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The Exhibition of Fruits

Prof. T. G. Bunting, Macdonald College, Que., President Quebec Province Fruit Growers' Association

THE successful exhibition of fruit is a study that largely comes through practice and experience. It requires a knowledge of what perfection is in the different varieties, as well as how to exhibit fruit in its most attractive form.

A comparatively small percentage of fruit growers will make any pretence at exhibiting their produce. There are plenty of reasons they may give for not doing so. One frequently heard is that their fruit is not good enough.

There is nothing that will so surely encourage a man to grow good fruit as exhibiting and competing for honors at the various exhibitions. It is largely through our exhibitions that our most prominent judges and pomologists get their experience, as here they can see large numbers of fruits of the various varieties, grown under different conditions, competing side by side. No one man can be expected to grow all varieties, and have them at their very best. Thus his experience will be more or less limited until he comes in contact with the larger exhibitions.

Another reason that is sometimes given by the average man for not exhibiting is,—he would have no chance against the larger exhibitors some of whom have been exhibiting for years on a large

scale. Naturally they have profited by their past experience and know just how to get the most out of their fruits, not only in exhibiting but also in growing it. But this does not in any way preclude the small grower from securing a fair share of the awards.

JUDGING

Judging is a difficult position for any man, even of wide experience, especially at the larger exhibitions, and it is true judges do not always agree in their decisions. When we consider that judging consists of balancing up the good and bad points of the different exhibits and then placing them in their relative positions, we can see how difficult it would be to obtain at all times the same placing by various judges. Frequently they are called upon to judge fruits which are below the average and which contain many defects. Then it may be a case of choosing the plate with the least or less serious defects, and in such decisions there may be room for dispute.

Our exhibitions have been one means of training our fruit growers and professional horticulturists in pomology and giving them the practice and experience necessary to qualify as judges. Any professional or amateur fruit grower may feel sure that he will be given a fair

chance at our exhibitions even when competing with the largest exhibitors.

To win a prize should be an honor more highly prized than it sometimes is. At some of the fruit exhibitions as many as fifty to a hundred exhibitors may be competing in the same class for some of our better known fruits, and competition must of course be keen. Those who are unsuccessful—if having the right spirit—will make even greater effort the next year to produce the prize winning fruit.

SELECTING THE FRUIT

The selection of fruits for exhibition purposes will bring out all the finer points of the different fruits, and one cannot really know the number they may possess until he comes in contact with individual fruits in making these selections. A tree of Crawford peaches will have no two alike and when one comes to select five specimens for a plate, he should have some ideal in mind and each should conform as nearly as possible to that ideal. This tends to produce uniformity which should be one of the first things required, even if the plate does not possess some other quality in as high a state as one would like. An unusually large or very highly colored specimen on a plate with others, will



A British Columbia Packing School in Operation. These Schools are conducted in Leading Fruit Districts and have been Productive of much good.



Packing Apples in an Ontario Packing House

not produce uniformity and will hardly secure the prize unless the other plates are markedly inferior. Uniformity cannot be too greatly emphasized in fact one would make no mistake in placing this point before all others. Uniformity consists in having each specimen like all others on the plate as far as size, form, color, freedom from blemish, maturity, and so forth, are concerned.

Freedom from blemishes should be rigidly insisted upon. Many will pick up a plate consisting of one or more wormy apples which of itself should be sufficient to put the plate outside of first place, because the prize-winning fruit should be at least No. 1, and a wormy fruit is certainly not. Too often this point is not given enough attention. Small scab spots, scale insects, bruises, broken stems, and so on, may be found on the fruits that are sometimes exhibited. These should never be allowed. They have frequently been the means of losing first prize for otherwise good fruit.

REQUIREMENTS TO OBSERVE

In order to choose good color, one should know what good color is in the variety under consideration. Abnormally high color is not to be desired, but good color for the variety with all other points equally developed, should produce a plate of the right kind of fruit.

Good color in fruits is usually found on specimens grown in the sunlight individually rather than in pairs or clusters. Most fruit have a natural bloom and this should be preserved without any unnecessary rubbing in handling.

Form, which is almost as important as color, should be as nearly normal for that variety as it is possible to have it. One familiar with fruit will know that the majority of varieties have a distinct

form peculiarly their own, and the nearer this form the better.

One will occasionally look for the largest specimens obtainable. These are usually overgrown, coarse and poorly colored and are seldom to be desired. Specimens somewhat above the average in size with a nearly ideal form, high color and free from blemishes, are the most valuable for exhibiting. Just how large or how small they should be will depend on the other factors that go to make the individual. Avoid abnormal specimens. Quality and texture are largely judged by color and finish. Specimens should be mature, or nearly so, at the time of exhibiting, and for this purpose one has recourse to retarding or hastening maturity for the exhibition. Cold storage should be resorted to when necessary to hold the fruit a considerable time. A cool and comparatively dry place will answer for holding the fruit a short time.

The season of the different varieties is a varietal difference and varies somewhat with the different seasons. The fruits on a tree are not all at the same stage of ripeness at one time, and earlier or later specimens can be chosen as required.

In collections one must know the relative value of the different varieties in order to determine what varieties should go in a specified collection. This is largely gained by experience and comparison with the winning collections.

Score cards are excellent as an aid to standardizing our ideas as regards fruit, and can be followed with profit by anyone intending to make his first exhibits. As experience is gained one unconsciously fixes in mind the points that are important and seeks these in making all selections.

The Prairie Markets

F. C. Hart, Department of Agriculture, Toronto

THE conditions which obtain this fall with regard to the western market for Ontario fruit are without precedent. Nobody knows what is going to happen, and it is impossible to prophesy. We can readily understand, however, that for Ontario the west may be the main market. The difficulty is in forecasting what the consumption will be, and how this consumption will be supplied by apple growing sections other than Ontario. Nova Scotia has a large crop this year and their markets across the water will be seriously curtailed. An endeavor is being made to find a market for some of their fruit in South America. If however, quantities from Nova Scotia are sent west it will have an effect on the market.

Financial conditions in the west are reported not to be of the best. This will have an effect on consumption. A good deal depends on the decreased western crop finding a profitable market on account of the war. A large part of the British Columbia apple crop has been offered to England by the Government. The apple growing sections south of the line however, have a good clean crop, and much of this fruit will, as usual, seek our western market. Various possibilities are open. It may be that the prairie provinces will be flooded with apples from Ontario, Nova Scotia and the United States. This together with lack of money in the west may make this market a very poor one. On the other hand conditions may cause a material increase in the price of all food products, in which apples will have a share, although not to the same extent as the more staple articles of food. There seems to be no doubt that the western grain crop will find a good market this year, and this to some extent will relieve the financial strain that at present exists, so that the market for apples may not be as difficult as might be anticipated.

In view then, of the uncertainty of the western market and of the partial stoppage of our usual export market, Ontario growers should ship only their best fruit of their best varieties west this year, and even then it is likely they will have to be satisfied with lower prices, as the expected prices may not be realized if an endeavor is made to bring up the total returns by shipping inferior grades and varieties. In view of the financial conditions, care should be taken to ensure returns. Credits should be closely watched.

Many customers will buy a box who will not buy a barrel. Boxed fruit is more easily handled.—C. J. Thornton, M.P.

Modern Marketing Problems—How we are Meeting Them

R. M. Winslow, B.S.J.A., Provincial Horticulturist, Victoria, B. C.

FRUIT growing in British Columbia has in it many of the elements of a liberal education. One can hardly hope to succeed without a practical mastery of the problems of marketing as well as of culture and packing. Thus the members of our large cooperative organizations, who pay capable men to handle their marketing must constantly be studying changing problems of market demand and competition, if they are to continue to give confident support to the men they employ to sell their fruit. Many kinds of British Columbia fruit do not lend themselves to cooperative sale and for these lines the individual grower must be his own salesman.

Practically ninety per cent. of all British Columbia fruit that is sold goes to consumers at least four hundred miles away. Probably not more than five per cent. of our fruit is marketed within ten miles of the point of production. Ten per cent. of our apples are marketed from six hundred to twelve hundred miles from home. Such conditions require some study of geography and trade routes, to say nothing of the study of human nature at long range. Because of the long distance from markets and the varying climatic and soil conditions, British Columbia fruit growing lends itself to specialization and, on the whole, requires highly perfected organization for its success.

A PRESSING PROBLEM

One of the most pressing of marketing problems is that of increasing production. In 1900, British Columbia had 8,000 acres in fruit; in 1910, this was increased to 33,600 acres, and in 1913 to 38,200 acres. Of the total planting, not twenty-five per cent. is yet in bearing, but the total production increased from the value of \$200,000 in 1903, to \$1,030,000 in 1913. The 1914 fruit crop on the whole will be 20 per cent. to 25 per cent. greater than in 1913, but the total value will also increase, though not quite in proportion.

The values given are not nearly as great as credited to the crop of 1910 by the Dominion census officers, but it represents only the product handled in recognized commercial channels, and the values are on a f.o.b. basis.

This increasing production, in view of the large market for high class fruit, would be more of a pleasure than a problem if it was not for a steadily increasing production in the north-western states of Oregon, Washington, Idaho and Montana. In these four states, which had practically no fresh fruit industry twenty years ago, there are now over 280,000 acres planted in fruit, which have every reasonable prospect of

commercial success, and an almost equal amount of orchard which is not likely to do so well, but will still add materially to the production. The north-western states moved only about 2,000 carloads of fruit in 1912, but in 1913 they had 10,000 carloads of apples alone, and in 1914 they will have about 15,000 carloads of apples, about 4,000 carloads of peaches, pears, plums and prunes, and over 200 carloads each of apricots, strawberries and cherries, and over 300 carloads of raspberries, in all of which lines British Columbia growers must face formidable organized production, capable of shipping straight carloads of fruits into our markets just as our own crops are coming on.

WHAT COMPETITION NECESSITATES

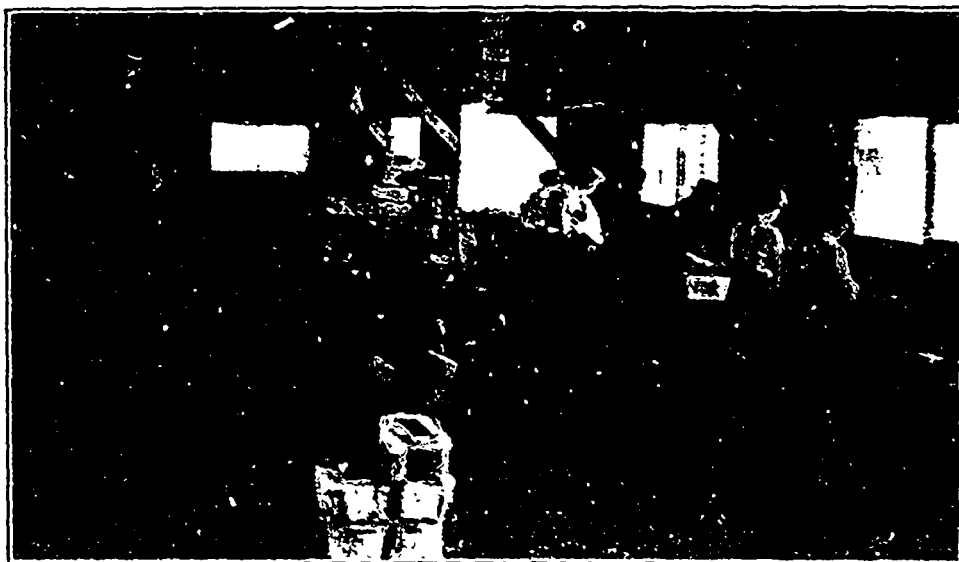
Increasing production and increasing competition will compel our growers, with a new industry on their hands, to be constantly on the alert and to cut cost of production as low as possible consistent with efficiency. Over the whole of the province, cooperative organizations for the purchase of fruit growers' supplies and for the sale of their products have developed. Many of these handle flour and feed, spray materials, and other similar commodities, while in some cases fruit growers are operating highly successful retail businesses in household supplies. Both in the markets of the coast and the prairies, the principal factor in determining our prices and even the entry of our products into these markets, is competition from the north-western states, and the continuous adjustment of British Columbia fruit marketing to meet competition is the most important consideration.

We are being compelled in a multitude of ways to meet American competition.

Most important is the constantly rising standard of perfection in grading, packing, and particularly in the matter of the weight of fruit per package, on all of which our markets are very critical.

The British Columbia packages are, in general, very closely copied after those of the north-western states and California, but changes in their particular styles have to be followed more or less closely by us to meet their competition. Taking a striking and fresh instance: It is generally known that the United States Government has finally passed a law creating two standard boxes for berries, a full pint holding 33.7 cubic inches and a full quart holding 67.4 cubic inches. The Canadian standards are two-fifths of a quart, which is 27.7 cubic inches, and four-fifths of a quart or 55.5 cubic inches. North-western strawberries were shipped into western Canada in dozens of car loads packed in the full pint crate. The consumers made practically no distinction in price between the American full pint and our four-fifth quart, which held one-half more berries. The fact must be said that the consumers took very kindly to the full pints as against our four-fifths. The Dominion Inspection Service do not require it to be marked short in the regulations and in consequence our growers must in 1915 adopt the full pint.

The full pint is also used for American raspberries as against our two-fifths quart, which holds about nine ounces as against ten and a half ounces in the pint. The advantage in this case was on our side, but the trade handling American berries objected strongly to handling our hallack of less capacity, and it is likely if not next year, the following year, we will be compelled to come to the full



Fruit Packing on the Fruit Farm of J. W. Smith, Winona, Ont.

pint for raspberries. It will be used experimentally next year by the Department of Agriculture in cooperative experiments.

All apples from the north-western states are marketed in a box 10½ by 11½ by 18 inches, that has practically the same cubic capacity as our own which is 20 by 11 by 10, but it has the favor of the trade and the consuming public to such a degree as to warrant our adopting it for our Canadian business. Over one-half of the British Columbia apples this year have been marketed in the so called American box to

meet the demand, and it is found to be facilitating sales considerably.

I am of the opinion that, generally speaking, where the trade favors American practice, as to packages, grades, packing, and so forth the most effective way of meeting competition is to adopt the American standards. Because of the fact of our Federal law governing many such matters and of the natural conservatism of British Columbia fruit growers, we do not as quickly arrive at conclusions with respect to trade practices as do our north-western competitors.

(To be continued.)

Packing Fruit for Exhibition and Market

E. F. Palmer, Assistant Provincial Horticulturist, Toronto, Ont.

THE box package has been rapidly gaining in favor throughout Ontario during the past few years because of its superiority as an apple package only. It is reasonable to expect too, that it will continue to gain in favor until a large percentage of Ontario's No. 1 apples, at least, are marketed in this way. And, in the face of competition with western box packed fruit together with the fact that the markets for our best fruit are gradually coming to prefer the box package it is certainly no mistake to begin to use, or continue using, the box.

