

**PAGES**

**MISSING**

63.

# The Canadian Horticulturist

6260  
248

JANUARY, 1906

## Leading Articles

### Fruit

- Co-operation by Fruit Growers
- Why Fruit Growers should Co-operate
- Reports of Three Fruit Growers' Conventions
- Fruit Growers and the Tariff

### Garden

- Winter Work for the Amateur Florist
- Prepare Your Bedding Plants for Next Summer
- An Amateur's Greenhouse in January

### Vegetables

- Growing Vegetables for the Early Market
- The Growing and Marketing of Cauliflowers
- Vegetable Growers are Wide Awake

THE ONLY HORTICULTURAL PUBLICATION IN CANADA

Issued Each Month



**SIMMERS'**  
 —————  
 Illustrated  
 —————  
**Seed Catalogue**  
 For 1906.

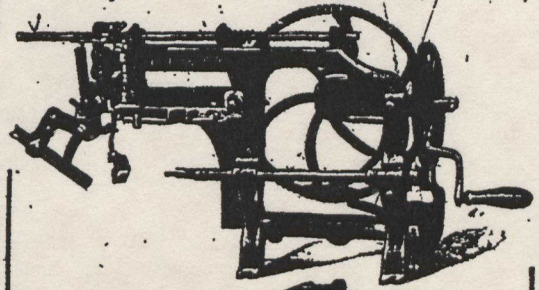
Q Unlike any other work of its kind. Not only tells what are the best flower seeds, bulbs, small fruits, garden and farm seeds, but tells plainly how to get the best results in the growing, whether you plant for pleasure or for profit. Many New Features this year.

IT'S FREE

IT'S FREE

ADDRESS

**J. A. SIMMERS**  
 TORONTO, ONTARIO



No. 2 Rival Apple Parer

Canners' and Evaporating Machinery  
 Canners' Can Making Machinery  
 Tinsmiths' and Sheet Metal Working Tools  
 Presses, Dies, Etc., Etc.

Manufactured by  
**THE BROWN-BOGGS CO.**  
 HAMILTON, CANADA Limited

MY BUSINESS IS THE  
 GROWING AND SHIPPING OF

**Choice Strawberry  
 Plants**

SEVEN years' experience has enabled me to ensure the entire satisfaction of many customers. My prices are right, my stock is excellent and my system of packing the best ever.

25 STANDARD VARIETIES  
 GUARANTEED TRUE TO NAME

SOME OF MY LEADERS  
 Extra Early, Johnson's Early, Early, Haverland, Bederwood, Clyde, Wick Season, Sample, Dornan or Uncle Jim, Glenn Mary, Senator Dunlap, Wm. Belt, Late, Lester Lovett.

Send at once for my handsomely illustrated catalogue and comprehensive treatise on the culture of the strawberry. Mailed free on application.

**W. H. VANDERBURG**  
 POPLAR HILL ONTARIO

# BUY THE BEST

AND SAVE MONEY

## THE BIGGS ADJUSTABLE BOX PRESS

is the best press made  
It is strong, efficient, easy  
to operate, and inexpensive

WE DEAL IN

## PACKERS' SUPPLIES

OF ALL KINDS

The Biggs Utility Fruit Case    The Biggs Fruit Sizer  
Tuck's Improved Packing Table    Packers' Hatchets

The Burlington Barrel Press with  
Steel Circle or Wood Head Block

Corrugated Paper

Lace Paper, Etc.

## THE BIGGS FRUIT AND PRODUCE CO.

BURLINGTON, ONTARIO

Limited

# Baby Rambler Rose



THIS is the latest introduction in the Rose line. The bloom resembles the  
Crimson Rambler; the bush is not a climber. It is the greatest for  
rose and nearest to a *perpetual* bloomer of any rose known. When grown  
the garden it is in constant bloom from June till November.

WHERE VALUABLE—As specimen plant in lawn or garden. In  
in corners. As edging in driveways. Where low hedging of roses is  
In house for pot culture. For florists for forcing for bloom at Christmas  
Easter, or any day of the year. Everywhere, parks, cemeteries, etc.

We are the largest growers of H.P. Roses in Canada. Write for  
and also one of our General Catalogues.

**BROWN BROTHERS COMPANY, NURSERY**

P.O. BROWN'S NURSERIES, WELLAND CO., ONT.



SUTTON'S GIANT GLOXINIA

We Sell

**SUTTON'S**

Cineraria

Cyclamen

Gloxinia

and

Primula

Our 1906 Catalogue  
of High-Grade

# SEEDS

And POULTRY SUPPLIES is now ready.

Write for it to-day

## DUPUY & FERGUSON

8 Jacques Cartier Sq., Montreal

# GRAPE VINES

Largest Stock in Canada

SUPERB IN QUALITY

## CURRANTS

HIGHEST GRADE

Propagated only from bearing  
varieties, and not from non-bearing

WRITE FOR PRICES

## JOSEPH TWED

FRUITLAND, ONTARIO

# Horse Blankets

WE CARRY A COMPLETE LINE OF

Horse Blankets, from 50c. to \$3.50  
 Teamsters' Mitts and Gloves, Driving  
 Mitts, Gloves and Gauntlets, etc. Team-  
 sters' Coats, \$2.50 to \$4.00; Leather  
 and Corduroy Reversible, \$6.00 to \$6.50

# SKATES

We handle a full line of celebrated  
 STAR MFG. CO. SKATES

Hockey Skates, from 50c. to \$4.00  
 Spring Skates, from 50c. to \$2.50  
 Tube Skates, from \$4.50 to \$5.00

Hockey Sticks, latest designs. Ladies' and Gentlemen's Hockey  
 Boots. Latest designs in Snow Shoes for Ladies or Gents. Moc-  
 casins. Boys' and Girls' Hand Sleighs and Coasters, from 30c. to  
 \$1.00. Call and see us for anything in Sporting and Athletic Goods.

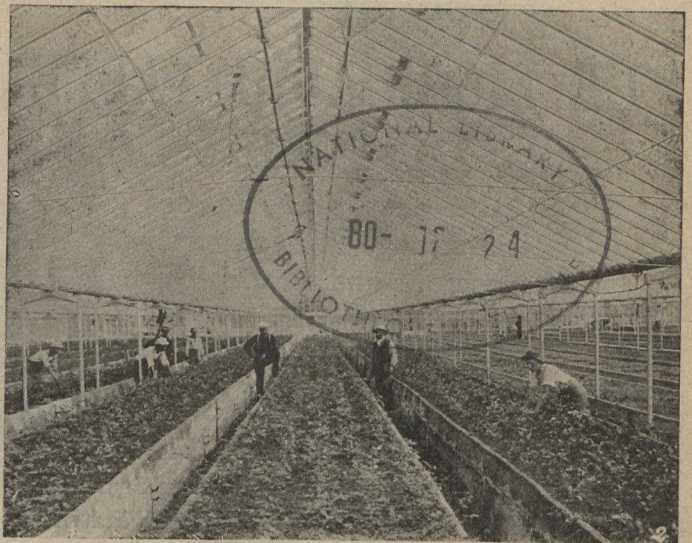
## Hamilton & Company

Hardware Merchants Limited

111 KING STREET EAST HAMILTON, ONT.

# GREENHOUSES

FOR FRUIT AND FLOWERS



Permanent structures, best and cheapest to build. Ventilating, Heating, and all other accessories for Greenhouse equipment.

For Catalogues and particulars, apply to

## The King Construction Co.

32 CHURCH STREET, TORONTO

# DONALDSON LINE

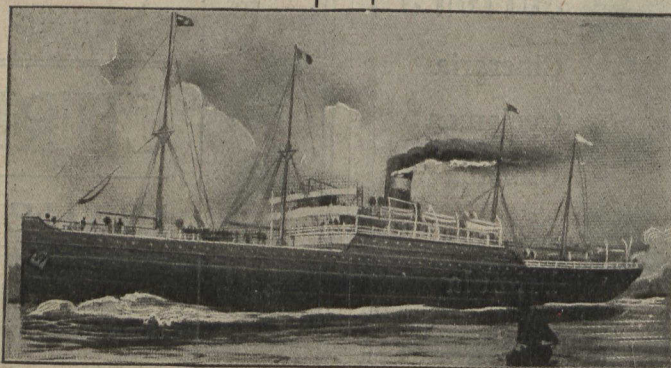
WEEKLY SAILINGS TO  
 GLASGOW

From MONTREAL in  
 Summer and ST. JOHN,  
 N.B., in Winter

FAVORITE LINE FOR  
 FRESH AND PERISHABLES

STEAMERS  
 VENTILATION

SIROCCO FANS  
 COLD STORAGE  
 REFRIGERATORS



FULLEST INFORMATION GIVEN ON APPLICATION. ASK YOUR RAILWAY AGENT, OR

## The Robert Reford Company, Limited

110 UNION STATION, TORONTO, ONTARIO

OFFICE—MONTREAL, QUE.

BRANCHES—ST. JOHN, N.B., and PORTLAND, Me.

# THOMSON LINE

ATLANTIC REFRIGERATOR SERVICE

WEEKLY SAILINGS TO LONDON

From MONTREAL in  
 Summer and Portland,  
 Me., in Winter

COOL AIR COLD STORAGE  
 SIROCCO FANS

For BUTTER, CHEESE  
 BACON and all Perishables  
 use only this Line

Also Sailings to NEWCASTLE  
 LEITH and ABERDEEN

# Allan Line Steamship Company

## Weekly Services

**Montreal to Glasgow**  
EVERY THURSDAY

Steamers—Ionian (twin screw) Corinthian  
Pretorian Sicilian  
Mongolian

**Montreal to London**  
EVERY SATURDAY

Steamers—Pomeranian Hibernian  
Sardinian Hungarian Sarmatian  
Ontarian

## Montreal to Liverpool

ROYAL MAIL SERVICE

New Triple Screw Turbine Engined Steamers Victorian and Virginian, 12,000 tons. Twin Screw Steamers Bavarian and Tunisian, each 10,500 tons. Average time of passage from Port to Port 8 days

## Also Fortnightly Sailings to Havre, France

All the vessels in these services are provided with cold storage accommodation, and the system of fan ventilation is very complete. The facilities provided are unsurpassed for the carriage of all classes of dairy products and fruit. The special attention of apple exporters is called to the fact that the vessels of the London Line now discharge in the Surrey Commercial Dock Co's Greenland Dock, which is in close proximity to all the London fruit centres.

For further information apply to

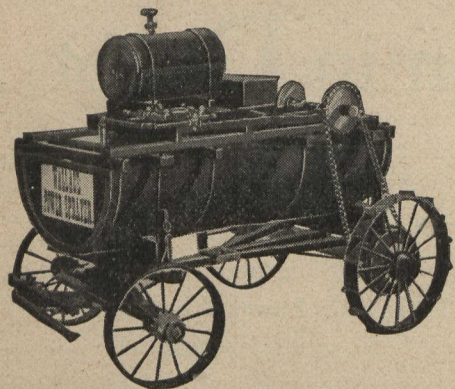
Or to **D. O. WOOD**

General Freight Agent for Ont., 77 Yonge St., Toronto

**H. & A. ALLAN**

MONTREAL

**G. E. BUNTING**, Travelling Freight Agent for Ont.



"STANDARD" mounted outfit. Both these and the "DUPLIX" can be mounted low, if so desired.

"The Wallace Standard Power Sprayer which we have been using for two seasons has given excellent satisfaction. We have always been able to get all the pressure required when using a 19-nozzle Spar in continuous driving along the rows, and have also used 8-nozzle Cluster to spray while standing at every tree. We have been able to keep sufficient mixture in pressure tank to spray any of our trees, as we think thoroughly, with either Spar or Clusters, the trees being about 40 ft. in diam. and 30 ft. high. The only trouble we have had occurred when a couple of nuts worked loose.

13th Dec., 1905.

Yours respectfully,  
**E. G. BECKETT**,  
Hamilton.

# Wallace Power Sprayers

ARE STRICTLY COMPRESSED AIR MACHINES

## Power Costs Absolutely Nothing

No hand pumping whatever. Are run by 15 and 17 year old<sup>s</sup> Indians; you<sup>s</sup> should be their<sup>s</sup> equal, surely.

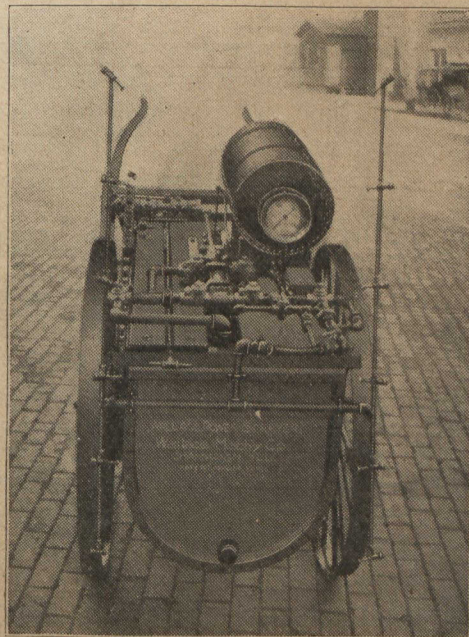
**Save their cost in a very short time. \$10 to \$20 per day**

**saved on each full day's work.**

Sprays thoroughly the largest trees or smallest fruits, potatoes, mustard, etc. Abundant volume to work while standing at a tree. A number are now in use here in Canada.

*The Wallace Machines prove their superiority when given the opportunity.*

Don't fail to order early—by 15th January—as we have carloads to supply, and you may delay too long.



"JUNIOR" arranged for nursery. It will develop equal pressure with the larger machines. Built to 6 foot track when wanted.

FOR ANY FURTHER INFORMATION WRITE

**W. H. BRAND**, Representative and Salesman  
(FORMERLY OF GRIMSBY) JORDAN STATION, ONT.



## MAMMOTH VERBENA SEED

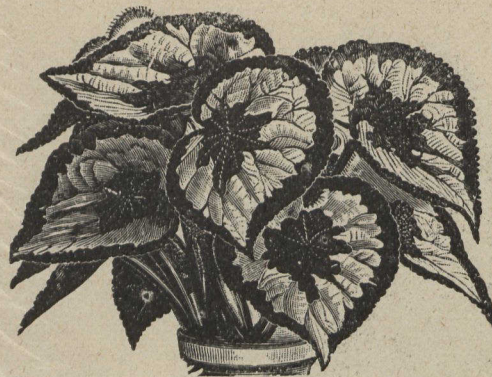
RENNIE'S 1841—Seed saved from enormous flowers. A great mixture of richest colors  
 Packet 10 Cents. \$1.00 Packet contains about 2,000 Seeds

NEW CATALOGUE NOW READY

WM. RENNIE CO., Limited, TORONTO  
 BRANCHES—WINNIPEG and VANCOUVER

## Steele-Briggs Seeds

Are known everywhere for their Purity and Reliability. Send today for our handsomely illustrated Catalogue for 1906. It is full of good things for the garden and farm.



Many new and reliable introductions

Palms  
 Roses  
 Shrubs  
 and  
 Plants

### POULTRY SUPPLIES

Agents for Genuine Cyphers Incubators and Brooders

The Steele-Briggs Seed Co., Limited  
 132 KING STREET EAST TORONTO, ONTARIO

## GERHARD HEINTZMAN PIANOS

☛ All the work in the world is directly and immediately undertaken for the maintenance and betterment of the home. Musically, no refined home is complete without Canada's best piano

### The Gerhard Heintzman

which can be purchased on easy terms and will prove much the cheaper piano in the end.

☛ Have you seen the wonderful self-player, the "Apollo"? Anyone can play it. Send for catalogue and printed matter.

GERHARD HEINTZMAN  
 LIMITED

97 YONGE STREET, TORONTO

Hamilton Warerooms—127 King Street East

## When in Doubt

WHICH are the best varieties of Fruit or Ornamental Trees, Shrubs for Hedges or Lawns, Vines or other Nursery Stock, write for our beautifully illustrated catalogue, which is mailed free to those who plant

*The*  
**Helderleigh  
 Nurseries**

E. D. Smith, Winona, Ont.

# The Canadian Horticulturist

Vol. XXIX

NEW YEAR'S DAY, 1906

No. 1

## Co-operation as Practised by Fruit Growers

Prof. J. B. Reynolds, O.A.C., Guelph, Ont.

THE inevitable conclusion from last year's experimental shipment of fruit from Ontario to Winnipeg, pointed to the urgent need for co-operation among fruit growers in practically all the branches of their business that are concerned in the handling of the fruit. This led me this year to make some inquiries respecting packing houses and co-operation. In this inquiry I have visited a number of places in Ontario where co-operation has been tried and a few points in the States. Some of my observations and conclusions on this subject will likely be of interest to the readers of THE CANADIAN HORTICULTURIST. I shall deal with the matter under two heads: (1) organization; (2) equipment.

*Organization:* Where co-operation has been established I found either a co-operative association, properly so-called, or a joint stock company. The co-operative association is organized under a special provincial act, and is empowered to own necessary property in connection with the business for which it is organized. The joint stock company may have all the features of the co-operative association and has in addition all the powers and privileges granted to the joint stock company under the provincial charter. The latter form of organization is rather more ambitious than the simple co-operative association. While it may not suit most localities, it seems to be a pronounced success in one locality that I visited, namely Thornbury. The banker who does the business for the company expressed his approval of the principle of the joint stock company for the purpose of the fruit growers. The powers of the company are such as will enable them to meet all demands of the business as they arise, since the amount of stock subscribed may be made sufficient to build or purchase various parts of the equipment necessary in the business, so that under progressive and careful management there is greater chance of success in handling, in packing, in storing, and in marketing. Mr. J. G. Mitchell, the enterprising manager of the Thornbury Association, is convinced that he has solved the problem of co-operation among fruit growers. Ordinary co-operation had been attempt-

ed time and again in that district without success, but now, he claims, the investment of a small sum of money in the business interests each individual

### NEW YEAR THOUGHTS

How the returning days, one after one,  
Come ever in their rhythmic round, un-  
changed,  
Yet from each looped robe for every man  
Some new thing falls. Happy is he  
Who fronts them without fear, and like  
the gods  
Looks out unanxiously on each day's gift  
With calmly curious eye.

—Archibald Lampman.

shareholder to a degree that is not to be expected under ordinary co-operation.

One rather difficult problem in organization is that of holding members together, so that they act co-operatively, and not singly, in all branches of the business. It is needless to say here that farmers do not sufficiently recognize the necessity for co-operative action. Perhaps they are too much imbued with the spirit of independence and self-reliance. However that may be, it is admitted as a great difficulty, wherever I have been, to secure complete co-operation. For instance, at Fennville, Michigan, members of the co-operative association there had been approached by fruit buyers and offered prices in advance of those they were securing through the association. The ostensible object of this offer is to break the association and subsequently to have the farmers at the mercy of the buyers, as they were before co-operation was established. Some of the members of the association at Fennville had succumbed to the temptation, and I found no business being done at the packing house, partly on this account.

Various devices are invented here and there for the purpose of keeping the members together and inducing them to pack and sell only through the association. The difficulty of securing co-operation among a large membership has induced most of the associations to limit their membership. At Forest the membership has been reduced to a comparatively small number this year by the establishing of a new clause in the by-laws, that requires members of the as-

sociation to spray their fruit at least four times during the season. At Thornbury, however, the joint stock company is found to be a sufficient bond among the members. The financial interest in the concern, however small the investment may be, and the prospect of a dividend, creates a lively interest in the prosperity of the company. In addition, a by-law providing that members of the company who sell their fruit privately shall be entitled to no dividend, serves as a deterrent upon independent action. As a consequence the membership at Thornbury is increasing, while the tendency at other points is to diminish the membership and reduce it to a comparatively small number of interested and enthusiastic growers.

### EQUIPMENT

When I commenced this year's inquiries I was of the opinion that a packing house of special design would be advisable for the purpose. Having seen a number of houses where packing is being done, I have come to the conclusion that no special form of building is required. Plenty of floor space of suitable shape, conveniently situated, seems to be the principal requisite. Two floors are advisable, the lower one for receiving, packing, and shipping the fruit, and the upper one for storage of packages.

Besides the packing house, a storage house is advisable. In districts where summer fruit is grown extensively, an ice storage is an important feature in the business. If the fruits are shipped daily, that is, received and packed and shipped the same day, there is perhaps little need for cold storage. At Gypsum, Ohio, where I found the best equipped and best managed packing house of all those that I visited, there is no cold storage, although tender fruits, such as peaches, plums and pears, are the principal output. The fruit is packed immediately on delivery and is stored in the refrigerator car without delay. In this instance, as in many other instances, the refrigerator car takes the place of the refrigerator chamber.

For winter fruits, also, a storage house is advisable. It is the opinion of the managers of the associations that the



fruit should be held by the owners until ready for use if the best ultimate results are to be reached. If green stuff is put on the market, such as Ben Davis apples are in December, it makes an unfavorable impression. The grower or packer should be the best judge of the fitness of the fruit for the market. If the grower or packer does not hold the fruit until ready for use, he has no reason to expect that anyone else between him and the consumer will be interested enough to do so. As a result of immediate shipping much unripe fruit is being sold to consumers in Europe and in the west, and an unfavorable impression is being created. To store fruit for the winter, the associations may rent space in large city storage houses, or they may construct storages of their own.

