom, we are apt perhaps not to notice so closely these wayside flowers, but I have met many which have graced the old English flower borders, and I felt pleased to make their acquaintance again so far away from the garden where I first knew them. I have found growing wild, *Lilium Tigrinum* (the Tiger lily) drooping its handsome head as if ashamed of being recognized in all its wildness.

I have met too the little *Hypericum* (St. John's Wort), with its thickly covered heads of golden bloom, and by its side the Evening Primrose (*Oenothera*), small perhaps, and no doubt the wildest of its specie, but I predicted for it almost as striking a bearing as some of the more conspicuous cultivated varieties, were it tended and put under cultivation. Of the commoner "weeds" there is an endless field, quite as interesting perhaps, but too well known as "weeds" to be elevated to the flower border. I am thinking now of the *Chrysanthemums* (Wild Daisies—Oxeyes and Marguerites), which in some parts are most progressive little pests, and seem to have an insatiate longing for travel. There is the wild *Achillea Antirrhinum* (rad flax), the beautiful blue flowered chicory, and so many others, which seldom find their way in any save the children's eyes.

## The Care of House Plants

E. MEYSTER, OTTAWA.

**H**OUSE plants are almost a necessity. They are decorative; they are pretty and they are cheering in the long winter months. What equals the pleasure of the whole family when father brings up a pretty plant, however inexpensive it may be? However, to have them thrive in the rooms in winter they need lots of attention.

There are quite a few drawbacks to contend with. Among the worst is coal gas from the stove or the smallest escape from illuminating gas. This is very fatal to plant life. Then to many plants the dry air in the room is very hard; not only does the plant lose the moisture natural to it, but its greatest enemy, the red spider, flourishes on it. Electric light and furnaces have, however, done away with coal gas to a great extent, and we must do our best to help in the matter of moisture. So we must sponge many of our plants at least once a week.

The palms, especially *Auracarias* and Boston ferns, can hardly be sponged, but they can have a good rinse. This cleans the leaves of insects, and gives them a little taste of that moisture they love.

Begonias and some others do not like water on their leaves, neither does the red spider, so early attack them. The most particular thing in house culture is the watering. So many people think they are doing their duty if they give their plants a little water every day. This is altogether wrong.

When you find your plants dry they need water. This can be easily learned by tapping the pot with the knuckles and getting a ringing sound for dryness and a dead sound when it is wet enough, or by rubbing the soil on the top of the pot with the finger: if it feels moist and sticks to the finger it is wet enough, but if

it feels dry and slightly dirty, it wants water. Water it well, and be sure the water has gone through the pot. By half watering, that is not giving enough water to go to the bottom, the roots are drawn to the top for a drink instead of going down, where they will get both food and drink. Never let plants stand in water either in saucers or jardinières, as it will in most instances be fatal to your plants.

### Potting Plants for Winter

**I**F possible procure new pots. Plants will do much better in them. Soak the pots in water a short time before putting the plants in them, as considerable moisture is absorbed by new pots. If sufficient water is not given the plants immediately after potting they often suffer at that period for lack of moisture.

When old pots are used, wash them thoroughly inside and out before potting the plants. See a small hole is made in the bottom of each pot before putting the plant in. A layer of small stones, bits of broken china, etc., in the bottom of the pot will ensure good drainage, which is most essential. A small bit of charcoal in the bottom of the pot is also an excellent thing.

In repotting, many plants you will find to have but few roots; these require a portion of the ball removed—place them in smaller pots, encourage them to make new roots, and in a short time you will have fine healthy tops. After they have been given proper drainage, put in a little soil (care being taken to have the plant a little below the surface of the pot, sufficient to allow for watering); place the plant in the centre of the pot with one hand and with the other heap up the soil loosely in the pot; give the pot a sharp rap, pressing the soil with the thumb firmly around the plant. In potting large plants, a flat stick must be used to firm the soil around the plant, otherwise it will not be packed as firmly around the edges as is essential for good results.

\*Extract from a paper read recently before the Ottawa Horticultural Society. Societies are invited to send *The Horticulturist* copies of the papers read at their meetings.

Have the soil in proper condition, neither too wet nor too dry. If too wet, it will bake and roots will not penetrate it. If dry, like dust, you cannot pot with that firmness required.

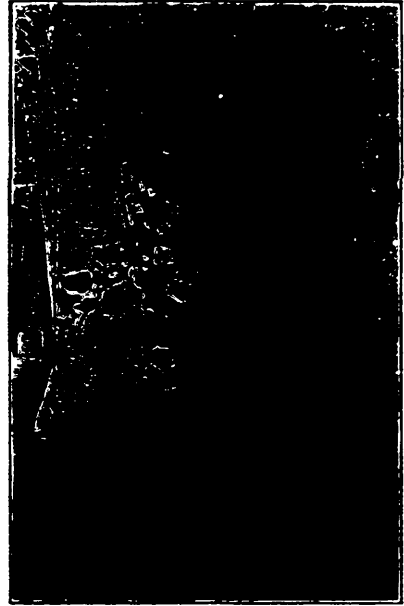
Suitable compost for nearly all plants is composed of three-fourths turfy loam, equal parts of cow manure and leaf mould with a little bone meal and sand added: mix well together, and it is ready for use, and suited for roses, geraniums, fuchsias, heliotropes, verbenas, pansies, and all free-growing plants. Turfy loam is the top sod from all pastures well rotted. Leaf mold is decayed leaves, which you can get from the woods.

### Carnations

CARNATIONS can be grown successfully in the garden by starting the seed in cold frames in July or August and leaving the plants there over winter. In the spring set them out in beds that are well raised so that water will not lie on the ground.

If the soil is rich about 75 per cent. of the plants make good growth, but will not bloom. During the succeeding winter they should be well protected by a covering which admits some air but protects them from the frost. A covering of dead leaves is as good as any. About June 15 or July 1 of the following season they produce an abundant and fragrant bloom which lasts for three or four weeks.

The difficulty in this country is, that if they do not bloom the first season they become winter-killed and there is practically no bloom. The best varieties are Red Grenadin and Early Dwarf Vienna (white and variegated). Only about 60 per cent. come double and some others semi-double. The remainder are single and should be uprooted. The variety Marguerite will bloom the first year, but it does not give nearly the amount of bloom the others do.



**The English Ivy**

C. B. M.

OF all vines for continued house growth the English Ivy stands at the head as a universal favorite, and yet is seldom seen brought to a state of luxurious growth and vigor. It is most easy to grow, and when once well established makes rapid progress. It branches freely and gracefully, will stand dust, hot and dry air, sudden changes of temperature, and show no ill-effects therefrom. One of its qualifications as a house plant is its ability to grow in the shade even better than in the sunshine. Frequent washings of the foliage make it as "good as new," rendering the dark glossy rich leaves even more attractive than ever.

Good drainage is an especial necessity for the ivy, and only enough water should be given to keep the soil moist. None better than ordinary soil is required for good success with English ivy, applying liquid fertilizer once a week or thereabouts. The foliage must be kept clean, otherwise the plant is subject to scale, requiring such

washing and scrubbing, if once attacked, to rid it of the pest.

The English ivy is about the only plant that lends itself to training round a room, and as mentioned before, it grows equally as well without sunlight as with. The color of the leaves in fact take on a deeper and richer tone if in complete shade. Aim always to keep the plant in a perfectly healthy condition. If disease attacks it, leaves will fall off before recovery sets in, and the long naked branches are anything but a "thing of beauty."

### Another Blue Hydrangea

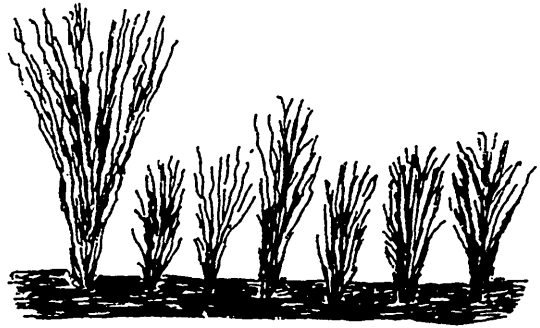
GEORGE VAIR, NORMAL SCHOOL, TORONTO.

**I** NOTICE by the October issue of *The Horticulturist* that Mr. E. Tyrrell, president of the Toronto Horticultural Society, writes about a blue hydrangea, belonging to a lady somewhere in England, which produced blue blossoms, and that the owner in question was offered the sum of 10 pounds but did not make a sale even at that sum. The plant referred to is not the only one that produced blue flowers.

I remember in my father's time (who by the way was a gardener) hearing of a similar freak which occurred in Scotland.

Of course it was a wonder, and very many ideas were put forth as to the cause. Finally the whole matter was exploded. The hydrangea was planted against a wall and through the wall there was a lead pipe. The roots of the plant wound around the pipe of lead and thus became what might be termed oxydized. The plant produced blue flowers. The lady spoken of must have possibly in some way placed some lead filings amongst the soil, hence the result. Let some one try the experiment.

Never allow plants to droop for want of water. Do not let water stand in bottom of jardinières, as it rots the roots and the plants will die.



### Preparing Roses for Winter, No. 1.

Many amateur rose growers in Canada fail to attain success through not knowing how to properly protect their plants in winter. One of the most successful rose growers in Canada is Mr. W. G. Black, of Ottawa, who in an address on roses, delivered recently before the Ottawa Horticultural Society, gave some valuable information on this subject. The process by which he preserves his rose trees through the severest winter, is simple, inexpensive and easily applied. In the spring, his roses come out 16 feet and sometimes 20 feet long, as perfect as the day they were turned down. This cut shows a row of roses 14 feet long, in November with the leaves all off, ready for winter protection.