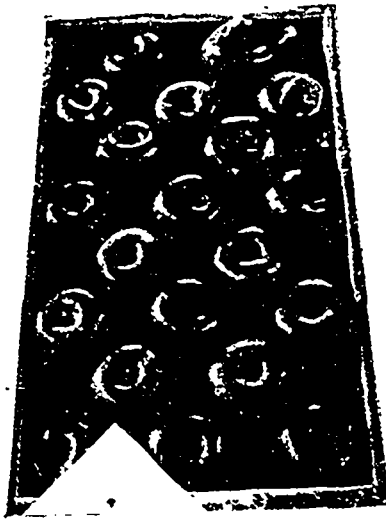
It would seem also that if the present European War is long continued, only the best fruit, the most attractive, will find a ready sale for this season at least. Prices on necessities are already going up rapidly at the time of writing (13th August), and this will mean that many people who, under normal conditions buy considerable fruit, will be unable to afford any. Fruit must be regarded as a luxury, not a necessity, and while the price of one goes up the other must go down in proportion. It must also be borne in mind that Europe and particularly Germany, is a large consumer of American apples. If this market is cut off this year, as seems likely, there will be much more fruit to be disposed of on the home markets. In the face of these last conditions, it is evident that fruit growers should make every effort this year to put out only a clear, honest, attractive pack, whether in boxes or barrels.

STYLES OF PACKS

Of the three common styles of packs, the straight, the diagonal, and the offset, the diagonal has much the most to recommend it, and is used far more than either of the others. With the straight pack each apple rests directly on the one below it and there is, therefore, great danger of bruising. With the diagonal pack, no one apple rests directly on another, but cushions in between the apple below, thus greatly reducing any

chance of bruising. The diagonal pack lends itself to a much greater variety of sizes and shapes of apples. It is far easier to make a good commercial pack with it and more weight is secured to the box as the apples fit more into the crevices, making less waste space.

The third system of packing—the off-set—is generally considered inferior to



3-2 Diagonal; 5 Layers—100 Apples

the diagonal. However, it is sometimes desirable to use it with inexperienced and unscrupulous packers, as any defect in the pack is easily detected. With the diagonal system it is much easier to vary the size of the fruit in the bottom and centre layers without materially spoiling the appearance on top. Again, in the off-set pack the spaces show at the sides, giving the box an unfilled appearance, whereas, in the diagonal, only small spaces occur, and these at the ends of the box. Another point against the off-set is that it contains from four to twelve apples less than the diagonal, making the box light in weight.

The term diagonal comes from the fact that the rows do not run straight across the box, but go at an angle. It includes the commonly called 2-1, 2-2,

and 3-2 packs. In beginning the 2-2 pack, an apple is placed in the left-hand lower corner of the box and another midway between the cheek of the first apple and the right hand side of the box. Two spaces of equal size will then be left. Into these spaces two apples are placed, it being understood that the apples are too large to fit across the box. The spaces left by the last two apples placed are then filled, and so on, until the layer is completed. The second layer is packed in the same manner, except that it is started in the lower right hand corner for the half-tier packs. This throws the apples of the second layer into the pockets formed by the first layer. When completed the third layer will be directly over the first layer and the fourth over the second.

In the straight packs the rows run straight across the box and parallel to the sides. It is very neat in appearance, but as stated above, it is rather severe on the fruit, as each apple presses directly against surrounding apples rather than into the crevices. As the straight pack should be discouraged on account of its several faults, no description of how to pack will be given here. It is necessary to remember only one thing; the apples must fit snugly across the box lengthwise and in height. It is quite apparent then that a comparatively small percent. of an orchard run of apples will be of right size to pack properly in the straight pack. If the accompanying illustrations are studied, the idea of the different packs can be seen and understood far better than from any descriptions that can be given of them.

The off-set pack, with ordinary sized apples, is started by placing three apples firmly together cheek to cheek in the lower end of the box with the first of the three in this row against the left hand side. The space then left is all on one side of the box. In this space the first apple of the three constituting the second row is placed. When the remaining two are in, the space will be on the left hand side. The layer is thus completed, the space alternating from side to side of the box. The second layer is started in the right hand lower corner by placing the apples into the crevices formed by the apples of the first layer. In the completed box the alternate layers will then be directly over one another. For the pack, as in the diagonal 2-2, it is necessary to have apples too large to fit for across the box. Similarly the 3-2 diagonal requires apples too large to go five across.

In the straight pack, before the lid is nailed on, the apples at either end of the box should come up a little better than flush with the top. With the diagonal the ends should be a little higher—about

one-quarter of an inch to three-eighths of an inch in all. Then from either end there should be a gradual bulge amounting at the middle of the box to about one and one-half inches. Thus, when the lid is nailed on thoroughly, there will be a bulge of practically three-fourths of an inch each on top and bottom. Less bulge is desirable with the straight packs on account of their unyielding nature. There is no settling of the apples into the crevices as in the diagonal.

The proper bulge is obtained, in the straight pack especially, by selecting apples that are a trifle smaller for the ends. With apples that are being packed on the cheek, it sometimes becomes necessary to turn the end rows flat to ensure the desired bulge, and at the same time have the ends low enough.

In the diagonal pack the small spaces left at the ends of each layer aid materially in securing the proper bulge. This, and pulling the apples tighter towards the centre of each layer, is sufficient to give the necessary bulge in wrapped fruit. By packing closer in the centre you close the pockets between the apples more, and the next layer will not go so deep down in, and therefore builds up the centre. The ends being left a little looser, the pockets are opened a little more and the apples drop in further, and therefore do not build up so high. Practice alone will give the knowledge of just how tight to pack the centre or how loose to pack the ends.

Then unwrapped, of course, this difference in firmness cannot be made

and the packer has therefore to take advantage of the small irregularities and differences in the sizes of the apples. The difference in size must not be so great as to attract attention. It is essential to begin the bulge with the first layer of fruit and to pack each layer with the same end in view, placing the slightly larger or higher apple in the centre rows of each layer.

The bulge should form an unbroken arch when the box is finished, so that the pressure of the lid will be equally distributed over the fruit. A bulge high in the centre and dropping off to the sides will not be held firmly in place by the cover, causing the whole pack to become loose.

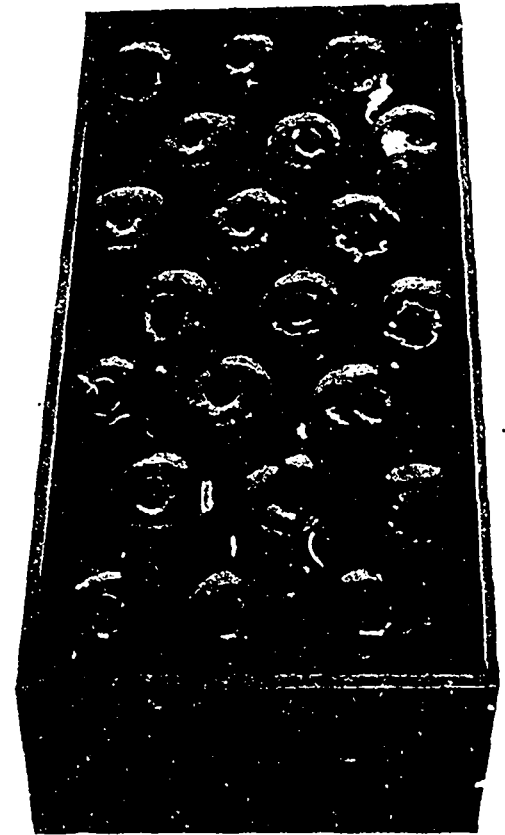
GRADING

Without good grading, rapid box-packing is impossible. To do good work and to do it rapidly, the packer must have before him an even run of apples in point of size and quality. In fact, packing, simplified, is simply grading and sizing, then placing the fruit in the box so that it fits systematically and snugly. Unless the fruit is sized properly, it cannot be made to fit systematically.

STEMMING.

To prevent the stem of the apple being bent over by the top and bottom of the box and puncturing the fruit, stemming is practised to some extent. Part of the stem is simply removed by small pincers especially made for the purpose. It is questionable whether stemming is practical in commercial box packing. In barrel packing, where only a small percentage of the apples have to be stemmed, namely, the face layer, it is an economic operation. With boxes however, two layers, the top end and the bottom, or half the apples in the box, are stemmed. For exhibition fruit this may be permissible, but there seems to be a fairly general impression in Ontario that all box packed fruit should be stemmed. It would be far more economical to pack those varieties of apples that require stemming calyx end up or on their side, for stemming must add considerably to the cost of packing. A good packer will pack half a box in the time required to stem the fruit for the top and bottom layers of a box. Thus where he would pack a box and a half when not stemming, he would only pack a box if he were required to stem the fruit. This seems an increase of practically one-third in the cost of packing, which is far too big an expense to overlook.

Wrapped fruit needs no stemming, as the wrappers prevent any puncturing by the stems. The apples give more when the pressure of the lid is brought to bear, tending to obviate any danger. Furthermore, since the fruit is wrapped, it matters very little whether the fruit is packed stem-up, calyx-end up, or on its side.



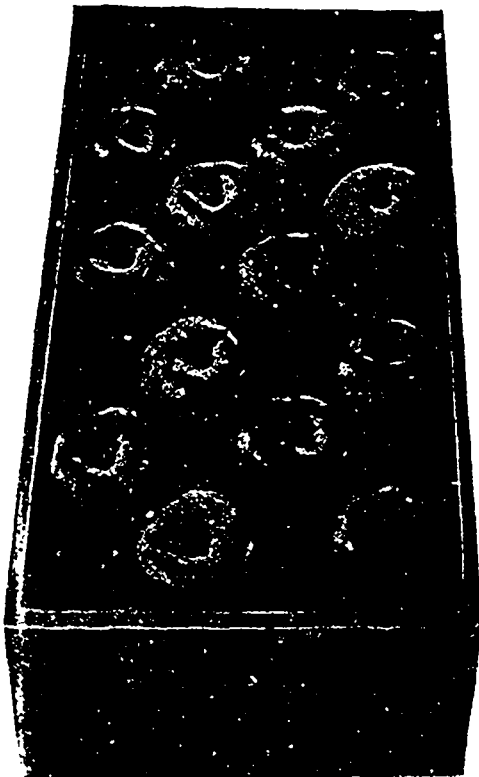
Offset Pack; 4 Layers—84 Apples

In varieties of apples, therefore, in which puncturing is to be expected, the top and bottom layers may be packed calyx-end up or on their cheeks. There is no serious objection to packing apples on their sides even when unwrapped, and there certainly is no objection to packing wrapped fruit so. It is better, however, to pack the apples on their ends whenever possible and use the side pack only when necessary.

Time to Wake Up.—On our average Ontario farm the tillage and care of the orchard is the most neglected part of the farm work. Spraying pruning, cultivating, the sowing of cover crops, the scraping off the old bark of the trees and grafting worthless trees to good fruit, is exceptional rather than general.—W. J. Baker, Warkworth, Ont.

Those who admire our fruits as they see them from day to day in boxes, barrels and baskets or on the trees, should be able to see in them real beauty and inspire their minds to produce something beautiful, yet simple, in the way of a trade mark, that would perpetuate and increase our trade in Canadian fruits from year to year.

A man or an association having only a small quantity of fruit to sell can neither command the attention of buyers nor make an impression on the market.—Prof. J. W. Crow, Guelph, Ont.



2-2 Diagonal Pack; 4 Layers—56 Apples

The Modern Herbaceous Paeony*

H. W. Cooper, Ottawa, Ont.

THOSE who have observed the improvements made by specialists in the modern herbaceous paeony, which is the most hardy of all the showier hardy perennials, now concede to it the premier position as the gayest and most brilliant of border plants. In fact it bids fair to outrival the rose as the Queen of all early summer flowers. It gives its wealth of bloom each and every year with scarcely any attention other than to maintain the fertility of the soil. It is perfectly hardy, standing our winters in the most exposed positions without injury and without any protection whatever. In fact it is now conceded that this plant is better without winter protection, the frost aerating and sweetening the soil.

Paeonies are beautiful from the moment their carmine stems and leaves push through the ground in early spring until flowering time when they are the glory of the garden. Their foliage is ornamental throughout the summer, and again in early autumn when their foliage is changing into rich bronze and red tones as the early hoar frosts begin to ripen them. The fragrance of the modern paeony in some varieties is redolent of the purest attar of roses; others resemble that of violets, and others that of the carnation.

SOIL AND LOCATION

Any soil or situation suits the herbaceous paeony. They are indifferent as to whether the soil is light or heavy, or whether they be planted in full sun or half shade, in beds by themselves, in the border or in the grass. To get the best results the ground should be dug to at least two feet in depth in plenty of well rotted cow manure or other suitable fertilizer added before planting. Great care must be taken to see that the manure does not come in direct contact with their spindle shaped roots, or the crowns. Growers now agree that this is the cause which promotes the disease they are sometimes subject to.

PLANTING

This is best done in September after the first frosts, or during October. The plants have then matured their growth and root action is dormant for a short time. This permits them to get established without losing a season's bloom.

Propagation may be accomplished by lifting large plants in the autumn and dividing. Make sure that there are one or more eyes to each piece, and immediately replant in suitable soil. Place the crowns not more than two inches below the surface. New varieties are obtained from seed, which is sown as soon as convenient after ripening. The seeds

are planted in a shallow box or pot and covered about half an inch. The pot or box being placed in some quiet, shady spot in the garden and watered occasionally through the next summer. The seedlings appear the second spring after sowing. Give them attention until the autumn when they may be transplanted into open ground and grown on to flowering size, which is usually four years from the time they germinate. If a few seeds are planted each autumn after the first four years you will have new varieties coming into bloom each season, some with single and some with double flowers. There is a possibility of obtaining a new variety of merit worth naming.

The fragrant blooms are of extreme beauty for room decoration. They should be cut just as the bud is expanding. Their delicate tints are not then faded out by the sun's rays, and they will keep in good condition for about a week.

VARIETIES

I will not attempt to say what are the best varieties to grow, for this is largely a matter of individual taste; all the named varieties are good. I will, however name a dozen good sorts, and which are easily procurable at reasonable prices from dealers in this class of plants:

Whites—Early, Festiva Maxima; mid-season, Duchesse de Nemours; late, Marie Lemoine.

Pale Pinks—Early, Umbellata Rosa; mid-season, Eugene Verdier; late, Albert Crousse.

Deep Pinks—Early, Rosa Superba; mid-season, M. Jules Elie; late, Livingstone.