The Georgian Bay fruit growers have constructed a building—a combined packing house and storage house of good pattern. This building is 100 feet in length and 40 feet in width, and consists of a basement nine feet high and a storage and packing house 13 feet high. The basement, as well as the storage house above, is intended for winter storage. The ground floor above the basement is divided into two parts—one part, about 25 x 40, consisting of the packing house proper, the other part, 75 x 40, consisting of the storage house. The walls are concrete, 10 inches thick, and from the ground floor to the first floor the wall is insulated with one inch lumber, tongued and grooved, inside the concrete, with four inch space between the lumber and concrete—this space being filled with planer shavings.

The building is well provided with windows, and, in addition, for ventilation two large flues, one near each end of the building, have been provided, running from the basement ceiling to the garret and extending some six feet above the garret floor. As these flues pass through the storage chamber between the ground floor and the first floor, slides are provided that may be opened or shut as desired for change of air in the storage chamber. When the windows in the basement are opened a strong current of air passes up these flues and effects a rapid change of air and affords a means of controlling the temperature of the chamber. It is hoped that by means of the thorough ventilation and the well-insulated walls the temperature can be kept at about freezing point throughout the winter. The company are storing all their winter fruit and expect to hold it until they judge it fit for use. In order to enable all the members of the company to hold their fruit, arrangements have been made with the bank to advance payment on the fruit stored, at the rate of one dollar per barrel. The bank loans the money to the company on security of their warehouse receipts.

In September, packing houses in western Michigan and in northern Ohio were visited. In western Michigan I found nothing at all in advance of what is being done at different places in Ontario. Some of the associations, as at Fennville, Benton Harbor and Bangor, have built their own packing houses, while others, for the time being, are renting space. The organization of these companies is generally co-operative, and all on much the same plan as the co-operative associations in Ontario. By far the

crop. For peaches and pears they use almost entirely machine graders of the type known as the Rope Sizer. I was much impressed with the efficiency of these machines, and am convinced that they could be used to advantage in any of our co-operative packing houses for grading apples and pears particularly. These graders are operated by foot power, the operator sitting at the upper end of the machine and at the same time feeding the fruit from the hopper into the grooves of the machine. At the dif-



Receiving Fruit at the Warehouse of The Chatham Fruit Growers' Association

best equipped and best managed packing house that I visited in the States is that at Gypsum, Ohio, managed by Mr. W. H. Owen. The packing house there was built for the purpose, and has one or two features worthy of note. It is alongside of the railway track, so that fruit can be loaded directly from the packing house on to the car. The depth of the building, from the track back, is 52 feet, not including the shed. The width, parallel to the track, is 150 feet. The depth, 52 feet, is said by the manager to be about right to allow room for the ungraded fruit at one side, for grading in the middle, and for shipping at the opposite side next the track. This width is divided into 24 feet for the delivery floor and 28 feet for the grading and shipping floor. The latter floor is three and a half feet lower than the delivery floor, and at the breast of the upper floor the grading tables and machine graders are placed. The width, 150 feet, is proportional to the amount of business done. For a smaller business this width should be less, but the depth, 52 feet, allows just enough space for turning over the fruit from the grower to the car. Above this floor there is a second floor for empty packages.

I might add a word or two with regard to the handling of the fruit at Gypsum. Most of the fruit consists of tender varieties, such as peaches, pears, and plums—peaches being the principal

ferent grades attendants stand removing undesirable specimens of fruit, such as bruised, imperfectly formed, and over-ripe fruit. The machine grades very accurately according to size.

In most of the packing houses on the other side I was surprised to find that bushel baskets were used for shipping peaches. These peaches were principally of the Elberta variety, and, therefore, were fairly well adapted to the large basket. Where customers asked it or with softer varieties the 12-quart or smaller baskets were used.

Mr. Owen drew my attention to the fact that they made no attempt to "face" their baskets of fruit. The peaches or other fruits were left at the top of the basket exactly as they happened to fall without the slightest attempt at selection, even in the matter of color. Mr. Owen claims that only by doing this can they secure the confidence of their customers, for by making no attempt at facing the surface of the fruit represents in every particular the contents of the package. Any purchaser securing one of these packages of fruit suffers no disappointment as he penetrates farther and farther into the package. I notice that in packing apples in barrels in various packing houses in Ontario the custom is to face the head of the barrel very carefully by selecting, not the largest fruit, but fruit of uniform size and good color. Mr. Owen would not do this, and claims that by refrain-

ing from doing this he creates a greater feeling of confidence between himself and the consumer.

In the disposing of the fruit, the invariable practice at Gypsum is to sell direct to the dealer. The manager quotes his price to the dealers, by letter or telegraph, and receives from them orders for certain quantities and certain grades of the fruit. So complete is the reliance of his customers on the honesty of his packing that they regularly resell fruit by description before they receive it.

There are no conditions that would make co-operation successful, that I could observe existing in northern Ohio, that do not exist in Ontario. So far as I can see the spirit of co-operation is the

first essential; whereby members are willing occasionally to sacrifice some possibly temporary advantage that they may gain by independent action, to the permanent interests of the association. In order for this feeling to exist there must be complete confidence among the members of the association with one another and with the officers. The success of the association depends, above all, on the enthusiasm and the business ability of one or two men in the district. As a usual thing these men have organized the association and in some way or other manage it. They foster this spirit of co-operation and, by their untiring efforts and business ability, they make the thing a success. Wherever co-operation has been undertaken a man of this

sort has always had the guiding hand. Success in co-operation, therefore, does not depend on outside conditions so much as on the men who engineer it.

I must express my indebtedness to those from whom I have obtained the suggestions that are here embodied, particularly Mr. Owen, of Gypsum, Ohio; to Mr. Johnson and Mr. Lawrie, of Forest, Ont.; to Mr. Mitchell, of Clarksburg; and to Mr. Sherrington, of Walkerton, Ont. Mr. Sherrington, especially, is deserving of great credit, not merely for having organized successfully an association in his own district, but for his enthusiasm and untiring efforts in organizing associations elsewhere in Ontario wherever he has been invited to assist in the work.

## Why Fruit Growers Should Co-operate

THE method of handling the apple crop by which the buyers and men go around and do the picking and packing, is utterly unsatisfactory. It causes loss to the grower and to the buyer. Much of the fruit is packed so poorly as to seriously injure the reputation of Canadian apples. This system is the cause of a large proportion of the complaints concerning our fruit made by the British importers. During the past season THE CANADIAN HORTICULTURIST has given the matter a great deal of

ing so they would receive twice as much for their fruit as they usually obtain. Even the co-operative associations already established have not made as much from their fruit as they might had they sold direct to the retailers instead of to the wholesalers. These, and other points germane thereto, are touched on in this article and in those immediately following. Methods that have been adopted by a number of the leading co-operative associations in Ontario and the States are described in

that even the buyers are outspoken in its condemnation. "One of the worst features of gathering the crop in this way," said Fruit Inspector P. J. Carey, of Toronto, to THE HORTICULTURIST, is that very few of the apples are picked at the proper stage of maturity. Some of the best winter varieties are harvested before they have obtained their color or other characteristics, while the earlier sorts are past marketable stage in other orchards before the gang can reach them. In many instances a great percentage is blown down or sometimes damaged by frost before the pickers arrive.

"Thousands of bushels of apples last fall were not put on the market in the proper season. One large firm had 71 gangs packing in different parts of Canada from Hemmingford, Quebec, on the east, to Sarnia on the west and Penetanguishene on the north. These gangs were made up of men of different occupations, and it could not be expected that satisfactory work would be done by them all.

"Every farmer and fruit grower should pick his own crop and then all would be harvested at the right stage. It is too bad to have the farmer waiting for the pickers to come while heavy winds blow down the best fruit. Our co-operative associations are doing splendid work. Were more of them formed many of these defects would disappear.

### A BUYER'S VIEWS

"Were the growers to pick their own apples and to store them under cover, as they do their other farm crops," said Mr. Eben James, of Toronto, the well-known buyer, "one of the chief sources of loss would disappear. In addition to this the dealers should erect temporary houses, or secure packing sta-



Co-operative Grading and Packing as Done at Chatham

attention. It has found that not the growers only, but leading buyers as well, are thoroughly dissatisfied with this system; while the Dominion fruit inspectors condemn it vigorously.

Great loss to the growers, also, occurs by the fruit passing through the hands of too many middlemen. The remedy lies in greater co-operation on the part of the growers, who should sell direct to the retailers in Great Britain. By do-

the article by Prof. J. B. Reynolds. Some of the sources of loss to the growers that arise from the fruit passing through the hands of numerous middlemen will be found described in the article dealing with the marketing of fruit.

The defects of the method of gathering the crops, by which the buyers send gangs of men around to do the picking, grading and packing, are so apparent

tions at the different railway points from which they purpose shipping.

"In the past few years the apple trade has undergone various changes. Some have been for the better, while others have been for the worse. Honest picking has greatly advanced since the Government took measures to prevent fraud. The old practice of allowing the farmer to pile his fruit under the trees until the buyer got time to pack them is also less common. Experience proves that fruit left lying under the trees for even 24 hours is seriously injured in quality.

A few years ago barrels cost about 18 cents, and labor could be obtained for \$1 a day, making the cost of packing about 15 cents a barrel, or a total cost of 33 to 35 cents in preparing a barrel for export. In time competition became so keen that the buyer was not satisfied to purchase by the barrel, but began buying orchards in lump and taking chances on wind and weather. In some cases he bought below the market value, and in others paid double what the fruit was worth.

"Under this system, when heavy winds or early frosts come, the fruit is damaged and the buyer, in his attempts to make something out of his deal, often exports fruit that should go to the cider mill or to the evaporator. This results in serious injury to the Canadian apple trade, and gives profits only to the barrel manufacturers, the laborers and the steamship companies.

"Every few years," continued Mr. James, "the dealers get a severe 'scalding,' and they are more cautious until a good season comes, when they again lose their heads. Cooperage stock has doubled in price, and two years ago the unreasonable price of 50 to 60 cents for barrels was reached, and at that price they were difficult to obtain. During the past season we were able to get the eight-hooped barrel at 35 to 38 cents.

"The advance in the cost of labor has added to the troubles of the large buyers. Packers get \$15 to \$18 a week with board, rain or shine, while the pickers work for \$1.25 to \$1.50 a day. Even at these wages, sufficient men are not available to properly harvest the crop.

"Another serious drawback in handling gangs is the fact that farmers refuse to board the men. The dealer, rather than lose the orchard, makes the contract under those conditions and the men are forced to stay at hotels. Time is lost by the men getting to and returning from work, and frequently some of them stay up late drinking instead of resting, and the next day they are not in shape for a full day's work.

"These drawbacks would disappear were the growers to harvest their crops and deliver them at a central packing house in barrels or crates on spring wagons. In this way sales would be

made on the out-turn when put up as XXX or XX. Another satisfactory method would be to have the packing company do the work at so much a barrel, making sales f.o.b., or shipping through some reliable commission house on consignment. In this way the expense to the dealer would be reduced at least 50 per cent., and the grower would receive more for the fruit. The responsibility would then rest on the producer to see that none of the crop was lost. Besides, much of the trash that is now exported would be sent to the cider mill or the evaporator, where it properly belongs, and only the marketable crop would be forwarded.

"It is utterly impossible," concluded Mr. James, "for the average dealer to secure help to handle the fruit as it should be handled in the limited time available, and do enough business to make a working profit. The apples can be thrown into barrels for storage,

deliver them. By that time nearly every barrel was slack. The contract calls for immediate delivery, but various excuses are given by the growers for failure to live up to it. As a rule the farmer cannot pack properly, and the best plan would be to have central packing houses to which the producers could deliver the fruit.

"Each gang," continued Mr. Graham, "consists of a foreman, who has had several years' experience, an assistant and four or five pickers. If a picker does good work for one season, he is made first assistant the following year. The wages run \$12 to \$18 a week and board for the foreman, \$9 to \$12 for the assistant, and \$1.25 a day for the pickers.

"Great quantities of apples are lost annually because of lack of accommodation at the shipping point. At many stations the barrels are piled on the ground in the sun and rain for days,



Fruit of the Chatham Fruit Growers off for the Old Country

but that means great shrinkage and double expense in packing."

#### ANOTHER BUYER'S VIEWS

"If I could get all my requirements from co-operative associations," remarked Mr. R. J. Graham, of Belleville, "I would not put any gangs out. Every farmer should pick his own apples. Some growers claim they cannot get men to do the picking, but it should be as easy for the grower to get five men as it is for a buyer to get 500. It would be as reasonable to ask a miller to harvest his wheat as it is to demand that the apple dealer must harvest the apples he buys.

"During the past season I had over 70 gangs at work in the apple sections of Ontario and western Quebec. It was impossible, under such circumstances, to prevent some apples being packed that should have been thrown out. In some cases the apples I had had packed stood in the orchard for a month before the grower took time to

and as a consequence many slack barrels are found. With central packing houses this evil would be removed and the apples would be kept under cover in proper condition."

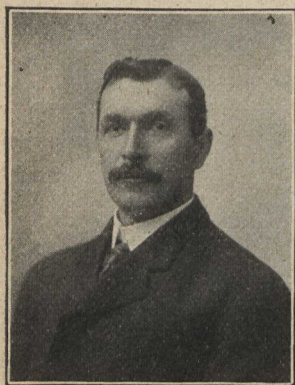
This system of handling the crops is responsible for the inferior condition of much of the fruit that arrives at Montreal. Out of 104 cars that reached that port to make up a cargo early in October, the fruit in 38 cars was reported by the Government inspector as being in poor condition. Improper marking is also common. In one car of about 160 barrels, 10 were found with deceptive marking.

In a recent interview with the manager of one of the leading steamship lines, THE CANADIAN HORTICULTURIST was informed that a great quantity of good fruit reached Montreal in poor condition. He had seen barrels opened in which the fruit was six or eight inches below the head. It seemed to have been dumped into the barrels when hot and not packed or pressed.

# Chatham Fruit Growers' Association

W. D. A. Ross, Secretary-Treasurer

THE business of the Chatham Fruit Growers' Association for 1905 was the most successful in the history of the association. Prices were the highest that have been realized, and there were practically no losses. This association started business nine years ago with a membership of about 12, and shipped two carloads. At that time each member packed his own fruit. In



W. D. A. Ross

1902 the central packing house system was adopted, and in that year 42 carloads were shipped. In 1903 the crop was a failure, and we shipped only seven cars. In 1904 we shipped 43 cars, and this season another off crop, 26 cars.

During this time the membership has gradually increased till it has reached almost 100, and it will be necessary to increase our packing facilities to accommodate the increasing membership.

The association has plans under consideration with that end in view.

Before members are admitted their orchards are inspected and nothing but men with first-class orchards are accepted. In the spring of 1902, the association purchased a large power spraying outfit, run by a gasoline engine. It is used exclusively for spraying members' orchards. Three men and a team are employed to run the outfit continuously for three months during the spraying season. This year, in addition to the Bordeaux, 75 barrels of crude oil were used in fighting San Jose Scale. Excellent results followed its use. This co-operative plan of spraying is very effective and equally satisfactory, as the members have not always the time to attend to it when it should be done, and many lack experience in the work. The cost of spraying is charged to each member and deducted from his fruit returns in the fall. Those who are spraying regularly are reaping handsome returns from their investment.

The fruit is handled on a mutual basis—averaging returns for similar grades so that no one gets a preference, and the losses, if any, are distributed. This season we made three grades of apples: Fancy, which netted the grower

\$2.50 to \$3.00 a barrel; XXX netting \$2.03 on the average; and XX netting an average of \$1.41. These prices are net after paying all expenses for management, packing, barrels, etc.; everything except the picking is included, and we feel proud of the record. In addition to the apples, a large quantity of other fruits were handled, and they turned out equally well.

There is a healthy rivalry springing up among our members in their endeavor to excel, and since the best orchards in the association are just coming into their prime, a splendid future is anticipated. Several members are receiving cheques of \$500 to \$1,000 from orchards that previously, if sold at all, realized only \$200 to \$300 a year.

One of the chief elements of success in our association is the hearty co-operation of the members in everything that promises to advance its best interests. As secretary-treasurer, I have been ably assisted by an efficient board of directors, and an energetic business representative, Mr. W. A. McGeachy. We strongly recommend the co-operative system of handling fruit as our results show, that it is the only method that will ensure a uniform grade—special brand—and a good business connection.

## Some Notes from the Experimenters

SEVERAL of the well-known fruit growers, who are in charge of some of the fruit experiment stations in Ontario, gave results of their work at two special meetings, held for that purpose at the time of the Ontario Horticultural Exhibition, in November.

The superintendent of the stations, Mr. Linus Woolverton, of Grimsby, pointed out that we already have co-operation in spraying, packing and selling, but that the curse of many orchards is the numerous varieties they contain on a few acres. He claimed that by co-operation in planting and by the growers paying attention to the work of the experiment stations much could be done that would result in fewer and more desirable varieties being kept in the average orchard.

In talking about desirable novelties, Mr. Dempsey alluded to the fact that the horticulturists 30 or 40 years ago, who produced new and profitable varieties by crossing, had been lost sight of. He claimed that such men as Saunders, Dempsey, Arnold and Macoun were as worthy of recognition as Burbank. Al-

though favoring the introduction of new varieties he advised the growers to be careful in planting them, as different varieties are suited to different soils. Of the newer varieties Coo's River Beauty, which came from the California Experiment Station, was one of the best. York Imperial, Windsor Chief and Downing's Winter Maiden Blush are also promising sorts.

In the discussion that followed Mr. W. T. Macoun, of Ottawa, said that the hardiness of the stock in top-grafting seemed to have no appreciable influence on the hardiness of new wood. A weak trunk is a great defect.

The subject of hardy fruits was dealt with by Mr. Harold Jones, of Maitland. It was stated that varieties that succeed in Durham and Northumberland may fail east of Kingston, although there is not much difference in temperature. In that county Fameuse, Scarlet Pippin and McIntosh Red are the standard varieties. They withstand the severe winters but are subject to spot unless thoroughly sprayed, and all come in early in the season. A profitable var-

ety to cover the season from Christmas on is wanted. Spy has been found to be hardy until it comes into full bearing, but after one or two crops the trees die. Ontario was thought to be the desired variety, but the winter of 1903-04 killed almost every tree. Baldwin and Greening are not hardy. Russet is the most profitable winter variety for that section, but shrinks badly in ordinary storage. The Northwest Greening is hardy and prolific, but lacks quality. McMahon White is desirable because of its vigorous growth and its excellence as a stock on which to top-graft other varieties. It forms an extra strong crotch and is hardy. Milwaukee and Scott's Winter are promising varieties for cooking. Others that are uncertain bearers or lacking in quality are Salome, Baxter, Blue Pearmain and Delaware Red.

In the report of the Transportation Committee Mr. Bunting said that it taxed the railway companies at times to handle the fruit in the Niagara peninsula. The committee had asked the railway commission to attend to the matter and their request was not overlooked.

# Winter Work for the Amateur Florist

John Cape, Hamilton

WHAT should we amateur gardeners do in January? No outside work is possible. The gardens are sealed up. Jack Frost holds full sway. Plant life is sleeping the long winter sleep; and those of us who have no house plants are waiting patiently, or impatiently, as the case may be, for the coming of spring; that annual miracle, the renaissance of plant life. It will be three months yet ere the sweet modest little snowdrop peeps forth, whispering to us the welcome tidings that winter is passing and heralding the coming of warm weather and nature's awakening.

What then is there for the amateur florist to do in January? Much, indeed, in the way of planning, mapping and other preparation for the future. It is in the cold dark days of winter that we amateurs grow the most charming flowers (in our minds). It is then we build our castles in the air, and dream dreams of the wonderful achievements we are going to compass in our gardens next summer. Now it is that we bring out our seed and shrub catalogues, pore over them and study them, and, under the seductive influence of their alluring descriptions, and gorgeous illustrations of plants and flowers, shrubs and trees, new and old, we plan new designs and elaborate effects; make out our lists, and review them and renew them, and alter them to suit our area and our pocket-book, until finally we settle on the absolute requirements and make the orders for seeds and plants.

The seeds should be purchased immediately, and the plants later on.

What a charming occupation this is! Every grower wants some plant or flower that he didn't have last year. That white Turk's-cap lily that was seen at St. Catharines; that pale blue larkspur, which was a conspicuous feature at the Grimsby show, or that Rocky Mountain columbine that Dr. Fletcher described so vividly. Aye, and we must not forget that Colorado blue spruce for the lawn, or the feathery Japanese maples at Niagara Falls Park, that caused us to break the tenth commandment, and covet and desire other men's maples; and that hardy chrysanthemum we saw in Hamilton, a great bush of golden glory that, once planted, needs but little afterthought or care, increases year by year in bulk and beauty, and blooms on forever.

Besides, that color scheme for the south border has to be thought out, and we need to settle what annuals are to supplement the perennials there, and what shall be grown this year especially for the show in September. With such work as this it can readily be understood how easy it is to have our hands full of garden work in winter as well as in summer.

## PURCHASING SUPPLIES

When the lists are made out the question is:—Where, and from whom shall we purchase our supplies? Aye, there's the rub! Catalogues pour in upon us in bewildering numbers. Catalogues of seeds, catalogues of bulbs, catalogues of

trees, of shrubs, of vines, of perennials, of annuals, of native plants, of ferns, of orchids, and of "everything for the gardener"! Catalogues great and catalogues small; catalogues modest and catalogues—well—not at all! All and every kind of catalogue, offering all and every kind of growing things, or things to grow. From Germany, from Japan, they come, and from all parts between. The selection of the necessary requirements from such a mass of material is interesting, and will prove to be more beneficial employment for the winter evenings than working out Alice's riddles in the *Ladies Home Journal*.