**Growing Sweet Peas.**—Seed of sweet peas should be planted at the earliest opportunity, after all fear of frost has gone. Seed planted late in fall, if in well drained soils, will give much earlier flowers than will be secured from the earliest spring plantings. Do not plant sweet peas in the same soil two years in succession, or where you have planted garden peas the previous year. The vines should be located so as to receive the sunshine at all times. If too shaded a location is selected for the sweet peas the vines will grow to an extreme length and have but few leaves and fewer flowers.—  
(C. B. M.)

Syringe your plants often with pure water. It will add health and vigor to the plants being grown in the windows, or in a hot dry atmosphere. Sprinkling and washing the foliage in hot, dry weather is good for all plants. Pick off all dead and sickly leaves as soon as they appear. They only drain the strength of the plant and do no good.

In winter and cooler months give plants all the sunshine possible. Fresh air in mild weather is exceedingly beneficial for all plants kept indoors.

## Something About Geraniums

WM. HUNT, ONT. AGRI. COLLEGE, GUELPH,  
ONT.

What have you in double flowering silver leaved geraniums? Give name and color of flower. Do you consider them worth growing by the retail grower? What do you consider to be the best scarlet bedding geranium?—(A. W. F., Hensall, Ont.)

The varieties of double flowering silver leaved geraniums we grow are: Wm. Languth, a very desirable variety for a pot or window plant. This variety has flowers of a dull scarlet color. We also have the silver leaved type of the well known bedding geranium, S. A. Nutt. The leaves of this variety are slightly margined with silver, otherwise it is very similar to the original type. It is a recent introduction, and we have not had time to thoroughly test it, but it seems inclined to deteriorate or go back to the plain leaved or original type; evidently it is only a sport from the original.

The pink flowering variety is in all probability "Mrs. Parker," a good variety for growing as a pot plant, and quite as easy to grow as an ordinary variety. Would not recommend carrying a very large stock of these geraniums, as the demand for them is limited. At the same time they are very effective as window plants. I consider S. A. Nutt the best crimson scarlet bedding geranium, and J. J. Harrison for a lighter scarlet.

Before lifting plants from a box or bed to transplant, soak soil with water and lift as much earth as possible with each plant; very few will wilt. You can transplant sweet peas and poppies in this way, although some people will tell you that they cannot.—(N. S. Dunlop, Floral Agent, C. P. R.)

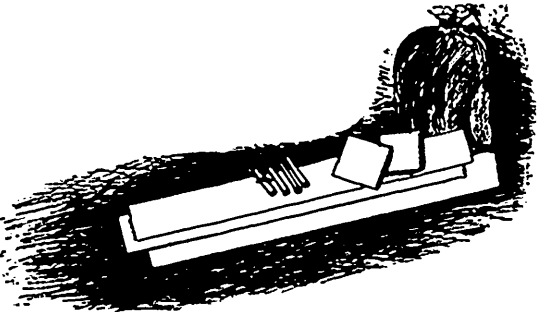
I find pansies will give two good crops of flowers, after which it is better to replace them with young plants.—(William Spendlow, Billings Bridge, Ont.)

## The Peony

WILLIAM FOLEY, LINDSAY, ONT.

THE peony is cultivated in a great many gardens, and is considered very hardy. It has a great variety of colors and is sometimes highly scented. The season of flowering runs far into the summer.

Nothing looks more beautiful than a hedge or row of peonies of various colors, or a large round or oval bed. Peonies when once planted should not be disturbed for years, and only then to reduce the clumps. They respond to kindly treatment, and even when neglected, which is too often the case, die hard. There is a great variety of both double and single flowers. I would cordially recommend every one who is interested in a flower garden to make room for a few plants of the much-neglected peony.

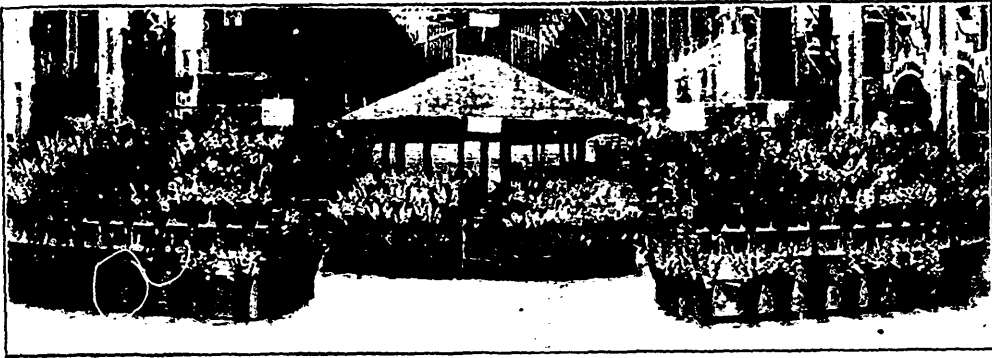


### Preparing Roses for Winter, No. 2.

In this cut, the materials required for the protection of the roses during the winter are shown. They include three pine boards, six feet long, about 1 1/2 inches wide with two end pieces, four straw braces and a sack of dry leaves.

See plants are properly potted, not over-potted. Give them a little fertilizer occasionally, either in liquid form or dry powder on top of the earth around the plant. Secure free drainage by putting bits of crockery, stones, etc., in the bottom of the pot before filling with earth.

Turn plants in windows occasionally, say every two weeks, and they will grow straight and symmetrical. Pinch back all trailing shoots to form bushy and good shaped plants.



### A Floral Exhibit That Has Brought Honor to Canada.

The magnificent floral display shown in the illustration was made at the World's Fair at St. Louis by Mr. H. H. Groff, of Simcoe, Ont., and brought great honor to Canada, by winning the highest award. In the growing of gladioli Mr. Groff is recognized as the leading specialist in America, and has won many valuable and notable prizes for his exhibits. Among these are the Gold Medal at the Pan American, the Pan American Silver Vase, besides thirteen first awards at Buffalo the same year. It was with the intention of securing certain strains that he desired that Mr. Groff took up the question of scientific hybridization. His creations have to-day been sold on every continent. From one-half to three-quarters of a million bulbs are sold every year.

### A ROT OF STORED CELERY

**C**ELERY may be dug in the fall and stored in a cellar to be used during winter and spring. It is usual to pack it closely, with the roots in soil which is kept moist. With right conditions of moisture and temperature the celery keeps well until spring, but, if the soil is wet, and the temperature varies, and, especially, if the celery freezes and thaws, it will decay.

Decay follows close upon death. The bacteria and moulds are its active agents. They are always present in the soil in which the celery grows, and in the soil in which the roots are packed, and there are no practicable means by which they can be kept away from the plant; neither can they be killed without killing the plant. It remains then to keep the celery alive and in health so that it can resist the invasion of the bacteria. A constant temperature, a little above freezing, keeps the celery alive without growing, and keeps the bacteria in check, for they also become dormant at low temperatures, and increase slowly, or not at all. If the celery freezes it becomes so much dead matter without resistance, fit food for bacteria, and, as soon as the temperature rises, the celery rots.

\*A bulletin by B. Barlow, recently issued by the Ontario Agricultural College.

This was observed in some celery stored in the cellar of the horticultural department of the Ontario Agricultural College during the winter of 1903-4. The celery tops showed signs of having been frozen, but, as the temperature continued low, it remained sound within, the outer leaves and stalks only showing signs of decay. On staining the decayed tissue, bacteria were found in large numbers, and, on making plates from the inner parts of the decayed stems, many colonies developed. The plates were usually pure cultures, or almost pure cultures, of *Ps. fluorescens*, and two varieties of it were recognized.

Some fresh plants of celery were obtained and the outer leaves were cut away. The inner leaves were washed under the tap and covered with mercuric chloride solution, one part to 1,000 of water, then rinsed in sterile water and each stem put into a larger sterile test tube containing a little sterile water in the bottom. In three weeks, four out of 14 stems so prepared showed signs of rotting, but some remained sound after a month and were then inoculated with pure cultures originally isolated from the celery. Some of these stems in test tubes had been standing in the sunshine and had regained their

green color. To inoculate them a sterile platinum needle was dipped into the pure culture and thrust into the stem. After one day at room temperature the rot was sometimes evident, and, in about four days, juice from the rotting stem had accumulated in the bottom of the test tube, and the stem was softened throughout so that it could be shaken down into a soft pulp in the bottom of the test tube. Plates from such inoculated and rotted stems developed colonies of *Ps. fluorescens* in pure cultures.

While the weather continued cold the celery in the cellar remained sound, although it developed a sweet taste; but, when warm weather came in early spring, what had not been consumed, rotted.

By such study we learn that bacteria cause decay, and that decay takes place under conditions in some measures known to us and under our control. To keep celery well, it should be packed with the roots in clean soil. For this purpose it is best to use the humus, or muck soil, in which the celery is commonly grown. The soil in which the roots are packed should be kept moist, but not wet, with good water. The cellar or storage room should be kept at a uniform low temperature, a little above freezing. Free ventilation should be provided, both as a means of regulating the temperature and for the health of the plants. It should be remembered, also, that celery kept in a close, foul atmosphere becomes tainted.

