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# The Canadian Horticulturist

Vol. XXXIV

OCTOBER, 1911

No. 10

## Cooperation in Ontario

P. W. Hodgetts, Toronto, Ont., Provincial Director of Horticulture

CO-OPERATION in fruit growing is appealing strongly to-day to the Ontario farmer. Success has attended the efforts of the men at St. Catharines, Simcoe, Forest, and other points in the joint marketing of their fruit products under one manager and in the purchasing of those supplies which are so essential to the production of the best quality of fruit. Urgent appeals have been made to both the



P. W. Hodgetts

federal and provincial departments of agriculture for aid in the organization of local associations, and to-day forty-one of these are at work that will handle this year fruits valued at from three-quarters to one million dollars, besides thousands of dollars' worth of spraying materials, packages, fertilizers, and other materials. The future of co-operation seems brighter than for some years, and with care in the selection of suitable officers and man-

agers, and a still higher standard of grading than we have yet had, very few failures should result.

### TWO ESSENTIALS

Two points at least seem to be essential in the proper organization of any farmers' co-operative company. First, the selection of the best man possible as business manager and the payment to him of a good living salary; and second, the growing of high quality fruit that can safely be marketed under the brand of the association. Numerous instances have occurred in Ontario where organizations have come to grief on one or other of these points. One company in Southern Ontario, successful the first year, and with splendid prospects before it, changed managers the second season to effect a saving of a few dollars in the salary. To-day the company's packing house is for sale, and co-operation is not very popular. Three small organizations in one of the northern counties came to grief in one year through attempting to pack and sell apples from orchards that were neglected, unpruned, unsprayed and generally dilapidated.

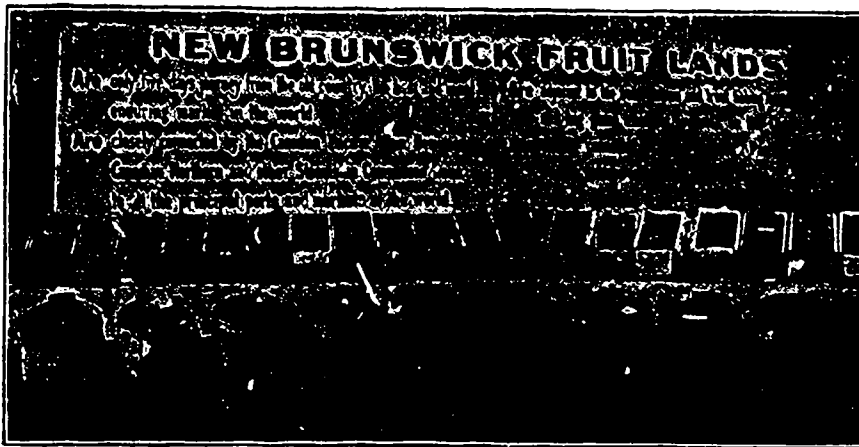
The greatest encouragement to those

engaged in the promotion of fruit growing in this province is the active interest being taken on all sides by farmers and others in their apple orchards. No previous year in our history has shown such a demand for spraying machinery and spray materials for demonstrations in pruning and spraying and for other information relating to the apple industry. Companies both large and small have been formed to lease and buy apple orchards already in bearing and to set out young orchards. One of these concerns has taken over one hundred and forty thousand bearing apple trees from parties who in the past have largely neglected their orchards. Farmers themselves are everywhere leasing their neighbors' orchards where these can be procured on reasonable terms.

This activity means that during the present season and in coming seasons there will be a tremendous change in the quality of the fruit sent out from this province. With the improvement in the quality naturally follows co-operation in the selling. The expense of securing a high grade apple is naturally much greater than for the low grade product,



The Box Packing of Fruit in Ontario is Increasing Steadily. Students in a Short Course in Box Packing at the Guelph A. C. are Here Shown.



**A Section of the Exhibits at the Last New Brunswick Provincial Horticultural Exhibition**  
 The above illustration serves to show that the fruit growers of New Brunswick are awake to their possibilities in the line of fruit growing. Possibly no province in Canada offers better opportunities for profitable fruit growing than New Brunswick. Strawberries and certain varieties of apples do particularly well.

and a better price should be obtained for the fruit. With the exception of isolated cases this can only be procured through co-operative selling, and the growers very soon find this out. With quality fruit to pack and with a good manager, success will follow.

In view of the increase in the number of associations already manifest the Ontario Department of Agriculture is issuing this month an exhaustive bulletin on the subject of agricultural co-operation, with particular reference to fruit growing. This bulletin has been prepared by S. E. Todd, of Petrolia, who has made a special study of the subject. In addition, the Department Representatives, who are now placed in about twenty of the counties, are prepared to furnish information respecting this subject, and are capable of aiding in the organization of associations. Most of the newer organizations are taking out charters under the special clauses of the Ontario Companies' Act relating to co-operative associations. The charter fee is fixed at ten dollars for associations without capital or with capital to the extent of ten thousand dollars. All of the requisite papers can be obtained from the Provincial Secretary's Department, Parliament Buildings, Toronto.

**CHANGED CONDITIONS**

At the beginning of the co-operative movement the fruit buyers, who had practically control of the apple situation in Ontario, were very much opposed to the organizations. These men feared that if the apple business was formed on co-operative lines that they would have to go out of business. This has now changed, and the most successful apple dealers are those who are purchasing from co-operative companies.

The pack of fruit which they now obtain is more uniform and superior to that which they were able to put out themselves under the old system of packing the fruit by separate gangs in the orchards. With the central packing

house the buyers are able to get together mixed carloads much easier than heretofore, and on the whole they can pay a higher price for the fruit, knowing that they run very little risk of loss such as they frequently had to look forward to under the old conditions.

That the co-operative movement has assumed fairly large proportions can be best understood by stating that this year probably one-quarter of the entire export of apples from Ontario will be packed by co-operative associations. With continued activity along this line, such as has shown itself during the present season, three-quarters of the apples grown in Ontario will soon be picked, packed and sold by these farmers' co-operative organizations. When that time comes it is not too much to expect that a central organization of these local associations will be largely instrumental in looking after the sales. At present the provincial organization, known as the Co-operative Fruit Growers of Ontario, is formed from representatives of two-thirds of the existing fruit growers' associations. While it is most largely interested in the purchase of supplies, it is arranging for the marketing end of the business, which will be likely to soon follow.

Rather interesting is the following financial statement of one of our large co-operative concerns. This shows something of the extent of the business at one point in the province. With similar strong organizations in other centres the fruit growing industry will soon occupy a premier position among agricultural pursuits in Ontario.

**RECEIPTS**

O. S. accounts .....	\$ 971.65
Ice and shipping accounts..	2,633.56
Storage and sundry accts..	155.13
Interest .....	71.94
Load and and com. charges.	1,886.06
Packing house charges ....	395.08
Fruit sold .....	63,321.16
Supplies sold .....	45,855.89

Stock sold .....	425.00
Balance .....	2,656.48

\$118,371.95	
<b>EXPENDITURES</b>	
Deficit of 1910 .....	\$ 795.73
Power and light .....	343.68
Supplies and repairs .....	98.97
Sundries .....	884.68
Printing, posting and stationery .....	135.23
Telegraph and telephone...	251.36
Insur. taxes and interest ..	594.97
Ice and teaming .....	1,119.72
Foreman and assistants....	2,356.57
Manager .....	1,500.00
Fruit paid for .....	62,832.80
Supplies paid for .....	45,003.63
Refund on supplies, &c. ....	1,749.68
Officers and directors .....	205.00
Building purchased .....	500.00

\$118,371.95

**Irrigation Advocated**

**A. Benar Ballou, Port Dalhousie, Ont.**

The item in the editorial column of the August issue of The Canadian Horticulturist, entitled "Investigation Required," interested me immensely. During the past ten years I have made a study of irrigation in both the humid and dry climates, and in my several visits to Canada the feasibility of irrigating limited areas adjoining the lake shore always appealed to me. Unfortunately for my pet scheme, when I came to reside in Canada I could not procure a place suitable to me near enough to the lake to put my ideas into practice.

We have here, however, to the east of Port Dalhousie something better—indeed one of the easiest propositions in irrigation it has been my good fortune to run across: that is, irrigation from the present Welland Canal by means of gravity. It would not be necessary to cut into the bank—the water can be syphoned over and carried in an open flume or through pipes. The land has a comparatively easy fall north to the lake, in which direction the flumes could run with lateral distributing flumes east and west. The better system would be to irrigate each unit from a reservoir, so that the volume of water carried by the flumes would be comparatively small.

To carry the water across a road or other obstacle, the system in vogue at the Craigenterry Meadows, near Edinburgh, could be used, namely that water rises to its own level. Over there water is carried under streams and across roadways through pipes, the water bubbling up on the other side to continue its course down the open ditch.

I trust that this may meet the eye of those interested in developing our resources, and that a practical demonstration of the value of the proper application of water to land may be made at a date not far distant.

## Educational Work in Fruit Packing

R. M. Winslow, B. S. A., Provincial Horticulturist, Vancouver, B.C.

IT is a commonly accepted and true statement that the packing of British Columbia fruit is superior to that of any of the other provinces of Canada. This is due to a number of factors, the first of which is the influence of the high-class packing in Oregon and Washington, while the long distance to market centres, and the absence of the knowledge of poorer methods of packing, have had a great share in giving British Columbia this pre-eminence. This position has been attained only by a large amount of hard work on the part of her people, and not less so on the part of the Department of Agriculture.

The seasons of 1909 and 1910 have witnessed a tremendous advance in methods of packing, and so of grading, even in British Columbia. In that time, the fruit growers of the province have strengthened their packing and marketing organizations tremendously, and the output of fruit, coincident with this, has increased very largely. This has made possible the importation of the best class of United States packers, and has permitted a still higher standard of packing than previously attained.

The most notable advances since 1908 have been along two lines—the discarding of the square packs and the adoption of the diagonal, and the use of wrapping paper for practically all grades of market apples. The advances which we will next see are the marking of the

number of apples on the end of the box and a still higher standard of grading than we have yet had.

### THE MORAL STANDARD.

Perhaps the greatest factor in creating a high moral standard among fruit growers in the matter of fruit packing, has been the influence of the Packing Schools conducted by the Department of Agriculture. This work was inaugurated two years ago in the Okanagan Valley, at which time the Department opened classes under the instruction of the two most proficient packers, at which a limited number of pupils received twelve practical lessons of three hours each, for a fee of one dollar for the course. These schools immediately met popular favour in that district, and in all, an attendance of one hundred and twenty was enrolled.

In the fall of 1910, the exceptionally large apple crop on new orchards doubled the number of men who had fruit to pack, but did not know how to pack it. The applications for packing schools from all districts of the province rolled in to the department, and despite the fact that the fee was raised to three dollars, and that a local corporate body in each district was required to guarantee a minimum attendance of twelve, and to provide many of the requirements, the demand did not at all slack off. The department insisted on employing only apple packers of undoubted qualifica-

tions, and, on this basis, was enabled to discriminate, holding apple packing schools only where they would be most urgently required. In all, thirty packing schools were conducted, at which the total attendance of pupils was three hundred and eighty-four.

The attendance at each school was limited to fifteen. The fee of three dollars prevented the attendance of any but genuinely interested fruit growers. The instructors were of the highest class. The enthusiasm of the people was all that could be desired. Under the circumstances, it is not surprising to learn from the reports of the instructors that at least seventy-five per cent. of the pupils would, in their opinion, make satisfactory packers.

### THE STANDARD REQUIRED

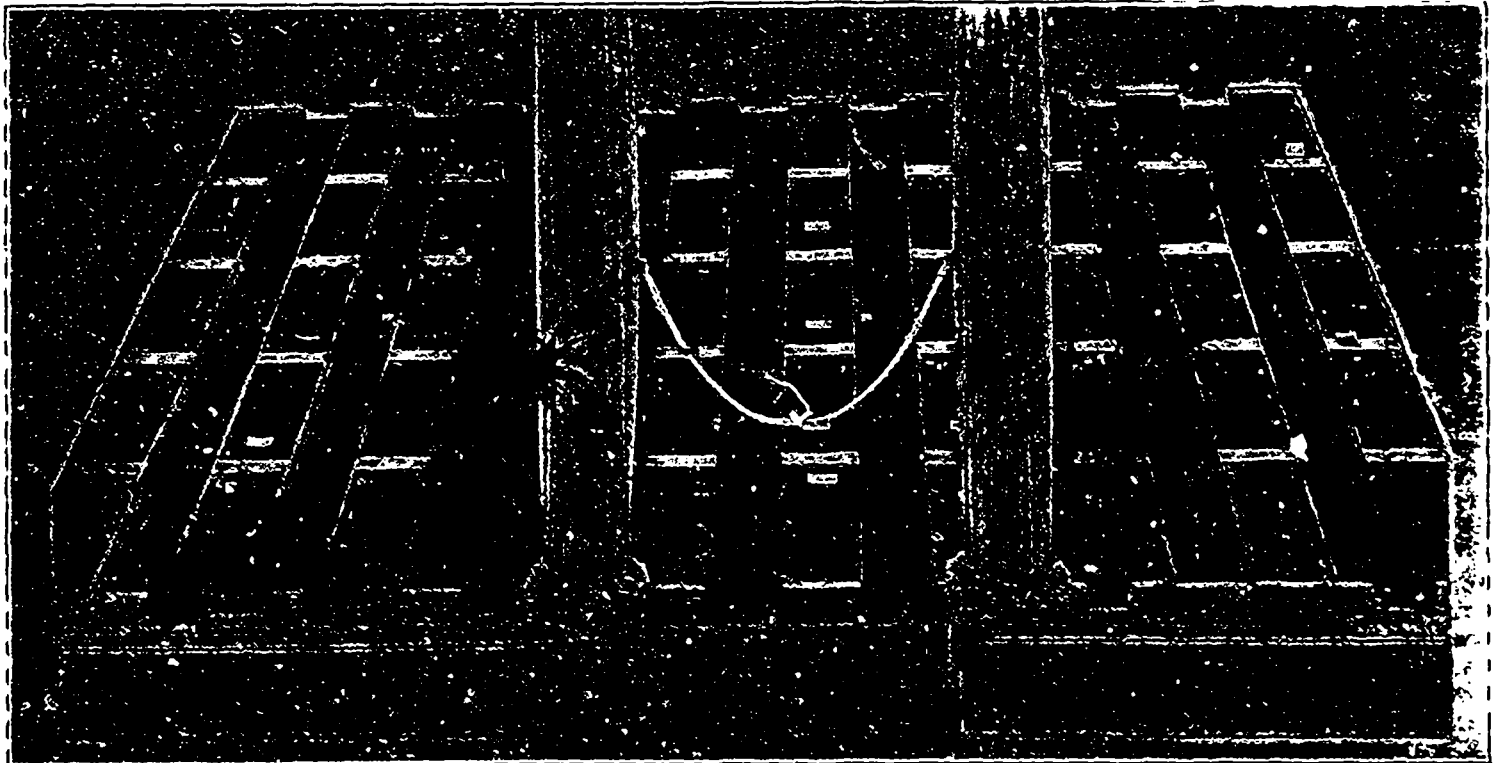
Diplomas will be given to the pupils of packing schools who attain to the following standard:

(1) Are given a score of 75 per cent. for efficiency by the packing school instructor.