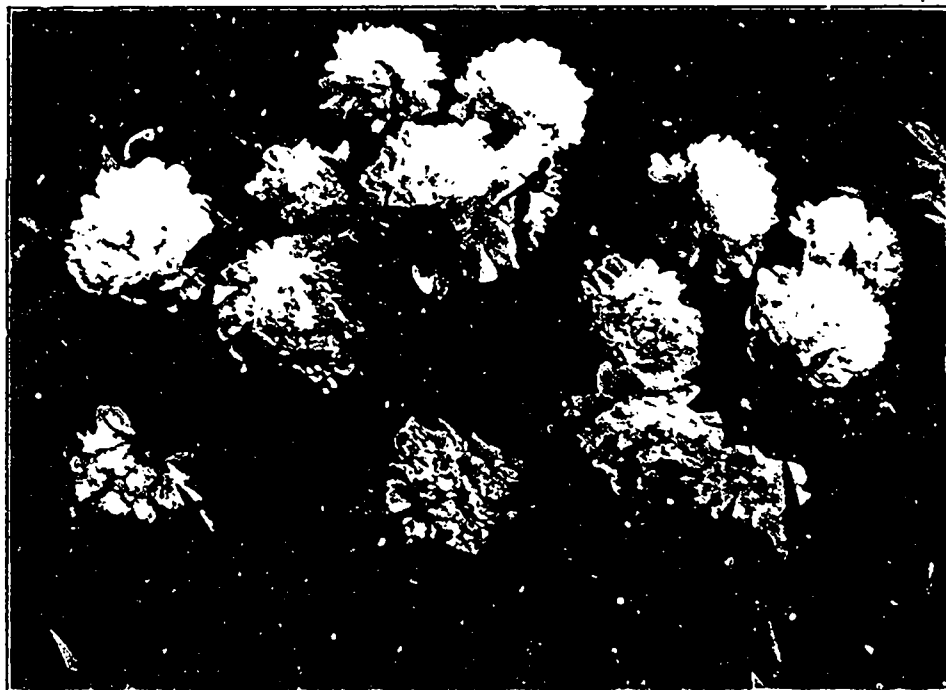
Reds—Early, Adolph Rosseau; mid-season, Felix Crousse; late, M. Krelage.

Anyone cultivating a selection from the above list will be well repaid by the fragrance and the abundance of bloom with which his garden will be filled.

Garden Notes

R. S. Rose, Peterboro, Ont.

Loosen the earth around each plant. A good tool to use for this purpose is a mason's trowel sharpened at the edges. It gets under the weeds and through the soil easily without disturbing the roots of the plants. Take a section of the bed each day and do it thoroughly. Do not try to do more than you can handle. Do a little at a time, and do it well. It will pay better in the long run than trying to do more and skimping it. In the dry weather it would be a good plan to put around the plants that need more moisture than others the grass clippings before watering in the evening. This will retain the moisture and the plants can drink it in at their leisure. If your garden is a large one it would also be a good plan to water by sections and give each section a good soaking. This is better than watering the whole garden with a light sprinkle, which is worse than not watering at all. The water should reach the roots, and not only go down an inch or two. Surface watering is useless.



Paeony Festiva Maxima: One of the Finest White Varieties in Cultivation

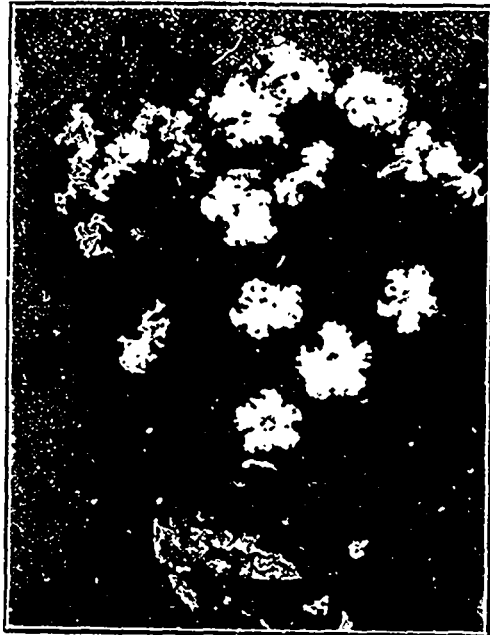
This plant, grown by J. R. Thompson, 53 Ontario Ave., Hamilton, had sixty-four buds on it at once. Several of the flowers measured eight inches across.

*Read before the Ottawa Horticultural Society.

Fall Notes for the Flower Garden

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

THE first early fall operation for the plant lover is to take cuttings or slips of any perennial plants that are required for keeping over winter. Coleus, salvia, iresine (*Achyranthes*), and ageratum cuttings should be taken early in September before cold, chilly nights



A Petunia Plant in January

Prepare this fall to have plants like this next winter. This plant was dug up from the border in October.

appear, as cuttings from these plants do not root successfully after they have been chilled, much less when they have been frozen. Geranium cuttings may be left until a week or so later on, but even these should be taken before the leaves are touched by frost, as they rot much quicker and better.

The best material to root cuttings in is clean, gritty, rather coarse sand, sand that will make good stone mortar. Pit sand, river sand, or rinse sand from the side of a stream or from the roadside will do for the purpose. It should be free from vegetable and woody matter such as leaves, sawdust, or chips. A little light soil with no fertilizer in may sometimes be mixed with the sand but pure sand usually gives the best results. Moisten the sand well and pack it firmly in a shallow box that has holes bored through the bottom for drainage purposes. Empty fish boxes from the grocery store that haddies have been packed in do well for this purpose. Soak these boxes in water before using to dissolve any salt that there may be in them. Flower pots may also be used to start the cuttings in.

Select a healthy growing cutting from terminal or side shoot. A fairly short jointed cutting is usually best. The base

of the cutting should be cut flat across with a sharp knife close underneath a node or joint of the stem where a leaf stem joins the stem; the texture of the base of the cutting is an important point. It should not be too hard and woody or too soft and pulpy. About the texture of a young tender carrot is about the right texture. Securing the proper texture for the base of the cutting is of far more importance than the size or length of the cutting. Cut off about one-half of the lower leaves close to the stem. Remove all bloom buds and blossoms where possible. The stem of geranium cuttings should be about four to five inches in length; coleus iresine, salvia, and ageratum cuttings about an inch shorter than the geranium cuttings.

SETTING AND CARE OF CUTTINGS

A hole or drill should be made in the sand deep enough to set about two-thirds the length of stem upright in the sand. Water the cuttings well and set the box in a temperature of sixty to seventy degrees Fahr. Shade them from the hot sun and keep the sand well moistened until cuttings are rooted, which should be from four to six weeks or longer after setting. Pot the cuttings when rooted, singly, into two or two and a half inch pots, or put them in shallow boxes about two inches apart in rather sandy potting soil. The rooted cuttings may be kept in the sand all winter and potted in the spring if the sand is not kept too wet.

KEEPING OLD PLANTS

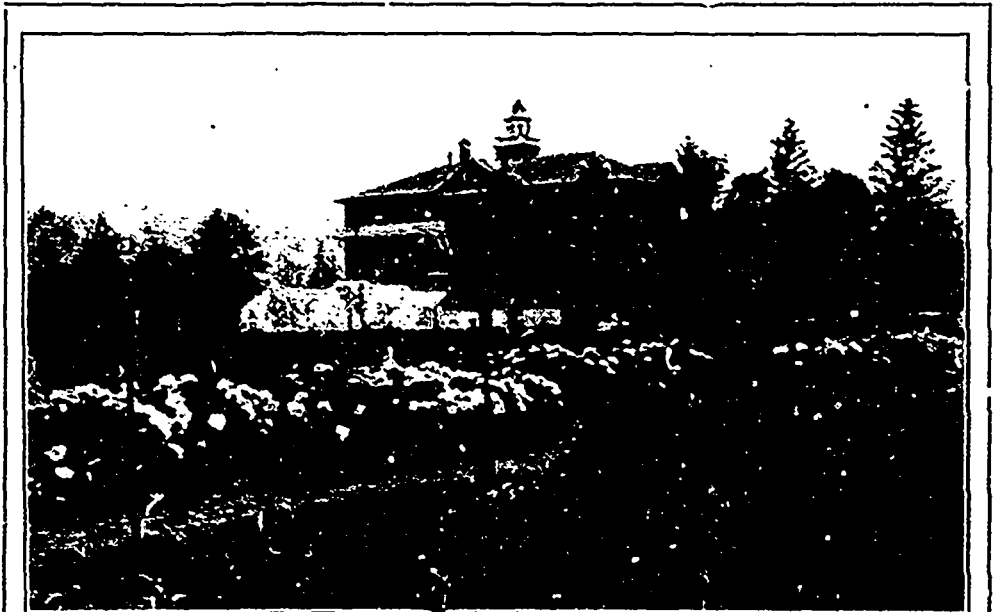
Dig the plants about the end of September before the stems are frozen. Cut the tops well back, about one-half the

growth, and shorten the roots about one-third their length.

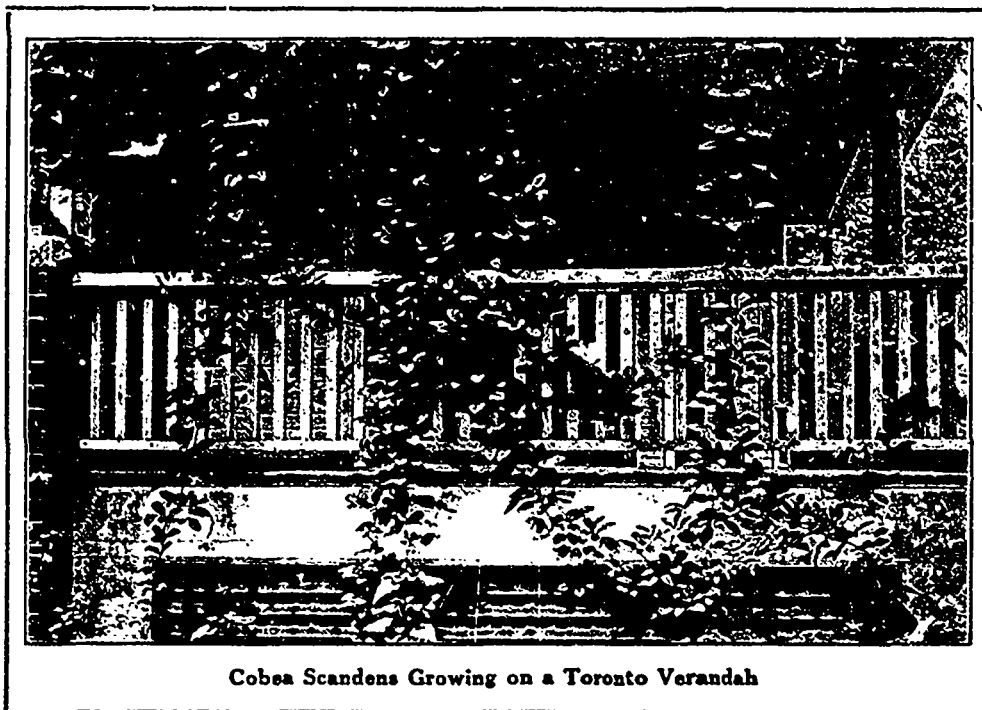
Plant the roots in sand or sandy soil in pots or in shallow, well-drained boxes about four inches deep. The plants may be set quite close together. A box four inches deep and twelve inches square will hold sixteen or eighteen good-sized plants when tops are cut off. Water them well once and set the box in a cool window, temperature about fifty-five degrees. These plants may be potted after five or six weeks' time singly into three or four inch pots when rooted and starting into growth. Or the box or pot may be placed in a light basement or cellar in a temperature of forty to forty-five degrees, and the sand kept only barely moist. These may be brought out into the window in a temperature of about sixty degrees later on, watered and started into growth, and potted singly into four or five inch pots in good soil. Plants treated in this way will usually make splendid plants for the window in spring and for setting out in the border in early June.

OLD PETUNIA PLANTS.

If you have an extra fine double or single flowering plant of petunia growing in the border and wish to save the plant, the top growth can be cut down early in September to within about eight inches of the ground, leaving any young new shoots of growth at base of plant. After a week or so, dig the plant up carefully with all the roots and soil possible attached. Pot the plant into a not too large-sized flower pot, a four or five inch pot, in good soil. Water it well and set it in the window and keep the soil well



Experimental Paeonies at the Ontario Agricultural College, Guelph, Ont.



Cobea Scandens Growing on a Toronto Verandah

moist (not too wet). When well rooted in the small pot which should be in five or six weeks from the time it was first potted, repot the plant without disturbing the root system into a two size larger flower pot. Put some broken pieces of flower pot in the bottom for drainage, and use good, rich, loamy potting soil for this second repotting. Keep the plant in a sunny window in a temperature of fifty-five to sixty degrees, not too near the radiators. The young, non-flowering shoots of petunias will root readily in sand the same as other cuttings mentioned if taken before they are frozen.

FREESIAS.

Six or eight freesia bulbs put into a five-inch flower pot before the end of September will usually produce their sweet-scented blossom by Christmas or New Years. Water the bulbs and put them into the window as soon as potted. A great many people pot these bulbs and put them in the cellar the same as Dutch bulbs to root. This is a mistake. They should be put in the window as soon as potted and kept there until they flower. The plants must be staked and tied up when about eight inches high.

CALLAS.

If callas have not already been repotted in July or August, it would be best now to dig out about an inch or a little more of the top soil and fill in (top dress) them with a good, rich compost of about half dry cow manure and good loamy potting soil mixed together. A little sand or leaf mould or both, about one-sixth part, may be added to this if the soil is at all of a heavy nature. This method of top-dressing, as it is technically termed, is very often better than repotting callas. Many other bulbous

rooted plants can often be treated in this way rather than to repot them, especially when they have passed their regular season of repotting. Callas should be taken into the window before frosts. Do not place them too close to the heat radiators.

FALL PLANTING.

All border plants having thick, fleshy rhizomes or root stocks, such as paeonies, German iris, *Dicentra spectabile* (Bleeding Heart), Funkias or Day Lily, or the *Hemerocallis flava* (Lemon Lily) or the later flowering *Hemerocallis fulva* (Tawny Lily), lily of the valley should be planted or transplanted late in September or early in October. Bulbous rooted lilies such as the Madonna, Tiger and Elegans type of lilies are best planted or transplanted early in September.

Avoid planting German iris or the Funkia or *Hemerocallis* too deeply in the ground. The fleshy rhizome roots of these should be only just under the surface of the soil when planted. Bulbous rooted lilies such as the Madonna and the other varieties named should be planted four to six inches under the surface. In light soils plant fully six inches deep, in clay soils a little shallower. If the lilies are doing well every year, it is best not to dig or disturb them, as they often do not do so well after having been removed or transplanted. It is best to "leave well alone" in connection with the culture of lilies.

After an experience of several years in garden work, I should feel it an irreparable loss to attempt to teach in either a rural or city school without the inspiration which a garden affords.—Harvey Gayman, Jordan Harbor.