## GROWING LETTUCE FOR THE WINTER MARKET

THE growing of several lines of vegetables under glass is a profitable occupation for market gardeners in many leading cities. Quite a little of this work is carried on in Toronto. One of the most successful growers is Mr. J. W. Johnson, of Queen street east, who makes a specialty of raising lettuce, he having two greenhouses, one 10 x 18, and the other 10 x 70 feet.

"My method," said Mr. Johnson recently to *The Horticulturist*, "is to start my lettuce as soon as the cucumbers are out of the way. It is started in the greenhouse, as I prefer using the greenhouse to growing the lettuce outside under frames. They usually keep freer from the green flies than when started outside. It is difficult to destroy these insects when they once get into the greenhouse, and if the plants are brought into the greenhouse the place is often stocked up with the flies for the winter. When the plants are grown in the greenhouse it is possible to fumigate and keep the insects under control.

"I sow Grand Rapids and some varieties of Boston Market. The first is a bunch lettuce and the second a head lettuce, which I find is coming into greater demand, it being a more tender variety, and with a nice crisp white head. For a fertilizer I find barnyard manure gives better results than anything else I have ever used. Planting is started about September and continued until March or April, when cucumbers and tomatoes are started again. These latter vegetables are started about a month or six weeks before the last crop of lettuce is ready to be cut. I start cutting the Grand Rapids variety of lettuce about a month after planting, or October 1, while the head lettuce is not ready until about December 1.

"The wholesale dealers of Toronto take all the lettuce I can produce. These dealers say they have to import large quantities from the United States because they cannot get sufficient quantities here to supply the demand. The imported article is not nearly as crisp or nice as the home grown."

Do you like the changes we are making in *The Horticulturist*? If you do, tell your friends about them.

I am well pleased with *The Horticulturist*. Find it a great benefit and entertainment.—G. E. Russell, Stamford, Ont.

## GROWING ONIONS FROM SETS

R. BRODIE, WESTMOUNT, QUE.

It is only in small family gardens that onions are grown from Dutch sets. Hundreds of acres near Montreal are grown from seed, some farmers having 12 acres each. They are generally grown on land that has been very heavily manured and planted the previous year to cabbage or cauliflower. Sow about five pounds of seed to the acre, in rows one foot apart. Cultivate often and keep the weeds down or they will soon down the onions.

With good soil, good seed and clean cultivation, 600 bushels to the acre should be the yield. This, however, is only in case there is no onion maggot, for which as yet no practical preventive has been found. The best remedy, perhaps, is paris green and plaster of paris (gypsum), two pounds of paris green to a barrel of plaster. Sown

on a row of onions where the plants are afflicted it prevents the maggot from spreading over the field.

The most profitable varieties to grow are: for the red onion, the Early and Large Red Wethersfield; the Red Globe Danvers is much liked on some soils, especially the black sandy loam. For yellow onions, the Globe Danvers and Flat Danvers are the best; the Giant Prizetaker is good for amateur growers. Start the seed in the hot beds, transplanting in May. For commercial purposes it comes into competition with the imported Spanish onion, and we can never obtain the bright straw color of the imported varieties. In white varieties the White Southport and Prize Winner can be grown, starting them in hotbeds. Avoid wet soil or the onions will grow to thick necks.

### A Promising Industry

PROF. H. L. HUTT, ONT. AGRIC. COLLEGE,  
GUELPH.

THE growing of vegetables for the early markets, I believe, is one of the branches of market gardening which will certainly increase very much within the next few years. From the fact that many of the

crops of tomatoes, cabbage and cucumbers even more profitable than peaches. There is a growing demand for these early crops; in fact, some of the growers stated that they could not begin to meet the demand this year.

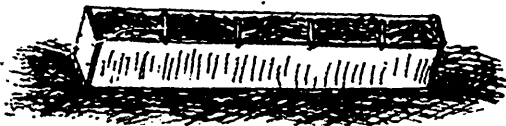
In the past we have been importing a large quantity of early vegetables from the southern states, and there is no reason whatever why we should not produce a large quantity, if not the greater part of these, in our own country. Some of the southern sections of the province, like the Niagara and Essex districts, are particularly adapted to growing such crops, as they have a suitable soil and their winters are not so severe that the expense of heating is excessive.

### Preparing Roses for Winter, No. 3.

This illustration shows the box with the cover nailed securely on, and the bushes ready for their winter's sleep. Amateur rose growers will do well to adopt this method.

peach growers in Essex district have been forced to turn to something else since they have lost their peach orchards, this forcing of early vegetables has received a great deal of attention in the Leamington district. Some of the growers there this year have told us they have found their early

We are apt to judge strangers whom we meet on the street by their personal appearance. Their outward garments, if you please, convey to us almost insensibly their qualities of mind and heart.—(P. G. Keyes, Ottawa, Ont.)





**Express Charges on Vegetables**

S. WARD KENNEDY, LEAMINGTON, ONT.

**I**N his remarks on tomato growing in Essex county, which appeared in the September issue of *The Canadian Horticulturist*, Mr. W. W. Hilborn does not, to my mind show clearly why we must have better rates to the Northwest. My shipment of vegetables was not large, but serves to show the point. The following is a copy of statement I received in regard to my consignment.

Aug. 2. By 24 Baskets Tomatoes	10.20	
To Express.....	11.00	
.. Commission.....	1.02	
.. Money Order....	6.28	
		19.20 19.20

The tomatoes sold for 80 cents a basket. This I am sure is a good price, and yet the Express company received nearly double what I did. Surely this is not right.

**Growing Celery in Beds**

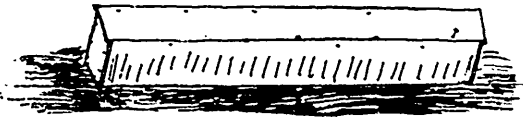
“**W**E get good results with celery by putting the plants in the old chrysanthemum beds,” said Mr. John Whittaker, of Whittaker Bros., Cornwall, Ont., to a *Horticulturist* representative, who visited his place. “We sow the seed about the middle of March, and when the plants are about one inch high transplant them into flats. They are left there until about two or three inches high, then the flats are set outside to harden the plants. If frost is anticipated the flats are placed inside or covered with burlap. As soon as danger of frost is past, the plants are set outside in beds 12 feet wide. For the early market, plants are set nine inches apart each way, but for the later crop the space is increased to 12 or 14 inches. When planted in this way a wheel hoe can be used. By running the hoe both ways very little hand weeding is necessary. When large enough for use, board in all round with a 12-inch board.

The centre, of course, bleaches itself, however if it does not bleach quickly enough, cover the bed with burlap. The advantage of growing celery in this way lies in the fact that the bleaching is more easily done than when celery is grown in trenches, besides which, three or four times as much can be grown on the same amount of ground. The ground of course, must necessarily be well manured and watered frequently to ensure good growth. White Plume and Paris Golden Yellow are the only varieties I grow, and of these I prefer the latter.”

**The Culture of Potatoes**

**N**O vegetable is raised as extensively as the potato. To the householder, who cultivates a few hills in his own garden, and the large grower, who raises many acres, the crop is an important and profitable one.

A bulletin, devoted exclusively to the culture of potatoes, has recently been issued by Prof. F. Wm. Rane and H. F. Hall, of



**Preparing Roses for Winter, No. 4.**

The rose bushes bent down and fastened with braces to the sides of the box. The box is then filled with the dry leaves after which the bushes are ready for the winter.

the Northwest Agricultural Experiment Station. According to the bulletin the ideal potato soil is deep, friable, retentive of moisture, and well drained. Heavy clay and very light sandy soils should be avoided. Stony land renders planting and cultivating difficult and expensive.

The presence of decaying organic matter in the soil not only furnishes valuable plant food but also increases its water-holding capacity. Everything else being equal, a northern slope would be preferred to a southern one, except when grown for early

use, as the crop is sometimes badly injured by the intense heat increased by a southern exposure during a hot, dry season.

#### GUARD AGAINST DISEASES.

Fresh stable manure, especially when harrowed in, tends to produce such diseases as scab, blight, and rot, and should therefore be applied, if possible, to the crop preceding, and enough used to provide for the needs of both crops. The potato thrives best in a cool, moist soil, and, unlike the corn crop, roots quite deeply. It is therefore recommended that stable manure be plowed in for the above-mentioned reasons, and also to prevent the germination of the weed seeds contained in it, thus greatly reducing the cost of hand cultivation.

Cultivation is a very important operation, and must be attended to at the proper time if the crop is to be kept clean and thrifty at a minimum cost. The neglect of a few days in one cultivation may mean the difference between profit and loss. Cultivation should begin by stirring the soil with a weeder or smoothing harrow within one week from time of planting, and the operation repeated every week or ten days as long as the size of plants will admit, the objects sought being to prevent crusting of the surface soil and the extermination of weeds before they have gained foothold in the soil.

**An Instructive Bulletin.**—Some Bacterial Diseases of Plants, is the name of the bulletin, No. 136, recently issued by Prof. H. C. Harrison and B. Barlow, bacteriologists, of the Agricultural College at Guelph. The subjects treated include Fire blight or twig blight, Soft rot of cauliflowers, fall turnip, etc., by Prof. Harrison, and Bacteriosis of beans, and A rot of celery, by Mr. Barlow. The bulletin is well illustrated, describes the various diseases, and the causes and remedies, as far as they have been discovered to date.

## Storing Celery

WM. HUNT, ONT. AGRIC. COLLEGE, GUELPH.

A GOOD method of storing a few dozen heads of celery is to place it in boxes. The boxes should be about 15 to 18 inches in depth, and of a size convenient to be moved around with comparative ease. The box should be deep enough so that the tops of the celery are at most only an inch or two above the top edge of the box.