(2) Make a display of five boxes of packed apples at their local fair, to be judged by an assistant horticulturist of the department, gaining a score of seventy-five per cent.

(3) Pack for one season with a reputable packing house, which certifies to their speed and efficiency as practical packers.

Only eight diplomas were given for the season of 1909-10. It is the intention of the department to make these diplomas valuable certificates of competency, and it is not likely that any



The Kelowna District Exhibit that Won the First Prize of \$500 at the Canadian National Apple Show, at Vancouver, B.C., Last November. Notice all the different "packs" that are shown.

greater percentage will be given for the year 1911-12.

It is the policy of the department to encourage a type of packing that will produce a remunerative pack for the markets supplied by the district. We have never, for instance, used a packer from Hood River, because the Hood River pack is put up in two distinct grades. About fifty per cent. of their fruit is destined for the high-priced markets of the great eastern cities. The other fifty per cent goes to a low class of trade in Texas, Oklahoma, and Coast markets.

The pack of British Columbia, on the other hand, goes principally to the Canadian prairie markets, which will not pay the price for the exceptionally fancy quality which finds favor in the eastern cities of the United States, but yet want something better than do the central and southern states. On this account, the packers who come here are mostly from the Yakima and Wenatchee Valleys, which aim to supply fruit packed in medium grades, to the profitable but not fancy prairie markets. It is my own opinion, from actual observation of the fruit, the prices received, and other factors, that our grade in the Okanagan Valley runs higher than that of the Yakima, though possibly not equal to the average high-class pack of the Wenatchee, which district has an advantage in the exceptionally high color of its fruit.

We aim for a Number One grade, however, which is practically one hundred per cent. free from defects of any kind. There have been very few apples packed in British Columbia under the designation "fancy," though a big percentage of our Number One in consequence of our standard could practically be ranked under this head.

In some districts the grading is not so good, but our department is endeavoring to raise the whole standard of the province to the highest possible level consistent with the best returns. It speaks well for our fruit, that our higher-class Okanagan brands have already an assured market in the prairies.

#### IMPROVEMENTS DESIRED

The following are the principal improvements in packing being worked for by the Department of Agriculture:

The standardization of the grades in the various districts to make all equal to the best; the encouragement of the wrapping of practically all grades of winter fruit sent to market, and all summer fruit except the earliest and the green cooking apples; the standardization of packages, other than the apple, so as to simplify packing and popularize our product in the market; the adoption of the most efficient packing tables and general packing house equipment; the elimination of the straight and offset

packs, and the adoption of the diagonal packs altogether, in the long box; the reduction of the cost of grading, packing and wrapping; the most careful handling at all stages; the marking of the number of apples on the end of the box, as well as the grade number; and the reduction of costs throughout by scientific management, and high-grade, conscientious work by every packer.

The Department of Agriculture will continue this work while the need for it exists. The production in the province is increasing so rapidly, and so many new districts are being opened, that the packing school will be a popular institution for a number of years yet, and when we have outgrown the packing school, there will be other problems in connection with the handling and marketing of our fruit which will call for continued missionary work.

This article is not intended to be of an educational character, but it is hoped that it will indicate, to at least a small extent, the spirit of strong enthusiasm and high ambition behind the fruit industry of the province of British Columbia.

#### Marketing the Apple Crop

P. J. Carey, Dominion Fruit Inspector, Toronto, Ont.

The branding of packages is not the least important point in the art of packing. A striking brand gives a good impression to the intending purchaser, and often will make a difference in price of twenty-five cents a box and fifty cents a barrel.

The Inspection and Sale Act calls for the face or shown surface to be a fair representation of the contents of the package. This should be the aim of every packer. A package can be neatly and attractively faced with fruit of uniform size, and at the same time meet all the requirements of the law. It is only fair to the grower, as well as to the different dealers through whose hands the fruit passes before it reaches the consumer, that it should be neat and attractive in order to meet the competition which is becoming more keen every day.

It is in the hands of the growers of Ontario to either mar or make the great fruit trade of this province. Quality in the fruit and proper packing are the two great essentials to aim at. With common sense and careful application these are easily within our reach. Having accomplished this we need not fear competition from any part of the world.

Celery should be dug before severe frost. Store it in a cool, well-ventilated place. The stalks should be packed upright with the roots bedded in good garden soil. The roots should be kept moist and the tops dry.—G. W. Hack, Norwood, Man.

#### Varieties of Grapes

Wm. Warrock, Goderich

With regard to the most suitable variety for this district, I would say that I have had a fair experience with over thirty varieties, and can recommend a great number of them; but I will only name three of the very best: For black (Rog. 4), for red (Vergennes), for white (Moore's Diamond). These are sure croppers, and of excellent quality.

The three I recommend have the following qualities: Moore's Diamond, a heavy cropper, a most beautiful grape, and a little earlier than the Concord, and quite as hardy in the vine. Rogers 4, is more prolific than Concord, with a larger and better flavored berry and a longer keeper. Vergennes, apparently as hardy as the others, producing regular crops of splendid fruit, which I can keep till late in the spring by packing in sawdust. The grape requires to be planted in well drained land, deeply worked.

#### Nursery Stock in the Fall

Fr. M. Leopold, O.C.R., LaTrappe, Que.

It is usually good policy to purchase trees in the fall. "Heel" them in, near the proposed orchard and thus be ready for instant action when the ground gets in workable shape in the spring. The fall buyer gets first choice of trees, and runs no danger of delayed spring shipments. Or, buy the trees in the fall, and let the nurseryman keep them for you until the winter is over.

To "heel in" trees, dig a trench a foot and a half deep, the same in width, and as long as may be necessary. If possible, choose a high, sheltered, well-drained spot. Untie the bundles of trees and place them loosely along the trench—each variety by itself, properly labeled. Half a dozen trees to a running foot is close enough. Of course, put the roots in the trench; then incline the trees backward, until they are "half lying down" across the excavation. Now shovel in fine dirt, carefully firm it into place, and pile the remainder of the dirt well up around the roots and lower portion of the trunks. In Quebec, where the winters are very cold, and mice are often feared, earth can be piled still higher up around the trunks.

#### THE VARIETIES

The right varieties to buy is a very important matter. Even if it requires a year of preliminary study and inquiry to decide the matter rightly, it will be time profitably spent. The choice of varieties depends upon whether you intend to plant for market or family purposes. Talk with practical fruit growers in your locality and consult with your market buyers and with your family's taste.

In Quebec do not forget to plant

Fameuse, MacIntosh, and Wealthy apple trees. Also before buying, planning an orchard or ordering trees, study the facts relating to the pollination of blossoms. Much of the unsatisfactory fruiting of orchards all over the country is due to self-sterility. A tree is self sterile if it cannot set fruit unless planted near other varieties. An indication of self-sterility is the continued dropping of young fruit from isolated trees or solid blocks of one variety; also, fruit from a self-sterile tree is apt to be imperfectly formed. Self-sterility is not a constant character with any variety.

The loss of fruit from self-sterility may be prevented by planting other varieties among self-sterile trees. Duchess, Fameuse, Scott Winter and Tetofsky are early bloomers, while Alexander, Ben Davis, Fallwater, American Golden Russet, MacIntosh, Peach, Pewaukee, Greening, St. Lawrence, Salom, Stark, Wealthy, Winter St. Lawrence, Wolfe River, and Yellow Transparent blossom relatively at a later period. Therefore, we must avoid planting large blocks of the one variety. But on the other hand, remember that large uniform lots can be sold to better advantage than an assortment of many varieties. "Carload lots" always command attention. The carload lot of Jonathan apples was the attraction at the Canadian National Apple Show at Vancouver.

Getting the ground ready for the tree

setting is another important part of "starting an orchard." If possible, plow it deeply in the fall. At least, it should be plowed previous to planting. Harrow it until the field is fine and level.

If the ground was in sod last year, it is better to grow potatoes and subdue the grass previous to setting the trees. If necessary, spread barn manure over your field before plowing.

## Floral Notes for October

Wm. Hunt, O. A. C., Guelph, Ont.

**P**LANTS of geraniums that have been doing duty as decorative plants in flower beds or borders can by proper treatment be kept over the winter very easily. The plants should be dug up before the stems have been frozen. A slight freezing of the leaves only does not injure them. Dig the plants with as much root as possible. Cut the roots well back, removing about half their length. Then cut back the top growth well to where the main stems are of medium or rather hard texture.

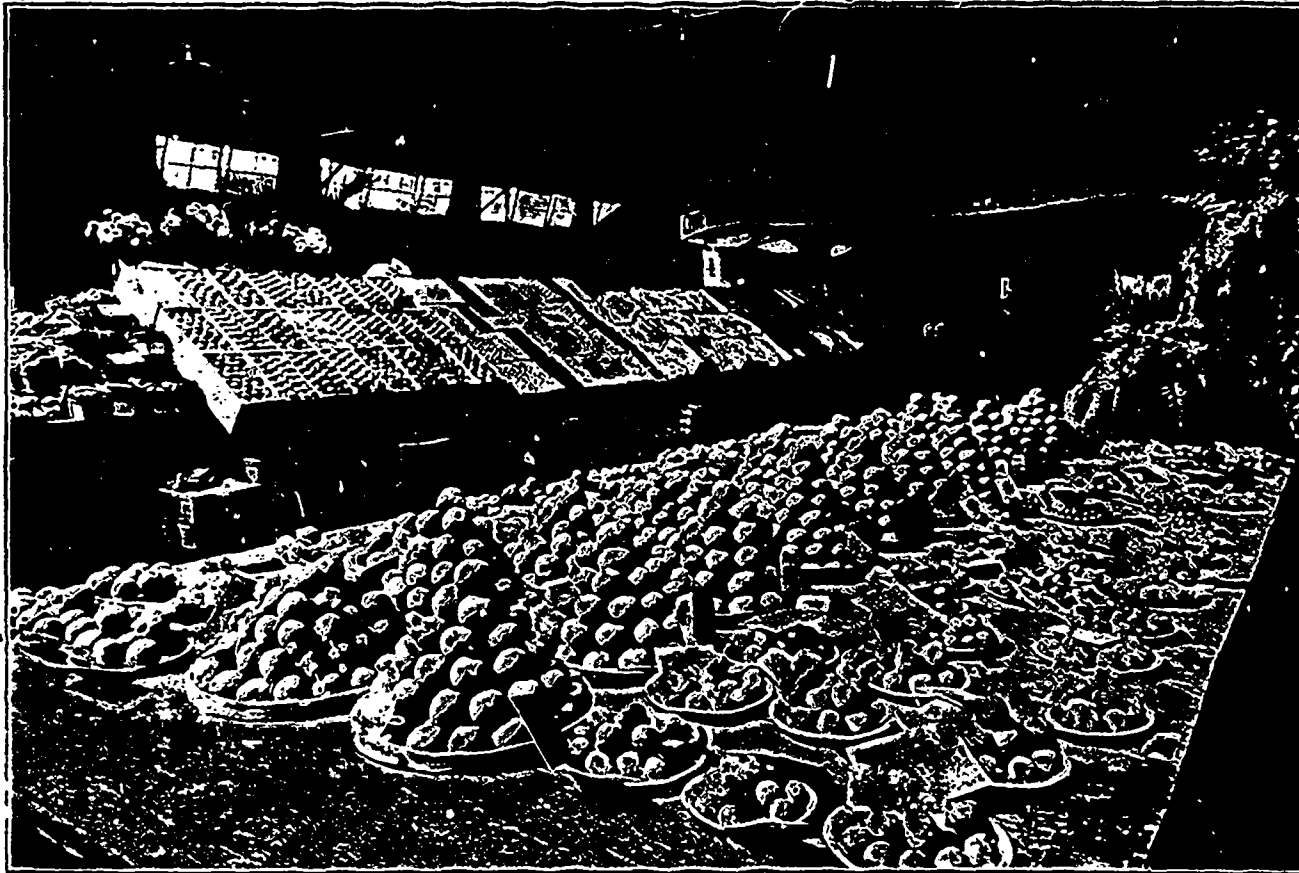
Usually, each large stem can be cut back to within a few inches of its base where it springs from the main stem near the root. All of the leaves may be removed from the plant. The plants can be potted singly in sand or sandy soil—half sand and half soil—in small pots. Three and a half or four inch pots are usually large enough. The plants can be put rather thickly in larger pots, or in small well-drained shallow boxes in sand or sandy soil. A small box about ten by twelve inches, and four inches in depth, will hold ten or twelve good-sized plants.