Cobea Scandens

J. McPherson Ross, Toronto, Ont.

Cobea Scandens has long been grown as a greenhouse or conservatory climbing plant and under glass is a perennial. Outdoors wherever known, it is one of the most popular of annual climbers.

Being a remarkably free grower and the ease with which it attaches its tendrils to anything convenient to cling to after once established you can almost see it grow. The foliage is a delicate green—leaves oval, regular and free from any known insect, it is to be recommended as a useful plant for covering arbors, trellises and verandahs, while the permanent creepers of slower growth are making headway, such as roses, aristolochin and honeysuckle.

Besides being a rapid climber with nice foliage, *Cobea Scandens* blossoms very freely in tulip-like purplish or greenish-white flowers set in a saucer-like corolla, hence the name cup and saucer plant. It is grown readily from seeds by florists, or anyone for that matter, by sowing early in March or April under glass. Seedsmen usually direct growers to place the seed on edge when planting in seed box or pot, but this is unnecessary. It is a great favorite with city dwellers.

Garden Notes

Lawn grass may be sown early in September, provided the ground is moist enough.

Geraniums and other plants that are to be kept in the house this winter must be taken up in September.

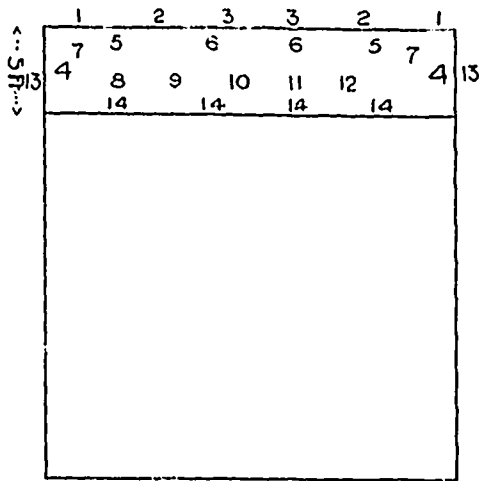
As soon as the leaves fall make hardwood cuttings of the currant about eight inches long and plant them in the garden. They should become well rooted by winter.

Some Uses for Fallen Leaves

Ruby A. Tillett, Hamilton, Ont.

In districts where gardeners have command of or easy access to plenty of recently fallen leaves, they are advised to make the best of their opportunities to get together as large a heap as possible. Unlike stable manure, even a large mass of leaves may be stored quite near the dwelling house without causing any inconvenience. Whenever possible an open shed or other protection should be provided in order to prevent the leaves being constantly wet. These leaves will be found of great value later on for mixing with equal parts of freshly-gathered horse manure when making up the earliest hot beds for forcing bulbs into flowers or such highly-appreciated forced vegetables as asparagus, sea-kale or rhubarb, or such popular flowering plants as begonias, gloxinias, petunias and lobelia.

Where the interior of the house is no suitable for making up a hotbed in the usual way, or other reasons exist which should not be made up, it will be



Garden Plan A

1. Golden glow; 2. hollyhocks; 3. hardy aster or Michaelmas Daisy; 4. bleeding heart; 5. delphinium; 6. campanulas (Canterbury Bell); 7. phlox; 8. gypsophila (Baby's Breath); 9. doxincum; 10. achillea; 11. pyrethrum; 12. gaillardia. Grandiflora; 13. sun flowers; 14. Iceland poppy.

found a really good plan to fill a rather large deep wooden box with this mixture standing it in one corner of the house where it may be covered with large sheets of glass, or failing that, light newspapers. Such a box will be found to retain a steady heat much longer than would have been the case had the box contained only manure; usually long enough, in fact, to allow whatever seedlings are raised in it to become quite sturdy before the heat has entirely left the bed.

If sufficient can be gathered to make up a hot-bed of the usual dimensions for growing cucumbers and other vegetables in frames, the gardener with an eye to the future should take full advantage of the chance, for if these large beds are made up as advised for filling the boxes, the heat after doing duty next hot season, should turn out a small gold mine to those whose aim is to grow universal favorites like begonias, chrysanthemums and fuchsias, to perfection. In fact, if to this mixture is added equal parts of good sound loam a compost well suited for the majority of soft-wooded plants will be to hand.

Others having no glass houses, whose ambitions lie in the direction of large clean roots of almost every kind of vegetable and those of good shape and quality, would find the contents of such a heap very valuable, for even when used liberally, badly shaped or forked roots rarely result. In fact for show carrots, beet roots and parsnips this may be relied upon by the addition of a few potfuls to a barrowload.

The value of fallen leaves as a covering and protection for old stumps of scarlet lobelias, fuchsias and other flowers, may be known to many. A few dry leaves banked around the stems of choice roses often saves them from dying.

Frames, containing lettuce, endive, parsley, or some flowering plants, which do not require much protection in severe weather, can have a good bank round them as another useful way of utilizing fallen leaves. This outside layer not only spares covering material, but as it helps to keep up a greater warmth inside the frame, the plants inside receive greater benefit than when covered only at night.

Even leaves alone, a good heap of them, over well-established crowns of rhubarb and sea-kale, soon start these into growth, and although the growth may be more tedious than when manure is used the result is much finer. The time to do this is after the turn of the days. A piece of wire netting or a tub or box should be placed over the stools before covering them. After this place a wheelbarrow load over each clump.

Simple Garden Plans

R. S. Rose, Peterborough, Ont.

By laying out your garden in the fall, it can be put into good shape for the spring planting. If the work is all left to be done in the spring there will be too much to do to get the ground into proper shape in time for bedding out plants or sowing the seed for an-

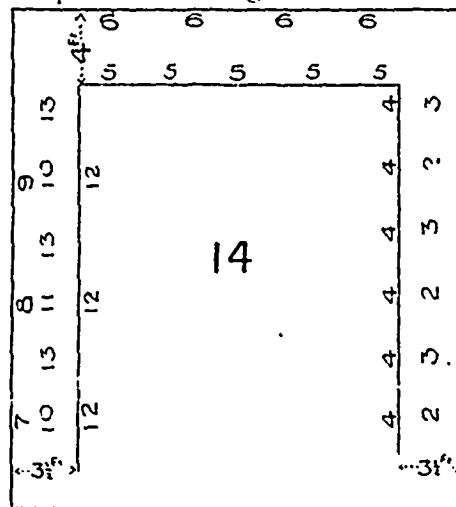
yard that gets lots of sun and has fairly good loam. After your beds are finished cover with a top dressing of decayed manure and dig this into the earth after the frost is out of the ground in the early spring.

Floral Notes

I have a seedling Pelargonium, leaves very round, and young shoots branch out from stem. It is a year old, but has not yet flowered. I would like to know if any subscriber has one like it, or anything on the market similar to it.—Chas. Harlock, Hillside P.O., Muskoka, Ont.

The Wistaria cannot be grown out of doors successfully in Ontario outside of the Niagara District unless under special conditions, such as winter protection. Even there they are sometimes injured materially during winter.—Wm. Hunt, Guelph, Ont.

There are two points in the culture of gladioli by amateurs that should be emphasized: the season of blooming of the variety and the size and age of the corn. In European catalogues buyers are advised of the season of blooming of each variety offered, while in America little attention is given to this important piece of information.—John Cavers, Oakville, Ont.



Garden Plan B

1. Background, phlox and perennials in various colors. 2. four o'clocks; 3. stocks; 4. sweet alyssum; 5. dwarf nasturtiums; 6. sweet peas. 7. sun flowers; 8. hollyhocks; 9. golden glow; 10. salvia; 11. asters; 12. pansies; 13. sweet William; 14. vegetables.

nuals. This should be done from a month to a month and a half before bedding out time, so leave as little work as you can for the spring, when you will have your hands full of other work besides laying out the beds.

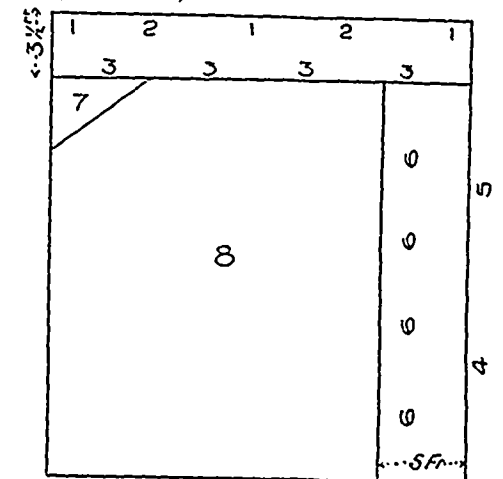
In the hope that it may help some I here give some plans for a small back garden with names of some of the plants that can be raised to advantage.

In diagram A the flowers are at the rear. Vegetables can be grown in the front of the flower bed, or it can be left for a grass lawn.

In diagram B the flower beds are at the sides and end. The centre can be used as one thinks fit.

In diagram C the flower beds are at one side, with spaces left for vegetables.

The plans are all simple and can easily be made with very little work. The seeds or plants can be got from any of the numerous seedsmen or nursery men, and can be grown in any ordinary back



Garden Plan C

1. Golden glow; 2. golden treasure; 3. nasturtium; 4. sweet peas; 5. morning glory; 6. asters; stocks, sweet william and other annuals; 7. rubbish heap, with sun flowers in front; 8. vegetables.

Mushroom Culture on a Large Scale

B. H. C. Blanchard, B.S.A., Eliershouse, N. S.

A CROP that requires years of study and experience before the grower can be assured of a regular yield is mushroom. The culture of mushrooms is somewhat uncertain from start to finish; in spite of all precautions, the crop may fall away below expectations. A grower who has had more than ordinary success is Mr. A. Collins, mushroom expert for Church & Illsley, of Falmouth, N.S., whose methods, as related to me during July, are full of interest.

Speaking from 30 years' experience, Mr. Collins stated as his belief that where most growers fail is in the preparation of the manure. The equipment required is not expensive; any cellar will do that has a dry, hard bottom. Mushrooms require darkness but the few windows in the ordinary cellar need not be darkened. The bottom may be clay, gravel or concrete. If the clay is not dry, it is best to concrete it. In addition to two ordinary house cellars, Church & Illsley have a special mushroom house, one hundred and twenty feet long, sixteen feet wide, and four feet high to the eaves. A longer house is not advisable. It is tightly built with good lumber and shingled all over. There are several doors for handling the manure conveniently, but no windows. Steam heat is used in winter. No heat is used in the cellars. A mushroom house should be as low as possible, convenience in working being a consideration.

The manure is treated by Mr. Collins for several weeks before it is put into the cellars. Only the very best horse manure is used. This is turned every day in the open for ten days, and the long straw all taken out. It is then turned every other day for a week. After that it is piled in ridges and turned once. Three weeks in all should put the manure in good shape. When ready, a handful of the manure squeezed tightly should become a solid ball, firm to the touch.

For the winter crop the best time to prepare the manure is August, although any time between April and the last of August will do. The manure is placed right on the clay or concrete in successive layers and tramped solid till it is six inches deep. The temperature will sometimes rise to one hundred and thirty degrees in two or three days, but when it falls to eighty-five degrees the spawn should be planted.

Mr. Collins prefers breaking the ordinary bricks of spawn into sixteen pieces. These are planted an inch below the surface of the manure, eight inches apart each way. The manure is tramped down solid and left for a week. After that a coating of rich, loamy soil is applied

two inches deep and pounded down till it is but one inch thick.

No attention need now be given to the beds for six weeks, when the mushrooms will begin to show. The first application of water should now be given and the beds thoroughly soaked. They should require no more water till the bulk of the crop is off. When the crop begins to die away another good watering will do till the crop is exhausted. A mushroom bed will usually crop from ten to sixteen weeks; twenty weeks is exceptional. Under good conditions a bed will yield from one to one and a half pounds to the square foot.

From seven to eight weeks after sowing the spawn the mushrooms will begin to lift. If sown in August they may run on till late in March. The dead

manure is splendid for compost. About fifteen two-horse loads is sufficient for twelve hundred square feet of bed. The temperature of a mushroom house to give best quality should not fall below fifty-three degrees and not rise above sixty-five.

It is possible to take off two crops of mushrooms in one year, if a new lot of manure is put in as soon as the old is taken out. The old bed can be renovated without taking out the manure by spreading one and one half inches dry cow manure and soil on top, tramping it well and then adding one-half inch of soil. This course is advisable only when one cannot wait to properly prepare the horse manure for the coming crop. Next to preparing the manure, the watering is most important. The two applications mentioned should be sufficient; too much water will kill the spawn.

Hints to Horticultural Exhibitors

A. V. Main, Ottawa, Ont.

IN view of the rapid increase in the number of Horticultural Societies, the extension of fall fairs and the love of garden recreation in general, something timely can be penned on the exhibiting of garden produce. Competition in the garden and in the competitive hall maintains high standard of quality and promotes healthy rivalry all round.

Competition is universal. In the garden it is a continual fight between weeds and vegetables. Were it not for the weeds our gardens might not receive the necessary cultivation and we ourselves would become indolent if gardening were only a matter of sowing and reaping.

A feature noticeably lacking at recent exhibitions has been displays by our well-known seed and nursery firms. Canada's best fairs should be taken advantage of by these firms for the purpose of advertising new introductions of vegetables, fruits or flowers. The exhibitors would be recompensed by medals or certificates, and the increased business that would result from coming in contact with their customers.

UNATTRACTIVE ARRANGEMENT.

On every hand the vegetable produce is unexcelled, so the spectators inform us. By many judges, luckless competitors, professional gardeners, and those having a taste for arrangement, the conclusion reached is that the material is good, but the arrangement is most ineffective. No system is followed. This is more evident at country fairs and does not exist to such a degree at the up-to-date shows, although in the latter case the general ensemble could be improved upon also. A cabbage is placed here, a squash overlapping. Tomatoes, onions,

beets, and carrots are set down wherever most convenient to the exhibitor.

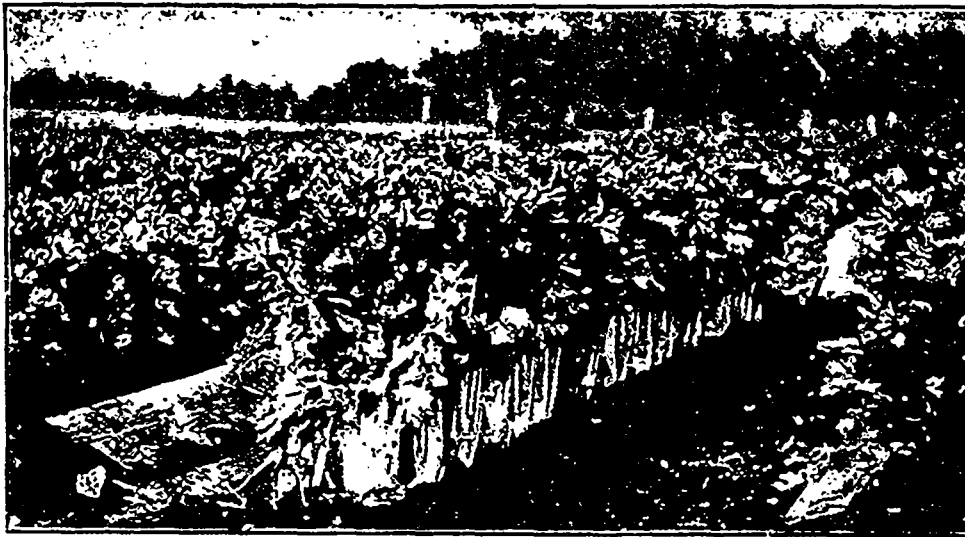
Such confusion is void of educational value or of any benefit to those interested. The exhibits should impart a lesson of improvement to the unsuccessful, so that the individual can adjust matters better in succeeding seasons. The space for each section should be set aside and distinctly labelled or else a competent man placed in charge to keep the exhibits in order.