When filling the box with celery first take out one side of the box. Then place the box on a bench or on the ground with the other side of the box, that has not been removed, downward. Start packing the celery with the roots toward the bottom of the box. If there is very little earth attached to the roots place some earth over each layer of roots, and if the soil is very dry give the soil, not the tops, a slight sprinkle of water. Fill up the box with successive layers of celery until the box is quite full. Then place the side of the box that had been removed on again and nail it down before the box is moved from its position. The box can then be raised to an upright position. Some soil may be required around the box if the plants are not packed fairly firm. Celery packed in this way can be placed in any part of the cellar. Packed in boxes in this way there is less danger of over-heating than if packed early in the season in a warm cellar. No lid is required for the box.

Another advantage in this method for the amateur gardener is that the celery can be kept safely out of doors until real winter weather sets in, if only a few leaves or some straw be placed over it on frosty nights. A few boards should also be placed over the boxes to keep out snow or rain. By packing celery in this way, it can often be kept out of doors under temporary protection until severe weather sets in, avoiding the necessity of taking it into the cellar too early.

# The Canadian Horticulturist

The Leading Horticultural Magazine in the Dominion.

1. **The Canadian Horticulturist** is published the first of each month.

2. **Subscription Price \$1.00** per year, strictly in advance, entitling the subscriber to membership in the Fruit Growers' Association of Ontario and all its privileges, including a copy of its report and a share of its annual distribution of plants and trees. For all countries except Canada, United States and Great Britain add 50c for postage.

3. **Remittances** should be made by Post Office or Money Express Order, or Registered Letter. Postage Stamps accepted for amounts less than \$1.00. Receipts will be acknowledged on the address label, which shows the date to which subscription is paid.

4. **Discontinuances**—Responsible subscribers will continue to receive *The Horticulturist* until the publishers are notified by letter to discontinue, when all arrearages must be paid. Societies should send in their revised lists in January; otherwise it will be taken for granted all will continue members.

5. **Change of Address**—When a change of address is ordered, both the old and the new addresses must be given.

6. **Advertising Rates** quoted on application. Circulation 5,500. Copy received up to the 24th. Responsible representatives wanted in towns and cities.

7. **Articles and Illustrations** for publication will be thankfully received by the editor.

8. **All Communications** should be addressed:

THE CANADIAN HORTICULTURIST,  
TORONTO, CANADA

## IMPORTANT IT SHALL BE A SUCCESS.

Fruit growers, florists and apiarists may, with good reason, unite in a sincere wish that the first provincial fruit, flower and honey show, to be held in Toronto this month, proves a great success. Its success will mean much to all concerned. If the issue of their first exhibition proves happy it will be the greatest advertisement the fruit, floral and honey interests of the province have ever received, and should result in a marked increase in the consumption of all three products.

These three allied industries have long been considered, by the general public, as of but relatively small importance, and an annual, large, provincial exhibition of this kind is all that is required to demonstrate the contrary. Let the first exhibition prove a success and the holding of annual exhibitions on an even more extensive scale is assured. The energetic and enthusiastic manner in which the preparations for the exhibition have been undertaken by the members of the various organizations interested reflects credit on the members and makes a crowning success of their efforts seem probable. All that now remains is for all who are interested in either fruit, flowers or honey to attend and make success certain.

## A WISE MOVE.

The railway commission has given additional proof of its value and of its determination to see justice done all parties by the appointment of the special committee to investigate condi-

tions surrounding the handling of fruit both in Canada and the United States. At the sessions of the commission in Toronto, when the evidence of the fruit growers and companies was taken, considerable was said on both sides concerning the methods adopted in the United States in regard to the handling of fruit. Definite and necessary information was lacking. The appointment of this committee should result in this information being secured.

Another matter for gratification is the character of the committee. It is to be presumed the railway companies are satisfied with their representatives; certainly, fruit growers have no reason to regret the selection of Mr. W. H. Bunting to watch their interests. The arduous work already performed by Mr. Bunting and his thorough mastery of the situation make him especially well fitted for a position on the committee. If any direct pleasure or benefit can be derived by Mr. Bunting, as a result of this trip, it is to be hoped he will be able to enjoy them to the full.

An encouraging point connected with the appointment of the committee is the inference that is to be drawn that the material concessions already made by the railway companies are only precursors to more important ones still to follow. So far fruit growers have nothing to regret in regard to the work of the railway commission, and much for which to be thankful.

## IT IS TIME TO COOPERATE.

The thousands of barrels of apples that are this fall going to waste and the low prices prevailing should be an object lesson to our Canadian fruit growers. There can be little doubt but that there will be a marked improvement, in the course of a few weeks, in the prices paid for winter apples. Were our Canadian growers able to store their best fruit until such time as the markets improve it would mean thousands of dollars to them. The trouble is, few of our growers are in a position to do so.

Cooperation by fruit growers is not a "cure all" for the various troubles our fruit industry suffers from. It will not materially advance prices in a dull season or improve the quality of the fruit in the growers' hands. Cooperation will, however, accomplish much, very much. By means of a central packing and storage house it makes it possible for small growers to have their fruit properly graded without the expense and annoyance of boarding the packers' gangs. Small growers would also be able to hold their best fruit until such times as the market was ready for its consumption instead of being forced to see it rot beneath the trees.

Cooperation would enable growers to deal direct with the large firms handling fruit and thus save the expense now incurred through dealing with small local buyers. Thousands of western grain growers, who have been all through this mill, have already conquered the situation by erecting their own elevators. It is time for our fruit growers to make a move.

**BOTH ADVERTISER AND BUYER PLEASSED.**

For several months The Horticulturist has offered to give ten dollars to the reader buying goods to the greatest value from advertisers in each issue provided it was stated the advertisement was seen in The Horticulturist. The prize for September has been won by Charles Mackey, of Thornbury, who purchased goods to the value of one hundred and seventy-five dollars and eighty-four cents from the Waggoner Ladder Co. While other readers may have bought goods of greater value from advertisers in the same issue, Mr. Mackey wins the ten dollars, as no other reader, whose purchases exceed his, has applied for the prize. One other reader purchased goods to the value of eighty-seven dollars from the Canadian Portable Fence Co. as a result of that firm's advertisement in The Horticulturist. And so it goes.

The result of Mr. Mackey's having informed the Waggoner Ladder Co. that he saw their advertisement in The Horticulturist is that he received the prize of ten dollars and is pleased; the Waggoner Ladder Co. have found that it pays to advertise in The Horticulturist and is pleased, while The Horticulturist is pleased because The Waggoner Ladder Co. has renewed its advertisement in this issue for the back outside cover page, and intends shortly to sign for a time contract. It will thus be seen that there is no "fly in the honey," because we are all pleased. Remember, any reader purchasing goods from our advertisers is entitled to a handsome calendar whether they win the special ten dollar prize or not.

When the Agricultural and Arts Act is changed and horticultural societies are placed on a footing of their own, as distinct from agricultural societies, several matters of vital importance will call for careful consideration. One of, if not the most important, will be the basis on which horticultural societies shall receive their grants. Shall the grants be made on a membership plan; according to the amounts societies give for horticultural purposes, or combination of these principles? Should societies be required to hold a certain number of meetings yearly, distribute seeds, etc? These are subjects that will have to be considered at the horticultural convention this month in connection with the fruit, flower and honey show. Delegates should prepare themselves to discuss these matters intelligently and be in a position to make suggestions.

Field mice are reported to be unusually numerous in different parts of Ontario this season. They are already very noticeable in cover crops and along grassy fences. Orchardists should be on their guard and use every precaution to prevent the destruction of fruit and shade trees by this pest, which did so much damage last winter. There are various methods of protection, such as banding the tree trunks, using specially prepared paints, etc., which should be given due consideration by readers of The Horticulturist.

Canadians who are proud of Canada's horticultural resources should read the description in this issue of the nurseries of Messrs. Morris & Wellington, of Ponthill. There are few firms of any kind in the Dominion which do a larger business; none that demand a greater mastery of infinite detail. The steady and marked growth of this immense business has not been of the hothouse variety. This speaks well for its operations in the past and its prospects for further development. Such an established business adds to the stability of the horticultural interests of the country.

What can be done with such a man as the one mentioned in this issue, by Mr. E. Morris, of Ponthill, who, when his farm was under-drained at no expense to him, thought so little of the improvement as to not even take the trouble to keep the outlets clear? Such a man is probably anxious for an opportunity to talk your head off about hard times.

**How Export Fruit Should Be Packed**

JAMES LINDSAY & SON, EDINBURGH, SCOTLAND.

Our opinion is that if Canadian shippers continue to pack in a straightforward manner there will be an increased demand for the article they put up. With regard to improvements, it ought to be seriously impressed on them that they must use strong packages. Some Canadian shippers hold the opinion that any sort of package will do, but such is not the case. Barrels ought to have eight hoops, and the staves ought to be of thoroughly dried wood and the liners better driven home than they usually are.

We find that at one of the ends the liners are fixed by the coopers, and that fixing is very inadequate for what is required. Many times they are nailed to the covers, not to the staves at all, and of course the consequences are, on arrival here, the heads or bottoms are out. Shippers should not send inferior grades of fruit, as the packages of such grading incur the same expense as fine quality to handle, and it is discouraging to the business all over.