Experience teaches us that no one firm has "Everything for the Garden," although some profess to have. There are specialists in horticulture, even as there are in other lines of industry. Where to get the best roses, is often where nothing else is grown. A firm may be famous for its pansy seed, and yet be unable to fill an order for half a dozen varieties of lilies. When the list of our requirements has been settled we have to study where the items can best be procured, and make out and send our orders, so that we may get our seeds now and our plants later. If we do not do this systematically and now (do it now!) when we cannot work out of doors, we shall inevitably be "left" when the spring-time, work-time comes. This is what we can and must do in January, and this is what January is for—to the amateur florist.

## Prepare Your Bedding Plants for next Summer

JANUARY is the best month for starting a great number of the most beautiful bedding plants for the garden next summer. Amateurs who try to grow these flowers are completely discouraged frequently by their lack of success. There is no reason why such failures and disappointments should occur. In almost every case the cause can be traced to lack of knowledge regarding the proper time to start and the proper methods to follow in preparing the plants for bedding operations. A fine show can be made with very little expense and most of the work can be done during the winter months when other labors are not so pressing.

Bedding plants are grown with great success in the Allan Gardens, Toronto,

where Mr. E. F. Collins is an expert in their culture. "In preparing plants for bedding," said Mr. Collins to *THE HORTICULTURIST* recently, "the growth of the different specimens must be studied. The main object should be to have the plants grow as quickly as possible, and just reach the proper size at bedding time. The slow growing sorts may be started as early as December, while others that grow rapidly will be ready if not started until April.

"Geraniums, when taken up in the fall, should be potted and placed in a shed. A thorough watering should be given and then they can be allowed to dry out until all the leaves drop. They should then be well cleaned and again thoroughly watered to induce new

growth. In this way young shoots, suitable for making cuttings, will be developed by January. When this first crop of cuttings has been removed, the old plants can be set to one side and again well watered. Another batch of cuttings will be ready in about six weeks. Under ordinary treatment the same old plants will grow rapidly after this and make fine flowering plants by April or May.

"Cuttings are best started in coarse, clean sand with good drainage. If only a few are needed they can be put in small pots or in boxes. When large quantities are required, flats can be used. An inch and a half or two inches of sand is sufficient, and the cuttings can be placed as close together as possible. If they are



A Beautiful Vine for an Amateur's Greenhouse. The Bouganvillea Sanderii, as now Growing in Mr. Alexander's Greenhouse.

placed around the edges of the pot or box, growth is encouraged and more rapid development results. The cutting should be made into the hard wood, but not lower than the second or third joint. The cut should be just below a joint and square across so that the base sits flat on the sand. A common fault with amateurs is to 'hang' the cutting. The earth is not packed solidly around the stem but merely pressed around the upper part, leaving a space around the base. Plants set in this way soon wilt and rot off. When light sand is used a thorough watering after setting causes the sand to settle around the cutting and drive out all the air.

"When these young plants are well rooted they should be put in two and a half or three inch pots. Ordinary potting soil can be used, and it should be packed firmly. Sometimes the plants can go from these pots to the beds, but the strong growing ones should be reset to four inch pots in April. Two or three weeks after potting the plants should be pinched back to give a strong, dwarf, hardy plant. It is bad practice to pinch or cut back a geranium at the time of repotting, as a check is given to both

ends at once. It is best to do the pinching some time after repotting. Geraniums require bright sun and plenty of air. Many amateurs fail because they attempt to grow them in the shade. Sunshine and air induces stocky growth and numerous flowers.

"The best coleus plants, too, are obtained by propagating a few cuttings through the winter and throwing away the old plants. Cuttings from the stock brought in in the fall become sickly before spring. Better results can be had by taking the tips of the first cuttings and resetting them. In this way the plants become tougher and stronger and more suitable for bedding purposes. After resetting about three times new cuttings may be taken in April, and first-class bedding stock will be ready by June.

"Abutilons, or flowering maples, are slow growers and must be started early in January. The same treatment as for geraniums suits them, but they must be kept from the sun for a few weeks after setting. Vincas, or periwinkle, too, should be started in January. Tuberous begonias may be started from seed in January, or tubers can be obtained as

late as April. For propagation from seed a light sandy soil is needed. A thorough watering should be given, before the seed is sown. They are hard to raise without a greenhouse as there is not sufficient moisture in the atmosphere of an ordinary room. Where ferns thrive begonias also do well. The *Centaurea candidissima*, or dusty miller, sown in January, and the *Centaurea gymnocarpa* sown in March, attain suitable sizes by June.

"*Ageratum* and *irises* root all along the stem and need not be cut off at the joint. They can be started in March or April, in the same soil as the coleuses. *Anthurium variegatum* makes a beautiful border for begonias or cannas, and may be propagated readily in the house. When the tip is cut off the flower stem, young shoots appear along the stem. These, when two inches long, can be put in sand in March and be large enough for bedding. *Stevias* should be started in January to have a good plants by June. The old wood should be cut off when the plants are taken in, and soon young shoots come. These shoots grow readily and much more quickly than the old wood."

# An Amateur's Greenhouse in January

A. Alexander, Hamilton, Ontario

TO the true flower lover, that is one who loves flowers all the year round; not only during the period when the snowdrop and crocus break the bars of their winter prison-house in early spring, to the season when the last of earth's autumnal beauties succumb to the killing breath of "Jack Frost," but who, also, all through the dreary, flowerless time of winter, is longing for flowers,

My first greenhouse was a very unpretentious affair. It was largely formed of old church windows. I was my own glazier and bricklayer. It was 20 feet long by 12 feet wide, was heated by an old coil of two inch pipe, and was just high enough inside that, with a little care I did not knock my head against the rafters every time I passed along among my flowers, and what flowers they were! Such geraniums and primulas and cyclamens I have never had since. My friends who saw my flowers then, and see them often now, say so. Then, I had three varieties of passionflower which covered the entire roof (ridge) with innumerable blossoms, and specimen plants of *Streptosolon Jamiesonii* and of *Begonia Rubra*; the former with its immense drooping clusters of orange scarlet bloom, and the latter with a great wealth of scarlet flowers that were produced all the year round, which formed a picture that yields me great pleasure even now. However, it was condemned because, not being attached to the dwelling, I had to get out of bed many times during severe winter weather when the outside thermometer was zero or below, and cross the yard to tend the fire.

My present house is nearly square, 24 x 22, and is built against the south wall of an addition to the dwelling. It faces south and is 18 feet high at the back and seven feet at the front. The roof is not at one angle, but there is a beam running across

from east to west that makes a kind of "hip" at about one-third of the distance from the top. I have found this to be a mistake, as it is almost impossible to prevent a drip where the angle of the roof changes over this beam, and the house is too high, thus making it difficult to heat in severe weather. The only redeeming feature of the height is that it enables me to have larger specimens of some plants and vines than I could have in a lower house. It opens into the dining-room by glass door and window.

One of my favorite vines for the greenhouse is *Bouganvillea Sanderii* which was planted soon after the house was built. It is a very beautiful, free-growing vine—has no insect enemy that I know of, and blooms very profusely, being of a beautiful rose color. It is in bloom for about four or five months. It does best when planted in a bed or border. The smaller photo shows the details of the flower. The highly colored portions of the flowers are not petals but colored bracts, the flower proper being the inconspicuous white portion in the centre.

Last winter I had the misfortune to lose nearly everything in my house from an escape of coal gas from the hot air furnace in the cellar through careless plumbing. I had no bloom all winter, and this vine lost all its leaves. But now, it is sending out immense young growths, some of them already twelve feet in length. My house is heated by hot water from a coil in a sort of a self-feeder stove.



The Flower of the Bouganvillea Sanderii Vine

to such a one the title of these homely notes will bring up pleasant memories or rainbow-colored hopes. To be able to step from one's dwelling in this month of January into a temperate or summer atmosphere laden with fragrance, and full of the beauty of flowers and foliage, is something worth possessing, and once tasted of, will be made a permanent adjunct to the home, however humble. My purpose in writing this short article for THE CANADIAN HORTICULTURIST is to urge my brother amateurs, who love flowers for their own sakes, to make a great effort to secure this pure and unalloyed and elevating pleasure.



A January Scene in a Corner of Mr. Alexander's Greenhouse



Chinese Primula

This plant now in bloom, was grown from seed sown last June.

A corner of my greenhouse, as it looked a few days ago, is shown in the illustration. It may be called a symphony in white. The white is supplied from a liberal stock of Roman hyacinths, paper white narcissus and white Chinese primulas, the latter grown from seed sown last June. In a small packet of seed I had about sixty lovely plants of fine colors. One of these plants is shown. I have always had great faith in the begonia for the amateur's greenhouse. There is such a great variety, and nearly all of them easily grown, and the plants themselves are so free from insect or other pests that they are most desirable, for they are decorative, whether in bloom or not. One of the most handsome is *Begonia velvetina*. In the picture of the *Bouganvillea* the plant in the background against the back wall is *Begonia rubra*, which in three years from planting covered a portion of the wall 18 feet by 14 feet, or an area of 252 square feet, and was in bloom continuously for years, until it suffered as above described, but it is now again in bloom and will soon cover its old space. To the right of the *Bouganvillea* and growing in the same bed is another *Begonia*—*President Carnot*. It was twelve feet high and laden with its immense clusters of bloom when the photo was taken. At the present time I have *Begonia incarnata*, *Paul Bruant*, *Alba* and *Metalica* in bloom, besides some others whose names are unknown to me. *Cypripedium insignis* is the only orchid I have in bloom now.

I noticed what surprised me last winter, when the gas was playing havoc with my plants, when the hardiest geraniums lost all their leaves, that my ferns, including the most delicate adiantums and others, never looked better. The illustration shows a specimen of *Nephrolepis Piersonii* about 18 months old, from a sucker that seemed to thrive upon the gas. Photo 10 shows a specimen of *Pteris tremula* which

is one of several that I found growing in a damp corner of the centre bed in the greenhouse. When I lifted it it had two fronds about an inch long and now, less than two years after, I have some fine specimens of this elegant fern from self-sown spores. This is one of the many interesting accidents that we came across in our little greenhouse experience.



A Fern that Throve in Gas

This *Nephrolepis Piersonii* fern, 18 months old, was grown from a spur and did well in a greenhouse, where many other plants were killed by an escape of gas.

I will say but little more at this time, as I have no intention to speak of greenhouse construction or heating, or of the mode of cultivating certain plants; all I would add is that I get the best soil I can get, and I often wish that some of the commercial men would take in hand to supply us amateur florists at a reasonable figure with the potting soil we need for general purposes. By so doing they would increase the sale of many of their plants.

I am particular about the pots I use—I wash them inside and out every time they are used, and, as far as I can, keep the atmosphere around my plants not only with the proper heat, but also the requisite moisture and air. With these the plants must grow and thrive for it is the law of their nature.

I would close these rambling notes by saying that the main feature of my greenhouse is the large bed in the centre 15 ft. by 14 ft. and the 3-ft. border along the back wall enabling me to have a wonderful development of such plants as fuchsias, abutilons and begonias and others planted therein.

Plants should have a rest, and that is accomplished by withholding water, lowering the temperature in which they grow and not giving them any stimulant."—(E. F. Collins, Toronto).

## It is Norway Spruce

J. W. Smith, Winona, Ont.

In the November issue of *THE HORTICULTURIST* we noticed the picture of a hedge on the lawn of Mr. J. W. Smith, of Winona. What kind of hedge is it? How long has it taken to grow and how old were the trees when put out?—(R. W. O., Collingwood, Ont.)

The hedge is Norway Spruce. When planted the trees were 30 to 36 inches high and about four or five years old. This is the best height for planting, although they may be used when higher. When planting them 30 to 36 inches it takes seven or eight years for them to grow seven to nine feet high, providing it is sandy soil. They grow in most any kind of soil.

When they reach the desired height the tops may be cut off by drawing a straight line. The sides may, also, be trimmed to suit. This should be done after the hedge has ceased growing for



Pteris Tremula

the season, usually about August. About the same time it may be thinned, cutting the wood back within an inch of what it was the previous year, so that each year a new wood is left, on which buds form. This hedge was planted about four feet apart and is now 25 years old. It becomes thicker and thicker each year.

Plant flowers, even if it is not necessary to do so in your vicinity, or if flowers are a trouble and do not bring money. They will bring refinement and pleasure.—(N. S. Dunlop, Montreal, Que.)

The flower lover who has never reared her own plants and in turn been rewarded by the dainty blossoms they have borne, has missed a great deal of joy and pleasure.—(Mrs. W. J. McLennan, Appleby).



# Try Improved Lilacs Next Summer

W. T. Macoun, Central Experimental Farm, Ottawa, Ont.

NOW, when you are planning the surroundings of your home for next summer, do not overlook the claims for attention made by the lilac. There is no spring flowering shrub so popular, and none so easily grown. In fact, the old-fashioned variety establishes itself so readily and suckers so much, that it often becomes almost troublesome and in small gardens takes up too much room unless carefully watched. But no garden should be without lilacs if there is room for any flowering shrubs, and the improved varieties that are budded on lilac stocks are so fine that no one who loves flowers will allow the suckers to grow. Moreover, the varieties that are budded do not sucker as much as seedlings.

The improvement in lilacs has been very marked during the past 15 or 20 years, but comparatively few persons in Canada have yet planted the improved kinds. Unless the collection at the Central Experimental Farm has been seen it will be difficult to make anyone believe that, when the census was taken in the arboretum in the fall of 1904, there were 162 varieties in the collection doing well.

Charles X, which is one of the oldest of the improved varieties, is still one of the best and freest bloomers of its color, but the range in color now is so much greater than it used to be and the double and semi-double varieties, and those with twisted petals, make so many combinations that there is a large list to select from. The length of blooming season also has been extended. At Ottawa the blooming season of lilacs is from about the middle of May to the first week of July. By planting the different species and having a good range of varieties anyone may have lilacs in bloom for at least six weeks.

There are so many fine varieties of the common lilac that it is difficult to reduce the list to a few of the very best. The most satisfactory single white is Alba Grandiflora, a very free bloomer with a large loose truss and pure white flowers. Of almost equal merit three of the best double whites are Madame Casimir Perier, Madame Abel Chatenay, and Obelisque. Of single varieties in the various shades the following are very fine. Congo is about the best of those of the darkest violet or purplish red varieties, the panicles being of good size and the flowers very large. Prof. Sargent and Souvenir de la Ludwig Späth are very much like Congo. Other dark-colored single varieties of great merit are Aline Mocqueris, and Charles X.

Fürst Liechtenstein and Jacques Calot are two of the best singles with rosy lilac flowers, and Lavaniensis is almost a pure pink. Dr. Maillot is a fine late variety. Two of the deepest colored and

best double varieties are Charles Joli and La Tour d'Anergne, both being dark reddish purple or violet purple. A great deal of the charm of many of these newer varieties is in the contrast of the color of the flowers still in bud with those fully open on the same panicle. The varieties that are particularly attractive in bud, the buds having a rosy appearance are, Charles Baltet, Michael

tioned last, at least one should not be omitted from a general collection. Taking into consideration the range of color we should select as the twelve best: Alba Grandiflora, Madame Casimir Perier, Congo, Prof. Sargent, Fürst Liechtenstein, Lavaniensis, Charles Joli, Charles Baltet, Leon Simon, Avel Carriere, Linne and Emile Lemoine.

In order to have a collection of lilacs



Those Who Passed Stopped to Enjoy This Lilac Bush

This Persian lilac stands on the lawn of Mr. T. W. Todd, of Toronto. Last spring the tree was simply a mass of bloom. The blossoms were of a very delicate lavender, and the flower spikes were of extraordinary length, many of them being over two feet long. This beautiful bush was the admiration and wonder of Parkdale for many weeks.

Buchner de Jussien, and Prince de Beauveau, all very fine sorts. The last named variety has a bluish tint when open making the contrast between bud and open flower very striking. Two varieties that are of particularly fine shades of lilac are Leon Simon and Comte Horace de Chisnel. Three other excellent varieties that are bluish when open are: Avel Carriere, Coudorcet and Boussingault. Linne is a very fine variety with twisted petals.

Some of the best of the double varieties of more or less pink or rosy color in bud or flower are Emile Lemoine and Jean Bart, of which, although men-

that will give the length of blooming season already referred to, one should have in addition to the varieties of the common lilac, the following: Syringa oblata, which comes in just before the common lilac; Syringa Persica and S. Chinensis or Rothomagensis, which bloom at the same time as the common lilac. Syringa Josikaea, closely following the common lilac, S. villosa, blooming during the second week of June. Syringa Amurensis, starting to bloom about the beginning of the fourth week of August, and Syringa Japonica, which is not at its best at Ottawa until the first week of July.

## Perennial Borders for Amateurs

Roderick Cameron, Niagara Falls South

**H**ARDY perennials, when once planted, are constantly developing in beauty and size. A variety does not cost the purchaser any more than the tender individual plant from the greenhouse, that lasts but a season. With the exception of keeping them clean from weeds, they require but little care or attention for several years after planting, and then only to subdivide into many plants for use elsewhere. The varieties and color are legion. With a judicious selection in the first instance, a perennial bed or border may be kept bright with bloom and foliage from the time the frost leaves the ground in the spring until hard frost in the fall.

There are many important points to be considered in making a perennial border. First, there must be a familiar acquaintance with the characteristics of each variety, its likes and dislikes as to soil, situation, shade, moisture and light, and its period and length of blooming. Every plant has a character and gracefulness peculiarly its own, and when surrounded by a variety of similar plants, all equally graceful and interesting, the beauty of a well-arranged plot or border commands admiration from even the least observant passer-by.

It is sometimes a good plan, when the border is a large one, to intersperse some of the finer varieties of shrubs. In some cases vines may be employed to advantage.

The choice of the situation for the border is a very important matter. On small lots it should be made up against the line fence. Cover the fence first with chicken netting, then plant against it vines in variety. They will cling to the netting, thus saving tying. There are many instances where this practice would be to advantage in our cities, towns and villages. In front of this netting may be made the perennial border, preferably as irregular as possible in form. It should be dug two feet deep. As much barn-yard manure ought to be used as can be turned under. I believe in using a good coat of wood ashes every fall, spread broadcast over the surface after the old tops have been cut and cleared away from the border. It can be forked in in the spring with a potato fork. I also believe in making such a border in the fall, and planting it in the spring, as the young plants get established, and are better fitted to withstand the following winter.

Taste and skill in the arrangement of the plants is very essential. Discarding any attempt at formality, freedom and grace are two important points to

be considered. There must, also, be some order and harmony. The plants ought to be graded from the back to the front in an easy and graceful manner, and if the whole border is seen at a glance, the colors of the contiguous plants should blend as nicely as possible. On the other hand, if the border is of a crooked form so that only one part is seen at one time, then harmony of color becomes a secondary matter.

The planting of a crooked border should always begin on the front row. Use all the smallest dwarf plants in this row, but a too strict line of uniformity of height should be carefully avoided. The plants for the first two rows should be of a mixed character, so that they will not all be in bloom at one time.

An excellent method in planting perennials is to use plants of about the same constitution, irrespective of their families, and preferably those that bloom at different periods of the summer. Care should be taken to select those that are not apt to rob, or clash with each other, and to plant three to six or more varieties in such a manner that the blooming of each distinct clump, or plot, will be prolonged as long as possible.

Most of the herbaceous plants can be used in this way to advantage, but there are some that are not suitable for inter-clump planting, such as the Rudbeckia golden glow, Helenium autumnale superbum, Pyrethrum uliginosum, Pyrethrum maximum, and other gross feeders and rampant growers. These should have a place for themselves near the back of the border.

It is advisable, when planting on the plot system, to arrange the plants in rows, parallel with the outline of the border. This facilitates the keeping of the border clean, makes it more easy to get at the plants for cutting and tying up, and simplifies the labelling of the varieties for the information of the public, which is a very important matter.

### BULB DEPARTMENT

Questions Answered by  
Mr. Herman Simmers

#### Storing Gladioli

I grew some gladioli last summer and stored the bulbs in an ordinary furnace-heated cellar in the fall. They seem to be drying out too much. What should I do with them?—(A.L.C., Owen Sound.)

The way you are keeping your Gladiolus bulbs will not do. They should be kept in an atmosphere containing more moisture. If you have a room in the cellar that does not freeze, or if you could keep them in the same place that

you keep such vegetables as carrots, beets and parsnips, they will come out in the spring much better. If you can secure a moist atmosphere where there is no frost you should have no trouble if the bulbs have been properly harvested.

#### Bulbs in Water

What bulbs can be grown in stones and water? What is the best time to start them, and under what conditions would I get best results?—(J. S. McP., Orangeville.)

Chinese Sacred Lilies are usually grown in this manner, and within the last few years the greater portion of the Polyanthus Narcissus have also been grown with success, notably so the Paper White Narcissus (*totus albus*); also Grand Primo and Grand Monarque Polyanthus Narcissus.

They can be started any time during September, October or November. The conditions as to results depends as much as anything upon the strength of the bulb. If a good strong bulb is selected, success is almost certain. It is advisable to add some ammonia to the water a few weeks before the plants come into bloom.

#### Flower Lovers—We Need Your Help

We hope our readers who grow fruit and flowers in an amateur way will be pleased with this issue of "The Canadian Horticulturist." A special attempt has been made to publish articles that will be helpful and interesting to them. We intend to make this department one of the strongest in the paper. Everything of a professional floral nature is to be eliminated, and special attention will be devoted to the needs and desires of the amateur.