All the entries of one class should be kept by themselves. Such a system commends itself to the judges whose duties are lightened; to the competitors, who see at a glance how they stand and profit by results for future contests, and to the spectators who can obtain a more comprehensive view of the exhibits. This is away in advance of the old method of having a first prize cabbage here and the second prize about twenty yards off.

A SLOPING EFFECT.

Collections of vegetables should command a good effect. A sloping face is necessary for the best results. Tall entries should be confined to background. There should be at least six samples of each sort with the possible exception of three hundred pound squashes or pumpkins. A few indiscriminate representatives in each class are not even worthy of name. I consider naming an important point. Neat tickets are preferable, wired several inches clear of samples.

In preparing for the exhibition, clean and trim the material well. Leave the soil in the garden; it is not required on the show board. Competitors must remember to adhere to the regulations of the prize list. If a given number of



A Crop of Celery as Grown by John Williams, Peterboro, Ont.

Mr. Williams is one of the successful market gardeners of Peterboro. Although his soil is a rich muck, he fertilizes it heavily. The celery is planted in double rows on the flat, no trenches being dug. The soil is cultivated almost daily.

specimens is mentioned neither more nor less is wanted. Fraudulent exhibiting sometimes occurs, such as showing stuff not grown by the exhibitor or displaying wrong varieties. The officers may not detect every case but the offender will suffer in the long run. With collections, the allotment to a certain space or the stipulation of a given number of varieties would be preferable to the wide range method at present in vogue.

THE JUDGING

For the judging of the groups, cards should be used. So many points should be allowed for each vegetable, the arrangement, effect, quality and naming. This gives satisfaction all around. Secretaries should forward the judges copies of the prize list so that they may look up the regulations, for no two are framed alike.

The services of up-to-date horticulturists should be obtained, men of experience from the experimental farms, practical market growers or professional gardeners. Amateur horticulturists have often been selected. A few are proficient, others are quite incapable.

With many, size and quantity is placed before quality. Over grown beets, carrots or tomatoes are always coarse. Size with quality combined counts with celery, onions, leeks, cauliflower, parsnips, and muskmelons; it shows cultural skill. In other classes abnormally large specimens are only secondary for table or culinary purposes, in comparison with typical medium ones. A few choice specimens are worthy of more points than a bushel of the poorer kind. The production of the former requires skill; the latter can be grown with random methods. Fine blanched celery, specimen onions and tomatoes can rarely be had without judicious cultivation.

Judges are slow to withhold prizes, yet many exhibits are not worthy of the judge's attention. When competition is not keen and material poor, premiums are better withheld. It will cause the competitor to exert himself a little more although his temperature may run high at such procedure.

Celery Blanching

Our markets demand a clean, white-stalked celery. This is obtained by a process called blanching or growing the leaf stalks in darkness. This destroys the color in the stalk and prevents any more forming. It also makes the stalk crisp and tender. If earth is used a characteristic sweetness and nutty flavor is obtained.

Early celery is usually blanched with boards, paper or something of that kind. If earth is used before the cool weather of fall it is likely to cause rust or decay on the stalks, which of course destroys their value. Late celery may be blanched with boards or with earth. Sound boards ten or twelve inches wide, one inch thick, and twelve to sixteen feet long are laid on each side of the row. They may be cleated at the ends and centre to prevent splitting or warping away from the plants. Hooks are also used to keep the upper edges close to the celery stalks. Treated in this way celery will bleach in from one to three weeks, depending on weather conditions. Warm, moist weather will hasten blanching, while cool weather will retard it. As fast as the bleached celery is used the boards may be put on other plants. Building paper, or even newspapers, may be used if the season is not too wet.

Earth-blanched celery has a better flavor than board blanched. Where earth is used, draw it up about half or two-thirds of the way to the top of the plant when

both plant and soil are dry. After a few days more earth may be put around the plant, leaving from four to six inches of the top above the soil. This may be accomplished by a celery hiller or on a small scale with a hoe. It is sometimes an advantage to "handle" celery before hilling, that is to draw the stalks closely about the heart of the plant, holding them in place either by tying or with soil. From ten to eighteen days are required to bleach celery for use by this method. Celery well protected by soil will not be injured by quite severe frosts. Where celery is to be stored for winter use, it should be bleached but very little, if at all, in the field.

Soil Sterilization for Ginseng

Prof. J. E. Howitt, O.A.C., Guelph, Ont.

In my addresses I have frequently recommended the sterilization of soil with steam or formalin, but have not yet explained how the sterilization is done. The formalin method is for most growers the handiest and cheapest. This is best done in the fall of the year. Remove the roots from the beds and throw the soil up loosely. The soil should be dry when the sterilization is done. The formalin is diluted in water. If the soil is wet the solution should be stronger about one part of formalin to fifty parts of water. This solution should be applied to the soil at about the rate of one gallon to the square foot. Two men can do this work best, one man applying the solution with an ordinary sprayer or watering can, the other man spading over the soil as the solution is applied. As soon as the soil can be worked without puddling after treatment, it should be thrown up loosely to permit of the evaporation of the formaldehyde. Do not plant the bed for about ten days after the treatment and before planting is done the bed should be thoroughly spaded over several times. Where live steam can be obtained, steam sterilization is very satisfactory.

The inverted par method is most suitable for ginseng beds. The apparatus consists of a galvanized iron pan about four by ten feet and six inches deep. This is inverted over the soil to be sterilized, the steam being emitted through a hose connected at one end of the pan. The sharp edges are forced down into the soil to prevent the steam from escaping. Fertilizers should be applied before the sterilization is done. The steam should be kept at as high a pressure as possible, eighty to one hundred pounds, and the sterilization continued from three-quarters of an hour to an hour and a half, depending upon the pressure maintained. This treatment will destroy the spores of the various fungi and the weed seeds in the soil.

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THE CANADIAN HORTICULTURIST,
PETERBORO, ONT.

EDITORIAL

THE EUROPEAN WAR

The human mind is incapable of grasping
the horrors of the European War. All
wars of ancient and modern times pale into
insignificance when compared with the car-
nage that is taking place in Europe. Never
before have the armies engaged been so
enormous, the instruments of warfare used
so destructive, or the world at large so
affected. No wonder that Christian people
everywhere are appalled at the thought that
these things are possible nineteen cen-
turies after the birth of Christ, whose com-
mand was that they should love one an-
other.

Yet who can doubt but that this war will
lift the world to higher and better levels of
thinking and of living? So it has ever
been. Over one hundred years ago the
streets of Paris and towns and villages of
France ran with blood as the people arose
in their fury and with unspeakable ferocity
slaughtered the ruling classes who had
been oppressing them for centuries. But
out of these troublous times arose the
French Republic which ever since has been
a haven which has been spreading demo-
cratic principles of government among the
peoples of Europe. The freedom of man-
agement of their own affairs enjoyed by
the people of the British Empire was ob-
tained only as the result of bitter civil wars
which in one case cost a king his head.
The Civil War in the United States lasted
for four years and cost scores of thousands
of lives, but it put an end for ever to legal-
ized slavery. Even the Boer War in fifteen
short years has resulted in the Union of
South Africa and the establishment in that
now thoroughly loyal colony of conditions
that apparently could not have been effected
in any other way.

For years the peace of the world has
been threatened by the existence among
the nations of Europe of militaristic parties
whose favorite motto has been "In times
of peace prepare for war," and whose creed
has been "God fights on the side of the
biggest armies." The activities of these
groups of reactionaries sowed the seeds of
mistrust and national animosities until
Europe became an armed camp and the
people groaned under a burden of taxation
that was rapidly becoming unbearable. The
militaristic class of Germany has been the
dominating factor in this movement. It
has vaingloriously set the pace that the
other nations of Europe have been forced
to follow. It has arrogantly refused to
listen to proposals looking for a reduction
of national armaments.

Now! what was feared has taken place.
This sentiment has had its way. Almost
universal war has been declared. The
blame, as the published correspondence
clearly proves, rests squarely at the doors
first of Austria-Hungary and secondly of
her ally, Germany. Both nations, under the
flimsiest excuses, persistently brushed aside
and ignored the almost frantic efforts of the
other nations, which were persisted in to
the last possible moment, to preserve the
peace of Europe.

The outcome is plain. Events to date
seem clearly to prove that God is fighting
on the side of the Allies. This being the
case, the complete overthrow of Germany
and Austria-Hungary is assured. With
their defeat will come the downfall of the

militaristic party in Germany. It is not too
much to expect even that Germany will
become a republic. Thus from the ground
that is now running red blood promises to
arise new conditions that will release the
people of Europe from fetters that have
bound them for years. Long needed re-
forms will thus become possible. Ulti-
mately the peace of the world will be pro-
moted. The price being paid is a fearful
one. Let us believe that in time it will be
justified.

THE EFFECT OF THE WAR

Year by year, as though by a divinely
ordered plan, the nations of the earth have
been becoming more and more interdepend-
ent. In spite of protective tariffs, which
aim to make the nations which rely on them
self-sustaining in matters of production,
the countries of the world have been spe-
cializing more and more in the production
of those commodities which their natural
advantages have made it the most easy for
them to produce.

This condition has been brought home to
us by the European War. Suddenly we
have been led to realize, as never before,
that the rest of the world is largely depend-
ent on Germany and others of the warring
nations of Europe for its supply of certain
standard fertilizers, seeds of many kinds,
and other necessities, to say nothing of
their being important markets for the pro-
ducts which other nations produce.

Fortunately we are not likely to suffer as
much in Canada from a shortage in seeds
and bulbs for next year's grain and gar-
den crops as at first seemed probable.
Many consignments from Europe had been
made before war was declared. Holland,
Denmark, Sweden, and portions of France,
as well as Britain, seem likely to be able
to fill most if not all the orders for seeds
of all kinds and bulbs that had been sent
forward from this side.

Canadian seedsmen, it is estimated, have
in stock from 1913 about thirty per cent.
of the requirements for the 1915 crop. In
addition, North America produces an
abundance of seed of cereal grains, clover
and the leading grasses, as well as of many
common vegetables. There may be a short-
age in supplies of certain flower seeds, but
the losses, if any, from this will be light.
Should the war be continued for a couple
of years, the effect will become more ap-
parent; but this is an eventuality that
hardly seems possible.

SHIP ONLY GOOD FRUIT WEST

Mr. F. C. Hart, Director of the Markets
Branch of the Ontario Department of Agri-
culture, points out to Ontario fruit ship-
pers that owing to the war situation, in
catering to the western market this year
they will be well advised to send only the
best varieties, and the No. 1 grade. In
anticipation of the market being a difficult
one, the fruit sent should be only such as
should be able to compete successfully with
the fruit from other sections. Ontario
apples find favor in the west. This in part
is because a large part of the population of
the west formerly lived in Ontario. The
"fruit from home" and "Ontario flavor"
has found, therefore, a ready sale in the
past when it has been put up in an attrac-
tive manner.

The known varieties of Ontario fruit are
familiar names to consumers in the west.
Spys, Baldwins, and similar varieties are
apples of which they have only heard,
but of which they have had their share be-
fore going west, and they want more of

them. In placing these varieties on the market, however, Mr. Hart reminds us that it is not only the name that sells, but the apple itself. Even a good sample may find a poor market; a No. 2 or 3 grade shipped west will likely result in loss this year. Particular attention should, therefore, be paid to the grading at packing time and no inferior fruit allowed to go through to spoil the chances of sale. Nothing but the very best should at any time be put in boxes, but more particularly so this year.

Occasionally fault has been found with the Ontario pack in the west. It is not necessary to inquire into the justice of the criticism. It is enough to know that the criticism exists and Ontario packers should be careful not to justify it by an inferior pack in a single instance. What is true of boxes for Saskatchewan and Alberta is equally true of barrels for Manitoba. This excellent chance of putting up a good pack for the west should not be lost.

The Canadian Horticultural Association is planning to extend the scope of its work and make it more truly national in character. It has serious difficulties to surmount but a wide field of usefulness before it. Without receiving any government assistance the association has accomplished much good work in the past. This promises well for its future.

The European war promises to seriously affect the European apple market. The new conditions thus created call for the highest possible efficiency in marketing this year's crop. Some losses on this year's crop may be unpreventable, but there are prospects that by good management these may largely be avoided.

Canadian Horticultural Association Convention

For several years the annual conventions of The Canadian Horticultural Association have shown a yearly increase in the general attendance and enthusiasm. This improvement was continued at this year's convention, the seventeenth, held since the Association was organized which took place in Toronto Tuesday to Friday, August 4th to 6th. On the Friday following the conclusion of the convention the members of the Association went as the guests of the Gardeners' and Florists' Association of Toronto for a trip across Lake Ontario to Niagara Falls. A remarkable feature of the convention was the fact that out of the sixteen past-presidents of the Association, one of whom held office for two years, fourteen were present at the convention. The two absentees are both alive.

The social features included a visit on Tuesday afternoon to the green houses of Miller & Sons at Bracondale, and later on, the same afternoon a visit to the magnificent residence of Sir Henry Pellatt. On Wednesday afternoon the members were the guests of the Dale Estate of Brampton, and were taken by special train on a visit to the wonderful establishment of the Dale Estate which is the largest in Canada. The green-houses of Wm. Fendley and some of the other well-known Brampton florists were also visited. On Thursday afternoon the members were the guests of the Richmond Hill Horticultural Society where the green-houses of W. J. Lawrence, Harold Mills, J. H. Dunlop and Endeau's Nursery were inspected. The green-houses at Richmond Hill have all been erected in the past three years and include, particularly those of Mr. John H. Dunlop's, many innovations and modern improvements that were a revelation to all who were present.

The following officers were elected: President, H. B. Cowan, First Vice-President, F. W. Adams, Toronto; Second Vice-President, Jas. Fraser, Prescott; Secretary-Treasurer, Julius Luck, Montreal; Executive Committee, F. Dicks, London, Geo. Douglas, Toronto; Luke Williams, Ottawa; R. L. Dunn, St. Catharines; R. J. Eddy, Montreal; S. Jordan, Peterboro; A. Ferguson, Montreal; John Milford, Sherbrooke, Quebec, and Frank Wise, Peterboro.