The Department of Agriculture's inspector in Glasgow writes to W. W. Moore, head of the extension of markets division, condemning the shipments of Canadian apples to Glasgow via New York as less satisfactory than from Montreal. The distance from the fruit centres to New York is much greater than to Montreal, and the steamships sailing from the former port are not well ventilated.

The freight from New York to Glasgow is 12 cents cheaper than from Montreal to Glasgow, which sum shippers by New York think they save. Actually, however, there is a net loss of 36 cents on every barrel going by the New York route. Owing to the state in which the fruit arrives from New York, some British importers have cabled Canadian shippers not to ship that way, but to send by the Donaldson or Allan lines from Montreal. (Note—Advertisements giving sailings by these lines are published in this issue.)

## CARS SUITABLE FOR CARRYING FRUIT

The Railway Commission at Ottawa has recently arranged to send James Hardwell, its chief traffic officer; W. H. Bunting, president of the Ontario Fruit Growers' Association; J. M. Riddell, freight agent of the Grand Trunk Railway, Montreal; and a representative of the Canadian Pacific Railway, not yet selected, to examine what are considered the best cars now used for the transportation of fruit in Canada and the United States. These gentlemen have been instructed to make a thorough inspection of such cars, gather all the facts available, and report at an early date what they believe to be the best car, considering three points: first, suitability for carrying fruit in warm or hot weather; second, adaptability for the carriage of other kinds of freight, when not required for the transportation of fruit; and, third, what is likely to be the cost of the special kind of car which they may recommend.

As chief traffic officer of the Board, Mr. Hardwell has special and varied qualifications for work of this kind; Mr. Bunting thoroughly understands what is required by the fruit growers of the country, and Mr. Riddell has had long experience as a local agent of the Grand Trunk

Railway in Montreal, and has therefore had an opportunity of noticing the merits and demerits of the different kinds of cars used for the carriage of fruit and vegetables.

### WHAT THE COMMITTEE WILL DO.

It is proposed not only to inspect the best cars now in use in the Dominion, but to go to New York and Jersey City, as it is thought that in these places the committee will have an opportunity of seeing a variety of the best cars used for fruit transportation throughout the republic.

The special object is to find a car that may be used as a ventilated car during the short fruit season, and at other times as an ordinary freight car adapted for the carriage of other commodities, and thereby relieve the railways of the expense of providing and maintaining special ventilated cars, which, owing to their non-adaptability for other purposes, remain idle during the greater part of the year.

It is sincerely hoped that the result of the investigation may be the selection of a car that will remove the many difficulties incident to the transportation of fruit under the conditions which at present exist.

## THE CONCESSIONS MADE BY THE RAILWAY COMPANIES

As a result of the evidence given last summer by representatives of the fruit growers before the Railway Commission, when it met in Toronto, the following concessions to shippers have already been approved by the commissioners. These concessions have been voluntarily proposed by the railway companies. It is expected further concessions will be made later.

The changes are:

(a) That under the heading of "Fruits," the Canadian freight classification be amended by reducing pears (green), in boxes or barrels, from first-class to third-class in less than carloads, and from third to fifth class in carloads; also that apples (green), in boxes, which are at present second-class in less than carloads and fifth-class in carloads, be made third-class in less than carloads and fifth-class in carloads, thus making the classification of apples and pears in boxes or barrels uniform.

(b) That fruit described in the current Canadian freight classification as "fruit, fresh," be carried in baskets, boxes or crates, viz: Between all stations in Ontario, east of Sault Ste. Marie and Fort William, and between all sta-

tions in Quebec, and interprovincially between Ontario and Quebec, also from stations in Ontario and Quebec to stations in New Brunswick and Nova Scotia, at fourth-class rates in carloads of not less than 20,000 pounds, instead of third-class, as at present, and at second-class rates in less than carloads of 10,000 pounds or over, instead of first-class, as at present. Also from stations in Ontario and Quebec to Winnipeg, Portage la Prairie and Brandon, at fourth-class rates, in carloads of not less than 20,000 pounds, instead of at third-class, as at present.

It is understood in all cases that the total charges on a smaller lot shall not be greater than the total charges on a larger lot at the next lower rate, as indicated above.

(c) With respect to the charge made by the railways for refrigerating shipments in transit, it is ordered that the average actual cost of the ice and the placing thereof in the cars shall not be exceeded, and that, pending a decision by the board as to a reasonable charge for such service, the charge for refrigeration shall not be more than \$2.50 per ton of 2,000 pounds of the actual weight of the ice supplied.

**No Opening for Ontario Fruit.**—I do not think Ontario fruit can be sold in British Columbia at all. Transportation is against it, and besides there is a large quantity of fruit raised here. Some fruit is imported from the states of Washington, Oregon and California, while Australia sends some too.—(H. Atkinson, Summerland, B. C.)

**Shipping Fruit.**—In shipping our fruit we must have a commission market for our surplus. When shipping on order, we can never tell just how fast the fruit is going to ripen. One day a large amount may be ready for market, while the next day there will be a shortage. If we ship more goods than the order calls for the buyer sometimes cuts the price. If buyers would order less frequently and give larger orders it would be possible for shippers to obtain lower transportation rates and make quicker shipments.—(Robert Thompson, St. Catharines, Ont.)

Lack of knowledge how to care for orchards, scarcity of labor, no organized system of packing and selling, and distance from stations are all against us in attaining success in fruit growing.—(S. J. Hughson, Durham Co., Ont.)

## FRUIT INTERESTS NOT YET SATISFIED

Two of the leading witnesses, Messrs. H. W. Dawson, of Toronto, and R. J. Graham, of Belleville, who gave evidence on behalf of the Ontario Fruit Growers' Association at the sessions of the Railway Commission in Toronto, last summer, are not entirely satisfied with the concessions made by the railroads, as published in this issue. Their views, as expressed to *The Horticulturist*, are as follows:

Mr. Graham says: "The concessions are of no great importance except to shippers of small fruits. The apple trade will be helped in no way by the arrangement, except in less than car lots, which amount to nothing. For instance, I have orders to fill for 10,300 barrels of apples, all in car lots, not an order for anything else. Better cars, despatch cars when ordered, and proper receipt are worth ten times the concessions granted."

The views of Mr. Dawson are as follows: "Regarding the concessions on fruit shipments,

they no doubt will result in good to fruit shippers, but they are not sufficient in consideration of the service fruit generally gets. True, the railroads are improving, but their service is not what it should be yet. We notice sometimes that railroads will try and give special service from one point to another, and keep it up for a while, but they seem to tire of it in a short time. While they are giving the special service not much fault can be found, but the trouble is they do not consider the handling of fruit of sufficient importance to give it the good despatch it really deserves. We can get fruit from the United States with much better despatch than we can from our own country. In getting fruits from California, the despatch is much better than from Chicago, St. Louis, or the southern states. I am of the opinion that if any special grievances we may have be kept before the attention of the commission, it will do much to remedy the evils."

## A SUCCESSFUL EXHIBITION EXPECTED

Final arrangements for the Provincial Fruit, Flower and Honey Show have been completed, and everything indicates the exhibition will be a great success. The exhibits of fruit, flowers and honey promise to be very large. Never before have as many flowers been raised in Toronto and vicinity for an exhibition as this year. Most of these will be shown, in addition to which numerous entries have been received from outside points, including centers as far west as Chicago.

In the fruit building demonstrations will be given in fruit packing by experts from the Dominion Fruit Division, in addition to which there will be working demonstrations by members of the Ontario Women's Institute staff, under the direction of Supt. G. A. Putnam. A most interesting feature will be the special exhibits of fruit that will be made by the provincial fruit experiment stations. These will be arranged by the secretary of the stations, Mr. Linus Woolverton. There will also be a special exhibit of fruit from the various provinces of Canada. One of the most valuable features will be numerous exhibits of orchard implements, spraying machinery, etc. Most of this machinery will be operated for the benefit of sight-seers. All the exhibits of fruit will contain cards describing their qualities fully. The honey exhibit will be made in this building and will be a large one.

### WILL BE FORMALLY OPENED.

The formal opening will take place Tuesday afternoon, November 15, when His Honor Lieutenant-Governor and Mrs. Mortimer Clark will visit and open the exhibition. The same afternoon the horticultural convention will open in the members' reception room at the Parliament Buildings. The bee keepers will commence their convention in one of the large rooms at the rink.

A mass meeting, open to the general public, has been arranged for Tuesday evening in the Y. M. C. A. hall, at which Hon. John Dryden, Minister of Agriculture, will preside and speak.

Other speakers will be Messrs. G. H. Powell, Washington, U. S. A.; C. C. James, Deputy Minister of Agriculture, and Dr. James Fletcher, of the Central Experimental Farm, Ottawa. On Wednesday fruit will be given away free to all who attend the exhibition. The horticultural convention (the program for which was published in the October issue of *The Horticulturist*) will be continued all day, and also the bee keepers' convention. In the evening the directors of the Ontario Fruit Growers' Association will hold a business meeting.

Thursday, thanksgiving day, the fruit growers will open their convention at the Parliament buildings, when the president will present his annual address, committees will report, etc. In the afternoon the speakers and subjects will be: Cold Storage, G. H. Powell, Washington, U. S. A.; Fruit Shipments to Winnipeg, Prof. Reynolds, of Guelph; Conditions Surrounding the Canned Fruit Industry, by R. J. Graham, of Belleville, Ont., W. P. Gamble, of Guelph, and others.