Starting with this issue several new departments have been added to the floral section of "The Horticulturist." Mr. W. T. Macoun, horticulturist at the Central Experimental Farm, Ottawa, has kindly consented to contribute a series of illustrated articles on shrubs. Mr. Herman Simmers, of Toronto, the well-known seedsman, will write on bulbs; Mr. Roderick Cameron, of Niagara Falls South, will treat on perennials, and Mr. A. H. Ewing, of Woodstock, on lawns. Each of these gentlemen will be pleased to answer any questions on these subjects that may be asked by our readers.

The interesting article in this issue by Mr. A. Alexander, of Hamilton, is only the first of a series by him that will be published during the spring and summer. These articles will be illustrated as is the one in this issue. Several other prominent amateur florists, including such well-known writers as Mr. J. O. McCulloch, of Hamilton; Mr. A. K. Goodman, of Cayuga; Mr. Edwin Utley, of Toronto; and Mayor H. J. Snelgrove, of Cobourg, have been kind enough to promise to contribute articles on selected subjects during the coming year.

All these gentlemen, although busy men, have consented, through love of their subjects, to contribute these articles free of cost. We feel there are many others among our several thousand readers who have devoted special attention to some one or two branches of flower-growing, who could aid greatly in strengthening this department by forwarding an occasional article with illustrations.

# Growing Vegetables for the Early Market\*

J. L. Hilborn, Leamington, Ont.

“WE start the first tomato plants about March 1, and we like to prick them out often. As soon as they have four leaves on we prick them out again. You can get a better rooted plant by firming the soil; we transplant three times, and often four. We keep them in flats.”

MR. MCMEANS:—“You never transplant them into cold frames?”

Answer.—“No, after they get a pretty good size, if they run up too much, we turn them down. We use shallow flats; the majority of our flats are four, and four and a half inches deep, and we only fill them half full the first planting, and after that we use more. The last planting we cut the earth out and take out a chunk of earth with the plant; and we have veneer, cut four inches wide, the length of the tray. One of these strips of veneer is placed in the centre of the tray, and two across, and that leaves a space four inches square, and we plant one in each space, and when we pull the partitions out it leaves the soil ready to lift out with the root. We have that square of earth with the roots all about it, and the plant gets practically no checking. We wet them just before going to field. It they grow stalky it is well to bury them down and bend them over. ‘Spark’s Earliana’ are grown for the majority of the crop.”

A MEMBER:—“A great many of them split.”

Answer.—“We do not find that with us.”

A MEMBER:—“I grow ‘Atlantic Prize.’ They are not very large but I get early crops and a smooth fruit. They are a little thin-skinned, and will not stand shipping as well as others.”

MR. RUSH:—“Do you find that a round tomato is better for shipping than a flat one?”

Answer.—“Yes, I believe it is better and firmer.”

A MEMBER:—“Have you grown ‘Chalk’s Early Jewel?’”

Answer.—“Yes, I tried it a few years ago. It is very fine looking, but with us it is two weeks late. The ‘Plentiful’ is grown in our district to some extent.”

MR. ROBINSON:—“They had a great rot in the centre this year. Last year we had no trouble in growing them, but it seems to be the general cry this past season that they were affected with this green rot.”

Question.—“Did you ever have any

experience with the ‘Imperial’?”

Answer.—“Yes, it is a nice sample and it takes well in the market, but it does not pay us as well as the others.”

MR. ROBINSON:—“I paid a visit to growers in my district this year, and I was surprised to see the amount of rot in the ‘Earliana’ and ‘Plentiful.’ Some ground was very rich, and I do not think you want the ground rich for tomatoes.”

Question.—“Do you have any leaf blight among your tomatoes?”

Answer.—“Yes, more or less, but we do not mind it very much, because we think we get the fruit a little earlier.”

MR. ROBINSON:—“We grew a few ‘Imperial,’ and they started with the leaf blight. The crop was very promising, but the leaves seemed to turn black and had the same kind of smell potatoes have when they get the blight.”

Answer.—“I think spraying will help that. Some five years ago we were troubled with blight on our tomatoes, and we sprayed with the Bordeaux Mixture as we loaded them on the waggon. We gave them two or three applications after they went to the field, and were able to control it very well. The last three years we have had very little blight. I think it is largely owing to weather conditions.”

“I used to grow melons very extensively, both the water melons and the musk melon.”

Question.—“What is the particular kind that you grow?”

Answer.—“The improved Hackensack.”

Question.—“Do you treat them similar to cucumbers?”

Answer.—“We do not have them so large when we transplant them.”

Question.—“Do you plant the melons in furrows?”

Answer.—“We mark out the field in

rows and we put the two rows eight feet apart and the next two rows six feet apart.”

Question.—“Haven’t you found there is a better demand for the small yellow flesh?”

Answer.—“Yes, and if I was growing the melon for the Toronto market I would grow small melons. There is more money in it. We have to spray a good deal, and if we put our rows six feet apart there is no room for our spraying outfit. We put two plants to the hill. We sow some rye when we take off our early melons and early tomatoes.”

Question.—“How high do you let your rye get before you plough it down?”

Answer.—“We plough it early in the spring. I have used very little commercial fertilizer, except nitrate of soda, when I am putting out my tomatoes. As soon as we get them in the field, I give them a little treat of nitrate of soda, about a teaspoonful to the plant. It seems to start them growing. We had a striking result from that this year when some large plants were moved out early. The plants that we treated yielded fully one-third more than the others.”

Question.—“Have you had any trouble with melon Aphis?”

Answer.—“The history of the melon growing countries, as far as I know, is that they have sandy land and they are effected with melon Aphis. It is a very hard pest to control unless you go about it in the right way. It will cover a five acre field in a week. The female deposits the eggs on limbs and branches of trees in the fall, and those hatch in the spring into females, and they start here and there in the field, and the first progeny are living young, and they give birth to living young in immense numbers. There is just one way to handle them successfully and that is to watch them closely



A Leamington, Ontario, Greenhouse in which Vegetables are Grown for the Early Markets.

\*Conclusion of an address on “The Growing of Vegetables for Early Markets,” delivered at the convention in November of the Ontario Vegetable Growers’ Association. The first part of this address was published in the December issue of THE CANADIAN HORTICULTURIST.

when they begin to run. They start in a few places, perhaps four or five plants to the acre, and this is liable to be near a tree, and if you destroy these plants you will have very little trouble.

"We take a bushel basket of straw and scatter the straw under the plant and set

fire to it. We used to try pulling the plants out, and dipping them in coal oil, but in that way we lost an odd insect and concluded that fire is the only sure remedy. This year, in about six acres of melons, we destroyed one-eighth of an acre of plants before we got it checked.

A neighbor across the road did not hunt out the hills, and he had to spray heavily and to use a great deal of tobacco stems and the result of his neglect cost him a good many dollars. There is not as much danger from this pest on heavier soil."

## The Growing and Marketing of Cauliflower\*

A. McMeans, Brantford, Ont.

**I**N packing cauliflower for market I use barrels and those large American berry crates that hold sixty boxes of berries. Use plenty of paper so that the heads do not rub. You can buy waste paper very cheaply from the newsdealer or newspaper offices. The large size crates cost me fifteen cents each, the small size ten cents each, second hand empty salt barrels fifteen cents and empty sugar barrels twenty cents. The cost of the packing I add to the invoice. Don't be afraid to packing too tight. If you pack too loosely you will find that owing to the jar of transportation they will rub worse than if they are packed tight. Sometimes I have to sit on the lids of the crates to get them fastened. The large crates hold on an average about two dozen heads.

Cut closely and try and have some local place to sell them. If you can't do that then sell them to the pickle manufacturers. Remember that one poor head in a dozen spoils the appearance of the whole lot.

Excessive humidity in the atmosphere frequently develops a disease of the stalk known as stem rot, for which we have no known remedy, but if the weather is cold during August, with occasionally a cool rain to keep them coming along, we may expect to see the care and labor that we have expended on these plants well rewarded. In the open field cauliflower will stand a temperature of 24° or 20° Fahrenheit providing it is not long continued. Full-grown heads are much more liable to be damaged by frost than the small ones.

It often happens that some plants will be left in the field when winter begins to set in. In order to save them and to get the most out of them cut them off at the top of the ground and stick the stump into moist, not wet, sand in a cool cellar, first removing all the leaves except the inner course. By doing this you will be surprised to find how many you can store away in a small space.

Question.—"Do you not think you would have had better cauliflower if you had left some of the outside leaves on?"

Answer.—"No, I do not think so. The more leaves you leave on the more you draw the strength from the stump. I remove every leaf except a few on the inner course because a cauliflower without a leaf does not look nice on the market."

Question.—"With regard to transplanting, do you try ploughing in the morning and setting out the plants in the afternoon?"

Answer.—"It is very seldom I do that. With my cabbage this year and last year I pulled the plants early in the morning, put them in the root-house, and then went to work and manured and ploughed them, and I planted the cauliflower that night and I had a good crop."

MR. T. DELWORTH:—"Watering is quite a labor?"

Answer.—"Yes; and if you plough twice, and keep the land harrowed and cultivated, you will keep the moisture in the ground."

MR. DELWORTH:—"If you plough your ground and put in the plants at once I think it is a good plan. I have adopted that plan and in the last ten years I have not used one can of water in setting out cabbages or cauliflowers."

MR. McMEANS:—"I have done the same thing; my father brought me up on the idea that the more work you do in doing anything the better the result."

Question.—"Do you ever pull your plants two or three days before planting them, and leave them in a damp place, and let the little rootlets break out before you plant them?"

Answer.—"I have done that with celery, but I could not see much came from it. You start the little fibres and then you brake them off, and you have to start them again under harder circumstances."

MR. J. RUSH:—"I found wonderful results in the hot weather in July. We plant our cauliflower from the fifth to the fifteenth of July, when it is generally hot weather, and I have found that by pulling the plants from the seed-bed and tying them up in bundles and putting them in the cellar on the floor and keeping them there for two or three days, they usually put on a nice bunch of fibres all ready to take over to the soil."

MR. McMEANS:—"I have no trouble when I put out a patch of cauliflower. I do not think I miss one in a hundred.

I am not troubled with the cut worm."

Question.—"What time do you generally plant?"

Answer.—"About June 20. The early cauliflowers bring me more money than the later ones; they may require a little more attention, but I can see but very little difference and if you can get an extra cent on a cauliflower you are making that much more profit. My average net price for the last four years has been \$1 a dozen."

Question.—"Is your soil light or heavy?"

Answer.—"Black loam with sandy bottom; it was originally a cedar swamp."

Question.—"You cannot grow early cauliflower there?"

Answer.—"I have put out early cauliflower the same time I put out early cabbage, and they were not bothered with the worm any more than the cabbage were. But your cauliflower will not develop as nice a head as they will later on. If you have a place with a nice cool bottom and of a stiff nature you can produce just as good cauliflower two or three weeks earlier."

MR. RUSH:—"What has been your experience in regard to seed?"

VOICE:—"Sometimes we blame the seedsman for having sold us inferior seed untrue to name. I think it is the time of sowing that makes the difference. I have sown May 1, and May 15, and June 1, out of the same bag of seed and had different results."

MR. McMEANS:—"That would be due more to the climatic conditions. We do not get the same weather the first of May as we do the first of June."

MR. RUSH:—"They all germinate the same, but we do not produce the heads."

MR. McMEANS:—"I get my best results from sowing May 1 or May 15. I like to sow the first week in May. Seed sown the first of June will not mature in time."

A MEMBER:—"Can you pick a Snowball from an Erfurt?"

MR. McMEANS:—"I think the Snowball is flatter. If you buy D. M. Ferry's Snowball you will get the flat top cauliflower. If you buy cauliflower seed this year, and you find it is good I would advise you to go back and buy some for next season."

\*The balance of an address on the growing of cauliflower, delivered at the recent convention of the Ontario Vegetable Growers' Association. The first part of this address was published in the December issue of THE HORTICULTURIST.

## The Canadian Horticulturist

Published by The Horticultural  
Publishing Company, Limited

The Only Horticultural Magazine  
in the Dominion

Official Organ of British Columbia, Ontario, Quebec  
and Prince Edward Island Fruit Growers'  
Associations and of the Ontario Veg-  
etable Growers' Association

H. BRONSON COWAN, Editor and Business Manager  
J. ALBERT HAND, B.S.A., Associate Editor  
W. G. ROOK, Advertising Manager  
A. B. CUTTING, B.S.A., Travelling Representative

1. The Canadian Horticulturist is published the first of every month.
2. Subscription Price \$1.00 a year, strictly in advance. 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 25th. 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  
507 and 508 Manning Chambers  
TORONTO, CANADA

### MAY SUCCESS ATTEND YOU

We wish our readers, one and all, the happiest of happy new years. May injurious insect pests shun you, the sun shine and the rain fall as you desire, and the output of your gardens and orchards for 1906 be the best and greatest in the history of the country. Such good fortune will be none too good for the readers of THE CANADIAN HORTICULTURIST.

### THE CANADIAN HORTICULTURIST

The great increase that has taken place in the fruit interests of the Dominion has made it necessary to enlarge THE CANADIAN HORTICULTURIST. During the past two years many improvements have been made in THE HORTICULTURIST; new departments have been added and the amount of setting greatly increased. Several issues last year had to be enlarged by the addition of four to twelve pages each, but even this was not sufficient to relieve the pressure on our space, as every month several columns of important reading matter had to be left out.

For years THE HORTICULTURIST chiefly represented the fruit growers of Ontario. Last year it was appointed the official organ of the Prince Edward Island, the Quebec and the British Columbia provincial fruit growers' associations and the management was surprised to find how immense are the fruit interests of these provinces. It was soon realized that if THE HORTICULTURIST was to keep the fruit growers of the Dominion in touch with the development that is taking place in the fruit interests in the different provinces it would have to obtain regular correspondents in the fruit centres of these provinces and add still another department to the paper. It was found to be impossible to do this last year, but at a meeting of the shareholders of The Horticultural Publishing Company, Limited, held early in December, it was decided to enlarge THE HORTICULTURIST to its present form and to make many other improvements. Most of the shareholders of THE HORTICULTURIST are prominent fruit growers.

One of the best features of the paper during 1906, therefore, will be the correspondence that will be published in each issue from the leading fruit centres of the Dominion. Regular correspondents have been appointed at Montreal and Winnipeg who will report on the condition of the fruit that reaches and passes through those centres. A monthly letter from Prince Edward Island will appear that will be written by that well-known horticultural enthusiast, Rev. Father A. E. Burke, the president of the Prince Edward Island Fruit Growers' Association. The first of these letters appears in this issue. A correspondent has been secured in Nova Scotia, and one is shortly to be appointed in British Columbia. These correspondents are experts in fruit matters and are located in the heart of the fruit centres. THE HORTICULTURIST expects that their monthly letters will have the effect of giving fruit growers generally a broader outlook on fruit conditions throughout the Dominion, and of bringing them into closer touch with each other.

As a means of bringing the paper into closer touch with the rank and file of the fruit and vegetable growers, a travelling representative has been added to the staff in the person of Mr. A. B. Cutting, B.S.A., a graduate of the Guelph Agricultural College, where he took the special course in horticulture, and spent a year as instructor and lecturer in horticulture. Before going to Guelph, Mr. Cutting spent two years on the large fruit and vegetable farm of J. C. Black & Son, at Truro, Nova Scotia. During his connection with the Guelph college he had charge of fruit experiments there, under the direction of Prof. Hutt, and of the co-operative experiments in horticulture over Ontario as conducted by the Experimental Union. Mr. Cutting was in the Argentine Republic for a year and during 1903 visited the southern States, including Maryland and Georgia, in which latter state he spent three months in the great Hale orchards. It will be Mr. Cutting's mission, while representing THE HORTICULTURIST, to visit the fruit and vegetable growers in their homes and to contribute special articles to the paper giving their views and his own on topics of general interest. The first of his letters appears in this issue.

Although the number of pages has been decreased from 52, in the old HORTICULTURIST, to 32 in this, its new form, there is just twice as many inches of reading matter on one of these pages as on one of those in the old HORTICULTURIST. This means that THE HORTICULTURIST, as published last year, has been enlarged by the addition of twelve pages of reading matter, or practically by twenty-five per cent. In addition to this a better quality of paper will be used this year than ever before.

Since our last issue we have completed arrangements to have the paper printed in Toronto in future, instead of in Hamilton, as formerly. This will be a great convenience to the business management and will make possible the printing of a better paper. Many other improvements have been made in this issue, such as the addition of a poultry department and separate departments with competent men, who have had practical experience, in charge. Those of our readers who have difficulties with shrubs, bulbs, perennials, or those who do not know just how to have a beautiful lawn are advised to send along questions. We will be pleased to secure reliable answers to all questions bearing on horticultural work.

We make no apology for giving these details about the business management and plans of the paper. The horticultural interests of Canada and those of THE CANADIAN HORTICULTURIST are so closely identified that we feel that anything that affects one affects the other, and our readers are interested in both. It is our desire to publish a paper of which Canadian fruit, flower and vegetable growers may have reason to feel proud. The changes that have been made in THE HORTICULTURIST have been introduced with that object in view. We look to our readers to give us their active support and it will be our aim to justify their confidence.

### THE DISCORD SHOULD CEASE

It is time the fruit growers in the different provinces should get together and, armed with representative exhibits, should settle this matter as to which has the best fruit. Ontario has moved along for years in the happy belief that anything any of the other provinces has been able to do in the line of fruit production must have been largely due to an accident and as such was unworthy of notice. Were any person to inform a Nova Scotian that the Annapolis Valley was not the very best fruit section, well yes, anywhere, something would probably happen. Recently that cheeky little province, Prince Edward Island, has insisted on making itself heard; in fact, it does a little spouting in this issue of THE HORTICULTURIST, even going so far as to claim it has produced better fruit than that grown across the channel in the valley of Evangeline. This, of course, they believe, proves it is the best that could be grown anywhere. Quebec has long contended that there are no apples so fine as the Fameuse and McIntosh Red, and that these varieties are grown to perfection within its borders only. Now, if you would believe it, British Columbia persists in flaunting in the faces of her sister provinces the fact that for two years in succession her fruit has captured the gold medal at the big horticultural exhibition in England, the country that is the market of the surplus fruit of all the provinces. She even seems to think that she is so up-to-date in her methods that the other provinces, when they awake from their Rip-Van-Winkle sleep, will have a hard time to catch up to them—the band waggon.

Now what are we going to do about it? This discord among the members of Miss Canada's family should cease. Why not arrange for a national exhibition of fruit next winter, place the best fruit from the different provinces side by side and settle the matter—until the next time? Of course the present situation has its advantages. If I say I have the best fruit you can't prove that such is not the case. At the same time you can continue to believe that yours is the best of all, while the other fellows can laugh at us both. It is annoying, however, to have one's assertions ridiculed and a national exhibition seems the best solution of the difficulty. Now, then, which will be the first province to take the field with a challenge?

### OUR GROWERS SHOULD ACT

Ontario farmers and fruit growers as well as those in the other provinces, lose scores of thousands of dollars every year through the careless and wasteful manner in which a large proportion of the apple crop is gathered and marketed. Improvement is needed all along the line, including the method of growing the fruit, the picking, packing and selling of it on this side of the Atlantic and in the marketing in Europe. The existing system is like a sieve being so full of weaknesses, through which the money of the growers slips, that it is a wonder they receive as much as they do for their fruit.

The main defect is the number of times the crop is handled between the day it leaves the orchards of the growers, and when it reaches the hands of the consumers. In many cases the grower sells the fruit to a packer who sends men to the orchard to do the picking and packing. It is forwarded by the buyer to large dealers in Great Britain who call in auctioneers. The auctioneers dispose of the fruit to retailers and wholesalers, who in turn sell it to the consumers. It not infrequently happens that a crop passes through the hands of five people between the time the grower sells it and the consumer buys it from the retailer. Each of the intermediaries demand their fee, with the result that it is not to be wondered at that the grower frequently does not receive a quarter or a fifth of the price the fruit finally sells for in Europe. The remedy for the situation lies in greater co-operation on the part of the growers. Co-operation will make it possible for the growers to sell direct to the retailers and thus save

at least one half of the charges now exacted by the middlemen. These matters are discussed at length in this issue. It is well they are, because they represent the greatest problems confronting our fruit growers.

Evidence of the value of THE CANADIAN HORTICULTURIST as an advertising medium continues to accumulate rapidly. The cash prize of five dollars offered in the November issue to the reader purchasing goods to the greatest value from advertisers in that issue was won by Mr. W. C. Dempsey, of Albury, who bought trees worth \$140 from the Belleville Nurseries. A similar prize, as well as smaller ones, is offered in this issue. Readers must tell the advertisers that they saw their advertisements in THE CANADIAN HORTICULTURIST.

THE CANADIAN HORTICULTURIST starts this year with the largest circulation and the most valuable advertising patronage in its history. The advertisements carried in this issue are worth three times those that appeared in the January issue of 1905. Our February number will be devoted largely to planting and nursery matters, and the March issue to spraying. Advertisers should bear this in mind and should apply early for choice of positions.

### Canadian Fruit in Poor Condition

Mr. W. A. McKinnon, Canadian commercial agent at Bristol, England, has the following to say regarding the condition of Canadian fruit when it reaches Great Britain:

"I have examined a lot of Canadian apples recently landed for sale on commission. These consisted of a number of varieties, including King, Greening, Pewaukee, Cranberry Pippin, Hubbardston and others. The receiver stated that the fruit was not in good condition, and he therefore offered facilities for its examination. Not one barrel of the 20 or more that I examined was 'tight,' as all should be on arrival. It seems hardly possible that these could have been properly packed at the point of shipment; if so, the fruit must have been subjected to high temperature at some stage of the journey, for there was a large proportion of rotting and soft fruit. As the inspector for the department of agriculture stated that they were carried in a well-ventilated part of the ship (No. 1 'tween decks'), it is hardly to be supposed that the damage began on board ship, and I am inclined to fear that the fruit was never properly cooled before it went aboard at Montreal. The shipper has been notified, but it is to be hoped that other exporters will take warning. Especially in a season when good fruit is commanding such excellent prices, it is very regrettable that profitable returns should be lost owing to the want of protection from heat between the time of packing and loading on board ship.