The sand or soil should be well watered once and the pot or box stood in a cool window, temperature about fifty degrees, or they can be stood away in a light basement or cellar until spring. The sand or soil should be kept barely moist, not too wet, during winter. Toward spring, or whenever convenient during the winter, after the plants have developed new roots and some top growth, they can be potted singly into good potting soil in four inch pots and placed in a warmer window, temperature about sixty to sixty-five degrees. Old geranium plants treated in this way make splendid plants for growing on as pot plants for early spring flowering, or for window boxes or flower beds for the following summer. By cutting the plants back in the manner described and placing them in sand, new roots and a new top growth are developed and the whole plant practically renewed.

### A POOR PRACTISE

If the plants are dug out of the border in the fall and potted just as they are dug up, without being cut back, very poor results are usually obtained.

Generally speaking, when geranium plants are dug up in the way last mentioned, the leaves commence to drop, leaving an unsightly looking plant in a very large pot, with only a few leaves toward the top of the stem, a great disappointment to its owner, and a plant that is of no decorative value whatever. By renovating the plant as first described, good sturdy, bushy plants can be obtained by spring, much



A Portion of the Exhibit of Ontario Fruit at the Canadian National Exhibition, Toronto, Last Month

better plants often than can be produced from cuttings taken in fall.

#### PAEONIES

Early in the month is the time to divide and transplant old roots of paeonies that require dividing and transplanting. Dig up the whole root, and divide it with a sharp spade or a large strong knife into divisions, so that each division has at least two or three crowns or buds. These should be planted about three to four feet apart in rich loamy or clay loam soil. In planting, pack the soil well around the roots. The crowns or buds should be nearly an inch under the surface of the soil when the planting is finished. A good mulching of rather short barnyard manure put over the plants before severe frosts set in will help them. This should be forked in around the plants in spring. New plantations of paeonies should also be made now.

Six good paeonies, not high priced, they being worth thirty to fifty cents each, include the following:

*Festiva maxima*—White with slight crimson blotch on a few petals.

*Queen Victoria*—White.

*Edulis superba*—Violet pink.

*Jeanne d'Arc*—Soft pink, changing to white.

*Alice de Julvecourt*—Rose shaded cream.

*Felix Crousee*—Dark red.

Six newer paeonies, higher priced, 50c to \$1.00 each, are:

*Agnes Mary Kelway*—Rose, with yellow petaloids.

*Madame Geissler*—Sivery pink-shaded rose.

*Modeste Guerin*—Deep rose.

*Duchesse de Nemours*—Sulphur white.

*Virgo Maria*—Pure white.

*Mons. Jules Elie*—Glossy flesh-pink shaded deep rose.

#### DIELYTRA OR BLEEDING HEART

*Dielytra* (or *Dicentra*) *spectabilis*, the old-fashioned Bleeding Heart, is also best transplanted and divided in the fall. Much the same method should be adopted as in that given for paeonies. It is best to divide old plants of this favorite border plant every seven or eight years. Young plants in two or three years give finer growth and flower more profusely than do old plants that are left too long without being divided.

Where only one or two plants of either paeonies or Bleeding Hearts are grown, it may be best not to dig the old plants up entirely, but to cut off a small section or two from them and transplant in a fresh place, leaving the balance of the plant for another year or two before digging and replanting it. By adopting these methods, a continuous supply of the pretty red coral-like flowers of these plants can be had almost the whole summer.

## Outdoor Culture of Daffodils

John Gall, Weston, Ont.

FEW flowers have taken such a hold on the public during recent years as the modest daffodil. Many flowers can show a much greater range of color and diversity of habit, but this bulbous plant has a something about it that appeals and its cultivation is now almost universal. While the daffodil is by no means fastidious as to soil and situation, like most other plants, it well repays any little trouble incurred in giving it suitable quarters.

#### LIFTING THE BULBS

It is a mistake to imagine that daffodil bulbs must be lifted every season, for the truth is that if planned properly and at reasonable distances apart, they may remain for a dozen or more years, and be all the better for being undisturbed. The daffodil takes only a short period of rest, as almost immediately the foliage has died down the bulbs begin to form fresh roots. If any lifting has to be done, therefore, the sooner now it is seen to the better; many of the tender young roots would be destroyed if disturbed later. Of course it is possible to lift the roots, even after top growth has begun, if extra care is taken not to break the roots and replanting is done at once.

#### DRYING THEM

If lifted at once the bulbs will be improved by a few weeks' rest before being replanted. After being dug up with a fork they should be spread in shallow boxes and set in a cool, airy shed (never in the sun). After drying thus for ten days or a fortnight the bulbs ought to be gone over and the smaller off-sets removed. Grade the bulbs, reserving the largest and plumpest for pot culture, while those of a medium size will be well suited for out-door culture. The smallest roots may be planted in some out-of-the-way corner, so as to gain strength for flowering in some future year.

#### PREPARING THE GROUND

A change of soil is very beneficial to the majority of plants, and the daffodil is no exception; so if a fresh site can be given there is more chance of fine flowers. A border from which potatoes have been dug is probably the best of all positions for the daffodil. On no account add any fresh manure to the soil, as this acts like poison on all the finer sorts. Should the ground be very poor a small quantity of well rotted manure may be dug in, but must be quite eight inches below the surface.

#### HOW AND WHERE TO PLANT

Daffodil bulbs vary considerably in size, and in planting allowance has to be made for this. The proper depth to plant, therefore, depends on the size of the bulb of the variety. The small kinds should not be deeper than four

inches, while the largest may be six to nine inches. Perhaps it would be better to say that the tops of the bulbs should be from two to four inches below the surface. Plant with a trowel, setting the bulbs upright, and pressing the soil gently all round it with the fingers. The proper distance apart to plant depends on circumstances. If good clumps made in the garden to give a capital display the first year, set the bulbs not more than two inches apart, but for large plantations on grass three to six inches asunder will be found a suitable distance. Of course, there is no reason why wider planting should not be practiced, but a thin sprinkling will take several years to provide a good show. November is decidedly the best time to plant.

#### Preserving Dahlia Roots

Will you kindly tell me how to preserve the roots of dahlias over winter and the best time to take them up from the garden? I have three crimson dahlias with a lot of small buds and only one large flower. It appears to me that it is through lack of nourishment. The soil is a rough sandy soil. Would you advise cutting off the suckers as they start to shoot, or let them have their natural full bloom?—I. H. L., Belleville, Ont.

Dahlia roots should be dug out of the ground before the roots or tubers are frozen. As a rule, the early part of October is late enough to trust them outside. I would dig them up at once, cut the tops off about six inches from the ground, dig the roots carefully with some soil attached. Place them in a shed or under the verandah away from frost for a week or ten days so that they may dry out a little. Then place them in a cool rather damp cellar for the winter, temperature about forty to forty-five degrees. If the cellar is not available, put them in a box. Put dry earth around them and put them in as cool a room in the house as possible.

The rough sandy soil spoken of where the dahlias are growing is not the right kind of soil. A rich sandy loam suits dahlias better. Some loam should be obtained and dug into the soil with well-rotted manure if the soil is sandy.

Not over three, or at the most four, main shoots should be allowed to grow on each dahlia root. One or two shoots are better if large flowers are desired. The suckers or small shoots should be cut off except those that are wanted for flowering purposes.—Wm. Hunt, O.A.C., Guelph.

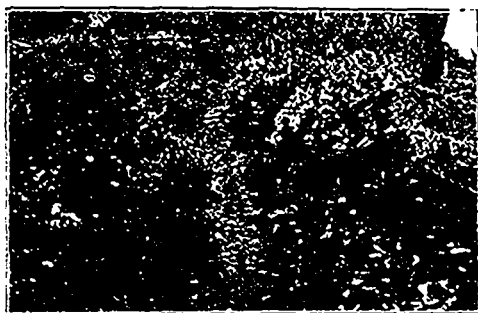
Seeds and bulbs are just like any other work of nature, as it greatly depends upon their breeding whether they are of any use or not.—D. W. Marden, Pilot Mound, Man.



## Fall Preparation for the Perennial Border

A. J. Elliott, Aylmer, Ont.

It will be generally conceded that the perennial flower is fast coming into its true position in the affections of flower growers, and that never before was there greater demand for it than at the present. Everyone who has a flower garden to-day must have a border of perennials, not single specimens dotted here and there, but a whole border, to get the very best effects of these excellent plants. This is only a matter of a few dollars, the will to spend them and enough land to make the affair a satisfactory success.



Perennials in Mr. Elliott's Garden

More than ever are experts writing about the perennial or herbaceous plant and more and more are their writings read and copied and their instructions filled. There is so much more pleasure from very early spring to late fall through all the phases of the peeping appearance out of the ground in the spring till the sere and yellow of autumn that it pays far more than the gaudiest bed of annuals in this short summer season. Foot for foot, I do not contend that the border is grander than, say, a bed of asters. But as a whole if properly planted with a view to continuity of bloom, the tout ensemble is far better.

It is claimed by some that the border should be of uneven width to give what is called an "undulating" appearance. If for a border of shrubs, to a fine stretch of lawn, all right, but if for a garden with walks around, my plan is to make the border geometrically straight. It is always best to place it along a fence or division line behind or at the side of the house, and if two neighbors can agree as to procedure and expense the effect is delightful, no fence then being needed. The tallest plants would be set in the centre and each could do as he liked on his own side.

### PREPARING FOR THE BORDER

Having decided, however, to have a border, dig it four feet wide, good and deep now. If it was well manured last spring, you need not heavily manure it. I do not like fresh manure around roots. Then, after raking it down to a fine

bed, set your line a foot from the fence and plant in this, the back row, any of the following. Hollyhocks, golden glow, tiger lilies, tea larkspur, hibiscus, rambler, thousand beauties or Dorothy roses, planting nothing closer than three feet.

This done, come in with your line eighteen inches, and set as before, but do as a carpenter says in shingling a roof "break joints"; that is, do not let any two plants be directly opposite across the bed. Also do not let the hollyhocks and phloxes be any closer than possible, because the former will rust the latter.

In the second row, plant perennial phlox, paeonies, lilies, coreopsis, sweet rocket, foxgloves, iris, chalydonica, yucia and poppies. Do not plant anything closer than two feet in the row.

Now come in with your line another sixteen inches, and plant the final row of columbine, galliardi, Sweet William, platycodon, pinks, and so forth.

### MULCHING THE BED

This having been done you will have nothing more to do till frost comes. As soon as the ground is frozen cover the whole with four or five inches of rough manure or leaves, and you can pat yourself on the head with thoughts of the flowers you will have next year. I have given a list of desirable plants, but there are many others, perhaps, that the reader would prefer. All can be reasonably procured at our nurserymen.

One thing I might add is that if there is no tulip or bulb bed near the border a few dropped in here and there, but enough to show well, might be done. For my part, as my bulbs are only across a path, I do not put any in the border.

When spring at length arrives, in the latter part of March, take your rake and pull off the mulch, and let the border lie. A red spike here and a yellow one there and signs of life everywhere push up through the ground in quick succession. About

the middle of April put on some good rotted manure, and dig in, always remembering that one of these borders devours a pile of food. This done, you will find several spaces left which latter should be filled, not crowded, with gladioli, asters, zinnias, and plants. These instructions followed you will have a joy garden all summer and will never regret the pains and expense taken to secure it.

## The Care of Dahlia Roots

J. McP. Ross, Toronto, Ont.

Saving the tubers of dahlias from frost is not difficult. Any place where you can keep potatoes will keep dahlias. After the frost has cut the foliage down leave the plants stay so for a week as it helps to ripen the tubers. Then on a sunny morning dig them up with the earth sticking to them as much as it will.

Cut the stalks back to six or eight inches, and let them stay out in the sun all day. If there is no danger from frost leave them out two days. Be sure and fasten the names by wire labels on the stalks and then pile them in a heap in some dry spot in the cellar out of the draft. If the cellar is hot and dry it will cause the tubers to shrivel; a liberal sprinkling of water will restore them. Packing them in boxes with dry sand over them is a good plan. Too much wet causes them to rot. My usual practice is to pile them in a corner on top of one another, and then forget about them till spring approaches when I overhaul them and put them in shape.

"The best is none too good." This old saying applies most forcibly to the selection of bulbs and flower seeds.—D. W. Marden, Pilot Mound, Man.



Border of Shrubs and Perennials in the Garden of Sir H. M. Pellatt, Toronto, Ont.



## Garden Cultivation in the Fall

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

IN the fall the use of the spade is particularly important as it secures the proper preparation of the various beds and plots of ground under cultivation and that useful stirring of the soil around perennials so essential to their welfare. There is nothing like good spade work throughout a garden whether of vegetables or flowers. Dig deep whether you want to grow celery or sweet peas. In fact, no effort of gardening can be really successful unless the soil is deeply dug and turned not once nor twice.

Loosen the soil thoroughly. Break up the clods. Allow no solid masses of earth to exist when you prepare a bed. What a splendid exercise, too, is this digging. How it warms up the blood and opens the pores of the skin in healthy wise. Accustomed as I am to vigorous spading it seems strange to see able-bodied men just spooning the ground with a long-handled spade and an injured air as who should say, "After all, why not do this with a plough?" Quite a number of men seem to think that digging for the purposes of a flower-garden is not the part of a man at all. But our gardener who digs well and truly is no dude nor dandy. He rises early and thinks, as he digs, deeply; stout boots and rough clothes are his choice.