BUSINESS SESSIONS

A number of extremely interesting addresses were given. Park Commissioner Chas. Chambers of Toronto, gave an illustrated lecture entitled "Park Systems." Mr. H. J. Moore, of Queen Victoria Park, Niagara Falls, Ontario, advocated the establishment of a National Plant Registry, this to be supplemented by trial grounds in which new introductions could be tested before being registered. The matter was considered to be an important one, and Mr. Jas. McKenna, of Montreal, Mr. Moore and Mr. W. T. Macoun, Dominion Horticulturist, of Ottawa, were appointed a committee to gather further information and submit it to next year's convention by which time it may be known whether or not the Association is likely to receive a government grant.

THE CONVENTION CITY

London, Ontario, was selected as the place for the holding of the next convention. Mr. A. C. Wilshire, of Montreal, spoke briefly on "Greenhouse Construction," setting forth the merits of the single against block houses. The following papers were read: "Cyclamen," by E. I. Mepsted, Ottawa; "Recent Rose Introductions," by Walter Muston, Toronto, and "New Greenhouse Plants," by E. F. Collins.

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Packing Fruit for Export

W. W. Moore, Chief, Markets Division, Department of Agriculture, Ottawa

IN this article I intend to deal with the general demands and preferences of the markets abroad to which Canadian fruit is shipped. The apple is the most important factor in our exports of fruit. It constitutes about 95 per cent of our sales abroad. I will deal first, therefore, with some features of our export trade in this fruit.

THE EXPORT APPLE TRADE

In 1884-5 Canada exported about 210,000 barrels of apples; in 1892-3 slightly over one million barrels, and in 1896-7, 1,664,470 barrels, a total not since surpassed. In 1911-12, however, when exports fell short of the above total by 305 barrels the total value was \$5,104,107, as compared with \$2,502,968 in 1896-7, or more than double the value for practically the same quantity of fruit. The crop of 1911, therefore, holds the record for value of apples exported and the enterprise of Canadian apple shippers is demonstrated by the fact that in that season shipments were made to twenty-eight different countries, of which the United Kingdom, Germany, Newfoundland, United States and South Africa were the largest customers in the order named.

KEEPING IN TOUCH

It is advisable to push the sale of Canadian apples over as wide an area as possible as there is a great advantage in having commercial connections in many different countries for a product that depends so much on the local supply in the various markets to which we export. It should be remembered that the sale of apples abroad depends not only upon the quality of the fruit, means of transportation and mutual confidence between buyer and seller, but also upon gaining the favor of the consumers, and this can be done only by giving them the opportunity to sample the fruit and thus determine their good qualities by actual test. Under these circumstances it is desirable that as many as possible of the twenty-eight markets referred to, should receive some shipments every year, so that close relations may be retained and the reputation of Canadian apples kept constantly before as many customers as possible.

COMPETITION GROWING KEENER

In the past ten years there has been practically no increase in the quantity of apples imported yearly into the United Kingdom where the main demand for Canadian apples is found. It is obvious, therefore, that this country can only secure a larger proportion of that market at the expense of our competitors. In order to achieve this result it is imperative that better fruit must be grown and greater care and skill developed in both barrel and box packing. Consumers are getting more critical every year and it is the inferior grades of apples that cause sales to drag and prices for all grades to decline. It should always be remembered by fruit growers and packers "that two good apples are worth more than two good apples with two poor ones thrown in."

DEMAND FOR BOXED APPLES

In Great Britain the demand for boxed apples is increasing in the high class trade, which is catered to almost exclusively at present by the product of the Western States which reaches the market entirely in boxes, packed in faultless style. The sizes most in demand during the greater part of the season are those packing from one hundred and thirty to two hundred apples in a box. In Liverpool, Manchester and Glasgow there is usually a good demand for well colored varieties of early apples packed in boxes. In the past these soft varieties have usually been shipped from Canada in barrels and the weight of the upper layers often

led to the bruizing of the apples below making the package "slack" and reducing the selling value. In the early part of the season the London market is generally well supplied with home-grown apples from the great apple-producing countries near by.

INFLUENCE OF THE PANAMA CANAL

Canadian apple growers should take note of the fact that the Panama Canal, now about completed, will very seriously increase the competition from growers in the western states. At present the railroad freight rate on apples in refrigerator cars from Oregon shipping points to Eastern markets is about sixty-two cents a box, but when shipped by water via the Panama Canal apples will be carried in cold storage for less than half that rate, probably twenty-five cents a box. It is expected that steamers equipped with refrigerated chambers will ply between ports on the Pacific coast and Liverpool, Hamburg and other European ports so that the rate to foreign markets will at least be cut in two. It is claimed that if the canal rates were available this season it would mean a saving in freight rates to apple growers in the Hood River section alone of at least \$240,000. In order to meet the situation Canadian apples packed in boxes both for domestic and export trade will have to be finer in quality and more scientifically packed than has been the case in the past, if remunerative prices are to be obtained.

THE EXPORT PEAR TRADE

Last season was a remarkably good one for exporters of pears. English and French crops were almost a total failure, and supplies from these sources were consequently very light. Unfortunately a considerable proportion of the Bartlett pears shipped from Canada were packed in barrels, an entirely unsuitable package for this variety. The greater weight in a barrel of pears, as compared with apples, is apt to lead to less care in handling in transit and the consequent bruizing of the fruit. Even with careful handling the heavy weight of the upper layers on the bottom ones flatten the latter and leave room for the balance of the fruit to move about in the barrel each time it is handled. Some three hundred barrels of Bartlett pears shipped by a well known Canadian apple shipper were condemned and destroyed in Liverpool last season. If these pears, which were a good quality, had been wrapped and packed in half boxes they would likely have arrived in good condition and realized a good price. It is essential that pears shipped abroad should arrive in a hard green condition so that they will stand up until they reach the ultimate consumer. Pears arriving in a ripe condition may be utterly thrown away if weather and market conditions are unfavorable. It is also necessary that pears should be properly graded and only fruit of the same size packed together.

COLD STORAGE NECESSARY

Cold storage is a very important factor in the shipment of pears, especially the Bartlett and other early varieties. Whenever possible this class of fruit should be pre-cooled at the initial point of shipment and refrigerator cars and ocean cold storage should be taken advantage of for every shipment. The difference in condition on arrival in Great Britain between pears that had been pre-cooled and shipped in iced cars and steamship cold storage and those lacking some or all of these advantages was clearly demonstrated to the writer during a visit there last autumn, as shipments from the United States received under the former conditions arrived in excellent shape, while a large proportion of the other consign-

ments were landed in a damaged condition and were often a total loss.

Some of the pears received in London from Canada last season had only the top layer in each box wrapped. This is a very foolish practice; either all the pears should be wrapped or none, as buyers will not pay the price of wrapped fruit for boxes which contain largely unwrapped fruit.

PEACHES FOR EXPORT

The principal market for imported peaches in Great Britain is found in London. There is a demand there for a limited quantity at fair prices. Experience has shown that Canadian peaches can be landed in first-class condition provided proper care is exercised in picking and preparing them for shipment. Each peach must be wrapped and single layer cases with wood wool lining should be used. If pre-cooling before shipment is possible the peaches may be allowed to get reasonably mature before picking and thus improve their quality and appearance.

COST OF PACKAGE AND MATERIAL

Packing peaches for export entails considerable expense and good prices must be obtained if the business is to be profitable. When the trial shipments of peaches to Great Britain were made by this Department in 1910 it was found that the total cost of the package and packing material was ten cents a single layer case holding about twenty Elberta peaches.

THIS SEASON'S OUTLOOK UNCERTAIN

Owing to the general European war which at the time of writing is in its initial stage, the outlook for this season's export fruit trade is very uncertain. The continental market will be lost, but thanks to the protection of the British fleet it is possible that shipping between Canada and the United Kingdom will be uninterrupted with freight and insurance rates not far from normal. There will undoubtedly be considerable unemployment in Great Britain, thereby diminishing the purchasing power of the bulk of the people, and fruit being more or less of a luxury will be one of the food products most quickly affected. The duration of the titanic struggle will be the all-important factor, but this we cannot foresee.

Fruit Crop Prospects

There is very little change in prospects for the apple crop since last month. The average over the whole Dominion for early apples is 79 per cent, for all fall apples 76 per cent, and for winter apples 75 per cent, giving a total crop of 77 per cent. This is an increase of 25 per cent over the total crop of 1913.

The apple crop promises to be generally clean, a feature of great importance. This has been largely brought about by more effective spraying, assisted by dry weather. There are some sections of Canada where apple scab is usually prevalent, and even in these the situation is not at all unfavorable.

With the exception of the southern portions of Ontario, fall varieties promise a slightly lower yield than the earlier sorts, though this difference is not greatly marked in any particular district. Orchards under cultivation are in better condition than those which have not been so treated. This feature emphasizes the importance, in a season such as the present, of the conservation of moisture.

PEARS

There has been no decided change in the pear crop. Prospects in southern Ontario point to a yield a shade above medium. Bartletts are generally light with Duchess and Winter Nelis more productive than

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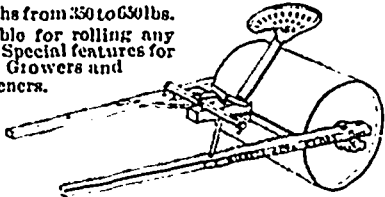
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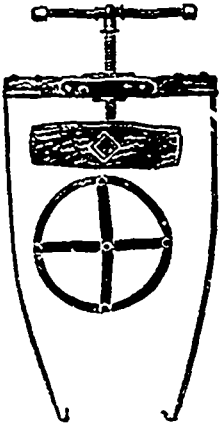
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other varieties. In all other sections of Ontario the crop is practically a failure, with a few scattered exceptions in the inland counties north of Lake Erie. Nova Scotia and British Columbia both report a crop between medium and full, although considerable damage has been done to the latter province by Fire Blight.

PEACHES

In spite of the fact that the peach crop in the Niagara district is practically a failure, some Triumphs are upon the market, and at least in one instance these were purchased at 55 cents for six quart baskets f.o.b. shipping point and retailed in Ottawa at 75 cents. At figures such as these, the few growers who are fortunate enough to have hardy cling-stone varieties in their orchards, will be in an enviable position, at least in the eyes of their less fortunate neighbors. The prices should also be good for the peaches of Essex, Kent and Lambton counties. In British Columbia the apricot season was ended by the first of August, which is two weeks earlier than in the ordinary year. All peaches are reported a good crop.

TOMATOES

The long spell of hot, dry weather seriously affected the tomato crop in all parts of Ontario, and the chances now are that in spite of the very heavy acreage the total crop will not greatly exceed that of previous years. The crop in British Columbia is in practically the same condition as in Ontario, except, of course, in irrigated sections where the effects of drought have been largely prevented. In other sections, however, the lack of rain has resulted in a falling off

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We offer 50 varieties of Paeonies at from 30c to \$2.50 each; 30 vars. of Irises at from 15c to \$1.00 each; 5 vars. of Phloxes at 15-20c each; 5 vars. of Helianthus at 15-20c each. Gold Medal Hybrid Delphinium at 20c each. 10 for \$1.50. 5 vars. of Hemerocallis at 15-20c each; 6 vars. of Anemone at 15-35c each; 4 vars. of Campanulas at 20c each; 5 vars. of Heuchera at 20c each. Dicentra Spectabilis at 20c each; 3 vars. Shasta Daisies at 25c each. 10 for \$2.00, and many others.

At the hour of writing, it is doubtful whether the usual importations of Paeonies and Tulips can be received because of the war. The best substitute for these is Irises, of which we have a good stock. These should be planted at the earliest day possible in September.

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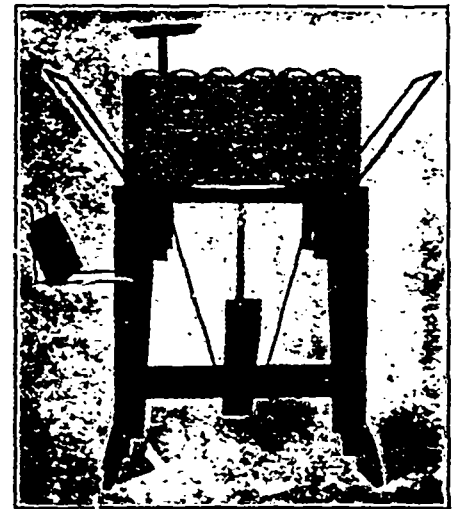
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in prospects, and much of the fruit produced, while abundant in quality, will be of small size.

GRAPES

Reports still point to an almost exceptionally heavy crop in the Niagara peninsula. The average for the district is 85 per cent and from practically no sections have any adverse reports been received. The red varieties are not so promising as some of the others.


FOREIGN CONDITIONS

United States.—A telegram from Portland, Oregon, dated August 10, estimates the apple production in the four northwestern states of Washington, Oregon, Idaho and Montana at 15,000 cars. Of these, Yakima Valley will produce 5,000 cars, Hood River 1,500, Wenatchee Valley 4,500 and Western Oregon 900.

The crop in New York state promises to be 12 to 15 per cent greater than the crop of 1912 and to double that of last year. In the large producing sections of the states the increase is great. Baldwins are particularly heavy, some growers reporting the crop as the best since 1896. Greenings are light to fair, Kings and Twenty Ounce good. The peach crop is a total failure, and plums are light.

London, England.—Weather conditions favorable for fruit. Apple crop larger than previous estimates. Owing to war and high price of sugar, fruit growers now receiving very poor prices.—Dominion Fruit Crop Report.

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Items of Interest

A meeting of the Ontario Ginseng Growers' Association will be held in the Temperance Hall, 1087 Queen St. West, Toronto, at half-past-one in the afternoon of September 9th.

At the annual meeting held August 21st in Morrisburg, Ont., of the St. Lawrence Valley Fruit Growers' Association W. G. Robertson of Matilda township was elected president; L. E. Parisien of Cornwall, vice-president; E. P. Bradt, B.S.A., of Morrisburg, secretary-treasurer. Because of the European war Montreal buyers have offered prices below the normal. It was resolved to again make an exhibit at the annual flower and fruit show in Toronto, and to agitate for the holding of a similar show in Ottawa. A much larger exhibit will be sent to Toronto than in former years, probably three hundred boxes of McIntosh Reds. The selling of apples cooperatively, with a central packing place, which would insure uniformity, was favored by all, though the meeting concluded that until the war ended the making of definite plans was not advisable.