#### TOO MANY VARIETIES

"It is impossible for shippers to throw away all the less popular varieties and to confine their shipments to a few of the leaders; so long as the trees live, or until they can be top-grafted, these grades must be marketed, but odd varieties and mixed lots would do better in the larger and more highly organized markets on this side. The Bristol market is just in process of development, and should have special care. The trade here express the opinion that five or six varieties are all that they require, and have recommended some of the following: Spy, Baldwin, Greening, King and Golden Russet. The Snow is very popular in the early part of the season if it can be landed in good condition.

#### A SUCCESSFUL SHIPMENT

"An Oakville exporter has just sent a very good lot, showing less than 10 per cent. of 'slacks,' the private sale of which, so far as it has gone, has yielded excellent prices. This

lot included some King, Spy, Greening, Mann and Colvert, and was not of the highest quality, many of the barrels being marked No. 2 (or XX), but the prices realized are much better than could be got for so-called No. 1 grade if improperly packed or out of condition."

### Canadian Apples in France

A report from Commercial Agent Poindron, of Paris, France, gives some valuable hints as to how Canadian apples should be sent there. The report says:

"Fall and winter table apples are the only ones suitable for the French market, and especially Golden Russets, Baldwins, Ben Davis and Spies. It would not pay Canadian exporters of apples to send to France on consignment for sale XX barrelled or boxed apples. XXX apples only will pay, and c.i.f. Havre dealings would be the most satisfactory basis rather than consignments for sale.

"Barrelled apples are in greatest demand. Much care should be taken in shipping the regular Canadian apple only as to weight and size. Apples in France are sold by the 100 kgr. as a unit (220 lbs.), and not by the barrel. Two years ago the Canadian apple barrel was introduced on the French markets, for the first time, in substantial quantities, weighing 74 to 75 kilos (163 lbs.) gross weight, and 68 to 70 kilos (152 lbs.) net weight of fruit per barrel. Later in the season barrels of smaller size were shipped to Paris market, causing trouble and loss to Paris importers who had bought by the barrel and sold by weight. Great care should be taken in having the barrels nailed, as in many instances the point of the nail is not properly knocked down, and it pierces and rots the apples. As a consequence, the apples in the barrel become loose and are badly bruised when the barrel is open, which constitutes a great damage to the exporter and to the reputation of the Canadian apple itself on the market.

"As to boxed apples, no fruit below 7 to 8 ounces in weight should be shipped to France. On the contrary, extra choice Golden Russets and Baldwins and Spies, 7 to 8 ounces and over, carefully packed tight in paper and paper wool would meet a good paying demand. By paper wool I mean light paper in small ribbons. The French fruit packers and dealers object to 'excelsior' wood fibre which, they say, settles owing to handlings during transportation and makes a much less compact package than paper wool, which enjoys the preference of all of them. The fruit remains unbruised and only in such condition can the full price be obtained from retailer and consumer."

### To Publish Results of Experiments

At a meeting of the board of control of the Ontario Fruit Experiment Stations, held during December, in the Parliament Buildings, Toronto, it was decided to have published the results of experiments conducted during the past 10 years. This report will include the numerous experiments that have been carried on with different varieties of the various fruits in each of the experiment stations.

The object in having such a report published is to show the growers or prospective growers what varieties are best adapted to the different sections of the province.

In the same volume will be included the work of the experimenters in obtaining accurate descriptions of the standard varieties already planted throughout the province. This part will be fully illustrated, and will be of special service in identifying the different varieties.

The board of control comprises Messrs. G. C. Creelman, chairman; Linus Woolverton, of Grimsby, secretary; W. T. Macoun, of Ottawa; Prof. H. L. Hutt, of Guelph; P. W. Hodgetts, of Toronto; Elmer Lick, of Oshawa; and A. M. Smith, of St. Catharines.

### The Standard Fruit Baskets

The fruit growers of the Niagara district have agreed that the law regarding baskets should be amended. At a meeting in St. Catharines on November 25, the points for and against were freely discussed by the leading growers who deal most extensively with basket fruit. The prevailing opinion was that standard baskets should be adopted. It was decided by a large majority to have only the present 15 quart basket for wine grape purposes, the 11 quart basket, a 6 quart basket and the present pony baskets of 2-2-5 quarts.

A committee was appointed to investigate the various measurements and decide on which shape would be best adapted to general use. Top and bottom measurements had to be selected for the 11 quart and the 6 quart sizes. This committee met on December 2 and reported that they had decided the law should be amended to read: "11 quart basket 5 $\frac{3}{4}$  inches deep, bottom to be 6 $\frac{3}{4}$  x 16 $\frac{3}{4}$  inches, and top 8 x 18 $\frac{3}{4}$  inches, measurements to be inside of the veneer and not to include the top band, the cover to be 8 $\frac{1}{2}$  inches wide by 19 inches long. "6 quart basket 4 $\frac{3}{4}$  inches deep, with bottom 5 $\frac{3}{8}$  x 13 $\frac{1}{2}$  inches, and top 7 x 15 $\frac{1}{2}$  inches, inside measurements, cover to be 7 $\frac{1}{4}$  x 15 $\frac{1}{2}$  inches, corners of baskets to be nicely rounded."

A few of the growers were in favor of having a third size for peaches, plums and cherries. Some wanted 7 quart, some 8 and some 9 quarts, but the majority were in favor of having only the standards as defined, and leaving the law as at present, so that if any grower has a special market he can use a 7, 8 or 9 quart basket by stamping the size in large letters on the side of the basket—this to be done by manufacturer. Very few of these special baskets are used. Another objection raised to the special sizes was the fact that it is felt that the time is not far distant when standard fruit crates like those used by western growers will be adopted for the better grades of fruit.

The fact that almost all of the baskets used for grape shipments are of the 6 quart size, largely determined the action of the growers. A larger basket than the 6 quart or 9 pounds is not desirable for shipping grapes any distance, and it is the size most called for by the buyers. Only three factories in Ontario are making the 6 $\frac{3}{4}$  quart baskets.

### British Columbia Growers on Top

The fruit sent by British Columbia to the Royal Horticultural Society's show in London, England, captured the gold medal this year for the second time. When it is considered that this has been done in competition with fruit from all the colonies, some idea can be gained as to the high quality of the display sent from British Columbia.

The display of apples covered an area 75 x 6 feet, and Britishers said it was the finest exhibit they had ever seen. Besides a gold medal for the provincial exhibit, eight industrial exhibitors' medals of lesser value were awarded to British Columbia growers.

**A Fine Spraying Machine.**—Regarding the "Duplex" Wallace Power Sprayer, Capt. H. L. Roberts, of Grimsby, reports that it has worked well and given him no trouble. He finds only one pump sufficient for grapes and similar work. This machine, he says, has always maintained plenty of pressure. His apple trees are very large.

Scalecide is being widely used across the line for San Jose Scale, and reports show that the results have proved satisfactory. In an address on spraying at the Fruit Growers' Convention in Toronto, Mr. W. N. Brown, of Wyoming, Del., said that it was perfectly soluble and costs no more than the Lime-Sulphur wash. It is one of the cheapest of the combination washes used in spraying.

## Fruit Growers Meet in Annual Convention

THE importance of the fruit industry in the Province of Nova Scotia was well shown by the interest manifested in the 42nd annual convention of the Nova Scotia Fruit Growers' Association, held at Annapolis Royal, on December 13, 14 and 15. The subjects for discussion had been selected owing to their importance and this fact added to the interest taken in the sessions. The election of officers resulted as follows:—President, Mr. John Donaldson, of Port Williams; first vice-pres., Mr. G. C. Miller, of Middleton; secy., Mr. S. C. Parker, of Berwick; asst. secy., Mr. J. H. Cox, of Cambridge; executive, Messrs. R. S. Eaton, of Kentville; A. C. Starr, of Starr's Point, and Col. S. Spurr, of Wilmot.

### PRESIDENT'S ADDRESS

The address of the president, Mr. Ralph S. Eaton, of Kentville, dealt fully with the past year's crop returns and the prospects of the fruit growers of the province. "Though a million dollars which we have received so often for our apples," reported Mr. Eaton, "will probably come again to the fruit growers this year, yet the crop of fruit, for a second season in succession, has been a disappointing one to many. Yet, if we study our conditions carefully, we will find much in them to encourage us. The average returns of about \$3 per barrel, for good fruit under the heavy shipments that have gone forward from this continent to England, means much to the stability of that market.

Again, never before have so many persons felt satisfied with their ability to thoroughly control our worst enemy, the black spot. Never before, perhaps, has there been such marked evidence of the efficacy of Bordeaux when applied early and thoroughly. The feeling of certainty regarding this question will bring about a more general application of the fungicide. We are not likely to have again for many years such unfavorable weather when the pollen of the apple blossoms is in its most sensitive condition. Then again our trees have had a rest that should count in the income of 1906. The ocean transportation question that was so serious for many years seems free from criticism. The competition and difficulties in almost every line of business are increasing yearly, and we cannot expect ours to be an exception. More study is necessary to enable us to fight our enemies, and only the fighter really knows the solid satisfaction of overcoming obstacles and standing up against disappointments. After all men who really accomplish much are not men of chance and broadcloth, of legacy and laziness.

### 300,000 BARRELS FOR EXPORT

"It is doubtful if our export of apples this year reaches 300,000 barrels. Already 175,000 barrels have been shipped from Halifax, but for this year more than half the crop is gone. The County of Lunenburg rather surprises us with an estimated yield of 10,000 barrels. The Japan plums that blossomed early and set their fruit before that destructive week in June, were a good crop. Cherries were almost a failure. Pears were good. Peaches were fair.

"The resolution of our executive asking the Government to place the Express rates under the control of the Railway Commission, as freight rates now are, was formally presented to the Minister of Railways. This seemingly reasonable request was backed up also by Quebec and Ontario. It has not yet been acceded to. These questions are always larger than they appear to be at a distance. Further study and pressure will be necessary. I trust that the Dominion Convention will clinch this question. With two and three lines of railway in this small province carrying our expressed fruit to its destination, and each charging a separate high mileage rate the cost of perishable fruit transportation with us is very excessive.

### ORCHARD MEETINGS

"Under the auspices of this association several successful orchard meetings were held dur-

ing the year, when spraying by engine power or by hand was illustrated and practical orchard topics were discussed. Prof. Sears, our venerable pomologist; Mr. R. W. Starr and our secretary, Mr. Parker, assisted in making the meetings profitable.

"I wonder if we appreciate what was done for our province at Halifax when our association was organized in '63, and if we are familiar with the names of those to whom the credit of its inception is due. We should not forget the names of those first officers, among whom were Robert Grant Haliburton, the first president; Dr. C. C. Hamilton, the second president, and perhaps the prime factor in the movement; Dr. Robertson, as well as Dr. Forester, Richard Starr, Avar Longley, Herbert Harris, John Brown, Leander Rand, Edward Bishop and D. Henry Starr."

Prof. F. C. Sears, of the Agricultural College, Truro, gave an address on "Practical Pruning," with demonstrations on nursery stock and also on branches on bearing trees. This was interesting and instructive and brought out much discussion. Many questions were asked on the various points introduced.

"Nursery Growing" was discussed by Mr. Arthur Harris, of Annapolis Royal, who gave details of his process of preparing the soil, fertilizing, planting, budding, pruning and cultivating.

At the evening session of the first day, the best feature was an address on "Soil Management of Orchards, and its relation to Winter Killing and other Injuries by Frost," illustrated by lantern slides given by Prof. Sears, of Truro. Many questions were asked and much discussion on the various points developed.

On the second day the subject "Co-operative Fruit Shipping" was introduced by Mr. J. H. Tupper, of Round Hill. This subject caused a lively discussion on the different points advocated. The general opinion expressed was that it was a good scheme if properly conducted, but that farmers were not educated up to the point of making it a safe venture, and that it needed much missionary work and personal canvass to make it a success.

"What Varieties of Apples shall we plant?" was dealt with by Mr. R. W. Starr, who claimed that the list of standard varieties is large enough to select from and who advised growers to be careful in selecting new sorts and to notice the varieties that do best in each locality and choose accordingly. Market qualities must not be overlooked. The speaker gave a list of those best suited for light sandy loams, and of those not suited for clay soils, because they do not color or mature sufficiently in such locations.

Mr. W. T. Macoun, of the C. E. F., Ottawa, followed with an address on "Orchard Culture and Practice." He recommended the earliest possible cultivation in the spring and continuous stirring of the surface soil up to the first or middle of July, to conserve moisture and liberate plant food. Cover crops should then be sown to furnish nitrogen and humus, to check wood growth, develop fruit buds, and to prepare the tree with well-ripened wood for the frosts of winter. He remarked that the list of standard apples for Nova Scotia was much the same as that for Ontario.

Mr. R. W. Starr followed, advocating plowing the orchard in the fall just after the leaves have fallen, applying the necessary fertilizers and harrowing to a fine tilth. It was claimed that it would destroy the germs of "black spot" on the leaves, turn the cover crop into plant food fitted for the earliest growth in the spring, and furnish a better frost protection to the roots than can be obtained by any other practical means.

### POWER SPRAYING

Mr. W. M. Black, of Wolfville, gave an excellent paper on "Power Spraying." His machine was described as a tri-cylinder pump having a one and a half horse power gasoline engine,

with a long half-round tank mounted on low wide-tired wheels. The agitator was found to be unsatisfactory, and he affixed a short hose from the pump to the bottom of the tank. That only agitated the centre and the insoluble material settled at each end. He then discarded the tank for a 100 gallon cask and found that the hose from the pump kept the whole contents violently agitated. He had used two lines of hose and extension rods with clusters of eight nozzles on each, but would not do so again, as a man could not move around quickly enough to avoid waste of mixture. Next year he would use three lines with four nozzles on each, one working from a platform, the others on the ground. No trouble was experienced maintaining a pressure of 90 pounds and upwards.

Mr. G. H. Vroom, fruit inspector, of Middleton, followed, endorsing much of what had been said and giving his experience with the Government power sprayer. It is a large and heavy machine, that is probably too cumbersome for practical use in orchards, where the land is not always level. Its work was very satisfactory, and far ahead of hand pumps.

In a paper on "Cranberry Culture," Mr. J. S. Bishop, of Auburn, reviewed the commencement and growth of the industry and gave statistics of crop and price, methods of culture and harvesting, preparation for market, protection from frost and insects, best varieties to grow, etc. He claimed that the day was past when it was thought that the best berries grew on the poorest soils. It is known that cranberries need feeding as well as other fruits, and that fine bone and potash greatly increase the crop.

Mr. W. T. Macoun, of Ottawa, followed with an address on "Potato Culture," giving results of experiments with many varieties, which showed a vast difference in yield. Lists of the best, and results of experiments with change of seed, and with different methods of cultivation were given.

### STANDARD BARRELS

"The Standard Barrel" question was brought up by Mr. S. C. Parker. He reviewed the legislation on the subject, and showed that while the law admitted as a legal size the barrel of 96 quarts, or three bushels, for fruit and vegetables, it did not confirm it to that size. In some places the barrel was made to hold 112 quarts or 3½ bushels. What is wanted is that a standard of measurement be adopted throughout the Dominion. After some discussion a resolution was passed unanimously requesting the legislature to pass an Act defining the size of the dry barrel for fruit and vegetables, and that the dimensions be plainly stated for inside measurement. Also that fruit inspectors be empowered to inspect all barrels, boxes and packages as well as contents, to see that they comply with the conditions stipulated by law, and that coopers shall mark their name and address on barrels as a guarantee the requirements have been filled.

Fruit Inspector Fitch, of Clarence, gave a paper on the working of the Fruit Marks Act. He claimed that improvement has been made in the selection and packing of fruit. Dishonest packers are comparatively few in number, in spite of the noise made about them. The most trouble comes from the barrels marked No. 2, or XX, as there is no legal definition to say what constitutes a No. 2 apple. It should be defined as well as No. 1. No. 3 should be done away with, as this grade is meaningless and confusing. It should not be put on the market at all, but should be manufactured or fed to stock.

Inspector Vroom followed, reviewing the work the inspectors have done, and are doing. He stated an advance has been made all along the line, but that much has yet to be done to improve both packing and barrels. Sometimes barrels are smaller than the law allows, but the inspectors can only call attention to the fact, as under the Act they have no power to condemn such barrels. Some of the papers read at the convention will be published in THE HORTICULTURIST.

## The Prince Edward Island Convention

THE fruit growers of Prince Edward Island were in session at Charlottetown Dec. 19 and 20, and, as usual, their meetings were most interesting, instructive and purposeful. Indeed, the remark of Senator Ferguson might be literally accepted when he said that of the many important meetings of the association, he believed this was really the most useful.

The association is in a most flourishing condition. The treasurer's report showed a considerable balance on the right side of the ledger. Reports on transportation, co-operation, prize lists, etc., showed how well organized the island is in those important matters.

Besides the local orchardists, Mr. W. T. Macoun, horticulturist at the Experimental Farm, of Ottawa; and Prof. F. C. Sears, of Truro Agricultural College, were present and rendered valuable service.

The National Council subjects coming up for discussion monopolized to some extent the program, but there were some excellent formal papers and addresses delivered, such as Senator Ferguson's paper on the "Commercial Outlook," which elicited much appreciation; Registrar White's "Horticultural Excursions;"

condition of success. He wanted co-operation also, and expected the Federal authorities to assist in organizing for it as they did with the cheese industry. A packing, grading, marketing house at the capital was suggested, also a means of canning, jamming and evaporating fruit. Father Burke spoke of the forthcoming National Council, from which he expects much. He also declared flatfootedly for an independent fruit commissionership at Ottawa.

The discussion arising from the question box was never more vigorous or interesting. The number of questions was very large, and covered the whole range of practical horticulture. The questions were answered most satisfactorily by the visiting professors, and local information was available for purely local queries.

The fruit show in connection with the convention was most successful. The beautiful apples on plates on the tables, and the barrels and boxes were much admired. Profs. Macoun and Sears did the judging, which was in every way satisfactory. We append Mr. Macoun's appreciation of this department.

The election of officers resulted in the unanimous and enthusiastic recharing of the Rev. Father Burke in the president's place; the election of D. J. Stewart as vice-president, and the return with few exceptions of the old board. Father Burke made his acknowledgments, and declared that as he had now put in his conscription, surely next year he would be permitted to retire. The resolutions passed covered a wide range of work, many of them referring to National Council subjects.

### The Fruit Exhibit

W. T. Macoun

While the fruit exhibit was not quite as large as last year, it was a very creditable one considering the light crop that followed the large one of 1904, and the fact that the heavy snowfall of last winter did great damage to fruit trees throughout the island. The fruit growers, however, are not discouraged, and are perfectly confident of their ability to grow good fruit. Last year, as well as this, certain varieties of apples appeared much better suited to the island conditions than others. Everyone was struck with the particularly fine lot of Kings that were shown, there being a very close competition in this variety, the specimens comparing very favorably with any seen in other provinces. The same may be said of the Stark apple, which succeeds admirably on this island, a box of this variety being as fine as any we have ever seen. There was also a very fine display of Gravensteins. The Annapolis Valley will have to look to her laurels if she wishes to hold the palm in the Maritime Provinces in regard to this variety. In the competition in boxes the first prize went to a box of Gravensteins that was practically perfect, both in regard to the fruit shown and in method of packing. Other varieties which were well grown were Wealthy, Alexander, Bellflower, Ben Davis, Baxter, Ontario, Wolf River and Wagener.

While the competition in boxes was not large, the fruit shown was all fine and the packing very good. Indeed, little improvement was possible in fruit, package or method of packing, and the prize boxes were practically perfect in every respect. From the writer's observations made at the exhibitions held in connection with the Fruit Growers' Association for the past few years, the varieties that in our judgment would be most desirable to plant are:

As permanent trees—Gravenstein, Alexander or Wolf River, Ribston, Blenheim, King, Spy, Stark, and a few Baxter for trial.

As Fillers—Wealthy, Wagener, Ben Davis, and a few Ontario for trial.

These observations are made from the fruit only. If made in the orchards there might be a slight change, but probably not much.

In closing I wish to compliment the fruit growers, including the energetic president, Rev. Father Burke, on the display of fruit made. It was easy for even an outsider to see that it was largely through the indefatigable efforts of the latter that much of the success of the exhibit, and in fact the whole convention, was due; but the mere fact that such a good exhibit was made in an off year, showed that the Fruit Growers of P.E.I. do not lack enthusiasm and are willing to work together to further the fruit industry on Prince Edward Island.

### St. Catharines Notes

Robert Thompson, St. Catharines

During the past month the weather has been propitious for the fruit grower, allowing him to finish up his ploughing and ditching. Never was the work as well advanced, and a lot of pruning has been done. All this should tell in the fruit growers' favor in the spring. The Niagara peninsula fruit growers held a meeting in St. Catharines on Saturday, Dec. 16, to discuss the tariff question. A large number were present. After a long and exhaustive discussion the meeting decided in favor of a resolution as follows: "That inasmuch as the fruit growers of Ontario in convention assembled at their annual meeting held in Toronto during the month of November, 1905, passed a resolution unanimously asking that the duties on fruit remain as at present, except as in regards pears and plums, which were asked to be changed from an ad valorem to a specific duty of  $\frac{1}{2}$  cent a pound, and a committee met the commissioners and pressed these views, we feel that it would be wisdom on our part to reaffirm our approval of that action." A few growers were in favor of asking that the duty on peaches be raised to two cents a pound, and pears and plums to one cent a pound and apples to 75 cents a barrel, but the consensus of opinion seemed to be in favor of being moderate, and they felt that the present duty was sufficiently protective for all ordinary purposes, and would not bear unjustly on the consuming public.