### DISCOVER THE WORMS

If you know anything of such roots as the peony or perennial phlox, you will know that worms entwine themselves so securely between the roots and the adhering soil that the worms will sooner break than allow themselves to be pulled forth from their retreat. Fall digging in October reveals these worms as dried-up reddish objects quite shrivelled and still, and not more than a foot to 18 inches below the ground. Thus they will remain frozen solid until spring returns when from the end of May they swarm in my garden—preferring the clayey soil rather than the black humus common to our prairies. The American robin will follow the spring digging to catch the worms though with less friendly confidence than the real robin of the Old Country, which will often stand on the very clod just about to be turned in its eagerness to catch the worms thrown up by the spade or fork.

### USE OF THE RAKE

After careful digging it may or may not be desirable to use the rake. Perhaps you desire to leave the soil rough-cast and open to the cleaving action of the frost or to help to hold the desirable snow-blanket, and therefore you do not rake. But perhaps you have planted tulips and other bulbs in the fall and intend to leave a prepared surface well

pulverized. Then the rake comes into use, and so you rake the surface thoroughly both before and after planting your bulbs, knowing that such doings will save part of the spring rush of work.

Or perhaps you are aware that the seed of annual poppies, sown in the fall, will spring and bloom nearly two weeks earlier than if cast in the spring. Say you wish to have a nice bed of the Shirley poppy. You pulverize the bed thoroughly in the fall and allow it to settle well. Then you broad-cast the seed all



White Heather, Grown in Picton, Ont.

White heather is said to be very difficult to transplant. Nevertheless the roots of the plant here shown were dug up from the hills in Scotland, in the Highlands, near Nairn, and sent to Mr. Walter T. Ross, the secretary of the horticultural society at Picton, Ont., by mail. That Mr. Ross has been successful in growing it is shown by the fact that the plant was in bloom when photographed last July. Mr. Ross has had unusual success in growing numerous novelties, especially tropical plants.

over the prepared surface and holding the rake vertically pack the surface with moderate firmness. For a spring sowing of seed such as mignonette I use both the rake and the sole of my foot to press the seed firmly into a well-raked surface. For the edges of my beds, which are always a little raised, I use the rake as a firm packer and to rub off the weeds which are inevitable.

### The Asparagus Beetles

My young asparagus plants have been attacked by speckled beetles, which have caused considerable damage. What are they and what will destroy them?—H. M., London, Ont.

The "speckled" beetles are probably one of the well-known Asparagus Beetles. The common asparagus beetle is about a quarter of an inch in length, and is conspicuously marked with six white blotches on the back. This species appears in early spring and eats into the young shoots, upon which it lays

its eggs. The twelve-spotted asparagus beetle often occurs with the above, and is about the same size but broader, and of a reddish-orange colour. On the wing cases it has twelve black spots.

A remedy which has given probably the best satisfaction in destroying the grubs of these beetles is to dust the plants frequently with fresh air-slaked lime. This adheres to their slimy bodies and kills all with which it comes in contact. A simple remedy which has often given satisfaction is to simply brush the grubs from the plants with a stick, in the middle of a hot day. When the beetles first appear in spring, chickens and ducks, if allowed to run in the beds, will destroy large numbers.—A. Gibson, Assistant Entomologist, C.E.F., Ottawa, Ont.

### Doorweed for Dry Places

Mrs. Annie L. Jack, Chateaugay Basin, Que.

During the past summer, so trying to lawns on account of the excessive heat and drought that caused the grass to shrivel and turn brown, a strip of ground along the north side of the house was the admiration of all comers, being vividly green, and showing the line plainly where it ended and other grasses began. It is "*Polygonum aviculare*," a small leaved perennial, properly named a weed, that grows along walks, and in dry hard soil where it makes a mat-like appearance, if kept regularly cut with the lawn mower.

It is a plant closely allied to the "dock" family and also to the buckwheats. So, though of humble origin, it is well connected. It proved this summer a friend in need, and has gained the name of "Doorweed." The object of bringing it into notice is that it might be useful where other plants cannot resist the dry hot weather, but it must be kept regularly and closely cut and not be allowed to straggle. Properly managed, it presents a velvety appearance that was very interesting by contrast this season.

In the good old days it was the custom of merchants to advertise their wares "by the power of man." The lungs of apprentices were developed, and the ears of passersby were deafened by strident cries. The apprentice boy has made way for the bill board. The ear is relieved, but the eye suffers grievously owing to these monstrosities. We must not only wipe out the bill board with all its hideousness, but we must get after the man who owns the vacant lot on which it is erected. If we cannot prohibit, we can at least put them under proper taxation and restriction.—Major H. J. Snelgrove, Cobourg, Ont.

Geraniums should be firmly potted to promote strong growth; loose potting has the opposite effect.

## Winter and Spring Flowering Bulbs

W. Hunt, O. A. C., Guelph, Ont.

**O**CTOBER is the month for potting bulbs for indoor flowering, also for planting them out of doors for spring flowering. A few pots of white Roman hyacinths, Dutch hyacinths, Paper White narcissus, as well as some of the Trumpet and Double Flowering narcissus, will help to keep the window bright from Christmas until Easter. Pot the bulbs in good potting soil with a sprinkling of sand mixed in it. Water them well, put them in a cool cellar, and cover them an inch in depth with sand, fine soil, or coal ashes. Water this covering also, if dry, sufficient to well moisten it. Let the bulbs stay in the cellar for three or four weeks, or until they have developed a good root system. Bring them into the window as required before top growth is over two inches in height.

By making two or three pottings at intervals during the month and bringing them into the light gradually as wanted, a succession of these useful flowers can be had all the winter. In potting bulbs, the top or apex of the bulb should be just under the surface of the soil. The bulbs can be placed almost close together in the pots, half an inch of space between them being sufficient. Dutch hyacinths can be planted singly in a five inch pot.

The main points in the successful pot culture of bulbs are to first develop a good root system before top growth starts, and to keep the soil moist from the time they are potted until they are through flowering.

Tulips, Dutch hyacinths and narcissi should be planted about four inches deep in good garden soil. Avoid digging in strawy manure when digging the ground. Well rotted barnyard manure should be used if any. This is best dug in below the bulbs so as not to come in direct contact with them. Roman hyacinths are of no use for planting out of doors as they are too tender to endure the winter frosts. They are, however, excellent for pot culture indoors.

Crocus, Scilla, Chionodoxa, Leucojum vernum, and Snowdrop are dwarf growing bulbs. These are useful for planting near the margins of flower beds. All of them can be planted about three inches deep, and be put only an inch or so apart. No flower garden should be without a few of these useful pioneers of spring flowers to brighten up the surroundings, before the summer flowers appear.

### Wintering Roses

W. G. McKendrick, Toronto, Ont.

I used to tie up each rose in the beds in the fall in a bundle of straw or bulrushes and heavily manure the bed. I tried one fall four beds without manure or straw but drew the earth up around the stems of the roses from four to six inches, and they came through the winter in good shape. Since then I have not used manure as it holds a soggy mass around the roots of the roses that winter better if they are kept dry and well drained. A little loose straw or strawy manure just enough to keep the ground shaded so that it will not thaw and freeze off and on through the winter, would help the roots.

The comparatively modern plan of earthing up roses from four to six inches is a simple and excellent one. The non-conducting properties of this slight covering are surprising in a very severe winter, when no sound wood is to be seen above the earth covering; beneath it the shoots will nearly always

be found uninjured.

I tie the stem of each climbing rose in a bundle to the fence a foot or two above the ground and shade from the sun with a little straw, though some that are left quite exposed for years are in as good condition as those I tie up. Climbing roses that are planted or transplanted late in the fall should have straw tied to them to keep off the hot sun in the spring as the sun will evaporate the sap in the shoots before the feeding roots can get to work to replace this sap and the roots shrivel up as a result.

### The Lovely Phlox

A. K. Goodman, LL.B., Toronto, Ont.

Abundant and familiar, beautiful and magnificent the phlox (meaning a flame in allusion to its brilliant flower), a weed in the untrodden wilds of North America, in the days of good Queen Bess, is now grown generally in our gardens. With good culture and good varieties the flower heads may be a foot long and nine inches through, the individual flowers being as large as fifty cent pieces. The annuals are grown from seed as asters, though they may be propagated by cuttings in the autumn.

It is best to plant the phlox a foot apart. The perennial phloxes, both early and late blooming, are propagated by division in winter and spring, cuttings or seed. They thrive in ordinary soil, but do not like a cold, adhesive, undrained clay; they favor light soil and love water in summer. The flowers are borne on the top of stems, but to insure large panicles it is necessary to have strong shoots, consequently the use of liquid manure is advised. By judicious arrangement, bloom may be had from July to November with growth possibly three to four feet high.

The following is a list of phloxes recommended for suburban gardens, experience seems to point to the fact that phloxes are not suitable for small city gardens, as they take up too much room.

#### "EARLY SUMMER"

Attraction, white with a crimson eye; Fantasy, pink, suffused crimson; James Hunter, rose.

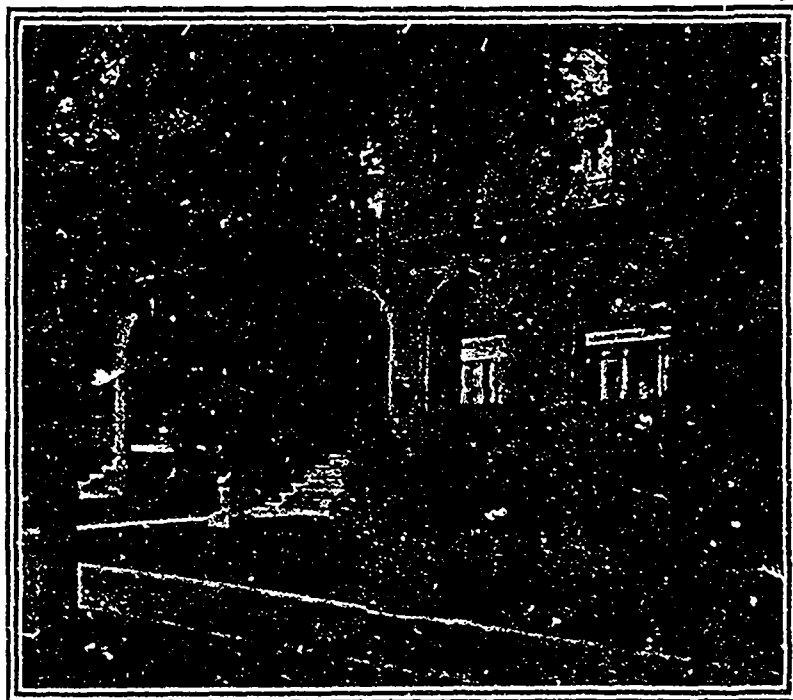
#### "LATE SUMMER"

Atala, rose with a white centre; Coquelicot, orange; Etna, scarlet, all three feet high.

#### "DWARF"

Vivid, brilliant rose; Grandiflora, pink, crimson eye; Newry Seedling, white, rose eye.

The uncertainty of next season's blooming, and the care required during the summer, make it unprofitable to carry primrose plants over. Start new plants or purchase new ones from your florist next season.



Home of R. H. Gould, Spadina Ave., Toronto  
Medal Winner in the 1910 Street Improvement Competition held by the Toronto Horticultural Society.

# Ginseng and Its Culture

[By Hugill Barr, Box 614, Forest, Ontario

THE ginseng family is an interesting one to the student of nature. There are, at least, five different members of this family found in our Canadian woods. Some are very common, others are rarely found. *Aralia Trifolia* or groundnut is easily found in the early springtime in rich woods. *Aralia nudicaulis* or Wild Sarsaparilla, is also common to most woods, while *Aralia racemosa* and *Aralia hispida*, the former commonly known as Spikenard, and the latter as Hirsute or Bristly Sarsaparilla (cf. Wild Elder) are not so common, and therefore, not so generally known.

It is with *Aralia quinquefolia* or Ginseng that this paper deals. It grows in rich, dry, shady woods. The leaves are in a whorl of three at the top of the stem, the latter being from twelve to eighteen inches high. Each leaf stem has five leaves, in the fully developed plant. The flowers are dull in color, small, and insignificant. When ripe the berries are a bright red in color and are not unpleasant to the taste. They are borne in a cluster or bunch upon a stem in the centre of the whorl of leaves. This is by far the most interesting member of the ginseng family.

It is generally conceded that the root has certain therapeutics. However, in America, its use in medicine is comparatively new, but in China and other eastern countries it is extensively used. As far as I am able to learn its medicinal qualities are soporific, anodyne, nerve tonic and slightly laxative.

Historically speaking it may be said, that this plant was first discovered in Canada. In the early years of the eighteenth century, some Jesuit priests in eastern Ontario, in their earnest and self-denying labors among the aborigines of this country, are credited with discovering the plant and gathering large quantities of its root. It is now known to have been found scattered over a large area of the American continent.

There is no better strain of ginseng known than that found growing in our Canadian woods. At the present time, it is well nigh exterminated. Sometimes one may search for days and not find a single plant. Rightly or wrongly the Indians are charged with exterminating it from our forests. As a rule they dig it when and where ever it is found. I am of the opinion, that the Ontario Ginseng Growers Association, might do well to seek legislation protecting this valuable plant from the ravages of men. If a law were enacted, making it lawful to dig the root only in the month of October, it would be certainly a step in the right direction. By the end of September, as a rule, the seeds have ripen-

ed and have fallen and thus a chance is left, at least, that new plants will start into existence. Only a very few white men gather the wild root, for very few know it as it grows amidst the profusion of plant life usually found in our Canadian woods.

The Chinese and Koreans, almost, if not quite, venerate the ginseng plant. It is small wonder that they do. Specially is this true, if the root be in the shape of a miniature man, as indeed many of them are. Full of the Korean, who is successful in his search for the wild root, is considered to have found favor with the gods. It is not an unknown thing for a Korean, anxious to find this wonderful plant and equally anxious to find the favor of the deities, to continue his search until overtaxed nature gives up the game and he lies down to die, on the hillside of his beloved Korea.