The program for Friday includes a free distribution of flowers by the florists. At the fruit growers' convention in the morning the nominating committees will report. Prof. Lochhead, of Guelph, and W. T. Macoun, of Ottawa, will speak on Fungus Diseases of the Grape; Prof. R. Harcourt, of Guelph, and Provincial San Jose Scale Inspector J. Fred. Smith, of Gleanford, will describe the Latest Results of Spraying for San Jose Scale, and Mr. Alex. McNeill, Chief of the Fruit Division, will speak on Dominion Power Spraying Demonstrations. At their Friday afternoon session, which will close their meeting, the fruit growers will discuss methods of co-operation, when speeches will be made by Messrs. A. E. Sherrington, of Walkerton; Elmer Lick, of Oshawa; Robert Thompson, of St. Catharines, and others.

### NOTES.

The exhibition will be held in the Granite Rinks on Church street, from November 15 to 19, and will be open from 9.30 a. m. until 10 p.

m. Church street cars pass the doors.

General admission 25 cents, children 10 cents. Members of the organizations interested in the exhibition will receive membership tickets for 50 cents, good for entrance at any time. Six coupon tickets may be bought for one dollar up to November 14.

The rinks will be beautifully decorated and an orchestra will be in attendance three afternoons and every evening.

The conventions will be open to the public.

### Active Horticultural Work in Guelph

The Guelph Horticultural society is doing good work. We had excellent meetings in March, April and May this year, and had good programs for our meetings in September and October. At our September meeting Mr. R. B. Whyte, of Ottawa, gave us an address on "Autumn Planted Bulbs for Spring Flowering," which was of interest to the members, who receive from the society a collection of bulbs for fall planting.

In the spring a collection of Semple's Branching Aster seeds was distributed to about 500 of the city school children, and accompanying it was given an excellent little bulletin giving full directions for the cultivation of the plants, and stating rules governing the flower competition, which was held in the Central school recently. The children made a grand display of flowers of their own growing, which were carefully judged and prizes awarded for those who were most successful. The city teachers have taken a great deal of interest in this work, and have ably backed up the efforts of the horticultural society. In this way we hope to encourage a love for flowers among the children, and trust it will spread to the older people and have its effect in beautifying the gardens and grounds of the city generally.

### Seaforth Has A Large Membership

The membership of the Seaforth Horticultural society is 111. A number is considered pretty good for our town. A number of the members live in the surrounding country.

Not many meetings have been held this year, but in the spring a very interesting lecture was given by Mr. T. H. Race, of Mitchell, on the "Purposes of Horticultural Societies." During the summer there were two other lectures, one by our president, William Hartry, on the "Cultivation of Tuberosus Begonias"; the other took the form of an open air meeting on the president's lawn. Numerous bouquets of the flowers in season were brought by members, who had the privilege of viewing Mr. Hartry's garden; also a very fine collection of tuberosus begonias. A small vase of seedling dahlias, grown by Mr. Langstrath, was shown, and an address on the treatment of dahlias was given by Mr. Robert Scott. These meetings were all well attended.

Our surplus funds have been used to give premiums to the members. The premiums given by the Fruit Growers' Association, viz: gladioli

Everything possible will be done to make the various features of as great educational value as possible.

People attending from points outside the city, when buying their railway tickets, should ask for certificates which, on being presented to the secretary at the show, will entitle them to free passage home.

Let every fruit grower and florist attending a successful exhibition will be assured.

bulbs and Dorothy Perkins roses, were very much appreciated and gave very general satisfaction.—(Wm. Elliott, Sec'y.)



WALTER T. ROSS.

Every since 1896, Mr. W. T. Ross, of Toronto, has been secretary of the Horticultural Society. The membership of this society is usually between 200 and 300. Distribution is made each spring to the members of plants, bulbs and seeds. In the annual lecture given before the society in the spring, through the generosity of the government, is always looked forward to with interest. Most of Mr. Ross' attention has been given to the growing of tropical plants and fruits. He has had remarkable success, not only though he has not, in general, he has produced

### More Enthusiasm Desired

With the exception of a lecture by Prof. H. L. Hutt last spring there have been no public discussions during the past few months by the Thornbury Horticultural society. The decrease of interest in horticulture is doubtless partly due to the fact that fruit growing is not nearly as profitable as formerly. Premiums, consisting of apple trees, grape vines and flowering bulbs have been distributed as usual to subscribers. This is a feature of the work highly appreciated. Most subscribers prefer bulbs.—(A. W. Walker, Sec'y.)

**Two Challenge Cups.**—The Toronto Gardeners and Florists' Association, through its secretary, Mr. E. F. Collins, has sent notice to Mr. H. B. Cowan, the secretary of the combined fruit, flower and honey show, to be held in Toronto this month, that it offers for competition two challenge cups in the same classes which they were won in before by the present holders, namely class 1, section 9, and class 2, section 26 of the prize list, which was published in *The Horticulturist* recently. These cups must be won three times, not necessarily in succession, before becoming the property of the inner. The cups are valued at about \$35 each.

### The Meetings are Interesting

Members of the Grimsby Horticultural Society have had some rare treats in the way of flower and fruit exhibits in connection with their literary and musical entertainments given during the past year. The last meeting was held at the residence of Dr. Clark, who is an enthusiast in floriculture. The display of gladiolus and dahlias was a most gorgeous one. A most interesting and pleasing musical program was presented at this meeting.

The next meeting will be held at the home of the president of the society, Mr. Adam Rutherford. On this occasion Dr. Montague will be present and deliver an address. It is expected a fine flower show will also be a feature of this meeting.—(J. W. Brennan, Sec'y.)

### Good Work Done

The Deseronto Horticultural society has appointed its president as a delegate to the meeting of the horticultural societies of the province, to be held this month in Toronto. Other delegates from this society will also undoubtedly be present.

If other towns have improved their grounds and lawns as much as those in Deseronto, since the organization of the horticultural society, it has been money well expended, and their appropriation should be increased. The fall distribution of bulbs has taken place, each of our members receiving four Dutch hyacinths, three Roman hyacinths, and three Von Sion hyacinths.—(R. W. Lloyd, Sec'y.)

### A Successful Fall Exhibition

The annual exhibition of the Orillia Horticultural society was held late in September in conjunction with the fall show of the East Simcoe Agricultural society. A large space was devoted to flowers. The display of cut flowers was perhaps the finest in our experience of 17 years. The large fruit table, although well filled, was lacking in the usual quantity of winter apples, but of summer and fall apples there was a very fine exhibit, the fruit being sound and well colored. Pears and plums were practically none, most of these trees having been either entirely killed or badly damaged by the severity of last winter. There were some handsome bunches of grapes shown, and a great crop of all garden vegetables. The display of these attracted much attention.

**A Large Pottery Firm.**—The attention of our readers is called to the advertisement of J. Davis & Sons' Potteries, which appears in this issue for the first time. Besides being the oldest pottery firm in the Dominion, having started business in 1842, they are also the largest manufacturers of rose jars, flower pots and fancy pottery. The proprietor, Mr. J. S. Davis, reports having recently shipped large quantities of rose jars, etc., to the United States. They also make all kinds of dairy ware. The rose jars and flower pots to be used in the Provincial Flower and Herb Show are of this firm's manufacture.



R. W. RENNIE.

held in London, Mr. Rennie has served well and efficiently since their inception.

**More Delegates Appointed.**—The Oakville Horticultural society has appointed Messrs. James Waldbrook, John Cavers and E. A. Morden, of Oakville, as delegates to the horticultural convention, to be held in Toronto this month. The delegates from the Hespeler society will be Mr. L. Rife and the secretary, Mr. E. Gurney. From the Belleville society the delegates will probably be Messrs. W. C. Reid, S. J. Wedden, and the secretary, W. Jeffers Diamond. A large proportion of the societies have appointed delegates.

### An Example for Some Other Societies

During the past year 235 packages of flower seeds, consisting of asters, nasturtiums, phlox, zinnias, etc., have been distributed to the members of the Stirling Horticultural society. Each member also received three pounds of sweet pea seed, eight pounds of vegetable seeds, and there were \$80 bulbs distributed throughout the society.

The society has planted 50 elm and maple trees in Victoria park, fully two-thirds of which are living and growing nicely. The fall distribution of bulbs has taken place, and it is expected next spring to further improve the park, which the officers have materially beautified by their efforts. The grounds of both public and high school have been decorated with many shrubs, all of which are doing well.—(G. G. Thrasher, Sec'y.)

**Bulbs Sought After.**—The members of the Picton Horticultural society have received their fall distribution of bulbs, which have recently arrived from Holland. They consisted of 23 narcissus and 7 hyacinth bulbs for each member. Members of this society are doing good work in horticultural lines, and the bulbs were eagerly appropriated upon their arrival.—(W. T. Ross, Sec'y.)

I hope the Ontario Fruit Growers' Association may continue to grow larger and the circulation of The Canadian Horticulturist to increase tenfold, as it has had and is doing a grand, noble work.—(Benj. Crawford, Bellside Creek, N. B.)



### A Dangerous Practice

ADOLPHUS PETTIT, GRIMSBY.

From statements I have heard made, I understand that many of our great Ontario growers have been in the habit of shipping their inferior fruit to the Winnipeg market. This is most unfortunate, for as long as it continues, our fruit will never be able to supplant American fruit at that point.

Would it not be well for our fruit inspectors to watch this trade very carefully? A few convictions against growers who carry on this practice would result in much good and improve the western buyers' opinion of our Ontario fruit.