The Grimsby and Winona growers wished the depth of the 6 quart baskets as defined at a previous meeting, changed from  $4\frac{1}{2}$  inches in depth to  $4\frac{1}{4}$  inches, and the St. Catharines growers agreed. This will have the effect of making the growers unanimous in favor of the 6 quart size.

Apples in this district are almost as scarce as oranges. The canning factories are trying to procure contracts from tomato growers at outlying stations such as Fonthill, Jordan and others, agreeing to furnish crates, make up carloads and pay freight to St. Catharines, and pay 25 cents a bushel. A large number of the growers refuse to grow for 25 cents, as at this price nearly any other crop will pay better, and the factories can afford to pay 30 cents as their output for 1905 is nearly all sold, and they start in the new year as short of canned tomatoes as at the end of 1904.

### Spraying for Scale

The eighteenth annual report of the Maryland Agricultural Experiment Station, College Park, Maryland, contains a report of tests made of spraying materials for controlling the San Jose scale. The tests made by Mr. Thomas B. Symons, who says it has been proven that by proper spraying the San Jose scale can be kept under control, and that the trees can be saved and made to produce profitable crops.

Tests were made of the various spraying solutions used at different seasons. Better results were obtained from the cooked solutions of lime sulphur and salt than with the uncooked. The addition of caustic soda or potash was an advantage when cooking was not practised. It was found that the lime sulphur and salt spray may be used to advantage in late fall or early winter, but that the preferable time is early spring.



Rev. Father A. E. Burke

President Prince Edward Island Fruit Growers' Association and Special Correspondent from the Island for THE CANADIAN HORTICULTURIST.

Prof. Jones' "Horticultural Beginnings;" Mr. Dickey's "Cranberry Conditions in 1904-5," and the excellent addresses of Mr. Macoun on "Island Horticultural Notions," and "Remarks on Varieties" and Prof. Sears' "Provincial Demonstration" and "First Impressions of Island Horticulture."

At a large public meeting with a musical program interspersed, His Worship Mayor Kelly and His Honor Lieut.-Governor McKinnon made salutatory addresses, and Acting Premier Hazzard, Commissioner of Agriculture Reid, Senator Ferguson and Alex. Martin, M.P., made addresses commendatory of the industry and encouraging its extension in healthy lines.

The president, Rev. Father Burke, made his annual address at this meeting, and as usual it was replete with matter and admirable in manner. He again insisted on better fertilizing—it wasn't enough to know that good fruit of every variety could be grown on the island; the best had to be produced, and as with all other organisms proper nourishment was an important



## Ontario Vegetable Growers are Wide Awake

THE Ontario Vegetable Growers' Association is rapidly becoming one of the strongest associations of the kind in the province. The annual meetings of the branch associations were held during December and in most cases were well attended and successful. According to the constitution of the Ontario association, the annual meetings of the branch associations have to be held during December, at which time the officers are elected. The branch associations have the right to appoint a director to act on the board of the provincial association, and these directors form the Provincial board.

The membership fee of the branch associations is \$1 a year, and they pay 50 cents per member to the Provincial association, which makes the members of the branch associations members of the larger body, entitles them to receive free copies of the official organ of the association, free copies of the report of the Ontario vegetable growers' convention, and other printed matter.

The report of the secretary of the provincial association, Mr. H. B. Cowan, as read at the meetings of the branch associations, showed that the provincial association on December 1 had a balance on hand of \$500, the paid up membership of the association being 225. Branch associations are located at Toronto, Hamilton, Sarnia, Chatham, Leamington and St. Catharines, with individual members scattered all over the province. The branch associations were asked to consider several important matters at their annual meetings, and report their decisions through their directors at the first meeting of the provincial board. These subjects included the advisability of the provincial association devoting a portion of its funds to the securing of regular crop reports throughout the growing season for the benefit of the members of the association; the advisability of giving the directors the right to amend the constitution of the Ontario association so that an executive committee can be appointed, and the advisability of petitioning the Dominion Government to appoint an appraiser of vegetables whose duty it would be to inspect importations of vegetables into Ontario, to see that they were not entered at too low a valuation. The reports on these subjects received from the branch associations have shown them to be in favor of action being taken along all three lines. The following are reports of the meetings of several of the associations:—

### Toronto Vegetable Growers

At the annual meeting of the Toronto branch of the Ontario Vegetable Growers' Association officers were elected for the ensuing year, and it was decided to hold monthly meetings during the winter months. Great satisfaction was expressed with the recently formed Ontario Vegetable Growers' Association, and every member of the 30 or more who were present was anxious to do what he could to further the interests of the larger association as well as of the Toronto branch. It was thought that the constitution should be revised so that the provincial association could select a suitable executive committee to deal with matters not of sufficient importance to warrant the expense of calling together the whole board of directors. It was also carried unanimously that the Toronto branch was in favor of a reasonable sum being expended by the Ontario Association in securing crop reports, and recommended that this information be obtained in whatever way the directors deemed best. Another point that created much discussion was the appointment of an official to appraise the value of vegetables imported into Ontario. It was agreed that such an official should be appointed and given power to prevent the importation of vegetables invoiced at less than their real value. The proposal to ask the Ontario Gov-

ernment to carry on experiments to devise remedies for insects and fungous diseases was also approved and Messrs. Delworth and Rush were appointed to draft a statement of the main points that they considered to be most worthy of special attention.

The election of officers resulted as follows: pres., Geo. Syme; vice-pres., R. Lankin. The offices of secretary and treasurer were combined and Mr. F. F. Reeves was selected secretary-treasurer. The executive committee consists of Messrs. Syme, Lankin, Reeves, Thos. Delworth, J. W. Rush, W. G. Carter and John McKay. Messrs. Wm. Harris and W. G. Carter were appointed auditors. The directors for the board of directors on the provincial association are Messrs. Reeves, Lankin, Rush, Syme and Delworth.

Each member was requested to canvass his section for new members, and the officers were appointed to do special work in this line.

Mr. Delworth, of Weston, suggested that monthly meetings be held during the winter months, so that the growers could exchange ideas. It was decided, therefore, to hold the first of these monthly meetings on the first Saturday in January at the Albion hotel at 3 o'clock. The executive committee was appointed to arrange for the discussion.

Messrs. Syme, Reeves, M. Hamilton, John McKay and W. Elford were appointed to arrange for the annual banquet in January.

### Sarnia Growers and the Tariff

The Sarnia branch held its annual meeting December 14, on which occasion considerable enthusiasm was shown, both in the work of the local association, as well as in the work of the provincial organization. The election of officers resulted in Mr. J. Baxter being appointed president; Mr. William Gallie, vice-president; Mr. John Atkin, secretary and director on the board of the provincial association.

A lively discussion took place in regard to the matters referred to in the report of the secretary of the provincial organization and a committee was appointed to draft a resolution embodying the views of the members of the branch. The meeting considered each suggestion separately and adopted them all. The question of the tariff on vegetables was considered at length, and a committee was appointed to draft a resolution to be presented to the local member of the House of Commons, with a request that he use his influence on behalf of the vegetable growers. The members decided to recommend to the other branches throughout the province, that they should speak to their members and ask for their influence in the same direction.

**Chatham Branch.**—The members of the Chatham branch of the provincial association elected the following officers at their annual meeting:—Pres., Richard Everitt; vice-pres., H. Hudson; sec.-treas., F. Collins; directors, James Green, R. A. Tompkins, John Colby, Wm. Abbs, and Charles Ross.

**St. Catharines Growers.**—The St. Catharines growers have completed the formation of a branch at that point. Mr. Robert Thompson is president and Mr. W. C. McCalla, secretary.

The Toronto branch of the Vegetable Growers' Association will hold their annual banquet at Webb's on January 24. The following program has been arranged for the first of the monthly meetings that is to be held at the Albion Hotel on Saturday, January 6, at 3 o'clock:—Cauliflower Growing, by J. McKay; The Best Way to Market our Produce, by Geo. Syme, jr.; Forcing Vegetables under Glass, by J. Westwood, and Bunching for Profit, by R. Lankin.

## Hamilton Growers Organize

The Hamilton branch of the Ontario Vegetable Growers' Association held its annual meeting December 21. Unfavorable weather prevented the majority of members from attending, but those present transacted considerable important business. The auditor's report showed a large cash surplus on hand. Many members spoke highly of the work now being done by THE CANADIAN HORTICULTURIST to further the interests of the Ontario Vegetable Growers' Association.

The following officers were elected for the coming year: pres., W. A. Emory, of Aldershot; vice-pres., R. H. Lewis, of Hamilton; sec.-treas., Jas. A. Stevens, of Hamilton; auditors, B. Burniston, of Aldershot; Frank Crosthwaite, of Bartonville; director on executive of the Ontario Vegetable Growers' Association, R. H. Lewis.

## Fruit Growers' Organizations

The Ontario fruit growers decided, at their recent convention, that local associations or horticultural societies organized in any locality may become affiliated with the Ontario Fruit Growers' Association by paying in advance the sum of one dollar for each member. This fee is to be paid to the local secretary-treasurer, who is to forward 75 cents per member to the secretary of the provincial association. This entitles the members of local associations to all privileges of the parent organization.

In the discussion relating to the clause of the constitution referring to affiliated societies, several members claimed that only 50 cents should be forwarded to the provincial secretary, but it was objected that, as 60 cents per member had to be transferred to The Horticultural Publishing Company for THE HORTICULTURIST, local organizations, by paying 50 cents to the parent association, would be getting that magazine for 10 cents less than the actual cost and the Ontario association would be out that much for each member secured through the local organizations.

The point was referred to a committee and finally settled that 75 cents be paid. In return it is expected that the local associations shall send one delegate for each 50 or more members to the annual convention and that the expenses of that delegate shall be borne by the parent organization.

## A Fine Steamship Service

Fruit growers who export their fruit, are finding that the Allan Line Royal Mail Steamers are specially adapted for the carriage of imported fruits, the ships being well fitted with modern stowage, in addition to being fast and absolutely regular. Consignees would do well to give this matter careful consideration. It frequently happens about the Christmas season, that fruit is not delivered as promptly as the occasion requires.

The Allan Line Royal Mail Steamer "Tunisian" left Merville at 1 p.m., Dec. 1st, for Halifax, and delivered her Christmas fruit at Montreal on Monday, Dec. 11th. Consignees in Ontario might compare this service with arrivals via other routes and find it in their interests to do so.

Fitzsimmons, Derry & Co., fruit dealers of Duluth, have a branch office at Sault Ste. Marie, Ontario. This firm is strongly in favor of the Canadian Fruit Marks Act. Situated as they are in American territory, where there is no Fruit Marks Act, as well as on Canadian territory, they are in a particularly favorable position to judge the merits of this piece of legislation.

Mr. W. Carter, Canadian Cargo Inspector at Liverpool, thus describes the British Columbia fruit that took the gold medal at the Royal Horticultural Show: "The quality of this fruit was most excellent. I have never seen finer apples anywhere; this was the opinion of all who saw them."

## Quebec Fruit Growers Meet in Convention

LEADING fruit growers in the province of Quebec rallied at Richmond on December 13, 14, on the occasion of the annual winter meeting of the Pomological and Fruit Growing Society of the province. The sessions were well attended and subjects of live interest to fruit growers were dealt with. For this reason the convention was an important one. The following officers were elected:—Patrons, Hon. S. A. Fisher and Hon. A. Tessier. Hon. pres., W. W. Dunlop, Outremont; Hon. vice-pres., J. M. Fisk, Abbotsford; pres., R. W. Shepherd, of Como; vice-pres., J. C. Chapais, of St. Denis; sec.-treas., Dr. H. W. Wood, of St. John's; Directors of districts—District No. 1, G. B. Edwards, of Covey Hill; No. 2, Charles A. Fisk, of Abbotsford; No. 3, J. H. Carter, of Massawippi; No. 4, Mr. Auguste Dupuis, of Village des Aulnais; No. 5, Henri Dumas, of Murray Bay; No. 6, C. P. Newman, of Lachine Locks; No. 7, G. Reynaud, of La Trappe; No. 8, N. E. Jack, of Chateauguay Basin; No. 10, Robert Brodie, of Westmount.

"Commercial Fruit Growing," was discussed by Mr. C. P. Newman, of Lachine Locks, who described conditions that would benefit the export trade. The recent development of apple growing in Quebec has made it necessary to look to foreign markets. It was recommended that apple growing be specialized and not maintained as a side line. Mr. Newman said that apples and other fruits can well be combined, each having a separate piece of ground and being given to special care and cultivation. Thinning of trees and fruit and the growing of fewer varieties were advised.

"The Proper Handling of Our Best Export Apples" was taken up by Mr. R. W. Shepherd, of Como. His address was very interesting and will be published in a later issue of THE HORTICULTURIST in full.

Dr. Jas. Fletcher, of the Central Experimental

Farm, Ottawa, spoke on "Injurious Insects." The Codling Moth and San Jose Scale were fully dealt with. Remedies to prevent or lessen their ravages were mentioned. Recent ravages on shade trees by the Tussock moth were also alluded to and immediate action was advised. The most approved methods of destroying it are collecting the conspicuous white egg masses in winter and spraying in summer.

Mr. G. Reynaud, of La Trappe, in a paper on "Soils that may be Devoted to Fruit Growing," pointed out that much land now uncultivated could easily be made profitable by planting fruit trees. Mr. Reynaud is always a favorite speaker at the conventions of the association.

Mr. R. Brodie, of Westmount, gave an excellent paper on "How to Set Out an Orchard." It was claimed that in the past the great fault with Quebec orchards had been that the trees were set too close, and in 15 or 20 years they become overcrowded. This resulted in the branches becoming interlaced and the fruit being off color because of lack of sunshine. Limestone soil was mentioned as being best for apples.

In discussing the treatment best suited to an orchard for the first 10 years, Mr. W. Saxby Blair said that it was not necessary to give extra cultivation or extra fertilizers, but that to get good crops each year a system of cultivation must be followed that will give wood growth early in the season and later on fruit buds.

A resolution was passed expressing appreciation of the work of Sir W. C. Macdonald in establishing an agricultural college at St. Anne de Bellevue and equipping it with an able staff of professors.

Messrs. J. C. Chapais, G. Reynaud, J. M. Fisk, N. E. Jack, R. W. Shepherd and R. Brodie were appointed delegates to the Dominion Conference to be held at Ottawa in February.

## Would Increase the Tariff on Fruit

A. B. Cutting, B.S.A., our Special Representative

AT a mass meeting of the fruit growers of the Winona and Grimsby sections, held at the latter point, Dec. 21, it was decided, after a lengthy discussion, to petition the Dominion Government, through the tariff commission, for the following increases in the tariff on fruits:—

On peaches, from 1 cent a pound to 2 cents.

On pears, from 20% ad valorem, to 1 cent a pound specific.

On plums, from 25% ad valorem, to 1 cent a pound specific.

On apples, from 40 cents a barrel to 75 cents a barrel.

Messrs. J. W. Smith, E. D. Smith, M.P., and Murray Pettit were delegated to bring the resolution before the tariff commission. St. Catharines growers were invited to attend, but unfavorable weather prevented them from doing so.

Two meetings to discuss this question were held recently, one at Winona and one at St. Catharines. At the former, the trend of discussion showed most emphatically that the growers of that district were unanimously of the opinion that an increase in tariff should be asked for on certain classes of fruit, including peaches, pears, plums and apples. In reference to this Mr. A. H. Pettit, of Grimsby, said, "A high tariff on peaches will not effect the local market so very much, but it will increase the sale and consumption of Ontario peaches in the North-west. At present North-west dealers prefer California peaches to ours, as they, being better bodied and longer keepers, though lacking in quality, will stand on the market shelves

a week without spoiling, and as a result the North-west is asking for a decrease in the duties. As for apples, the question of tariff is important, particularly in the fall apple trade. We want an increase as under the present tariff the United States floods our markets with their surplus of early varieties. Large quantities of pears and plums also come into this country from over the line in competition with home-grown varieties."

At St. Catharines, fruit men from the different sections of the Niagara district were present, but the majority were growers from the immediate vicinity of the city. The expression of opinion on the tariff was far from unanimous. Most of the St. Catharines growers supported the action of the Ontario Fruit Growers' Convention at Toronto, in November, which waited on the tariff commission and asked that the tariff on fruits be left as it is; while the growers from Grimsby and Winona advocated an increase. A change from ad valorem duties to specific was suggested, in the case of pears and plums, from 20% to 25% respectively, to ½ cent per pound, the other duties on fruits to remain as they are. This was moved and carried by a majority of one, and cannot be said to express the views of fruit growers in general.

At the recent meeting in Grimsby, Mr. E. D. Smith, M.P., of Winona, said that the action of the Ontario Fruit Growers' Association, influenced as it was by Mr. W. L. Smith's sympathetic address, does not coincide with the opinion of the growers of this province as a whole. "The great majority were not consulted," said Mr. Smith, "and though we appreciate

the work of the Ontario Fruit Growers' Association in general, we have no right to back the organization when it has taken a wrong step." He advanced many arguments for an increase in the tariff. We are not going to make fruit more expensive for the home consumer by adding the increase in the duties to the price of fruit, but a higher tariff will keep out foreign fruits, thereby lessening the supply, and as a consequence, by virtue of creating a greater demand, the fruit business will be more profitable for the grower. In the North-west market, also, the demand for our fruit will increase. Buyers there will handle our fruit in greater quantity than now, because of its cheapness under increased duties, as compared with that from over the line, to say nothing of the advantage our fruit has in quality."

Mr. A. Greenwood, of Grimsby Park, cited some instances in which Ontario fruit has been preferred in the North-west to that from California. One consignment of Ontario fruit the past season brought \$2.25 per 35 pound box, against \$2.00 per 50 pound box of California fruit, the same day and in the same market. Mr. Greenwood contended that even to-day our fruit is preferred to Californian, but, under the present tariff, the foreign article captures the market on account of its cheapness.

A comparison between the existing duties on fruits and the cost of production was brought out by Mr. J. W. Smith, of Winona. The duty on small fruits is two cents a pound. This class of fruit is comparatively easy to grow, returns are secured within a year or so after planting, and the market for such does not fluctuate so much as the market for pears and other tree fruits; the grower of small fruits can form in advance an approximate idea of the demand and price for his fruit a year hence. On the other hand, the duty on pears is 20 per cent. ad valorem, or about one-quarter of a cent a pound. Pears are expensive and difficult to grow; they require a much longer time to produce a crop—best varieties, 12 to 15 years; the market for pears is not so stable as that for small fruits; and the pear planter cannot form the slightest idea of the condition of the pear market 15 years hence. For these reasons, Mr. Smith believed that the duty on pears should be increased to an amount equal to that now imposed on small fruits.

The relative costs of plants and work to plant an acre of different classes of fruit were estimated by Mr. Smith as follows:—Strawberries, 7,260 plants, \$14.50; setting plants, \$8.00; total, \$22.50. Grapes, 450 vines, \$14; 150 posts, \$20; setting posts, \$10; wire and hanging, \$10; planting, \$2.50; total, \$56.50. Plums, 200 trees, \$50; planting, \$6; total, \$56. Peaches, 200 trees, \$30; planting, \$5; total, \$35. Pears, 200 trees, \$50; planting, \$7; total, \$57.

The labor problem was referred to by Mr. Jas. Tweddle, Fruitland. The cost and scarcity of labor increases the cost of production. Manufacturers here at home and labor employers in the North-west are taking our best men. We cannot afford to pay the high wages offered by these men and as a consequence good farm hands are hard to secure. This condition of affairs could be mitigated by an increase in the tariff on fruits.

The annual meeting of the New Brunswick Fruit Growers' Association will be held January 25, immediately following a two days' session of the Farmers' and Dairymen's Association. Prizes will be offered for a display of winter fruit. Among the speakers whom it is expected will be present are Mr. W. T. Macoun, of the Central Experimental Farm at Ottawa, and Prof. F. C. Sears, of Truro, N.S.

The average farmer should have from two to five acres in an orchard, and should attend to it well. An orchard, unless well attended to, is valueless for commercial purposes. Farmers occupied in general farming have not time to take care of many trees.—(A. Shaw, Walkerton, Ont.)

# Practical Pointers from Practical Men

Picked up and Penned by A. B. Cutting, B.S.A., the Special Representative of The Horticulturist, who is Visiting the Homes of Fruit and Vegetable Growers

THE privilege and the pleasure afforded me, during the past few weeks, of visiting some of the fruit and vegetable farms of this province, more particularly along the shore of Lake Ontario, between Toronto and Hamilton, has given me the opportunity of hearing at "first hand" the opinions of growers on different phases of their various pursuits. I have picked up pointers on proper methods of orchard management, on market economics, on the tariff question and on other topics of interest to the readers of THE CANADIAN HORTICULTURIST.