Canada's recently appointed Dominion Fruit Commissioner, Mr. D. Johnson, visited Nova Scotia during the latter part of June and early July, in order to acquaint himself fully with fruit conditions in that province. In company with leading fruit growers and government officials he visited many of the largest orchards and also attended the annual meeting of the United Fruit Companies of Nova Scotia Ltd. Everywhere he went he made a most favorable impression. At the closing session of the annual meeting of the fruit growers' company, the following resolution was passed: "Resolved.—That that United Fruit Companies of Nova Scotia, Limited, express their appreciation of the visit of Daniel Johnson, the fruit commissioner of Canada. From him we have received inspiration in our work and advice that will be most helpful. We congratulate the government of Canada on their having obtained for the important position of fruit commissioner a man so eminently fitted for the office."

Fairbanks-Morse Spraying Outfit



The most satisfactory system for every spraying purpose.

It offers you the most convenient and economical means of destroying insects, curing or preventing plant and tree diseases. Made in many sizes—both hand and engine operated. Send for free catalogue. It tells you what and when to spray, the best compounds to use, how to prepare them, etc.

The Canadian Fairbanks-Morse Co., Limited

Montreal	Toronto	Winnipeg	Calgary
Quebec	Ottawa	Regina	Edmonton
St. John	Hamilton	Saskatoon	Vancouver
Ft. William		Victoria	

Canadian Departmental House for Mechanical Goods

QUEENS OF QUALITY
 3-band leather color. Unt., 60c. each, \$7.00 per doz.
 Sel. Unt., 75c. each \$8.00 per doz. Circular free.
J. I. BANKS - - LIBERTY, TENN.

IF YOU WANT SOMETHING BETTER
 than what you already have in the Queen and Bee line, try one of the Atchley Dollar Queens. I make a specialty of Dollar Queens, or \$10.00 per doz. Good, strong two-frame nuclei with Untested Queen, \$2.50 each; three-frame, \$3.00. Safe arrival and satisfaction guaranteed.
WM. ATCHLEY, BEEVILLE, BEE COUNTY, TEXAS

REQUEEN YOUR BEES
 this fall with young queens bred from Doolittle's best breeders. We have 500 or more choice untested queens on hand at all times. Prices, 60c each, \$6.00 per dozen. Delivery guaranteed. Nuclei, 2 frame \$1.50, 3 frame \$2.25. We have apiary of hundred colonies for sale at bargain, on easy terms of payment. Particulars on request.
SPENCER APARIES CO. - - NORDHOFF, CAL. U. S. A.

THE BEEKEEPERS' REVIEW CLUBBING LIST
The Review and Gleanings one year, \$1.50.
The Review and American Bee Journal one year, \$1.50.
 All three for one year only \$2.00
 Canadian Subscribers add for postage as follows: *Gleanings*, 30c.; *A. B. J.*, 10c.
 Address
THE BEEKEEPERS' REVIEW, North Star, Mich.

FOR SALE
 Hillcrest Fruit Farm of 48 1/2 acres, the property of the late H. T. Stevens. This property is situated 1 1/2 miles from the village of Norwich, Oxford County, 14 acres planted with apple, pear, plum and cherry trees and most all kinds of small fruit in bearing condition. Frame house and barns and 2 greenhouses on premises. For particulars apply to the undersigned Executors
ANDREW COH'E, R. R. No. 1, BURGESSVILLE
GEO. CRAIK, R. R. No. 2, MOSLEY, ONT.

QUEENS AND BEES
 We can supply choice leather colored Italian Queens promptly at the following prices:
 Untested 1 \$1.00 6 \$5.50 12 \$10.50
 Tested 1.50 8.50 16.00
 Select tested 2.00 11.25 22.50
 For prices on larger quantities please write us.
 We offer bees in pound packages from the same stock as above as follows after July 1st:
 1 lb. \$1.50 2 lb. \$2.50 3 lb. \$3.50
 These prices do not include a queen. Add price of queen you may select to price of package when ordering. Safe delivery guaranteed. Full directions for handling sent with each shipment.
 A full stock of bee keepers' supplies always on hand for prompt shipment. Catalogue on request.
 We Want More Beeswax.
F. W. JONES - - BEDFORD, QUE

CARNIOLAN QUEENS
 After July 1st
 Untested { 1 6 12
 75c. \$4.25 \$8.00
 Address
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 R.F.D No. 2

WHEN YOU NEED QUEENS
 We will be pleased to fill your order. Our business of rearing Queens was established in 1881. We know what it means to have a good strain of Bees and Queens that stand second to none.
 Three-band Italians only bred for business and free from disease. Tested Queens, \$1 each. Untested, 75c.; \$7 per dozen. Send for Price List.
J. W. K. SHAW & CO., LOREAUVILLE, LA., U. S. A.

SELECT ITALIAN QUEENS
 We will both be disappointed if you do not order a half dozen of our select untested Italian Queens at six for \$1.00. 1 lb. Bees with Queens, \$2.50. We have a number of satisfied Canadian customers. We want you too. Circular Free, write
J. B. HOLLOPETER
BOX 56 - - PENTZ, Pa., U.S.A.

INCREASE YOUR HONEY CROP
 by introducing some of Leininger's strain of Italians. Have been a breeder for 25 years. No better bees in America. Untested one \$1.00, six \$5.00. Tested one \$1.25, six \$6.00. Breeders, \$10.00 each. During August and September we will sell tested Queens, one year old, at 80c each. Will guarantee every queen.
FRED LEININGER & SON - DELPHOS, OHIO, U.S.A.

QUEENS
 by return mail or your money back. Guaranteed purely mated. J. E. Hand strain of three-banded Italians. Write for price list and free booklet, "How to Transfer, Get Honey and Increase."
J. M. GINZERIC, ARTHUR, ILL., U.S.A.

BEES FOR SALE
 Having to reduce my stock of bees I offer for sale a few hives. All bees on good straight worker combs in factory-made frames, 8 frames to the hive.
CHAS. BLAKE, SNOW ROAD STATION, ONT. (C.P.R.)

MILLER'S STRAIN ITALIAN QUEENS
 By return mail or money refunded, bred from the best red clover strains in United States, in full colonies; from my Superior Breeders, northern bred, for business, long-tongued, leather color or three-banded, gentle, winter well, hustlers. Not inclined to swarm, roll honey in. 1 untested, 75c; 6, \$4.00; 12, \$7.50; 1 sel, untested, \$1.00; 6, \$5.00; 12, \$9.00. A specialist of 17 years' experience. Safe arrival and satisfaction guaranteed.
I. F. MILLER, BROOKVILLE, PA., U.S.A.

BUY CARNIOLANS IN CARNIOLA
 Pure Carniolan Alpine Bees
 Write in English for Booklet and Price List. Awarded 60 Honors.
Johann Stregar, - Wittnach
 P.O. Wöcheiner Feistritz
 Upper-Carniola (Krain), Austria

QUEENS QUEENS
 Three Banded and Golden Italians. Vigorous queens, from clean, healthy colonies. Safe delivery at your Post Office guaranteed. See our catalogue.
THE HAM & NOTT CO., Ltd.
BRANTFORD - - - - - ONT.

Bees and Bee Supplies
 Roots, Dadants, Ham & Nott's goods.
 Honey, Wax, Poultry Supplies, Seeds, etc.
 Write for a Catalogue
THE CHAS. E. HOPPER COMPANY
 185 Wright Avenue, Toronto, Ont.

TOAK QUEENS
 AFTER JULY 1st
 Tested Strait 75c. each
 Untested 50c. each
 Bees per pound \$1.00
 Nuclei per frame . . . \$1.00 each
I. N. BANKSTON
BUFFALO - - TEXAS, U.S.A.

Famous Queens Direct from Italy
 Bees more beautiful, more gentle, more industrious, the best honey gatherers.
PRIZES—VI. Swiss Agricultural Exposition, Berne, 1895.
 Swiss National Exposition, Geneva, 1896
 Beekeeping Exhibition, Liege, Belgium, 1896
 Beekeeping Exhibition, Frankfurt, O. M. (Germany), 1907.
 Universal Exposition, St. Louis, Mo., U.S.A., 1904.
 The highest award.
 Extra Breeding Queens, \$3.00; Selected, \$2.00; Fertilized, \$1.50. Lower prices per dozen or more Queens. Safe arrival guaranteed.
ANTHONY BIAGGI
 PEDEVILLA, NEAR BELLINZONA ITALIAN SWITZERLAND
 This country, politically, Switzerland Republic, lies geographically in Italy and possesses the best kind of Bees known.
 Mention in writing—*The Canadian Horticulturist and Beekeeper*



Branch Warehouses:
 Sudbury, North Bay,
 Cobalt, Cochrane and
 Porcupine

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Fruit and Vegetables Solicited

WE GET YOU BEST PRICES

OUR facilities enable us to realize top prices at all times for your fruit, vegetables or general produce. Aside from our large connection on the Toronto market, we have established branch warehouses with competent men in charge at Sudbury, North Bay, Cobalt, Cochrane and Porcupine. In time of congestion on the Toronto market we have a ready outlet through these branches. We never have to sacrifice your interests.

H. PETERS
 88 Front St. East, Toronto

References: The Canadian Bank of Commerce, (Market Branch) and Commercial Agencies.

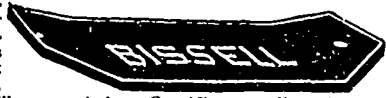


Bissell Steel Stone Boat

Used extensively by gardeners and fruit growers.

Steel Railing around edges. Steel Runners. Bevel Corners. 7 ft. by 2, 2 1/2 or 3 ft. Write Dept. N. for Folder and Prices

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Wilkinson Climax B

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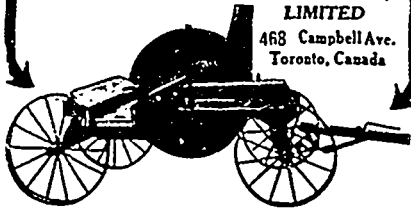
Ensilage and Straw Cutter

Our "B" machine, built especially for the farmer. A combination machine — it will cut and deliver green corn into the highest silo or dry straw or hay into the mow. 12-inch throat, rolls raise 6 inches and set close to knives — solid, compact cutting surface. Can change cut without stopping. Can be reversed instantly. Direct pneumatic delivery. Knife wheel carries fans. No lodging, everything cut, wheel always in balance. Steel fan case.

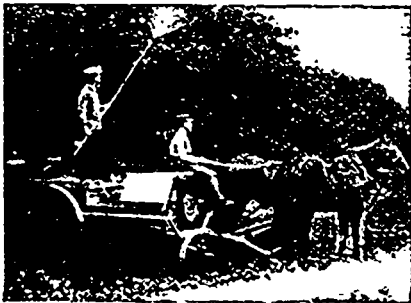
Made in two styles — mount for unmounted. We also make largest type machine for custom work. Ask your dealer about this well-known machine and write us for new catalog showing all styles.

THE BATEMAN-WILKINSON CO., LIMITED

468 Campbell Ave.
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**Mr. Fruit Grower**

Each year more and more of the celebrated "Friend" hand and power Sprayers are to be found in Canada; THERE'S A REASON—Let us tell you.



"FRIEND" QUEEN

A popular model on which sales have doubled. We have many others.

"FRIEND" MFG. CO.
GASPORT, N.Y.

Common Mistakes in Barrel Packing of Apples

P. J. Carey, Chief Fruit Inspector, Ontario

FOR a half-century the barrel has been the package generally used for the shipment of Canadian apples for export. It is only within recent years that the box has made its appearance, and while the latter has come to stay as far as our domestic trade is concerned, the same cannot be said of the export trade. The reasons for this are plain. With the exception of some portions of the north of England, where our apples are purchased by the package by the more wealthy consumers, the great bulk of our fruit is sold by the pound.

This being the case it matters little, therefore, what trouble we may take in putting on the European market neat and attractive packages with a view of impressing the consumers, when such packages scarcely ever reach the public, but have their contents broken up and sold in small quantities. Generally speaking, it would seem then that the apple package for export for some time to come is nothing more than a carrier. I am ready to admit, therefore, that the barrel is the cheaper package and likely to hold its place for the greater portion of the export shipments, notwithstanding the fact that the number of boxes exported is increasing yearly. This being true, then, perhaps the last word has not been said on the proper methods of barrel packing apples. It is my intention to point out some of the mistakes commonly made by the great bulk of apple handlers.

FACING.

Taking the operations in order, I would like to say a few words about the facing of the barrel. The Inspection and Sales Act requires that the face of a package shall fairly represent the contents. Of course, this means as to quality of fruit. There is no law to prevent a packer from making the face of his package look attractive by removing the stems from the apples and using fruits of a uniform size; or say a half-way between the maximum and minimum of the lot being packed as to size and color. There is easily twenty-five cents a barrel in value in the same lot of apples between a slovenly faced barrel and one properly faced.

PROPER FULLNESS.

In the particular of proper fullness, packers have made the greatest mistake in the past. The large number of slacks reported from the Old Country and the low prices returned for such alarmed the apple handlers, and orders were given to all packers that the trouble of "slacks" had to be met. Quite naturally the first thought was to fill to overflowing, and as a result the fruit was heaped on the end of the barrel before the head was being placed on. Strangely enough it took almost a quarter of a century to convince the apple growers that this was a faulty method and that thousands of barrels of the worst kind of "slacks" was the result of this style of packing. Apples crushed into a barrel with skin broken, followed, in many cases, by heating while in transit, spells failure, and the account sales and check in such cases are heartbreaking to the shipper.

The word "racking" as it applies to barrel-packing was coined by the apple packer and is commonly understood to mean the shaking and settling down of the apples in the barrel. So important is its application in the operation of barrel packing that the difference between it being properly and improperly done is the difference between

The process of racking is well understood by all apple men, and it is no my purpose to go into detail; only to emphasize the importance of that particular part of the work.

TAILING.

Perhaps fifty per cent. of the barrel packers still practice what may be termed jumble tailing. This is where an attempt is made to roughly and hurriedly level the top surface before placing the head. This may be put down as one of the common mistakes in barrel packing. When the head is put on, the high apples take the whole pressure first and are crushed or broken before the head is in place. What may be called proper tailing is when the apples are placed in solidly and evenly, so that each one will take its share of the pressure. Where this is done the operator can more easily detect if he is filling too high, and if the rest of the operation has been properly done the surface apples will not show more than a slight flattening and the fruit below not damaged. It has been admitted that up till a few years ago seventy-five per cent. of the export apples have been overpressed. Experiments have shown that where proper racking and tailing has been done it is not necessary that apples should project above the end of staves, and considerably lower for domestic markets.

PRE COOLING.


This introduces another phase of the operation that is a big factor in successful apple handling. The packing of summer or fall apples in an airtight barrel when the temperature is high can certainly be classed as one of the mistakes. Experiments this season have shown that small fruits pre-cooled sold for double the price of the same class of fruits shipped in the ordinary way. The same difference has often been shown between apples that have been heated in barrels and the same class of fruit that had arrived in a sound condition. Where pre-cooling cannot be put in practice it is a wise plan when the weather is warm to pick apples from the trees the day before packing. Orchard boxes for this purpose are used to good advantage in the Annapolis Valley, and Ontario handlers and fruit growers' associations would do well to put this into practice where possible.