### Shipping Immature Fruit Condemned

A Montreal fruit inspector says: In examining the fruit being shipped to the Old Country from Montreal, I notice a large number of barrels of Stark and Ben Davis apples and other late winter varieties. I do not think there is as much excuse for shipping Stark or Ben Davis in October as there is for shipping Northern Spy in August; and the practice should be recognized as distinctly detrimental to the fruit trade.

These apples will not be fit for consumption for three months, and yet if shipped now they go direct to the consumers, who will find them scarcely more palatable than a Swede turnip. When the question of shipping immature fruit is being discussed, it should not be forgotten that to ship late winter varieties as early as this is quite as reprehensible as shipping fall varieties in August or September.

### A Useful Machine for Grading Apples

While visiting at the home of Mr. A. H. Pettit, of Grimsby, recently, a representative of The Horticulturist was shown a machine for grading apples. Grading is a matter to which Mr. Pettit has given considerable attention for a number of years. In this connection, he has invented several machines, including the one he is now using, which he considers is about perfect.

The apples are poured onto a rubber sheet. In the sheet there are holes, the smaller ones being  $2\frac{1}{4}$  inches in diameter, for the small stuff. These are followed by holes  $2\frac{3}{4}$  inches in diameter. Larger apples roll off the end of the sheet. The apples as they are forced over the sheet drop through the holes according to their size and thus are graded very evenly. Holes of as many different sizes as are desired may be added.

Underneath the sheet are rollers, which, by means of a crank, are operated in such a way as to keep the apples rolling easily down the sheet. The whole implement has been made in such a way that the apples are not bruised in any way. Its simplicity is its best feature. By means of its use it is easily possible to grade a barrel of apples every four minutes. This machine has been in use by Mr. Pettit for three years, until he has come to consider it a necessity.



MR. Wm. WILSON.

In its August issue the Horticulturist published an interesting article by Mr. William Wilson, of London, whose likeness is here shown, describing a new adaptable package for fruit which is his own invention. This package is now recognized as one of the best on the market and has been used by the Canadian government for its exportation of fruits at foreign exhibitions. Born in Ayr, Scotland, in 1849, Mr. Wilson lived in Scotland and Ireland until 1877, when he came to Canada and finally settled in London in 1879. It was while on a visit to Britain in 1894 that he conceived the idea of inventing a complete egg and fruit case. The thought originated in the great market in Covent Garden, London, while watching a man trying to auction some really first-class fruit to a very stiff audience. In 1897 he developed an egg as fruit package, which has since been improved in many ways, until it is now one of the best known in the world.

### Scotch Buyer Expects Prices Will Improve

The following interesting letter, dealing with market prospects, was received recently by The Horticulturist from Messrs. Clark and Sinclair, fruit merchants, of 9 and 11 West Dock street, Dundee, Scotland, whose advertisement appears in this issue of The Horticulturist for the first time:

"Fall apples have been doing very badly over here, but this was expected in face of the heavy crop both in England and on the continent. We have had about 1,000 barrels and results have been anything but satisfactory. We, however, expect a firming up of prices very soon. Harder varieties arriving show an upward tendency. We shall be very pleased if you can put us in touch with some reliable growers and shippers.

"Last year we handled about 6,000 barrels and imported the bulk of them direct, but sometimes the dealers acted very unfairly with us. We could handle 500 to 1,000 XXX Baldwins and some of Spys, if reliable, finest fruit.

"The market reports contained in the September Horticulturist were very useful."

### What Fruit Growers are Saying

A great drawback to planting apple orchards is the inability to get good stock to plant. Nurserymen supply you with anything but the kind you order, mostly fall varieties, which come into bearing at the wrong time and are worthless on the market.—(Thos. O'Brien, Durham Co., Ont.)

The slipshod methods of buyers who buy the farmer's fruit and then send a lot of boxes to pack it disgust many growers. There is little encouragement for farmers to grow fruit. When there is a good crop the price is so low it does not even pay for the labor.—(Amos Butler, Middlesex Co., Ont.)

Farmers think it will not pay to spray simply because they have been taken in so many times by men who go about spraying and who do the work improperly. The man who is spraying looks out for his own pocket.—(Anson Crosby, York Co., Ont.)

# A FRUIT BUYER QUIETLY GOES FOR THE HORTICULTURIST

The following letter has been received by The Horticulturist and speaks for itself:

Warksworth, Oct. 10, 1904.

I am a grower as well as shipper, and agree with your report in The Horticulturist that growers should receive more than offered for their fruit. They also should have better returns for their cheese. Would you, Mr. Editor, undertake to go on the cheese boards and pay more than the buyers are offering? No, for the single reason that the consumptive markets for the above products are not in a prosperous condition.

I am paying 50 cents for fall apples and 75 cents for winters. I have returns for one car of Colverts which sold in Montreal for \$1.15 per barrel. They cost me: barrels 43c., packing 25c., freight 45c., fruit 50c., selling 15c., or a total of \$1.78 a barrel. Do you see any profit, or can you point out unnecessary expense in the cost. Twenty-five cents looks high for packing, but you must remember we can only get 10 to 15 barrels in each orchard, with perhaps three trees of the above fruit located all over the orchard.

Our winters will cost nearly as much to pack, as the weather has been very bad thus far for packing. I see very little encouragement for profits on winter stock. Farmers should receive more, but financial conditions will not warrant more. Just look at the cost: barrels 45c., packing for export 25c., export freight \$1.25, buying and expense of shipping, nails 10c., cost of freight 75c., total \$2.50.

Come now, Mr. Horticulturist, kindly give us a market, through your paper, that will give us cost. Your article has done immense injury, because it was misunderstood.

Yours truly,

W. J. BAKER.

In answer to the above letter The Horticulturist would like to draw attention to a number of the points made by Mr. Baker. The price he has paid for fall apples, viz., 50 cents per barrel, is reasonable in view of the excess this year of fall fruit, which is perishable and needs to be shipped immediately. The price paid for winter apples, viz., 75 cents per barrel for XXX stock, while better than is being paid in some sections, is not as high as growers have a right to expect. Good winter stock

that will keep sound for shipment in January or February will meet a market practically as bare of fruit as last year, there being no surplus of winter stock reported this season. It is therefore fair to conclude that the demand will be about what it was last year, and prices the same. The usual price last year was \$1 per barrel for XXX stock, and it would seem as if the same should be paid this fall.

The prices realized by Mr. Baker for soft fall stock like the Colvert on a local Canadian market, such as Montreal, should not be used when making a reference to the prices of winter stock. The estimate of cost to the dealer, given by Mr. Baker, is not excessive, but such cost should not be based on anything but the best winter stock. It is quite possible that \$1 per barrel for winter stock would be a better bargain for the buyer than fall stock at 25 cents per barrel. The statement that 25 cents is allowed for packing, owing to the small number of barrels that can be secured in the average orchard, is undoubtedly well founded, and emphasizes what has often been stated in The Horticulturist that small growers should unite in cooperative associations to save this expense by delivering their apples in central packing houses.

Most of the items of expense given in connection with the shipment of fruit to Great Britain are somewhat higher than many careful buyers have been paying this year. Thousands of barrels have been bought for 40 cents. Packing for export at 25 cents per barrel is the outside figure, as the larger proportion of the packing is done for 5 to 10 cents per barrel less. Concerning this estimate, careful buyers are doing the work for 25 cents per barrel less on the total, so that for apples bringing 12 to 15 shillings for XXX stock, and an occasional lot of choice apples selling at 20 shillings, it does not seem out of the way to claim that the dealer should have a fair and even liberal return, were he to pay the outside price of \$1 per barrel to the grower, for his best stock, which is all most of the buyers take.

We have no markets to encourage fruit growers to take an interest in fruit growing. Orchards are neglected.—(Jas. Brothour, Ontario Co., Ont.)



## FLOWERING BULBS

FOR FALL PLANTING. FOR THE HOUSE AND GARDEN.

Crocus—Choice, Mixed, All Colors.....	10c. doz.,	50c. per 100
Narcissus " " " " " " " " " " " "	60c. " "	\$4.00 "
Tulips " " " " " " " " " " " "	25c. " "	\$1.25 "

Prices Postpaid. Write for our 1904 Bulb Catalogue—FREE.

Special Prices to Horticultural Societies on application.

**JOHN A. BRUCE & CO.,** Seed Merchants  
HAMILTON, CANADA.

## APPLE PRICES ARE NOT SATISFACTORY

So far this season growers are dissatisfied, and with reason, at the prices generally being paid for apples. For the best winter stock in the large producing sections 75 cents to \$1 per barrel is being paid quite generally, and in some cases even higher. At this figure sales are being made freely. In most sections, however, prices range from 50 to 60 and 75 cents, and are causing great dissatisfaction. Where growers have facilities for holding their crops, many are doing so in the confident belief that prices will advance considerably as soon as the first rush of stock and the English apples are over. Where growers are unable to store their apples large quantities are going to waste. In a number of districts buyers seem to have reached an understanding that they will not invade each other's territory and thus they are able to keep down prices.

In the United States, according to the exhaustive crop enquiries made by American Agriculturist, up to the third week in October the deadlock between growers and buyers remained practically unbroken. Big operators in New York and the east generally are inclined to set their faces as flint at anything above \$1 a barrel, package included. Barrels are high in price, and have been difficult to get, and to this must be added cost of picking. We have been unable to learn of any general trading at better than \$1.25 for such standard varieties as Greening, Baldwin, etc., in the central states.