From observations made in certain localities it would seem that some of our local fruit and vegetable growers' associations are not taking full advantage of their opportunities during the winter months. In some places, these organizations hold meetings only once, twice or perhaps three times a year, and then only for business purposes. The business factors of the fruit industry are important, and too much attention can scarcely be given them, but they are not of more consequence than the factor of orchard management. Some associations discuss only the questions of markets and marketing. They fail to realize that there is always a market for the best in any commodity, but that the best is not always produced. In the fruit industry there is a most decided surplus of the ordinary. For this reason it is of advantage for each association to meet at least once a month during the winter season, as I find is the custom of the most progressive organizations, for the purpose of discussing and exchanging ideas on pruning, spraying, cultivation and on all the many practices that are needed in the production of high grade fruit. Such "experience" meetings should be more informal than those visited once or twice a year by speakers from the Department of Agriculture. By carrying on a series of local meetings, some of our associations, now inactive in this respect, would profit by the change.

## FRUIT WORK IN CLARKSON

One of the most progressive local fruit growers' associations is in Clarkson. The officers are: Wm. Oughterd, president; Robt. Shook, secretary; and Wm. Clements, treasurer. Regular meetings are held on the first Saturday of each month, when all questions relating to fruit are freely and thoroughly discussed. The area devoted to fruit growing in Clarkson is taken up largely with small fruits, followed, in order of extent of culture, by apples, cherries, pears and plums. Next season, according to Mr. Clements, about 1,000,000 quarts of small fruits will be grown. The association buys all the working material for the members, including barrels, crates and berry boxes. They have a trade mark for their packages registered in Ottawa so that returnable crates and boxes can be claimed and located when lost, strayed or stolen.

## OUR TARIFF ON FRUITS

Although the Ontario Fruit Growers' Association, in convention assembled in Toronto last November, decided not to ask for a higher tariff on fruits, and although the stand of the association is supported by the opinion of fruit growers in general, yet there are some who claim that the action of the association is not in accord with the best interests of the industry. Mr. P. Y. Babcock, a well-known shipper of Burlington, believes that we need a material increase in the duties. In the words of Mr. Babcock: "The Canadian fruit grower is handicapped by climatic conditions, by a high American tariff, and by the high cost of labor, and should be protected against foreign importations by a higher tariff. In support of this, I can get hundreds of names in the Niagara dis-

trict to sign a petition for more tariff." Mr. E. Thorpe, Burlington, in his own peculiar way, supports the views of Mr. Babcock, and said to the writer: "I'll bet money that those fellows at the fruit convention who don't want more tariff must have had a jag on. We certainly want more duty on strawberries and on early vegetables. Under the present tariff we cannot sell at a paying figure in Toronto on account of competition from over the line." Another grower, and a neighbor of Mr. Thorpe's, thinks differently, as he told the writer that he did not fear competition from American fruits, as home-grown fruit is far superior in appearance and quality to that imported from the other side. In the face of these pertinent expressions of opinion, it is fit to remark that, when growers themselves fall out, the tariff is safe.

## THE FRUIT DIVISION AT OTTAWA

Many and to the point are the comments from growers regarding the placing of the fruit division at Ottawa under the control of the dairy commissioner. That this condition of affairs should not be is the unanimous opinion of fruit growers everywhere I go. That the chief of the fruit division of this country should be given a back seat and made subservient to the dairy commissioner or any other commissioner is most humiliating to the fruit growers and not conducive to the extension of fruit work. On all sides I hear a general tone of disapproval and protest against this action of the Dominion Minister of Agriculture.

Among the many growers who have expressed their opinions on this subject, Mr. J. S. Freeman, Freeman, Ont., said: "The fruit industry of Canada is large enough and far enough advanced to warrant the appointing of a fruit commissioner, responsible only to the Minister of Agriculture. The fruit division should be placed on a par with the dairy and other divisions and should be given the place its importance deserves."

On this question Mr. J. C. Smith, Burlington, remarked: "I think that the fruit division should receive more than second-hand attention. The fruit industry has attained enormous proportions, and this should be recognized by the appointment of a fruit commissioner separate from the dairy division, and responsible only to the Minister."

## FRAUDULENT PACKING AND SELLING

Another matter referred to by a prominent shipper in Burlington was the fact that the Dominion force of fruit inspectors should be increased at least threefold. Although the present inspectors are competent and are doing excellent work, they cannot be everywhere at the same time. "During the past season," said the shipper referred to, "some very marked cases of fraudulent packing have come under my personal notice. In particular, I can cite the case of buyers coming here from France who were taken advantage of by the packers in a certain section of Ontario. I saw in one house, growers packing windfalls for XXX fruit, the packers were boasting about how they were soaking the poor Frenchmen, and this was going on right in the face of the inspectors." This is a most deplorable state of affairs, and should not be allowed to occur another season.

When speaking of our foreign commerce in fruits, Mr. J. C. Smith said: "I do not think that peaches and plums can ever be shipped regularly and with success from here to England. Our peaches haven't the body, the dryness and the carrying qualities of western fruit, and should not be expected to compete with the California fruit in the foreign market. Furthermore, we haven't yet secured a system of refrigeration

that can be depended upon to carry fruit safely to England. The best kind of refrigeration, however, is of no value unless we first cool our fruit before it enters the car for transport to the seaboard. Present refrigerator cars cannot cool fresh picked fruit quickly enough. Fruit must first be cooled for best results; it will save ice also, as the cars can then go from here to Montreal without re-icing."

A letter from England to the Biggs Fruit and Produce Co., Ltd., Burlington, says, in part: "Prices for apples are now good—Kings most in demand, some selling as high as 9s. per 40 pound box. We advise the wrapping of all Spy apples, as they are so easily bruised. The more I see of the Biggs case the better I like it. The first impression is undoubtedly unfavorable, but as soon as buyers get used to them, they go with a swing."

## IT PAYS TO SPRAY

"This year I had buyers in my orchard competing against each other for my crop of apples, which averaged 75% XXX stock. I credit the excellence of the crop to good pruning and cultivation, and particularly to the methods of spraying that were employed, as recommended by Prof. Lochhead, of Guelph, and by THE CANADIAN HORTICULTURIST. Systematic spraying gives results. Three years ago, when spraying was not practised in this orchard, I could scarcely sell my apples for any price, because they were unsound and undersized." So said Mr. A. C. Cummins, of Burlington, who is a firm believer in the value of spraying, and quite rightly, for his apples the past season, particularly his Spys, were among the finest grown in the Burlington district.

## PEARS FOR THE BURLINGTON DISTRICT

Mr. Wm. F. W. Fisher, president Burlington Horticultural Association, is the owner and manager of one of the best fruit farms in his locality. Among the many kinds of fruit grown on his place, the pear is very much in evidence. The writer happened upon Mr. Fisher in the act of directing and assisting the pruners in a young orchard of dwarf pears, and obtained a few pruning pointers that are of value to all. "As far as the time for pruning is concerned," remarked Mr. Fisher, "I believe somewhat in the old rule 'whenever the knife is sharp,' particularly here where labor is scarce, but for ideal results pears should be pruned in late winter for wood growth, and in early summer to induce fruitfulness. The form of the tree should be kept in mind and made pyramidal, a central axis should be maintained as far as possible, the superfluous limbs and all branches that rub and cross should be removed, and the remaining branches should be well headed back, pruning away about two-thirds of the new growth."

Mr. Fisher recommends for his district the Bartlett, which is the best of all; Boussock, an old variety of same season, good size, fair quality, with tree free from blight, not very early bearers, but long-lived; Duchess, an excellent export pear; Howell and Kieffer.

## BUSH FRUIT CULTURE

A method of pruning red raspberries practised by B. E. Chapman, of Bronte, is very effective, even though it does appear as though the same ground is gone over twice. Mr. Chapman adopts the hill system of culture and prunes three times during the year. In summer he nips back the new growth as soon as it has reached the height of the fruiting canes, say three and a half feet. After the berries are harvested, he hooks out all old canes and all new ones above six in number. The following spring he prunes back all canes that may have

been winter-killed and completes any work that may have been overlooked at the previous prunings.

Mr. T. G. Ruddell, of Oakville, has five acres of red raspberries that he grows in hedge rows. His method of pruning is somewhat similar to the above-mentioned, except that instead of leaving six canes to a hill, he thins out so that the new canes will stand about 10 inches apart in the row, and in spring, he is particular to cut back to a uniform height, about three feet, so that the hedge row will be level and neat in appearance. Mr. Ruddell grows the Marlboro and Cuthbert most extensively; for black caps, he plants Souhegan, Palmer, Lucas and Gregg. He also has a large plantation of blackberries, made up largely of Snyder for main crop, and Worcester Thornless, a productive, hardy sort, medium size, mid-season, and with smooth, thornless canes.

#### STRAWBERRIES

In Oakville a large area is devoted to the culture of strawberries. Mr. Ruddell has 10 acres, seven of which consists of Lovetts, which he considers the best commercial berry. It is quite large, of dark color, firm, rather tart in flavor—a good point in a shipping berry, and it is one of the very few varieties that will hang on the vines after ripening for three or four days without deteriorating.

Mr. W. F. W. Fisher, of Burlington, is another strawberry enthusiast. He said: "The Williams is the best and most profitable variety I have ever grown. It is an excellent shipper and can be cropped for two years without diminishing in size or yield." Among other varieties suggested for his locality are Bederwood, medium size, very prolific and early; and Sample, a pistillate variety, large, good color, productive and a good all-round berry for market purposes. Mr. Fisher believes in cropping his plantation twice. In his own words: "Whether one or two fruitings should be taken off depends largely upon the availability and cost of labor. I myself harvest two crops. I keep the soil in good condition and well fed, and when planting I select the best plants for the new plantation. The second cropping is always earlier in season than the first one and this is important in this district."

#### A NEW SYSTEM

Mr. W. A. Emory, of Aldershot, president Ontario Vegetable Growers' Association, has adopted a new system of growing strawberries which he calls the "hedge row system." A side-by-side test with the old "matted row" system has shown Mr. Emory that the new system is the better one. It requires more work than the old method, but returns justify the labor as the profits are doubled. In the "hedge row" system, the rows are kept as narrow as possible; the plants are set at intervals of 2½ feet in rows 3½ feet apart. Each of the mother plants are allowed to set four new plants, two on either side and the rest of the runners are cut off. The earliest runners are allowed to root so as to secure strong, healthy growth before winter. Among the many advantages claimed for this system by Mr. Emory are: 1. It is a happy medium between the matted row and hill systems and combines the good qualities of both. 2. It does away with what is always lacking in vigor of plant and in yield of fruit in the centre of matted rows. 3. All the productive effort of the hedge row is brought to maturity. 4. Each hedge row will produce twice the yield of matted rows. 5. Fruit is larger and better colored than from matted rows. 6. Plants are stronger and freer from disease. 7. Fruit can be picked without injuring plants and crushing over-hanging berries. 8. The plants can be cropped oftener than when grown in matted rows.

I used to go in for general farming but now grow fruit, and find that it pays better than wheat at \$1 per bushel, even if we don't get a crop of peaches more than every third year.—(C. S. Nelles, Grimsby, Ont.)

## POULTRY DEPT.

Conducted by  
S. Short, Ottawa

JANUARY is the critical month for the poultry keeper. The results of last season's matings and hatches can be seen at a glance, and whether or not any of the young stock are fit for the show ring. The birds are now mature and in full plumage, defects in which are apparent. Notes can be taken for help in mating next spring. April and May hatched pullets should now be laying. If breeding for winter eggs, the pullets laying earliest should be marked so that they may be used for breeding next season. There were a good many flocks of poultry composed of the following: old hens of various ages, cockerels and pullets, kept together in the same pen, and the result is misery to them all. There are but two excuses for keeping hens of the American (Plymouth Rocks and Wyandottes) and Asiatic (Brahmas and Langshans, etc.) breeds after they are two and a half years old. The first is—if the bird is a high-class exhibition specimen or breeder of exhibition specimens, and secondly, if she is an exceptionally good layer and likely to be a breeder of good layers. That she is a splendid sitter and mother is the reason given for keeping some scaly-legged spurred old veterans. This is not a good reason.

Seventy-five per cent. of all the hens that cluck make just as good sitters and mothers the first time they cluck as they will at any time in their career. The old hens should have been taken out in October or November, and the pullets would have done better. The cock-

erels are sufficiently mature to select any birds needed for breeders; the rest should be disposed of and in the meantime kept separate from the females from which winter eggs are expected.

The poultry houses should be made as light as possible. Overcrowding should be avoided. Each bird should have eight or ten square feet of floor space. Two pens with 25 fowl in each are better than one pen with 50. Ventilate. Dry pure cold air is better than damp vitiated warm air. The subject of ventilation will be dealt with at more length in our next issue. The successful production of winter eggs and the hatching of chicks from eggs laid in winter quarters, depend more on proper ventilation than any other factor.

NOTE—In adding a poultry column to THE HORTICULTURIST, the management hope that it will prove of interest to our many readers. The addition is in the way of enlarging the usefulness of this magazine. The poultry column will be devoted to seasonable and general information, including the care, housing, breeding and exhibiting; in fact, poultry keeping in all its branches. Believing that many of our subscribers keep poultry in a small way as much for pleasure as for profit, this column will be conducted more for their help and interest than for the expert fancier or large breeder who raises poultry for a livelihood.—(Editor).

The manager of the Oakville Fruit Growers, Limited, the co-operative fruit growers' association at Oakville, that was described in the November HORTICULTURIST, desires to explain that while the fruit of the growers is stored in bins before it is graded, as stated in THE HORTICULTURIST, the apples are not stored in bulk, but kept in barrels in a separate compartment for each grower. The price paid by the association for barrels this year was 33 cents.

## Pratt's Scalecide Soluble Petroleum

Is CHEAPER and MORE EFFECTIVE than SAN JOSE SCALE  
LIME SULPHUR, and SALT in controlling

Mr. A. N. Brown of Wyoming, Del., who so recently addressed the Ontario Horticultural Society, writes Nov. 25th, 1905—"You have conferred a great boon on the American Fruit Grower."

For Sample, Testimonials and Prices Address

B. G. PRATT CO.

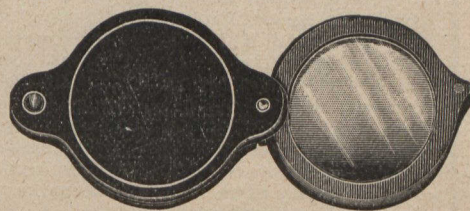
11 Broadway, New York City

Or THE SPRAMOTOR CO.

London, Ontario, Canadian Agents

## Canada's Greatest Nurseries

Offer Two Useful Novelties

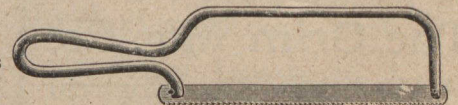


### Handy Hack Saw

Strong, compact and serviceable. Cuts iron and other hard metals as well as wood. Useful for repairing implements and machinery and a handy saw for trimming trees.

### Handy Pocket Microscope

No farmer or fruitgrower should be without this handy little glass. It magnifies 4½ times and is just the thing for examining seeds, grains, trees and plants for insect pests. In neat aluminum case, 25 cents.



Microscope and Saw sent post paid on receipt of Stamps or Silver

SEE READING NOTICE PAGE 24

Employ your spare time this winter selling our High-Class Nursery Stock. Send for Terms and Catalogue of Specialties.

STONE & WELLINGTON, TORONTO

FONTHILL NURSERIES

OVER 800 ACRES

**\$10.00**

**GIVEN AWAY**  
Each Issue to Readers

who purchase goods from advertisers and say they saw their advertisement in *The Canadian Horticulturist*. Five Dollars given to the purchaser of the largest amount; One Dollar to each of the next five making application.

Write the Advertising Manager of

**The Canadian Horticulturist**  
507-508 Manning Chambers  
Toronto, Ontario

## CHAMPION FRUIT EVAPORATOR

Save your Fruit and dry it with the Champion Fruit Evaporator

Dries all kinds of fruit and vegetables, producing a superior quality of clean white fruit. It is made of galvanized iron, is lined throughout with asbestos, is fire-proof and portable. Made in five sizes. Catalogue for the asking.

Manufacturers of the Celebrated  
**CHAMPION MAPLE SYRUP EVAPORATOR**

**The Grim Mfg. Co.**  
84 Wellington St., Montreal

### Money Makers for Someone

We have some excellent devices, fully covered by Canada patents, that are for sale. Some would make excellent patent-right sellers. Others are just what many of our manufacturers need.

WRITE FOR CATALOGUE

C. B. REECE St. Catharines, Ontario

### Fruit Inspection at Montreal

E. H. Wartman, Dominion Fruit Inspector

THE shipment of apples by steamers from the port of Montreal has ended for 1905. The season from beginning to end was one of great activity. Notwithstanding the reports, both early in the season and later on, that apples were only 50% of the crop of 1904, yet the aggregate shipments from Montreal, of over half a million barrels, was many thousand barrels greater than last year.

Many ask, How do you account for this? In the first place, prices on the other side for XXX fruit were so promising that in some cases 20s. were paid for XXX all varieties of apples. This rather spoiled the shippers, and led some of them to ship very poor XX and even X apples in large quantities. As an XX barrel of apples is not defined by law, the minds of many shippers were very elastic, and many thousand barrels went forward that could have been used in our own country to better advantage. However, it is hoped the law will soon define a No. 2 apple so that we can look for a fair quality of apples under this designation, which will fill a commercial want, while the poorer qualities can be used in other ways.

The season on the whole has not been a profitable one for shippers or ship owners, owing to the disastrous accidents that some of the big steamers, viz., the Victorian, Bavarian, Eupheme and others, met with. It is to be hoped that the blame for running such costly steamers on rocks will be attached to the right parties, that the effect may improve our future trade.

We should be encouraged, as fruit growers and shippers, when we see such markets as Britain, Germany, France, South Africa, Japan and Australia open for our fruits. Need we fear the future? I would think not. I heard fruit growers 25 years ago say: "We are getting only \$1 per barrel for our fruit this year, what is the use of setting out more trees, for in 25 years apples won't be worth picking?" The 25 years have passed and where are we to-day? Retailers in Montreal for a first-class barrel of Spy apples ask \$4.50, and say, with an independent air, that it is their best figure for such stock. So we see our fathers made mistakes in their day. The man who has a large orchard of good varieties, well cared for, has a gold mine.

The men who put up apples this season that were strictly in accordance with the Fruit Marks Act, are the men who will succeed and who are a credit to our country. But the men who, from time to time, mark No. 2 fruit No. 1, and who put any trash under No. 2 and No. 3, cannot expect to succeed or be benefactors to our great commercial fruit trade.

The inspection of fruit at the Port of Montreal this season involved the opening of 8,000 packages, and it has given the inspectors a good idea of the season's pack as compared with 1904. It is their opinion that Canadian growers show a marked advance in packing, and they can attribute their success largely to co-operation and co-operative packing, in most cases this season, on account of the uniformity of the quality of the fruit in the packages, has been highly commendable.

The increase in boxed apples this season over last was 16,584 boxes. This small parcel requires only moderate pressure to keep the fruit tight, and very few packages showed signs of injury by bruising. On the other hand, apples in thousands of barrels were materially injured by too hard pressing, which caused early decay. If many a manipulator of the apple press could have seen the damage he was doing by unskilful work, it would have been a lesson of a lifetime to him.

The handling of apples for export in boxes is, comparatively, a new thing, and the boxes are not handled with the care they should be. Freight handlers have no more right to drop a box of apples than a box of eggs, as both are injured by a fall. The dropping business does

**G**OOD, big "mealy" potatoes can not be produced without a liberal amount of POTASH in the fertilizer—not less than ten per cent. It must be in the form of Sulphate of POTASH of highest quality.

"Plant Food" and "Truck Farming" are two practical books which tell of the successful growing of potatoes and the other garden truck—sent free to those who write for them.

Address, GERMAN KALI WORKS,  
93 Nassau Street, New York.

HON. WM. GIBSON  
President

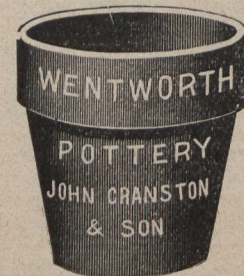
J. TURNBULL  
Vice-Pres. and  
Gen. Mgr.

## BANK OF HAMILTON

Capital Paid Up \$2,235,000  
Reserve - - \$2,100,000  
Total Assets - \$26,500,000

Savings Bank at all Offices  
Correspondence Solicited

Head Office: HAMILTON



### WENTWORTH POTTERY

Standard Flower Pots, Fern Pans, Hanging Baskets, Cut Flower Jars and all Florists' Supplies.

Mail Orders given Prompt Attention.

**John Cranston & Son**  
HAMILTON, CANADA

## Special Glass for Greenhouses

GOOD QUALITY, FLAT, EVEN THICKNESS AND WELL CUT

— PLATE —  
MIRROR PLATE  
WIRE GLASS  
PRISMATIC GLASS

And all other kinds of Glass used for building purposes

**Pilkington Brothers**  
MONTREAL Limited TORONTO  
VANCOUVER WINNIPEG

## John B. Smith & Sons

Limited

Cor. Strachan and Wellington Aves.

TORONTO



Manufacturers  
... of ...

LUMBER  
LATH  
SHINGLES  
DOORS  
SASH  
BLINDS  
SILOS, ETC.

Clear Cypress for Greenhouse Work

## Spring Planting



Choicest Fruit and Ornamental Trees, Shrubs, Roses, Evergreens, Berry Plants

Just the varieties you want, and they are nice

Look over our descriptive *Priced Catalogue*, it's free 25 years dealing direct with customers. Try us

**A. G. HULL & SON**  
Central Nurseries St. Catharines, Ont.

not facilitate speed, but rather retards it when the time required to pick up broken pieces and cooperage is considered. As inspectors at this port we insist on the handling of apples in boxes in the same way eggs are treated, and the system will not be complete until this has been accomplished.