## GINSENG CULTURE

In the cultivation of ginseng there are really few secrets to be known. The plant, being indigenous to Canada, is perfectly hardy. Nature is a wise teacher, and the ginseng grower will do well to observe her suggestions and laws with reference to the natural conditions of the life of this plant, as it is found in the woods. The writer invariably makes a study of the soil, situation, conditions of growth and general surroundings of every wild plant he finds. To keep near to nature is safe procedure.

The wild plant is not always found to be thrifty. Sometimes the shade is too dense, and the ground is too hard and unyielding or perhaps too moist. Another thing to be considered is the exposure of the plant to injury through accident. All these things, and many other considerations, will appeal to the ginseng grower. Given a rich, deep, alluvial soil, well drained, and in a location where the air, unhindered, circulates freely, and all that follows is easy. Cultivate deeply and finely in preparing the ground, being careful to remove all stones, sticks, and roots. By all means have the ground sufficiently rich—as rich as needed for onion growing—before planting begins.

The best way to make up the prepared ground is to shape it into beds five feet wide, with a two foot walk between. The edge of the bed can be kept in shape by running a narrow board along the sides, and staking it securely in its place. Of course, no weeds should be allowed to grow either among the roots or in the walks.

## PLANTING

In planting a good way is to set the roots about eight inches apart each way,

being careful to place the root two or three inches below the surface of the ground. A plan that works well is to dig a narrow, deep trench across the bed, and place the roots in the trench with the hand, straightening out, as far as possible, all fibrous roots before filling around with earth. If a crop is desired for drying, the best result will be obtained by maturing the root where the seed is planted. A better, marketable root is obtained by not transplanting. Of course, in some instances, it is found necessary to plant the seed thickly, and later transplant, say, when plants are a year old. Budless roots, in live condition, take a year to form new buds, during which time the grower will look in vain for the stems. To protect the buds, do not allow any scratch-of, or walking upon the planted beds.

## SHADING

Shading is perhaps the most expensive part of ginseng culture. Of course, every one knows that it grows in the shade. Some growers, who possess suitable woodlands, grow their ginseng there in the natural shade and do well. This saves the time, labor and expense of artificial shade. However, if shading must be built place the posts that support the shading in the centre of the bed. Place scantling or straight poles from post to post, fastening each end securely to the top of the posts. Make the shade sufficiently high that men can walk under it without danger or difficulty. Use lath, or any kind of strip to make the shade. Make it into sections of convenient size for you. Plan the overhead work so that the shade sections will fit—no overlapping is necessary. Lath placed one half inch apart will make shade dense enough. Possibly, on the south and west sides of your garden, you might have to place shade to protect the edges of the beds from the sun.

Surround the garden with woven wire fencing six feet high. Be sure the meshes are small enough to keep out chickens, cats and other animals. Keep all animals out of the ginseng garden except toads. They are the friends of the grower. As soon as the seed is ripe in the autumn the shading can be removed and piled away under cover. Some growers use wire to anchor the sections of shade in their places on the overhead work. Old gas pipes, cut the right length, make good posts. Use a flat stone or a square of cement for a base.

In the culture of ginseng attention to a few things will often work wonders. If your garden is surrounded by a close

board fence take it away and put it to a purpose more worthy. For a ginseng garden use, as we have said, woven wire. This gives the maximum of breeze and ventilation. Let the breezes blow upon your plants and through your garden. Get all the air and light you can under the conditions of shade described. Everybody knows that dank, ill-ventilated nooks and corners are the breeding grounds of plant diseases. Small wonder if seedlings damp off in such places—it would be a wonder if they did not. Get the air. Get the breezes. Exclude the hot sun.

Do not hoe the beds; if you do there is danger of destroying some root bud, or cutting a plant, that the frost has heaved too near to the surface. Better pull out the weeds, and cast them into the fire.

In the spring, just as you see the plants begin to break the ground, spray with Bordeaux mixture. It is possible that there might be some spores on the ground waiting to destroy your plants. The writer has not used pyrox, and therefore will not speak of it now. No doubt it will do all that is claimed for it.

#### AUTUMN CARE

Mulch in the autumn with clean, rich alluvial earth. It is not likely to be a culture for disease germs. A top dressing of such earth, one inch thick upon the beds every fall, will prove to be a great benefit to the roots. A word or two about seeds. As elsewhere stated, the seeds when ripe are a bright red. Indeed, a healthy ginseng plant with its bunch of red berries is a thing of beauty. It is generally conceded that the best way to deal with fresh, ripe seeds is to stratify them in moist sand for a year. A seed requires one year and a half to germinate; hence, if the crop be stratified for a year almost absolute protection is obtained. When seeds are required for planting, they can be sifted out of the fine sand very easily.

All seeds, whether planted in rows or broadcasted, should be covered with earth one inch and a half deep. If seeds are to be sown broadcast, sprinkle them with flour before sowing, so that an idea of the quantity on a given space may be obtained. If whitened with flour they are readily perceived on the surface, and can be covered with earth the desired depth. One thousand seeds to one yard of a five-foot bed will be sufficient. For Ontario, October is the best month for planting seeds and roots.

#### THE PROFITS

Does it pay? That depends largely upon the man. There are people growing ginseng who will never make it pay. Nevertheless in the hands of the right man it pays. At Blyth, Ontario, in the Hurnia Ginseng Gardens, with which the writer is well acquainted, careful tests have been made and results have

been obtained that warrant the statement that there is no more profitable crop grown than ginseng. The facts are in the concrete. Ginseng speculators have advertised in a most extravagant way the enormous profits to be realized from an acre of ginseng. Of course, such speculators have ginseng stock for

sale at exorbitant prices, and the advertisement has but one object—to lure "takers." All of which we can well afford to pass by. The writer has no disposition, no time for, and THE CANADIAN HORTICULTURIST has no room for overstatements.

## Celery Storing for Winter Use

Geo. Syme, Jr., Toronto, Ont.

**C**ELERY storing is an occupation which is rather uncertain. Much depends on the condition of the celery at the time of storing and also on the weather during the winter. Good healthy celery stored about the middle of October or to the first of November should keep to the middle of April or the first of May. There are three ways of storing celery, which according to my experience, have worked out satisfactorily, namely, trenching, housing and pitting.

To keep celery in trenches, the outside leaves should be pulled off, the tops trimmed lightly and the celery packed firmly in the trenches, one spade wide and deep enough so that the tops come on a level with the ground. When the weather becomes cold cover the celery with boards laid flat on the top supported with braces to keep them from pressing too heavily on the celery. It should be watched and aired until the weather becomes severe. Then, cover the boards with a litter of straw. If you can have a little frost in the leaves at the time of covering with the litter of straw the celery will keep better.

#### HOUSING CELERY

Housing, or packing, celery in houses made for the purpose, is the most common method. The celery house should be built about fifteen feet wide, with a gable roof high enough to put in a top bench. This makes it comfortable to work in. Trap doors or air holes should be placed not further than eight feet apart. A door is necessary at each end so that a current of air can be allowed to pass through when necessary to dry up moisture. Trim the plants the same as for trenching and pack firmly in stand, standing the stocks on end after two or three rows have been packed. It would be well to bank up a little dirt to the stocks, cutting square down with the spade so as not to take up too much room. Repack once or twice during the winter.

#### PITTING

Pitting is the easiest and latest method of storing celery. It can be done on the ground where the crop is grown. No trimming is necessary. Piles are made by placing two rows, butt to butt, with the leaves turned out. The pits should not be longer than about eight feet and about three feet high.

Cover the top of the pile with a little dirt until the weather becomes severe, then cover completely with dirt and afterwards with a little straw. Allow frost to get down to the celery before the last covering. It is better, if this method is adopted, to grow the celery far enough apart, so that it can be ploughed up to and banked. Leave the celery in banks as long as the weather will permit or until about the middle of November or the first of December.

## Planting Rhubarb

Prof. W. S. Blair, Macdonald College, Quebec

Ground for rhubarb should be worked deeply at least six to eight inches, and well fertilized. The richer the ground the better the rhubarb. Four or five inches of manure worked in will not be excessive. This plant will, of course, grow on moderately rich ground, but as a rule the one thing lacking in most cases is abundant food material. A friable loam will give the best results. For early rhubarb a southern slope is advisable.

Every five years at least the plant should be divided, otherwise the crown gets dense and many small stalks will be formed. The old plant may be lifted and split up with a spade, leaving two to three eyes to a piece. Care should be taken not to break the roots of these pieces any more than possible.

Seedling plants may be planted, but as a rule these are very variable; and if you have a good strain I would advise division of the roots. Seed of the desired variety may be sown in rows three feet apart early in spring, and thinned to six inches apart, and if the ground is rich these will make fair plant for the next spring planting, or good plants for the following spring.

The plant may be set in the fall or early spring. We set the plants in rows four feet apart and four feet apart in the rows. It is a good plan to mulch the plantation with 3 to 4 inches of good rotted manure in the fall, which is worked in the following spring. Grass should not be allowed to grow, and shallow cultivation should be continued right up to fall, keeping the surface ground loose and friable.

Strip off the asparagus seeds before they ripen and burn them.

# The Canadian Horticulturist

Published by The Horticultural  
Publishing Company, Limited

PETERBORO, ONTARIO



## The Only Horticultural Magazine in the Dominion

OFFICIAL ORGAN OF THE ONTARIO, QUEBEC, NEW  
BRUNSWICK AND PRINCE EDWARD ISLAND  
FRUIT GROWERS' ASSOCIATIONS

H. BRONSON COWAN, Managing Director

1. The Canadian Horticulturist is published on the 25th day of the month preceding date of issue.
2. Subscription price in Canada and Great Britain, 60 cents a year; two years, \$1.00. For United States and local subscriptions in Peterboro, (not called for at the Post Office) 25 cents extra a year, including postage.
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4. The law is that subscribers to newspapers are held responsible until all arrearages are paid and their paper ordered to be discontinued.
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. Copy received up to the 18th. Address all advertising correspondence and copy to our Advertising Manager, Peterboro, Ont.
7. Articles and Illustrations for publication will be thankfully received by the editor.

### CIRCULATION STATEMENT

The following is a sworn statement of the net paid circulation of The Canadian Horticulturist for the year ending with December, 1910. The figures given are exclusive of samples and spoiled copies. Most months, including the sample copies, from 11,000 to 12,000 copies of The Canadian Horticulturist are mailed to people known to be interested in the growing of fruits, flowers or vegetables.

January, 1910	8,525
February, 1910	8,967
March, 1910	9,178
April, 1910	9,410
May, 1910	9,505
June, 1910	9,723
July, 1910	9,300
August, 1910	8,832
September, 1910	8,776
October, 1910	8,784
November, 1910	8,747
December, 1910	8,662
	108,969

Average each issue in 1907, 8,677
" " " " 1908, 8,635
" " " " 1909, 8,970
" " " " 1910, 9,967

Sworn detailed statements will be mailed upon application.

### OUR PROTECTIVE POLICY

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

Communications should be addressed.

THE CANADIAN HORTICULTURIST,  
PETERBORO, ONTARIO.

## EDITORIAL

### THE ELECTION AND THE FUTURE

Since the election those fruit and vegetable growers who were alarmed, and with reason, in regard to how they might be affected by the passing of the reciprocity measure, have been breathing easier. There is little chance now of such a measure being adopted for another nine or ten years at least, and therefore all immediate cause for anxiety has been removed. Nevertheless the election has its lessons which should not be overlooked.

The inherent weakness of all industries built up behind the walls of protection is that they are subject to constant alarms. Every election is liable to bring on a clamor for the lowering or removal of the protecting tariff. This creates uneasiness in the minds of all connected with these industries and tends to unsettle trade. In Canada, hereafter, in spite of the immense vote polled against reciprocity this condition is likely to be most apparent.

As long as the United States was opposed to free trade there was practically no agitation in Canada for it. This accounts for the relief in this respect that we have had in the past. Now however, that the United States has shown its willingness to enter into a free exchange of natural products the agitation in Canada for the acceptance of the offer is not likely to subside. The urban population of the United States is growing rapidly. Its rural population is remaining stationary or decreasing. Thus year by year the value of the United States markets to our farmers will steadily increase. In Canada, because of our millions of acres of free farm lands, our rural population, for years to come, is likely to increase more rapidly than the population of our towns and cities. Thus our surplus of farm products for export will grow in proportion. This being the case, the demand for free trade is more likely to increase from year to year than it is to subside.

It seems altogether likely that the Liberal party will continue freer trade as a plank in its platform, including even many lines of manufactured products and an increase in the British Preference. This would make the question of free trade an issue at each election hereafter. Thus the battle may have to be fought all over again with its consequent disturbance to business conditions. The indications are that there lies before us a long period of tariff unrest.

### ESSAY COMPETITIONS

This year, through the generosity of Messrs R. B. Whyte of Ottawa the president of the Ontario Horticultural Association, and of Mr. Hermann Simmers of Toronto, a member of the well known firm, J. A. Simmers, Ltd., excise-men, of Toronto, prizes aggregating fifty dollars in value were offered to members of the Ontario Horticultural Societies contributing the best essays on the subject "My Favorite Garden Flower and How I Grow It." A number of excellent essays have been submitted in this competition, but not nearly so many as there might have been had the competition been more widely advertised by the local horticultural societies. The results of the contest will be announced shortly and the winning essays printed.

This is a line of work that the Ontario Horticultural Association might well take up next year and extend. A condition of the contest might be that competing essays must first be read at meetings or exhibition of the local societies before being eligible to compete for a provincial prize. Later the successful essays could be read at the annual convention in Toronto of the Ontario Horticultural Association and published in its annual report, thus receiving wide distribution. There is a great demand for such information as these essays could be arranged to provide. By conducting competitions of this character regularly each year the educational value of our horticultural societies could be much increased without involving the expenditure of more than a trifling sum.