The following special crop reports, secured

by The Horticulturist, will give a pretty good idea of conditions generally throughout Ontario:

### ONTARIO COUNTY.

Two-thirds of the apple crop has been bought for 50 to 75 cents per barrel. The latter figure is where the grower picks the fruit, which means 60 cents on the tree, as 15 cents is what is paid for picking. I agree with The Horticulturist that buyers could well afford to pay \$1 for all good winter apples. I have just received a very complete report of sales in Europe, and deducting all costs, insurance, etc., I fail to see why dealers are not more liberal in their prices. Some fine growers are packing their own fruit and storing, but the majority are anxious to get rid of their fruit for almost any price, as they have no facilities for storing. Cooperation on the part of fruit growers would greatly assist them.—(R. L. Huggard.)

The price opened at 50 cents per barrel on the trees, the farmer boarding the men and drawing the apples to the station. Red apples are now selling at 75 cents, and one man got 90 cents per barrel on the tree. These prices are for both No. 1 and No. 2. The apples, with very few exceptions, are sold.—(John Rice.)

An estimated crop of 700 barrels sold for \$525 cash, the buyer to do all barrelling, the seller to deliver to the depot. This was equal to 75 cents per barrel. In another instance a buyer bought an orchard at 75 cents per barrel, but in packing took only XXX of any sort, and only

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For Planting this Fall to Flower During the Winter and Spring Months.

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A very choice assortment of specially grown Bulbs, at reasonable prices. Cultural directions free.

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Toronto, Ont. and Winnipeg, Man.

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winter varieties. Buyers behave very shamefully and deliberately waste the apples. One buyer bought an orchard at 90 cents, the seller to board the pickers. For another orchard of 40 barrels of Spys, and nothing else, a buyer paid \$1.50 per barrel on the tree and did all except delivery. The average paid would be about 90 cents per barrel on the tree for winter apples. Buyers go around reporting apples are not selling in England at all and buy very low. Many apples are being stored. I have 1,000 to 1,200 barrels, and am selling Kings and Spys at prices like last year, while the R. I. Greenings, Baldwins, Russets and Bellefleurs are being held until the small lots are cleared out. Commission men from London and Liverpool are trying to get growers to ship to them. One buyer has 500 barrels on hand, which he is packing in boxes.—(Thos. Conant.

**YORK COUNTY.**

There are very few apple buyers here this year. Some local buyers have bought a few orchards in bulk. Both of these brought an average of 60 cents per barrel. In one case the buyer picked the apples, and in the other the grower had to pick and team them to the station. Four-fifths of all the apples are still in growers' hands.—(J. D. Evans.

**OXFORD COUNTY.**

All but two or three growers who sprayed have disposed of their apples at 75 cents per barrel. Grower does the picking and hauling. Growers who did not join in the cooperative

spraying, as described in The Horticulturist for October, are only able to dispose of the varieties which are not likely to spot, and their best kinds, as Kings. I have heard of no buyer taking an entire crop of any apples which were not sprayed. Unsprayed Greenings and Spys are worthless.—(J. C. Harris.

Apples are not being gathered in most orchards. A few carloads are being exported at 45 to 60 cents per barrel, the grower picking the fruit, buyers doing the packing. The cider and vinegar works are taking an average of 2,000 bushels per day and paying 10 cents per 100 pounds, delivered at the factory. There are very few orchards well cared for, which results in few good first-class apples.—(H. T. Stevens.

**WELLINGTON COUNTY.**

No one is purchasing apples, and fruit growers have to depend on the local markets for sales. A large proportion of the apples will not be picked.—(Wm. Scott.

**NORTHUMBERLAND COUNTY.**

Buyers are paying 50 cents for fall and 75 cents for winter apples per barrel. They pick and pack the apples and find the barrels, while the growers deliver them. If growers pick the apples buyers pay 10 cents per barrel more. Farmers have no accommodation for storing the apples, and must sell outright.—(A. J. Lacey.

**GREY COUNTY.**

The prices being paid are 50 and 75 cents per barrel. I have made a sale of my apples to Carrow, Assa., N. W. T. I furnished the bar-

# Dominion Line

## MONTREAL TO LIVERPOOL

S. S. Mexican (cold storage).....Nov. 5  
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The above steamers are specially adapted and fitted up with the most modern improvements for the carriage of apples, butter, cheese, provisions and eggs. Through B. L. granted to and from any point in Canada.

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Traffic may be booked with all Railroad Agents or direct with **The ROBERT REFORD CO., Limited, Montreal**, also with **D. O. WOOD, Western Agent, Room 311, Board of Trade, Toronto, Ont.**

A Handsome Calendar will be Given Free to all Readers who buy goods from Advertisers.

rels and put them up on the car at \$1.75 per barrel for all kinds. I had about 75 barrels of Talman Sweets and a good many Bellfleurs, and some other varieties that the buyers would give me only 50 cents for.—(H. Hurd.

There are very few buyers, and they are only picking from the largest and best orchards. Thousands of barrels of good winter apples are being shaken down and fed to stock and taken to the evaporators. This points strongly to the need for a cooperative association for the handling of all fruit. Barrels are costing 45 cents each by the 100, and 50 cents for less quantities.—(A. W. Walker.

#### WENTWORTH COUNTY.

Buyers are paying 60 cents a barrel for winter apples, the buyer doing his own picking and the growers the teaming. Growers feel that considering the size of this year's crop and the condition of the market, that they should receive at least \$1 per barrel. As soon as the local crop is off the British market Canadian apples should bring better prices.—(Adolphus Pettit.

#### NORFOLK COUNTY.

The average price being paid for winter apples is 50 cents per barrel, the buyer doing the picking and packing, and the grower boarding the men. Only a few growers have sold at this price. One grower sold his orchard for about \$80 and the buyer has taken out about 300 barrels of fruit, taking almost all on the trees. As the grower had to board the men and teams, he does not consider he received over \$50 for his crop. We should have a definite

statement as to what a No. 2 apple is. Where fruit can be stored I am satisfied growers will do well to hold their apples, as better prices will undoubtedly be paid later.—(Oliver Austin.

#### PELEE ISLAND, ESSEX COUNTY.

My son and our next neighbor are holding their prices at \$1.50 per barrel for picked fruit, those fallen a little less. Where the buyer has a team he comes for them, otherwise they are delivered. None are shipped off the island, as not enough are grown for the home demand. I hear some are selling the crop in the orchard, rough and smooth, the buyer to pick and furnish his own barrels, for 75 cents. This is on the main land, and is about the same price as Pelee growers sell for. Ours are all spoken for, and as few have good cellars to keep fruit in they will sell before Christmas.—(James Sugley.

#### SIMCOE COUNTY.

The prices commonly paid for apples is for fall 50 cents per barrel, and for winter 75 cents. The buyer picks and packs the apples, the grower delivers the barrels in the orchard and takes them to the storehouse when packed, and also boards the hands while picking, etc. I think there will be many orchards unsold in the Georgian Bay district owing to considerable imperfect fruit, and because many growers prefer to feed the apples than undergo the expense consequent on getting them to market. I think the estimate of prices given in The Horticulturist last month was not too high.—(W. S. Pattullo.

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Shippers of Apples to England are invited to correspond with us.

Central Market for nearly Seven Million people. Consignments accepted for all English ports.

Highest References.

Cablegrams, "Campania, Manchester."

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ENGLAND.

Correspondence invited.

Consignments requested.

Reports on the English Fruit & Vegetable Trade forwarded on application.

Fruit Expert :

Mr. Clifford Clark

WELLAND COUNTY.

Owing to its being impossible to get help, the bulk of the apples have been sold on trees by the orchard, so I cannot say what price per barrel prevails. Some crops have been sold for 50 cents per barrel, grower to pick, haul to car and board packers, buyer to pack and furnish barrels. I think if the growers had been able to handle their crop themselves and store until the middle of November they would have no difficulty in netting 75 cents to \$1 per barrel. — (G. E. Russell).

LAMBTON COUNTY.

The price paid for apples was 75 cents per barrel, but is now 65 cents. The grower is expected to pick the apples, and the buyer packs them, and the grower gives him his board while packing, and the grower has to deliver them at the station. Not more than 25 per cent. of the growers have disposed of their fruit. Some apples have been sold to the evaporator.—(Wm. Wight).

VICTORIA COUNTY.

Apples are selling as follows: Spys, Bellfleurs and Greening, \$1.25 per barrel; Tallman Sweet, Ben Davis and others of that class for 70 to 80 cents per barrel. The grower packs and delivers at those prices, subject to be cut if the packing is not good. One merchant told me he could buy all he wished at this price. Winter apples are about 50 per cent. of a full crop. The great bulk will be marketed this fall. —(Thomas Connolly).

**A GIFT OF \$10.00**

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Correspondence invited. Highest reference.

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FAST TWIN SCREW STEAMERS—10,000 TONS.

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Average time of passage from port to port, eight days.

Each steamer is fitted with refrigerators for cargo requiring cold storage, and in addition a thorough system of ventilation in compartments where fruit is stowed.

**MONTREAL to GLASGOW Every Thursday**

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The greatest care taken in handling apples.

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Our Rose Jars and Pots will be used at the Provincial Fruit, Flower and Honey Show ; examine them.

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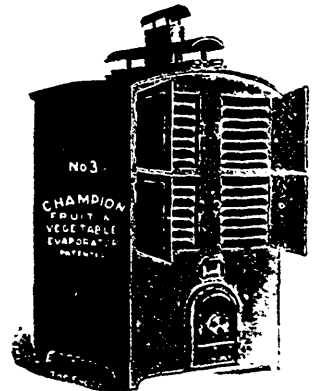
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