The eight wood hoop barrel has been in the majority this season, and it is to be hoped that there will not be a six hoop barrel offered to exporters another season. Wire hoops on apple barrels should be discouraged. Nailing hoops at either end into the fruit is a barbarous habit.

Windfall apples should be always marked windfall, so that the purchaser will not count on their keeping quality. When all these little factors that compose a perfect parcel are observed, we may hope for full success, and not until then.

### Prince Edward Island Notes

Rev. Father A. E. Burke, President Prince Edward Island Fruit Growers' Association

**W**E quite appreciate the advantages accruing to local horticulture from the opening in a valuable magazine like *THE HORTICULTURIST* of a permanent department wherein all its needs and aspirations may find ready expression. Nothing can better respond to our feelings as orchardists, and make more effectively for the spread of sane ideas and practises amongst us. One only regret—that some one better qualified to speak for the Island and so important a branch of its agricultural activity than ourself, has not taken up the task! However, we shall simply break the ice, if anything so frigid can be said to exist between us and the general horticultural educationalists of Canada, and whenever found, relinquish without a murmur this special column to the man best qualified to make it useful to us and creditable to all.

Despite the difficulties of winter communication, our growers of apples showed up well at the Winter Fair, Amherst, last month. The apple exhibition was away in advance of other years; and, covering such an extent of territory, wonderfully uniform. The sweepstakes exhibit by Mr. D. S. Collins, of Kings County, N.S., constituted a picture in itself. How more perfect fruit could be found it would be hard to say. His varieties, too, were eminently commercial. Ten varieties were called for, and they were furnished as follows: King, Spy, Golden Russet, Nonpariel, Blenheim, Stark, Baldwin, Ribston, Gravenstein and Fallawater. This exhibit would command admiration anywhere. In Nova Scotia the Blenheim is a most successful apple. It was known as Gravenstein in the past; that day is done.

New Brunswick only swung into line last year in the establishment of a Fruit Growers' Association. We all felt that it should organize as it could grow good fruit. What is the consequence? A splendid impetus in so short a time to all kinds of orcharding. Its apples at Amherst were in many cases admirable.

### The Bearing Wood of Currants

Regarding the pruning of currant bushes Mr. A. W. Peart, of Burlington, informs *THE HORTICULTURIST* that red currants do not bear on the previous year's wood as was stated in a report of the address that he gave at the Ontario Horticultural Exhibition.

Red currants bear on spurs grown on wood one year old and upwards, and in a measure at the base of last year's shoots. Black currants bear chiefly on wood of the previous year, and to a limited extent on spurs from old wood. These points should be considered when pruning the currant bushes.

In packing apples in boxes the fruit must be uniform in size and type. By facing the box with the stem end upward the bruises show far less.—(Harry Dempsey, Rednerville.)

New Address: 239 Yonge St.

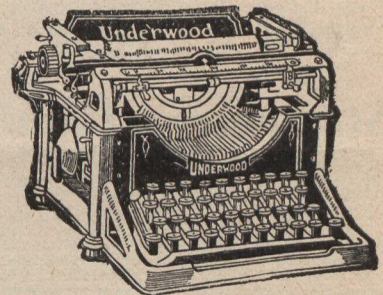
*Galbraith*  
*Photo Co.*

Leading  
Landscape  
And Commercial

## Photographers

In Canada

Call and see our new premises  
239 Yonge Street, Toronto



THE UNDERWOOD

## The Underwood

“Tried and True.” “Don't take our word for it. We are prejudiced. We can show you the Underwood, how it works and what it will do, but for the Most Convincing Argument you will have to ask any of the 5,500 users in Canada.”

More Underwood Typewriters are in use in Canada than all other makes Combined.

We carry a large stock of rebuilt typewriters at very low prices. Send for Catalogue and List.

HEADQUARTERS FOR SUPPLIES

**UNITED TYPEWRITER CO.**  
TORONTO, ONT. LIMITED

## MARCHMENT'S Sure Growth COMPOST

Supplied to all the largest nurserymen and fruit growers in Ontario. Shipments made by car or boat. Prices reasonable.

**S. W. MARCHMENT**  
105 VICTORIA ST., TORONTO


Telephone Main 2841 Residence Park 951

**All Seed Risks**  
are covered by our three warrants. By this we mean that

**GREGORY'S SEED**

shall always be fresh, pure and reliable. Our free catalogue also contains a lot of valuable farm and garden facts.

J. J. H. GREGORY & SON, Marblehead, Mass.



GET OUR CATALOGUE OF

**RUBBER STAMPS AND STENCILS**

THE SUPERIOR MFG. CO.  
58 ADELAIDE ST. W. TORONTO.

**Strawberry Plants**  
Spring 1906

We are now booking orders for choice Strawberry Plants for Spring setting. Williams, Senator, Dunlop, Ryckman, and Matilda the new big one. Correspondence solicited.

W. H. BUNTING, Carleton Fruit Farm, St. Catharines, Ont.

**Strawberry Plants**

Virginia and Chesapeake, winners of \$100 GOLD PRIZE; also Cardinal, Commonwealth, North Shore, Oaks Early, New York, Glen Mary, Stevens Champion, and 90 others; best list, good stock, fair prices. Dewberries: Lucretia and Austins.

**Seeds** Full line best new and standard old varieties GARDEN, FIELD and FLOWER SEEDS. **Now 60 Page Catalogue Free.** It tells about good plants and seeds and where to get them. Send now to

W. F. ALLEN, Dept. 57, SALISBURY, MD.

**QUALITY SEEDS BULBS PLANTS**

SEND FOR CATALOGUE.

**ARTHUR T. BODDINGTON**  
342 West 14th St., New York.

**Windsor SALT**

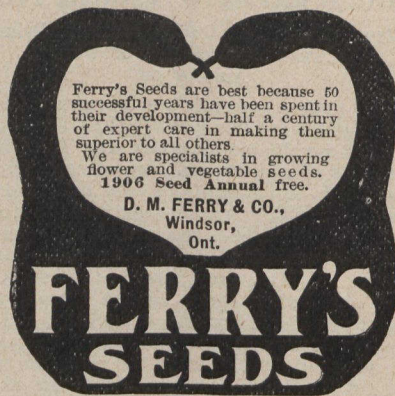
is always the same, whether you buy a 5c. sack or a carload.

There is only one grade of Windsor Table Salt—the best—and all of it measures up to the same standard of quality.

**Classified Advertisements**

**WANTED—SUBSCRIPTION CANVASSERS** for THE CANADIAN HORTICULTURIST both in cities and in the fruit districts of Canada. Liberal commissions offered. Good men soon put on salary. Write THE CANADIAN HORTICULTURIST, Rooms 507-508, Manning Chambers, Toronto, Ont.

**FOR SALE CHEAP—ONE OF THE CLEANEST** and best equipped greenhouses in Toronto. Everything in splendid condition, carnations planted, excellent stock of ferns and general stock of plants, 10,000 feet of glass. Apply at once to F. C., care of THE CANADIAN HORTICULTURIST.



Ferry's Seeds are best because 50 successful years have been spent in their development—half a century of expert care in making them superior to all others.

We are specialists in growing flower and vegetable seeds.  
**1906 Seed Annual free.**

D. M. FERRY & CO.,  
Windsor,  
Ont.

**FERRY'S SEEDS**

**Northern Grown Trees**

Apple, Pear, Plum, Cherry, Peach, Nut and Ornamental Trees. Small Fruits, Roses, Shrubs, cheap. Specialties: Wismer's Dessert Apple and Mammoth Prolific Dewberry.

Send for Free Catalogue—it tells the whole story

**J. H. WISMER,** NURSERYMAN  
PORT ELGIN, ONT.

**Farm Fruit, Stock or Grain**

I will sell or exchange my general store and stock for a small farm suitably situated. I am doing a good business here—farm implement trade growing. Good reasons for selling.

**C. B. REECE,** North Pelham, Ont.

**MANURE** Prepared by Compost process from which fruit and nursery growers get the best results.

**J. NELSON,** 97 JARVIS STREET  
TORONTO—CANADA

Telephone Main 2510      Established 1880

**Yes, It Pays to Buy the Best**

This applies to Nursery Stock as well as other things. ¶ If you **intend planting any Fruit or Ornamental Trees, Shrubs or Vines**, send for our 1906 Catalogue—just out.

**THE DOMINION NURSERIES**

ESTABLISHED 1860

The Smith & Reed Co.      St. Catharines, Ont.

**Dishonest Packer Caught**

J. J. Philp, Winnipeg, Man.

Dishonest fruit growers are beginning to realize that they are not certain to escape detection because they choose country points in Manitoba or the Western provinces, in preference to Winnipeg, as a field for their exploits. A large shipment sent by Mr. Archibald Patterson, of Ridgeway, Ont., was condemned recently because of the great proportion of inferior fruit it contained. In January, 1904, Mr. Patterson was fined for a similar offence, but the lesson was not forcible enough. Since that time, however, he has done business chiefly outside of Winnipeg.

A careful examination of the fruit showed that nearly half of it was marked the wrong grade. The agent for the consigner was fined \$1.00 and costs for each package falsely marked or falsely packed. The entire cost to the shipper will aggregate considerably more than the fine.

The majority of Ontario shippers are honest, and make an honest endeavor to pack their fruit properly and comply with the requirements of the law. Letters are received frequently from packers, who have been notified of defects, expressing thanks for pointing out these mistakes, and promising to exercise more care in the future.

**Carry a Pocket Lens**

A. McNeill, Fruit Division, Ottawa

No farmer and, more especially, no fruit grower should be without a pocket lens. It is perhaps as valuable in its use as a pocket knife, though not so frequently called into requisition. With it a farmer can immediately make an examination of seeds, note insect pests and fungous diseases on plants, and abnormal conditions everywhere.

The orchardist cannot work intelligently without it. It answers all practical purposes for the examination of clover, timothy and other small seeds. In fact, in innumerable ways, it may save the farmer hundreds of dollars each year.

**Controlling Nature**

Everybody knows that of late years natural forces have been wonderfully subjected to man's need. People now living can remember when the number of edible fruits and vegetables was far less than at present and even those that could be grown were vastly inferior to what we now have. For example, our parents knew nothing of the tomato except as a curious ornament in the garden. Sweet corn was hardly better than the commonest field sorts. All oranges had seeds. Celery was little known and poor in quality. In the flower bed the magnificent pansy has replaced the insignificant heart's ease from which it was developed, and the sweet pea in all its dainty splendor traces its origin to the common garden vegetable.

This progress has been made in spite of the great tendency manifested in all plants and animals to go back to the original type. It is indeed a battle to keep strains pure and up to the standard they have already attained, let alone any improvement. The practical results are accomplished by men operating largely for love of the work, like Luther Burbank in California and Eckford in England, as well as by the great seed merchants, D. M. Ferry & Co., of Windsor, Ont., who are not only eternally vigilant to hold what ground has been gained, but have a corps of trained specialists backed by ample means to conduct new experiments. The results of their experience can be found in their 1906 Seed Annual which they will send free to all applicants.

The onion growers of the section surrounding Scotland, Ont., asked the Tariff Commission for a duty of 25 cents a bushel instead of 25 per cent. Growers in that district produce 60 carloads of onions a year.

**Money Made by Having an Evaporator**

THE splendid results that may be obtained by fruit growers with large orchards, through the use of evaporators, is clearly shown by the returns secured last fall by a leading grower in southwestern Ontario, who made enough from his evaporator in two months to pay for its cost, although he paid \$350 for it. This gentleman, who is an officer of a fruit growers' association, was interviewed by THE HORTICULTURIST at the time of the Ontario Horticultural Exhibition. He stated that while the information he furnished was absolutely correct, he did not care to have his name used, for fear the people who read the article might come to the conclusion that he was exaggerating.

"There are," he said, "30 acres in our orchard. The evaporator we use is capable of handling 300 bushels of apples a day. It cost \$350, and we kept it running for two months, and I believe it paid for itself in one season. Last year was the first season we used it, and its capacity was 100 bushels. This year we enlarged it. By means of this evaporator we are able to save all kinds of windfalls and cull apples that would otherwise be lost. It should last 25 years.

"We keep one to two men busy all the time picking culls and gathering windfalls. Probably 800 barrels of this fruit is saved. In addition to the apples gathered in our own orchard, we buy about 500 barrels from growers in our vicinity. This year we made a profit of about \$1,200 net, which is not too bad when we remember the small cost of the machine which was bought from the Brown, Boggs Company, of Hamilton. The parts of the evaporator cost us as follows:—For each machine we paid \$8.25, and we have six; the slicer for the six machines cost \$25, and three furnaces complete with pipes, \$60 each, or \$180. The building we use for peeling and paring is an old one not worth \$100, that was used for a cellar and storehouse. Were we to build it new it would not cost \$50.

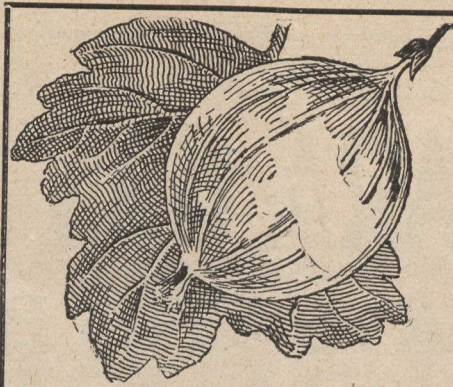
Wood is used for fuel which is bought from an Indian Reserve near our place. Squaws and girls do the peeling, and they are paid four cents a bushel for peeling and trimming. All the peelings and cores are dried and in this way there is no waste. Last fall was an exceptionally good one for the evaporators, as apples were scarce and in good demand. We received 8 cents a pound for output, while in 1904, 5½ cents was considered a high price. We sold the output of our evaporators to wholesale dealers in Hamilton, Toronto and New York, who shipped it to Germany. We are now in correspondence with a firm in Germany and trust to be able to sell them direct next year."

**A Successful Firm**

The well-known seedmen, J. J. H. Gregory & Son, of Marblehead, Mass., are celebrating their 50th anniversary as successful seed growers. For half a century they have been introducing seeds of improved vegetables to planters, farmers and gardeners throughout the country. During this time they have built up a great business and a still greater reputation for reliability. Their seeds are relied on to be fresh, pure and sure; and that this is true is proven by the fact that they are used universally by florists and gardeners.

In addition to raising the standard of ordinary varieties, many vegetables, prominent in the agricultural field to-day, were originated by this old seed firm. They are past masters in the art of introducing new and desirable varieties.

Any one intending to plant seeds of any kind should send to Messrs. J. J. H. Gregory & Son, Marblehead, Mass., for their new catalogue. It is a handsomely illustrated booklet, in which are photographic reproductions of many new varieties of interest to all. Sent free to those who write for it. A postal will bring it.



**Small Fruit Plants**

Gooseberry, Red, White. Currants, Red White, Black. Raspberry, Red, Yellow, Blackberries. Strawberry Plants. Strawberry-Raspberry. Roses. House Plants

**Garden Roots** Asparagus, Mint Rhubarb, etc.

**WM. FLEMING**  
NURSEYMAN

P.O. Box 54 OWEN SOUND, ONT.

**Baskets**

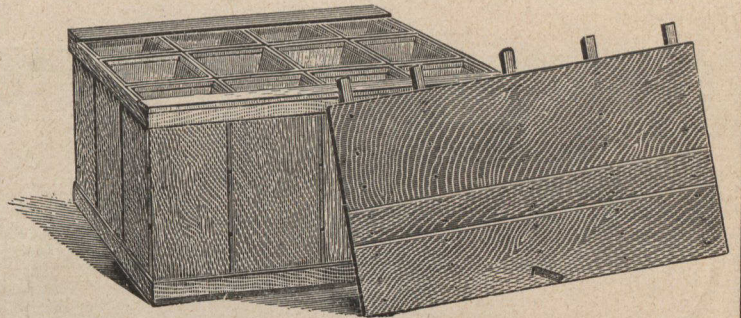
We are Headquarters for all kinds of Splint Baskets

**VENEER**

supplied for the protection of trees from mice during winter

**FRUIT PACKAGES**

A Specialty  
SEND FOR OUR PRICES  
**THE OAKVILLE BASKET CO.**  
OAKVILLE, ONTARIO



**— 20 PER CENT. OFF —**

That's really the difference between our prices and those in the United States when you consider the matter of duty! If you are not one of our many customers, be sure and drop a card for one of our illustrated catalogues, "Canadian Plants for Canadian People," out 1st March.

**THE WEBSTER FLORAL COMPANY**

Hamilton, Canada

Limited  
FLORISTS, NURSERYMEN AND SEEDMEN

**KIL-©=SCALE**

**The Great San Jose Scale Destroyer**

Strongly recommended by Professors L. R. Taft, of Michigan; John B. Smith, New Jersey, and W. G. Johnson, Editor American Agriculturist.

**No Cooking, Non-Corrosive**

Simply add water as per directions and stir.

**No Sediment to Clog Nozzle**

A scientific chemical compound, largely of Soluble Petroleum, with Oil of Sulphur and Resin. Two infallible remedies combined in our soluble compound.

Write for copy of letter showing Prof. Johnson's and Mr. A. N. Brown's examination of Prof. Smith's application

Write for Prices .. **GRIFFITH & TURNER CO.** 217 N. PACA STREET BALTIMORE, Md., U.S.A

**The Chrysanthemum**

Its culture for professional growers and amateurs; a practical treatise on its propagation, cultivation, training, raising for exhibition and market, hybridizing, origin and history. ILLUSTRATED.

By ARTHUR HERRINGTON

Price 50 cents

**Home Floriculture**

A practical guide to the treatment of flowering and other ornamental plants in the house and garden.

By EBEN E. REXFORD

ILLUSTRATED

Price \$1.00

**The Window Flower Garden**

By JULIUS B. HEINRICH

New Enlarged Edition

Price 50 cents

**Parsons on the Rose**

By SAMUEL B. PARSONS

New and Revised Edition

Price \$1.00

**Morang & Co., Limited, 90 Wellington St. W., Toronto**

A Handsome Premium will be Given Free to all Readers who buy Goods from Advertisers.

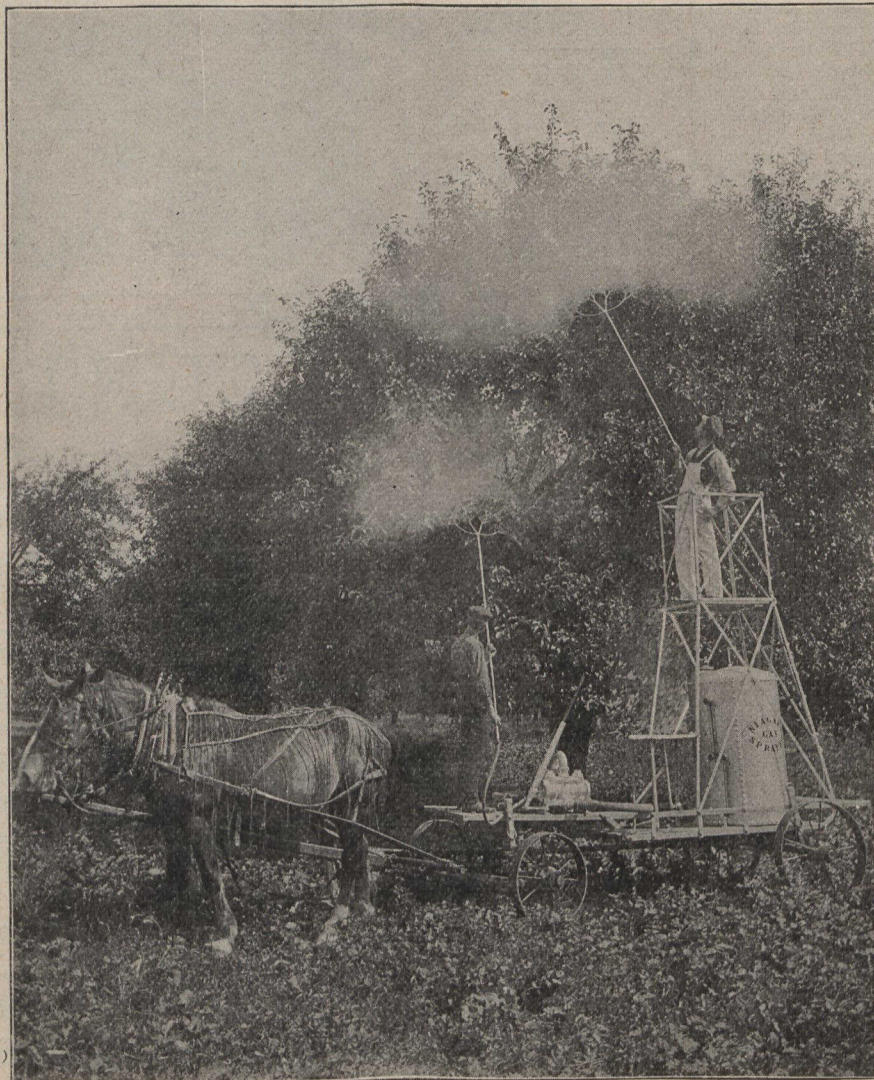


# THE NIAGARA GAS SPRAYER

## ALWAYS THE BEST



The  
1906  
Machine  
is  
Better  
Than  
Ever



The New  
Aluminum  
Rod  
and Com-  
bination  
Y  
must be  
seen  
to be  
appreciated



# The Niagara Sprayer Co.

MIDDLEPORT, NEW YORK