### EXHIBITION SUGGESTIONS

The fruit growers of Eastern Canada are making rapid progress, but much still remains to be accomplished. Our greatest need is a broader vision of the possibilities of our industry, more enthusiasm and a spirit of hearty cooperation in efforts to bring them to pass. In the light of what we might do if we would, what we are doing often seems sadly inadequate.

This year, for instance, Nova Scotia will export over a million barrels of apples. The fruit is of unusual quality. The bulk of it will grade high. It will bring into the province several million dollars. This month the Nova Scotia Horticultural Exhibition will be held at Wolfville. It will open on October tenth and last for three days. The prize list amounts to two thousand dollars. Think of it! Two thousand dollars! It should be twenty, or still better, thirty thousand dollars. But not it is two thousand dollars.

Last year British Columbia, which imported twenty-eight thousand, one hundred and three barrels of apples and exported only one thousand nine hundred and twenty-three barrels, held a national apple show at which fifty thousand dollars was offered in prizes. Five thousand dollars was offered as one prize for the best carload of apples. This year they are holding a provincial show at which the prizes offered will be equally liberal. What, let us wonder, would their prize list be if they had an apple crop like that in Nova Scotia?

The trouble in Nova Scotia does not rest on the shoulders of the directors of the exhibition. It cannot be blamed against the provincial government. It rests with the people of the province as a whole and particularly with the rank and file of the growers themselves. Did they but realize that there is nothing to prevent them from holding a show equal to that held in British Columbia, that doing so would advertise the fruit growing possibilities of the province to the world as nothing else could, that it would tend to double and treble the value of the good orchard lands of Nova Scotia, which are ridiculously low, thus increasing the prosperity of all the growers, we would soon see Nova Scotia holding an apple show that would be a credit to the East.

Ontario is but little if any better. It grows the great bulk of the fruit produced in Canada. Each year it holds an excellent provincial horticultural exhibition, but its prize list of less than five thousand dollars, a large proportion of that being offered for flowers and vegetables, is not what it should be. This year the directors of the Fruit Growers' Association had an opportunity to arrange for the holding of a national apple show in Ontario next year.



but the proposition seems to have overcome them, as we hear nothing more about it.

From a horticultural standpoint one of the best things that could happen in Canada would be the making of arrangements by which each of the provincial exhibitions now held annually in Nova Scotia, New Brunswick, Ontario and British Columbia would follow each other in consecutive order. These could then be advertised. Intending well-to-do settlers could be encouraged to make a tour of all the provinces, taking in each of the exhibitions; apple buyers could be attracted, and a healthy rivalry created between the provinces that would prove beneficial to all. The suggestion might receive attention at the next Dominion fruit conference.

From time to time we have drawn attention to the need that exists that the work of the entomological division of the Dominion Department of Agriculture should be extended and strengthened. In this connection we would like to see the division furnished with the funds that would enable it to publish a bulletin or book, profusely illustrated by colored plates, describing and giving the life history and characteristics of the more important injurious insects of the orchard, garden and farm. There are numerous bulletins giving this information in part, but none seems ever to have been attempted that would deal with the subject at all comprehensively. The educational value of the weed bulletin issued a few years ago by the Dominion seed division has been so great as to justify the expense that would be involved in the publication of a similar volume dealing with insects.

Compulsory spraying has frequently been advocated in Ontario and elsewhere in the

East, but the proposal has never been treated seriously by those in authority. Such a law prevails in British Columbia. If a grower refuses to spray, government officials have power to enter his orchard and do the work for him, and he has to pay the bill. Had there been such a law in Ontario the San Jose Scale would never have made the progress that it has. One of the worst agencies, probably the worst, in the spread of this pest were the orchards so far destroyed by the scale that their owners neglected them and left them to infest surrounding orchards. Some townships have appointed inspectors in an effort to deal with the situation and much good work has been accomplished by them. The situation, however, has never been entirely satisfactory. We can hardly wonder, therefore, that we still meet those who favor compulsory spraying.

From the outset the Ontario government has acted as though the Jordan Experiment Station was a sort of unwelcome infant that had been forced upon it against its will. It has never granted any more funds than it could well help to develop the work for which the station was established, and now it is stinting these. An improvement in this respect is *over due*.

## PUBLISHER'S DESK

Our front cover illustration this month shows a partial view of the celebrated Prairie Valley, near Summerland, B.C. It conveys a good idea of the beautiful nature of the country in this favored fruit growing section.

From time to time we are asked why we do not publish more news from British Columbia in *The Canadian Horticulturist*. The same mail that brings such a letter may bring similar letters from subscribers in Nova Scotia and Quebec who feel that the fruit interests of their sections do not receive adequate attention in our columns. To all such letters we reply that *The Canadian Horticulturist* is national in scope. The territory covered by *The Canadian Horticulturist* is so broad it makes it impossible for us to publish as much information and as many special articles relating to each section as we could were this paper local in character. As far as practical we endeavor in each issue to publish some notes from each of the leading fruit growing provinces and also articles that will be of equal value wherever they may be read. Within the next year or so we expect to be able to enlarge *The Canadian Horticulturist* sufficiently to enable us to give more attention to each province than we now do. Thus, while we will give more local news connected with each province, *The Canadian Horticulturist* will still remain national in scope and in usefulness.

Quite often we receive letters similar to the two mentioned in the advertising talk in our September number, asking for information as to where a certain class of goods may be purchased. There are probably many of our readers who wish to secure some such information, but who hesitate to write us. As our advertising department is in touch with the leading manufacturers and dealers handling goods and as readers of *The Canadian Horticulturist* may wish to buy, we can usually furnish the desired information to inquirers, where they fail to find what they want in our advertis-

ing columns. We are always pleased to furnish any such information as may be desired by our readers.

Plans are being laid for next year's issues of *The Canadian Horticulturist* which will insure our publishing the strongest numbers of the magazine our subscribers have ever received. Experts are being engaged to furnish timely articles for each issue throughout the year. Every issue will be filled with the most helpful class of information, and it will all be furnished by well known Canadian authorities on the subjects dealt with. The illustrations in each issue will also be of special merit. Expert photographers have been at work this year securing photographs for publication next season when their appearance will be most helpful. Attention is being given to each department of the paper, including the fruit, flower and vegetable sections. We expect to have our plans sufficiently complete to enable us to tell you more about them in our November issue.

## SOCIETY NOTES

We invite the officers of Horticultural Societies to send in short, pithy reports of work that would interest members of other Horticultural Societies.

### The Ontario Association

A meeting of the directors of the Ontario Horticultural Association was held in the tent of the Ontario Department of Agriculture on the Exhibition grounds, Toronto, September 5th. There was a full attendance, with the president, R. B. Whyte, in the chair. An excellent programme has been drawn up, which will make the approaching annual convention a most interesting one. Flowers, small fruit and civic improvement will be discussed. The selection of the date for the convention was left to the president and secretary. It will be held during the week of the Ontario Horticultural Exhibition in November next.

**LET US HAVE DISCUSSIONS**  
In establishing this department in *The Canadian Horticulturist* our desire has been that officers of horticultural societies would discuss through it methods of work that they found most successful. We would like to see discussions on such subjects; for instance, as whether or not it is advisable for societies to hold regular exhibitions. Some societies that have been holding exhibitions for years claim that by means of the exhibitions they interest the public in their work and that the competitions lead their members to put forth greater efforts to produce the highest quality of fruits and flowers. Against this it is contended that almost invariably the prizes at these exhibitions are captured by the same growers month after month and year after year, that not over five per cent. of the members of the average society draw any of the prize money offered and that more good would be accomplished were the money that is spent for prizes given for lawn and garden competitions and for the purchase of more liberal premiums for distribution among all the members. Officers of societies who have had experience in both lines of work are requested to furnish us with statements giving the results of their experience.

**GALT**  
The September exhibition of the Galt Horticultural Society was held in the Market Hall, which was filled with unusually attractive exhibits. An entrance fee of fif-

## Clean Advertising

"He must go." That is what two thousand representative advertising men from Canada, the United States, and England said at a great convention held recently in Boston, when discussing the advertiser who publishes dishonest, unclean or untruthful advertising.

Publishers recognize that they cannot allow the dishonest advertiser to use space in their publications if they are to retain the goodwill of their readers and the patronage of reliable advertisers. It is as much their duty to protect their readers from unreliable information in their advertising columns as from misleading articles in their reading columns.

The *Canadian Horticulturist* was one of the first Canadian publications to adopt this principle in regard to the advertisements it prints. For years its publishers have refused to publish any advertisements they felt to be unreliable or objectionable in any way, or that they felt doubtful about.

This attitude, while it has cost the publishers a great deal in loss of advertising which they might have accepted and published, has earned the confidence of readers of *The Canadian Horticulturist*. They intend to continue to merit that confidence.

We believe that every advertisement in this issue of *The Canadian Horticulturist* represents a reliable individual or firm and one which our readers need have no hesitation in patronizing.

teen cents was charged. It was feared that the dry season would interfere with the exhibits, but such did not prove to be the case. The display of geraniums was unusually fine, while asters and gladioli were shown in profusion. Ferns proved a feature of the exhibition. A novelty was a geranium three feet in diameter having over sixty blooms. Some splendid specimens of fuchsias were shown, including one "Rose of Castile" that was over fifty years old. Other novelties were a plant of *Tretonnia Avaria*, commonly known as red hot poker, and a specimen of the Jerusalem cherry. The exhibition was open afternoon and evening for two days.

#### ST. CATHARINES

The aster and gladiolus exhibition of the St. Catharines Horticultural Society was held August 29th and 30th in the armories. It proved to be one of the best of the many successful shows that have been held by this enterprising society. As usual one of the most prominent and striking exhibits was that furnished by Queen Victoria Park, Niagara Falls. It occupied a stand in the centre of the floor and was thirty feet in length by about twelve feet in width. Somewhat similar exhibits, but on a smaller scale, were shown from the gardens of Charles Riordan and Robert Dunn. One of the most important features from an educational standpoint comprised ten kindergarten tables which had been decorated by children from six to eight years of age. The character of the exhibits throughout was high class, and as the exhibits were well arranged the exhibition proved enjoyable to the many who attended.

A movement is on foot to form a horticultural society in Fort William. The Canadian Horticulturist is in receipt of a

letter from Mr. W. J. Hamilton, principal of the Collegiate Institute, in which he states that a meeting for organization purposes was to take place on September 29th. Residents of Fort William are said to be enthusiastic over the proposal.

#### MONTREAL

The Montreal Horticultural Society, in conjunction with the Fruit Growers' Association of the province of Quebec, held an exhibition of flowers, fruits and vegetables in the Victoria Rifles Armory, during September. There were over two hundred sections and cut blooms and plants were especially in evidence. Numerous wealthy residents of Montreal, such as Messrs. R. B. Angus, Senator MacKay, C. E. Gordon, Mortimer Davis and others, made large exhibits through their private gardeners. The prize for the best garden within the city limits was awarded to Mr. Rubenstein. Mr. A. H. Cook secured the prize for the best kept suburban garden. The officers of the society are Honorary Secretary, Senator MacKay; Honorary Vice President, W. M. Ramsay; president, R. Wilson Smith; Vice President, James Morgan.

#### CALGARY

The Canadian Horticulturist is in receipt from the Calgary Horticultural Society of their remarkable handsome booklet comprising over one hundred pages. It contains full copies of the different addresses and papers delivered and read before the society during the past year. The report is printed on high grade paper and deals with the cultivation of various kinds of flowers and vegetables, trees and shrubs. It reflects great credit on this society, which although only four years old, has already accomplished very valuable work for the whole province of Alberta.

## The Ontario Horticultural Exhibition

The prospects for exhibits of fruit at the Ontario Horticultural Exhibition, which will be held in Toronto November 14-18 were never better than the present season. The counties of Northumberland and Durham, Norfolk, Elgin, Lambton, Ontario, Prince Edward, Leeds and Grenville, Hastings and Dundas all will be represented by magnificent displays of boxed fruit running from a carload in one case down to fifty box displays in one of the eastern counties which makes a specialty of McIntosh. In addition there will be a splendid showing of boxed fruit from the demonstration orchards of the Ontario Department of Agriculture. The secretary, Mr. Hodggets, states that the display of package fruit will be likely to open the eyes of most of the Ontario growers.

Three new sections have been added in the boxed apple classes "for the best ten boxes of Snow, McIntosh and Spv. wrapped," the prizes being \$30, \$20 and \$10 in each case.

Another section calls for twenty boxes of Spv. wrapped, with prizes of \$60, \$40 and \$20, while there is a sweepstakes prize of \$50 for the best box of apples of any variety entered in any section of the show. All of the additions of last year to the prize list will stand, so that the exhibition offers a splendid opportunity to the up-to-date grower to show the best fruit that he can grow, packed in either boxes or barrels, with a chance also of winning one of the large prizes offered for specimen apples of the standard winter sorts. Prize lists with full information may be obtained from the secretary, P. W. Hodggets, Parliament Buildings, Toronto.

## THE CANADIAN NURSERY CO. LIMITED

Hardy Northern Grown Nursery Stock

10 PHILLIPS PLACE, MONTREAL

Ornamental Trees	Strawberries and
Deciduous Shrubs	Small Fruits
Evergreen Shrubs	Vines and Hedges
Fruit Trees	Hardy Roses
	Conifers, etc., etc.

Only those Plants sufficiently robust for our northern climate are grown. All Stock guaranteed. Full directions given.

NURSERIES: POINTE CLAIRE, 14 MILES FROM MONTREAL

On main line of Grand Trunk and Canadian Pacific Railways

Over Fifty Trains Daily ensure unsurpassed shipping facilities. Private siding. Plans and Estimates submitted for Gardens, Grounds and Landscapes. Catalogue on Application

A Few Reliable Salesmen Wanted

## BOXED APPLES

COMMAND BETTER MONEY

We make the Proper Box at the Right Price.

Send your order large or small, early, and assure prompt delivery.

Be first in the market with the most saleable fruit.

Write us To-day.

## THE FIRSTBROOK BOX CO. LIMITED

TORONTO



### Suggestions from British Importers

A number of interesting letters from British fruit importers have been received by The Canadian Horticulturist during the past couple of months. Among these have been the following:

James Adam, Son and Co., of Liverpool, have the following to say: "It is hardly fair to make any comment on the packing of Canadian apples during the last two seasons as, owing to the unfavorable crops, shippers were tempted to put in apples which at other times would have been discarded. At the same time we must admit that the standard of packing leaves something to be desired, as very often small, ill-shaped apples are found in the No. 1 grade, much to the detriment of prices here; while it is a matter of regret that No. 3's are shipped at all, as small apples are rarely appreciated, and what is more, when it is remembered that the cost of transport and handling is the same as on the No. 1 grade, the results cannot leave much to the shipper. Indeed, we are inclined to think that more could be realized at home; while their presence on this side prejudices the sale of the finer fruit.

"Californian and Washington apples are well packed, the fruit being mostly of uniform size, nicely papered, and carefully packed in tiers. This we know can be done when packed in boxes and where there is a plentiful supply of uniform sized fruit of one variety, but with so many mixed varieties, such as are grown in Canada, of varied sizes and shapes, then this style of packing does not lend itself to the same extent.

"For Canadian apples we much prefer the barrel, as it is a convenient package to handle and one that is favored by the trade

here. We would suggest, however, that the eight-hooped barrel should be used in preference to the six-hooped barrel, as the package is then much stronger, and there is more possibility of it arriving here in good shape than when six hoops only are used."

#### INTERESTING COMPARISONS

One of the largest fruit importers in Great Britain, Andrew Chalmers, of Glasgow, makes the following interesting comments: "The season just finished was our first big year of box apples from the Pacific Coast. We heard many complaints from the British public regarding the lack of flavour in the Californian apple. This of course cannot be said of apples from Ontario, and as apples in boxes are a coming feature, I would recommend shippers and growers in Ontario to box a portion of their apples.

"British Columbian and Californian shippers grow apples of good size and fair quality, and I would suggest that shippers in Ontario box only 'fancy' and No. 1 stock. The latter have the advantage of shippers on the Pacific Coast in regard to freight, and if shippers in Eastern Canada pack their apples as they do in British Columbia and California, the 'wise men of the east' would soon hold the export trade.

"It is foolish to ship No. 3 stock; this size of apple never pays to export. No part of the world can grow such quality as is grown in Ontario. No. 2 stock in barrels is always wanted, and has a big sale among a certain class of buyers here. No. 1 stock, honestly packed and graded, always commands a good price.

"Fruits of all kinds, and apples particularly, are sold more and more every year

## DOUGLAS GARDENS

OAKVILLE ONTARIO

### PAEONIES AND SHASTA DAISIES

Related orders for these may still be given, which will be filled promptly.

#### PER. PHLOX

Now is the best time for ordering and planting the Phloxes.

#### HELENIUMS

Have been grand this year

Try 4 "Superbum" and 3 "Stratum" for \$1.00

Postal Note with Order Please

### JOHN CAVERS

## J. O. SIMS

### FRUIT BROKER AND AUCTIONEER

For SIXTEEN years I have received enormous consignments of APPLES from Nova Scotian growers and Associations, always giving complete satisfaction to senders.

#### Your Consignments Are Solicited

Best Sales, Personal Attention and Promptest Returns Guaranteed

Offices, Warehouses and Wharf:

15 Stoney St, Borough Market, London, S.E.

Sale Rooms: 18 Padding Lane, London, E.C.



THIS IS A PHOTO OF OUR

## PEDIGREED PEACHES

They are exceptionally fine. Our other lines are also of very high quality. We shall commence to dig trees in a few weeks, and recommend fall planting. Order Now.

## AUBURN NURSERIES

QUEENSTON, ONT.

## Bruce's Regal Flowering Bulbs



### PLANT NOW

FREE—Write for our 28 page Illustrated Catalogue of Bulbs, Plants, Seeds, Sundries, Poultry Supplies

We offer a complete assortment of Bulbs for Winter Flowering in the house and spring Flowering in the Garden.

	Each	Doz.	100
Crocus, in 4 colors.....	.02	.10	.70
Freesia, Refracta, Alha Giant.....	.04	.30	1.60
Lilies, Calla, white, large.....	.20	2.20	
Lilies, Chinese Sacred, large.....	.10	1.00	
Hyacinths, Roman, 4 colors.....	.05	.50	3.75
Hyacinths, Dutch, 4 colors.....	.07	.60	4.00
Narcissus, Paper White Grandiflora.....	.04	.40	2.75
Narcissus, Single, 6 varieties.....	.03	.25	1.75
Narcissus, double, 4 varieties.....	.04	.30	2.00
Scilla, Siberica.....	.03	.25	1.50
Snowdrops, Single.....	.02	.15	1.00
Tulips, single, named, 6 colors.....	.04	.50	2.00
Tulips, single, best mixed.....	.03	.25	1.50
Tulips, double, named, 6 colors.....	.06	.35	2.25
Tulips, double, best mixed.....	.04	.30	1.75

JOHN A. BRUCE & CO., HAMILTON ONTARIO LIMITED

## USE FOSTER'S POTS

THEY ARE THE BEST ON THE MARKET



WE MANUFACTURE  
STANDARD POTS  
FERN PANS  
AZALEA POTS  
HANGING BASKETS  
SAUCERS AND  
STRAIGHT PANS

Canada's Leading Pot  
Manufacturers

The FOSTER POTTERY CO., Limited  
Main St. West, Hamilton, Ont.

## At Home with a KODAK

A beautifully illustrated little book on home picture making that not only shows what you can do in picture making by the Kodak system, but shows how it is done. Free at your Kodak dealers or direct by mail.

Canadian Kodak Co., Ltd.  
TORONTO, CANADA

## This furnace is built to keep gas, dust and smoke out of the house.

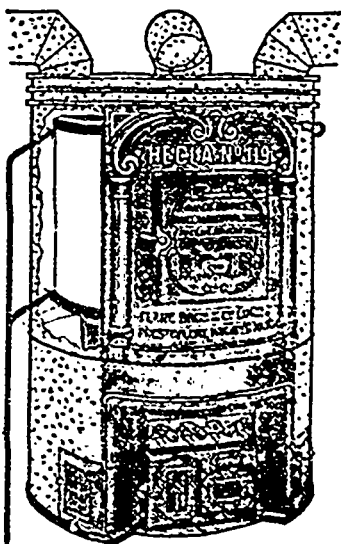
No matter how cosy your home, an odor of gas, however slight, is unpleasant and sometimes dangerous.

The health of your whole house demands a furnace that will give pure warm air without gas or dust.

Gas cannot escape from a

"Hecla" Furnace. Every place where experience has shown that gas might otherwise find an opening has been made absolutely tight by our Patent Fused Joint.

The constant expansion and contraction of the steel and iron parts cannot break this joint.



## "Hecla" Furnace

The "Hecla" has other safeguards against gas. The cast iron Combustion Chamber will not burn through and allow fumes from the fire to pass into the house.

The air jets in the door assure proper burning of any surplus gas.

The Automatic Gas Dampor prevents danger from gas puffs.

There is a special dust flue to carry the ash dust up the chimney.

### The "Hecla" Saves One Ton of Coal in Seven

#### THE FUSED JOINT

In the "Hecla" the steel sides of the radiator are fused by our patented process to the cast iron plates at the top and bottom. This process welds the steel and iron into one piece, making an inseparable joint one that cannot spread with the heat, and one that has proven perfectly gas and dust proof, even after years of service.

How steel ribs added to the "Hecla" Fire Pot make this saving is told in our booklet "Comfort & Health."

#### GET THIS BOOKLET

It tells how to get heat for a minimum cost.



148

CLARE BROS. & CO., LIMITED, - PRESTON, Ont.

PLANS

Send a rough diagram of your house and we will send complete plans and estimates for heating it.

FREE

according to the brand. The day of putting large apples on top, and small ones in the centre of the barrel, is past, and shippers who want to make money in the apple business should pack and grade apples honestly.

"Private sale is coming more into vogue with buyers in England and Scotland. We are the only private sale house in Glasgow. The English buyers who attend here every week during the apple season prefer to see the top and bottom of the barrels, so that they will not buy 'a pig in a poke,' as apples bought at auction very often turn out.

"We are handling a large quantity of apples this year from Australia, which, of course, come in boxes. Only the large sized apples have a ready sale.

"The apples we handled from Ontario last year gave cause for very few complaints, and if packers and shippers would be careful in buying and packing, it would be a great pleasure handling apples compared to what it has been in past years."

### A Western Buyer's Views

The Regina (Saskatchewan) Trading Co., Limited, which handles considerable quantities of United States, British Columbia and Ontario fruit, has written The Canadian Horticulturist as follows: "The pack of Washington fruit is far superior in many instances to British Columbia fruit. The early pack of peaches from British Columbia are often short in weight, the cases not being filled to their full capacity. Customers, therefore, are dissatisfied, and in some cases we have to fill the cases at our own expense. We would suggest that the cases should be either made smaller or the present sized cases filled. Plums in four basket crates, in the early season, are also lacking in this particular. We never have this trouble with fruit from Washington. The shape of the Washington fruit last year was much better than that from British Columbia, and the weight of the cases was always heavier, in some instances (peaches in particular) five pounds a case. The best way to ship plums, is in four basket crates.

"Boxes are preferable to barrels for apples for easy shipping and quick sale, and they give our customers a greater variety of apples for the same outlay, or practically so. A customer can get three varieties of apples in boxes, while they must take all one kind by the barrel, for the same quantity. We would suggest a uniform weight of about fifty to the box.

"Washington apples are better packed than most of the British Columbia stock. If all British Columbia fruit was shipped and packed as was the fruit at the exhibition last year, it would be second to none in this country, or in the States, but there is no use having good fruit poorly packed, for the good packing of fruit does as much towards selling it as the fruit itself.

"We receive some very poor samples of apples from Ontario in barrels, especially No. 2. This, to a great extent, would be avoided by following the box system, as we can open a box on every side if necessary, and see the quality of fruit we are buying and selling. We do not mean to say that we do not receive good apples from Ontario, as Spy's, Greenings, Russets and other kinds are second to none, but we would suggest that all grades should be up to the full standard.

"Ontario plums and peaches are in great demand, but we very seldom receive specimens that are in A1 condition, and usually they are high in price compared with the British Columbia and Washington fruit."

"We have a great demand for small fruits, such as raspberries, strawberries,

etc., but the price is very high. Good strawberries this year have been \$1.00 and \$1.50 a case, and all other small fruits correspondingly high. We cannot help but think that with proper packing and selection of fruits, there will be no fruit grown that can excel in quality that grown in our own country."

**Standards for Boxes**

The following resolutions will be submitted for the consideration of the Third Dominion Conference of Fruit Growers, which will meet in Ottawa next winter, by the delegates from the British Columbia Fruit Growers' Association:

"That this British Columbia Fruit Growers' Association adopt as a standard apple box for all purposes the box 10x11x20 inches, and that we instruct our delegates to Ottawa to use every endeavor in their power to have the words, 'For export only' expurgated from the Canadian Fruit Marks Act, Section 325.

"That the Association recommend that the four-basket plum crate be 15 1/4 x 15 1/4 x 4 1/4 inside.

"That the present pear box, 18 1/2 x 11 x 8 1/2, be the legal size.

"That the peach crate be 18 1/2 x 11 1/4 x 4 1/4.

"That the pear box, 8 1/2 x 11 x 18 1/4, be adopted by this Association as a standard box for crab apples."



**PROVINCIAL NOTES**

**Eastern Annapolis Valley**

Eunice Buchanan

The long drought is ended. In some places farmers had to carry water. Several maples died from lack of moisture. Here and there the sun baked apples on the trees.

Apples are still clean and exceptionally free from worms. Never has there been such a large crop in Nova Scotia. The trees are breaking down under the load of fruit, which is being propped up in all directions.

Peaches are scarce, and there is quite a demand for plums.

The fruit evaporator was destroyed by fire in Berwick at the end of August.

The Kings, Hants and Annapolis Horticultural Exhibition is to be held on October 10th, 11th and 12th at Wolfville.

The big apple buyers in the Canadian Northwest did not seem inclined to buy Nova Scotia fruit until they knew the results of reciprocity.

The first big frosts to destroy tender vegetables occurred here on September 14th and 15th.

All the men in the apple warehouses are very much rushed. Barrels are scarce at thirty-five cents, having gone up ten cents since the beginning of the season. It is now fashionable to head apples for warehouse by removing a hoop and covering with a sack, then replacing the hoop. This saves a lot of unnecessary hammering.

**Western Annapolis Valley**

R. J. Messesger

Contrary to expectations, Gravenstains, of which there is a crop of almost 300,000 barrels in Nova Scotia, are moving off without any trouble and prices are advancing slightly. Kings have sold as high as \$25 a barrel. The D. A. Ry., the principal road through the fruit belt, is to carry off the apples.

The weather has been ideal for growth and apples are large and splendidly colored for this early period. September 18th the hot, dry weather of July and August

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Hyacinths, Roman, White	5c	.40
	Doz.	100
Tulips, Single Early, White, Red, Yellow, Pink	2 1/2c	\$1.00
Tulips, Double Early, White, Red, Yellow, Pink	25c	1.25
Tulips, Darwin Late, White, Red, Yellow, Pink	40c	—
Tulips, Parrot Mixed	20c	1.25
Daffodils (Large single, Yellow)	40c	—
or Small Single, Yellow	15c	1.00
Narcissus (Large Double, Yellow)	30c	—
Giant Paper Whites	25c	1.50
Chinese Sacred Lilies	10c each	\$1.10 per doz.
Anemones, Grape Hyacinths, Freesias, Crocus (Yellow, White, Purple), Scilla Siberia. Any of the above,	10c per doz.	

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has had the effect of making the season earlier by two weeks than usual.

The provincial exhibition at Halifax, owing to its early date, August 28, and also to the request of the Fruit Owners' Association, offered no prize list for fruit this year, and for the first time fruit was conspicuous by its absence.

The Horticultural Show at Wolfville Oct 9th, 10th and 11th should, if a splendid crop of fruit is any indication, be the most successful ever held in Nova Scotia. The prize lists are tempting, the management energetic and if the orchardists are not too busy to bring the fruit we should have a banner exhibition.

Apples are being packed more in boxes than ever before. Barrels are, of course, used by the packers for all but a few choice.

Barrels and barrel stock are very high. Barrels have reached thirty-two cents, and stock is very scarce.

### Montreal

E. H. Wartman, Montreal, Que.

After having inspected a number of crates of Canadian peaches recently from the Jordan Harbor Peach Ranch, and other peach sections of the Niagara Peninsula, I felt prouder than ever that I was a Canadian. These peaches were put up systematically and carefully in one-layer crates, wrapped and padded with wood wool and nicely stencilled. The parcel was most attractive. Some specimens showed bright red cheeks. They were still very firm and I could not think otherwise than that these specimens would attract much attention and that the sales should return handsome profits.

On August 21st at our auction fourteen cars of California fruits, peaches, plums, pears, grapes, nectarines, in all 12,000 packages, were sold by Mr. J. J. Calahan in less than three hours. This is a record for speed. Of the lot four hundred and ninety-four packages were open for inspection. It made a very pretty sight. The fruit was most beautifully packed and landed here in perfect order. We on this side of the line have much to learn on packing and loading cars.

Several cars of plums in baskets have landed here from Ontario loaded seven or eight baskets high, causing so much weight on the lower or floor layer that the baskets gave way and large quantities of fruit on the car had to be scooped into barrels, as the baskets were completely demolished. This was the result of a lack of judgment which will cost someone quite a loss. Although some well basketed and graded peaches are coming, yet a very large percentage are hail pecked and very waxy. This class, of course, sell low.

Many barrels of beautiful Bartlett pears when packed arrived in very waxy condition. It seems too bad, as pears are not a full crop. I would consider the barrel altogether unsuitable for pears. The basket or box would be far safer.

A word once more to those who ship apples in cattle cars, placing the heads of the barrels to the outside. A car arrived here a few days ago with five heads knocked out and a good part of each barrel gone. There should be more protection for the shipper, as these cars are reported so many short, and where is a shipper to get redress? He would gladly see the thief go to jail for three months, but how is he to get pay for his apples? There should be something done along this line.

Shippers of apples for export should feel much pleased at the very cool weather that has prevailed since shipping commenced, as nearly all have landed in good condition at this port except a few St. Lawrence and Gravensteins and such varieties.



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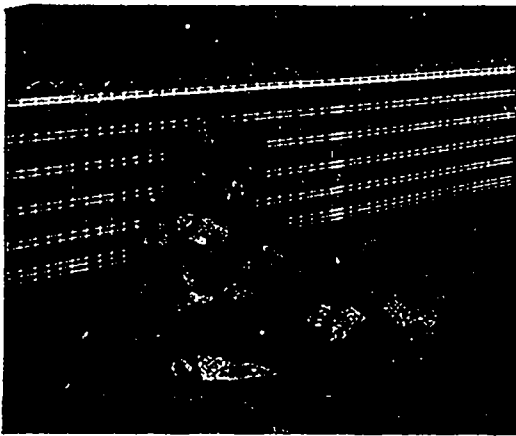
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R. I. Greenings are arriving in good size and well matured for so early a date. The market is well supplied at present with fruits. The banana trade is still increasing. Seventeen cars landed here a short time ago in one day.

### British Columbia

The British Columbia Department of Agriculture is making arrangements to send a thoroughly representative collection of potatoes from the various farming districts of the province to the American Land and Irrigation Exposition at Madison Square Gardens, New York, from November 3 next, where the exhibit will be entered in competition for the Stillwell trophy and \$1,000 prize. An official of the department will accompany this exhibit.

Peach growing does not seem likely to prove as successful in this province as was anticipated a few years ago. Frosts on the low lands have forced many growers to abandon peach growing and to go in for the production of more hardy fruits instead. Speaking on this point recently Mr. Thos. Cunningham, the Provincial Fruit Inspector, said: "There has been a noticeable falling off in the number of peach trees imported into the province, not nearly as many came in this year as last year, and in my opinion it is a good thing, as we shall do better to confine ourselves to cherries. There has been a great increase in the number of apple trees imported."

The Provincial Department of Agriculture this year operated five power sprayers which were used to instruct growers in their use.

Some interest was aroused at Vernon, B.C., by a consignment of strawberries from the ranch of Andrew Sutherland, near One Mile Point, which were offered for sale about the middle of September. The variety was the well known English berry Givonne, which was introduced in the Kootenay a few years ago. It has proved a successful late variety. The berries were thoroughly ripe, of good size and excellent in color and flavor.

### Notes from Niagara District

Linus Woolverton

The ill effects of the hail storm referred to on page 227 in the September number of The Canadian Horticulturist are just being measured up. In apples I find about one-half the crop hail pecked so badly as to be classed either as culls or as No. 3; while the other half is classed as No. 2. The fruit as it hangs is a sorry sight, so much of it was cut through by the hail so badly that rot has set in to finish its destruction. This is also very disheartening when one considers what beautiful clean fruit it all was the day before that hail storm. I am told that a grower near Grimsby was offered \$1,500 for his apple crop on a Saturday and refused it. The hail came the next day and so changed the prospect that he could not sell for \$300.

Peaches and pears, especially the later ones, do not show as much loss as apples; but the early varieties were mostly destroyed.

The grape crop has suffered more than any other fruit. I had the pickers go over and pull off the bad berries from a part of the rows, but found it a very slow job; the rest I left till picking time, and really it is quicker done, for the berries fall off more easily, being dried up. But at least the bunches are left very straggling, for nearly half of every bunch was destroyed. Some ten years ago we had a similar visitation of hail. One begins to wonder whether the

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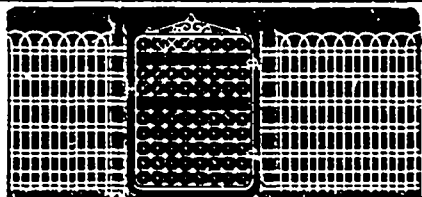
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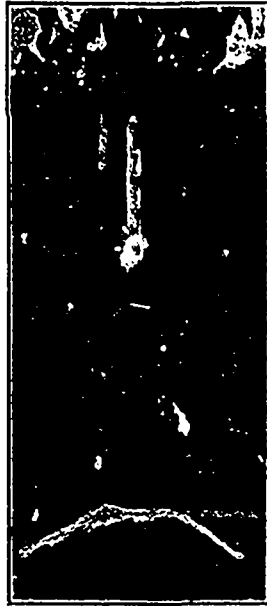
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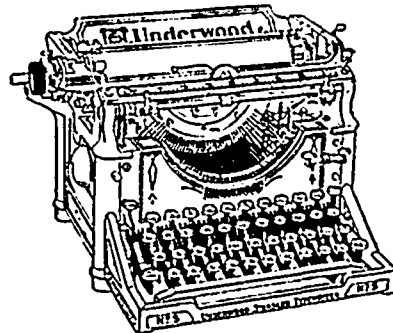
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The canning factories here are obliged to compete with shipping companies over fruit prices. There are two large factories at Grimsby, for example, and several shipping companies, of which the largest is the Ontario & Western. This company ships in car lots all over the Dominion and especially throughout the Northwest. This season they paid forty-five cents for eleven-quart baskets of Bartlett pears, and the factories about the same, and I thought it best to take this certainty rather than to export to Scotland with the hope of getting more.

I began picking and packing apples on the eighteenth of September this year, just as soon as I finished with Bartlett & Elberta peaches. They have ripened a little earlier than usual. I have just sold one carload to go to Manitoba and I believe that before many years almost all our fruit will be going to our great Northwest.

Items of Interest

Prize lists are being distributed for the second annual New Brunswick Apple Exhibition, which will be held in St. John, N.B., from October 30th to November 2nd under the auspices of the New Brunswick Fruit Growers' Association and the New Brunswick Department of Agriculture. The first exhibition, held last year, proved such a success the fruit growers of the province were much encouraged, and it is expected that this year's exhibition will show a still further improvement.

The first consignment of peaches ever received in London, England, from the United States was sold there last month. It comprised two thousand cases of peaches from the Wenatchee Valley, Washington. The Ontario peaches were the only peaches that had previously reached London from this side of the Atlantic.

The Dominion Government has instructed its fruit inspectors in Western Canada to see that all United States fruit boxes that are below the Canadian standard in size must in the future be stamped "short." Many of the United States boxes have false bottoms and are considerably smaller in other ways than the Canadian boxes, but peddlers and dealers in the past have made no distinction between them and the larger Canadian boxes.

The fruit inspection service of the Dominion Government has been organized for the present season. Two additional inspectors have been appointed, one to be located at Saskatoon, Sask., and the other in Western Ontario. Mr. W. W. Brown has been made senior inspector and will give special attention to the work at Montreal and the Lake Ontario section. Mr. P. J. Carey, in addition to his duties as fruit inspector, will devote a part of his time to demonstrations and instruction in box packing. Arrangements are being made for him to visit Nova Scotia in that connection.

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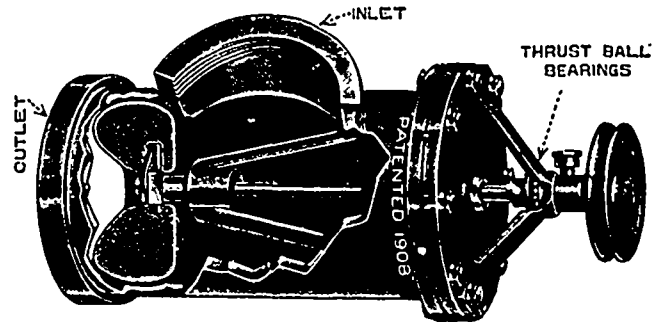
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**Fruit Crop Prospects**

The prospect for apples as a whole in Canada depreciated slightly during the past month. The report of the Dominion Fruit Division, under date of September 15th, states that all Duches and other early varieties yielded medium crops which were harvested in good condition and sold at fair prices. Spys are reported scarce except in the counties adjoining Lake Huron and Lake Ontario, in Ontario, and in Nova Scotia. Baldwins will not be quite a medium crop. Greenings will be abundant.

In the United States the apple crop will be somewhat larger than it was last year. The Crop Reporter, issued by the United States Department of Agriculture, estimates the yield of apples this year at 56.2 per cent. of a full crop, compared with a yield of 46.8 per cent. of a full crop last year for the whole United States. Maine and New York have a medium crop. This is a Greening year in New York as well as in Ontario. Michigan has a much heavier crop than last year. The middle and southern states will produce less, as will also the Pacific coast states.

Though the weather conditions have improved there is no chance for more than a medium apple crop in Great Britain. Up to date, local markets have been well sup-

plied with home-grown apples, clean and much better colored than usual. The shortage in plums will help the demand for apples only slightly. The Continental crop will be fairly good except in Germany.

In the United States the crop will permit of the usual quantity being exported. It is not probable, however, that the apples from the Pacific Coast will affect the eastern markets this year as much as last year. There is a fairly good demand from Australia and New Zealand. A single firm in Seattle is sending 50 carloads to Australia via Vancouver, B.C. There will also be a demand for western apples from the southern and middle states.

Cold storage space in the east is nearly all taken up, though large quantities of apples still remain in the hands of the growers, and eastern buyers are reported to be holding off for lower prices.

The commercial outlook in the United States is slightly depressing, and large operators are moving cautiously. In Canada, the demand from the Northwest is even brisker than last year, and facilities have opened up for supplying a much larger demand.

Cooperative associations in Ontario and Nova Scotia are now in a position to make their influence felt. Both Nova Scotia and Ontario cooperative associations have rep-

resentatives in the Northwest who are greatly facilitating the movements of apples, the result of which will be a large increased consumption. In Ontario the crop is largely in the hands of operators or cooperative associations. This condition will go far to regulate shipments that gluts are less likely to occur either in Great Britain or at distributive points in the Northwest.

General conditions are such as to demand caution on the part of holders of large quantities of apples, but there is no reason to doubt that the present crop can readily go into consumption at reasonable prices.

In Ontario, prices to individual growers ranged from \$1.00 to \$1.50 on the tree, and as high as \$2.00 was received in the case of special varieties. The cooperative associations are holding winter apples at from \$2.00 to \$2.50 for less desirable varieties and \$2.50 to \$3.00 for Kings, Baldwins, &c. Spys appear to be in demand at a higher price than this.

In Nova Scotia, Gravensteins, Ribstons, &c. are leaving the growers' hands at \$1.00 for No. 1's, Kings, Blenheims, &c., at \$2.00 per barrel.

In Nelson and Grand Forks, B. C. Wealthy and Gravensteins are selling at \$1.50 to \$1.75 per box to the grower.



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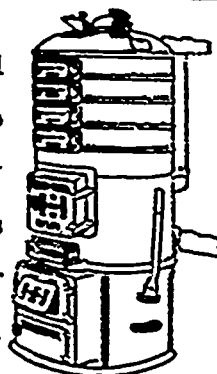
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