As the barrel is still to be the package for the shipment of a large proportion of export apples as well as for a proportion of the domestic supply, surely it is worth while for those engaged in the trade to make a study of the very latest methods in order to secure for all concerned the best results.

The United Fruit Companies of Nova Scotia, Ltd., last year paid salaries amounting to \$8,858.00. The general manager received \$2,500, the secretary and the combined organizer and inspector \$1,200 each; the European representative, \$1,111; the Halifax representative, \$1,000; and office help \$1,847. These officials incurred expenses in the course of their work amounting to \$1,963.

Mr. J. L. Hilborn, who at one time conducted the Fruit Experiment Station at Leamington, Ont., for the Ontario Department of Agriculture, has recently been appointed by the British Columbia Department of Agriculture, to take charge of an Experimental Station for small fruits and vegetables that is to be opened by the Provincial Government at Summerland, B.C.

ANNOUNCEMENT

 WE ARE PLEASED to announce to readers of The Canadian Horticulturist the incorporation of a Canadian greenhouse construction firm, under an Ontario charter called The Glass Garden Builders Ltd., and financed entirely by Canadian capital.. All the executive officers of the Company are men of repute in business and financial circles. The President is W. J. Keens, a prominent business man of Toronto; the Vice-President, Dr. J. M. Baldwin, at one time Vice-President of the Toronto Horticultural Society; the Secretary-Treasurer, C. M. Baldwin, for some years an officer of the Imperial Bank of Canada, and later connected with Real Estate Companies of Toronto.

The Company is most fortunate in having the services of Isaac Cassidy, formerly Secretary of the Lord & Burnham Co., Limited, of Canada, who has been in the greenhouse building business for about twenty years. He will devote his entire time to the activities of the Company.

R. Derbyshire, formerly Canadian Manager of The Parkes Construction Company, has also consented to give his entire services to the Company. He has been in the business for the past ten years and is well acquainted with the Canadian trade.

The policy of the Company is to build all types of commercial and private greenhouses, including all kinds of equipment. As an evidence of progressiveness on the part of the new firm two new houses are already under way for J. H. Dunlop of Richmond Hill. One of these, 61 by 400 feet, is being built of the flat rafter full iron frame type. The other is a pipe frame house, 24 by 236 feet. Several private houses are also being erected in the City of Toronto.

We would be pleased to submit plans and estimates on any work in this line. We know that our figures will interest you as all parts are manufactured in Canada.

GLASS GARDEN BUILDERS
43 SCOTT ST., TORONTO, ONT. LIMITED

FACTORY CLEARANCE SALE

ROOFING

98c Per Roll
108 Square Feet
Regular \$2.00
Quality.


ASPHALT FELT ROOFING

100 per cent. Saturation
Contains no Tar or Paper

Lowest price for Government Standard Roofing ever offered in Canada. Sale necessitated by business conditions.

Send for Free Sample

THE HALLIDAY COMPANY, LTD.
Formerly Stasley Mills & Co.
HAMILTON CANADA



Kelly's TREES

True to Name — Free From Disease

Mr. Fruit Grower, you are looking for the best Apple, Pear, Peach, Plum, Cherry and Quince Trees you can buy.

Kelly Trees are sold at Growers' Prices—Shipped direct from our own nurseries in Dansville and guaranteed sturdy, free from disease and True to Name.

For 28 years we have had the name of knowing how to grow trees right. From seedling to freight car we watch our own trees personally and know we are shipping just what you order. We have an up-to-date nursery plant and can ship all orders promptly, as well as grow and ship at a low cost. We give you every advantage on price. Plant apples this fall.

Write for our catalogue TO-DAY, and get our prices.

KELLY BROS. Wholesale Nurseries
216 Main Street, DANVILLE, N. Y.
You'll never regret planting Kelly Trees.

The Effect of the War on Fruit Prices

Fruit growers everywhere are wondering what effect the war will have on fruit prices. The following views on this point, of well known authorities, have been obtained by The Canadian Horticulturist:

P. W. Hodgetts, Secretary Ontario Fruit Growers' Association, Toronto, Ont. "Without doubt the European war will lower the prices of our apples and we must be prepared to accept just enough to make living wages and fair returns on our investments, perhaps less. The crop over the entire continent is good and prices would have been lower than last year if the war had not occurred. With millions of people affected by the shutting down of factories, absence of soldiers and breadwinners at the front in all large countries except the United States, disturbed trade conditions, both here and abroad, the outlook is far from favorable. About three million barrels of our apples, besides millions of pounds of dried apples are sent yearly to Germany, Great Britain, Denmark, France, Holland and Belgium. The greater part of the trade will be lost, and the fruit must be consumed at home, adding a large volume to that usually marketed here. The only policy seems to be to sell as much as possible this fall at lower prices, then prepare to pack and store the balance awaiting more favorable conditions of trade later in the year. By all means, pick and pack only the best grades this year."

Senator E. D. Smith, Winona, Ont.: "I feel that the effect of the war will be very injurious on the prices of Canadian fruits. Fruit is more or less of a luxury and in times of financial stress people are sure to cut off luxuries first. Furthermore, the shipping of apples to the Old Country will be under less favorable conditions than usual, not only as to freight rates and insurance, but the consumptive power of the British people will be impaired by the war. The two kinds of fruit which I look to be affected seriously will be apples and grapes. We have no peaches of any consequence in the country to be affected. Our plum and pear crops are comparatively light, and will be sold at reasonable prices, though not nearly so high as they would bring under normal conditions."

A Prominent Government Official: "I hesitate to venture an opinion as to the effect the present European war will have on the demand and prices for Canadian apples and Canadian fruit generally, because there are many uncertain factors in the situation which may change rapidly in the course of a week or two. With shipping, freight rates and marine insurance rates in a state of flux and the exchange market demoralized it will likely be those who know the least about the actual situation who will be most ready at this time to offer a hard and fast prediction. In Great Britain the question of unemployment will have an important bearing on the demand for Canadian fruit. A great many large manufacturing industries in the Old Country, which depend absolutely on the export trade, will be closed for an indefinite period and the purchasing power of a large section of the public will therefore be considerably diminished. In another week or two it is probable that the question of interrupted shipping, freight rates and the financing of export shipments will be better determined and that a forecast can be made with some degree of confidence."

Dominion Fruit Division: In its August report this division says: "With European countries in their present unsettled state, it would be imprudent to give any but the most indefinite prediction until some more..."

(Continued on page 235.)

WANTED, APPLES

AND BASKET FRUITS

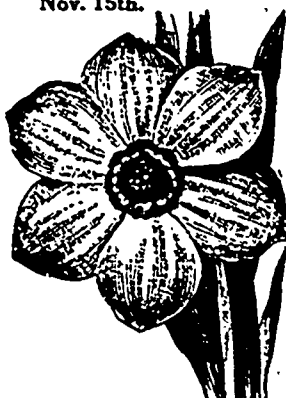
GEO. VIPOND & CO.
Montreal, Quebec

Branches: OTTAWA WINNIPEG REGINA

BRUCE'S REGAL FLOWERING BULBS

We offer a complete assortment of Bulbs for Winter Flowering in the house and Spring Flowering in the garden—Planting time Oct. 1st to Nov. 15th.

PRICES AT HAMILTON	Each	Doz.	100
Crocus, in 4 Colors	\$.02	\$.15	\$ 1.75
Preczias, Refracta Alba, large	.03	.25	1.50
Lillies, Calla, White, large	.20	1.80	
Lillies, Chinese Sacred, large	.10	.80	
Hyacinths, Roman, 4 Colors	.06	.50	3.75
Hyacinths, Dutch, 4 Colors	.06	.50	3.00
Narcissus, Paper White Grandiflora	.05	.30	2.00
Narcissus, Single, 6 varieties	.04	.30	1.75
Narcissus, Double, 4 varieties	.04	.30	2.00
Scilla Siberica	.08	.25	1.50
Snowdrops, Single	.02	.15	1.00
Tulips, Single, named, 6 colors	.02	.30	1.75
Tulips, Single, choice mixed	.03	.25	1.25
Tulips, Single, good mixed	.03	.20	1.00
Tulips, Double, named, 6 colors	.04	.35	2.00
Tulips, Double, choice mixed	.04	.30	1.50
Tulips, Double, good mixed	.03	.25	1.25



SINGLE NARCISSUS

The TANGO Tulip, a beautiful Tango colored variety, with very sweet perfume, Doz. \$5, 100 for \$2.50. Where Bulbs are to be mailed (parcel post) add one-fifth to amount of order for postage—where there are Express Offices, Express is cheaper than mail on all orders amounting to \$2.50 and over.

FREE—Write for our 28 page Illustrated Catalogue of Bulbs, Plants, Seeds, Poultry Supplies, Etc. This offer subject to the contingencies of war.

JOHN A. BRUCE & CO., LIMITED
SEED MERCHANTS Established 1850 HAMILTON, ONT.

First Sales of Ontario Pre-cooled Fruit

J. A. Ruddick, Dominion Cold Storage Commissioner, Ottawa, Ont.

THE first carload of pre-cooled fruit to be shipped from the Grimsby Cold Storage, was a carload of Montmorency cherries, purchased by the Department of Agriculture from the growers at thirty-seven and a half cents per six quart basket, delivered at the cold storage. After cooling, the cherries were loaded in a refrigerator car and consigned to the Scott Fruit Company, of Winnipeg. The car left Grimsby on the evening of Thursday, July 16th and was opened in Winnipeg on Wednesday, July 22nd. The account sales were as follows:

state that the cherries were in perfect condition.

A little calculation will show that the net proceeds of this car was nearly one hundred dollars in excess of the price paid the growers. The commission of twenty per cent. for handling seems altogether too high. I do not see why a commission agent should receive nearly twice as much for disposing of a car of fruit as the railway company receives for hauling it nearly fourteen hundred miles.

A second carload of cherries, which was put through the warehouse and pre-cooled

Winnipeg, July 24, 1914

ACCOUNT SALES:

Pkgs. Rec.	Description Car 340,232	Total
No. Sold	..... cts.	
2277 Baskets cherries, sold for	..... 60	\$1,366.20
10 Raspberries	..... \$1.25	12.50
		\$1,378.70
Freight	.....	\$148.00
Commission	.....	275.74
		423.74
	Net proceeds	.....\$ 954.96

Other sour cherries were selling in Winnipeg on the same day (July 22nd) at 38 cents. The car was accompanied as far as Winnipeg by Mr. Edwin Smith, who is in charge at Grimsby and both his report and the report of the Scott Fruit Company

for E. J. Woolverton & Sons, was sold in Montreal on Monday, July 27th. These cherries were picked at different times during the ten days preceding shipment, and they were placed in the cooling room the day they were picked. Some of them had

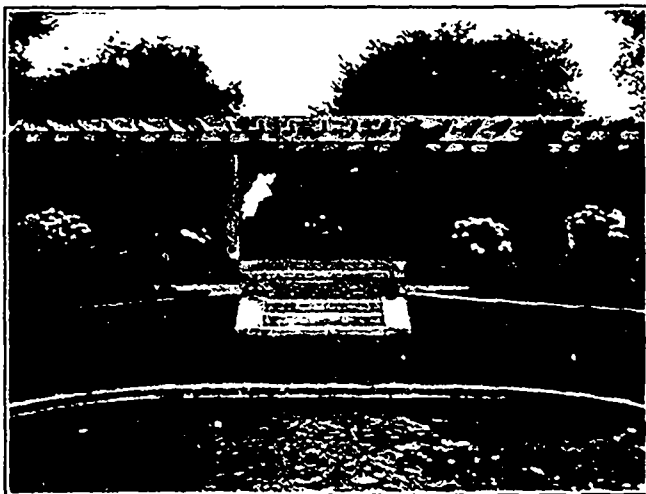
been in storage for over a week when the car was lifted on Friday, the 24th. The Montmorencys in this lot sold as high as forty-five cents and Windsors as high as seventy-five cents per 6-quart basket. The fruit inspectors report that the cherries arrived in Montreal ex-refrigerator car in good condition. Messrs. Woolverton's object in this shipment was to extend the season a week or ten days and thus avoid the glut which prevailed at the time of picking. They seem to have succeeded in their object.

Demonstration Orchards

The Fruit Branch of the Ontario Department of Agriculture has secured long term leases on three orchards in Prince Edward, Ontario and Brant Counties, respectively, which are to be used for demonstration purposes. Hitherto demonstrations have been conducted only once in the same orchards. It is realized that very little of value can be gathered from experiments conducted only once. It has been decided, therefore, that by getting orchards in several localities and treating each orchard the same for six or seven years, it will be possible to find out something of value to the apple growers of Ontario. Some orchardists have had good results with one spray material, others prefer something else. Some growers prefer Bordeaux mixture and Paris green, and say they cannot grow apples with any other mixture. The Department has not been in a position to say that they would have done better by applying some other material.

It is the intention of the Department to have about half of each orchard in sod and to compare the apples grown on it with those grown on cultivated ground. The

Have Your Grounds Been Satisfactory This Season?



It is during these months that you become best acquainted with your grounds. You realize where improvements might be made and promise yourself that next year things will be different

Do you know that the time to make your improvements is during the next few weeks? You have this season's experience keenly in mind and know what should be done.

Have you thought of having professional advice to show you how to accomplish the most satisfactory result? Remember that when your grounds are once laid out to a well studied plan, prepared by one who has had a thorough training and wide experience in Landscape improvement, your expenditure is closed and with the growth of your shrubs and trees your place becomes more beautiful each year. We place such training at your service and for a moderate cost you may have plans prepared providing for building location, design and specifications for walks and drives, drainage, orchard plantings, gardens, in fact we handle your entire estate through to completion.

Write at once acquainting us with your problems and we will be pleased to advise you as to the best procedure.

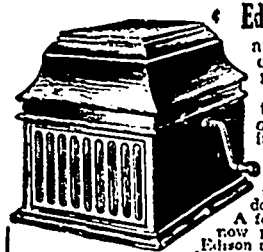
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"Festiva Maxima" is still among the best, and we have a large stock of it.

In "Phlox" we have a number of the best and newest varieties.

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CAMPBELL BROS. - SIMCOE

orchards are divided into about four parts. In the first part, commercial lime and sulphur with arsenate of lead will be used. In the second part soluble sulphur with arsenate of lead. In the third part Bordeaux mixture and Paris green, and in the fourth part one spray of commercial sulphur, second spray of Bordeaux mixture, and a third spray of commercial sulphur.

This will be done to find out if Bordeaux mixture for a second spray will control fungus better than three sprayings with lime-sulphur. One row of each part had a fourth spraying, several rows had arsenate of lead powder (instead of paste) used to see if it is as good, as it is much easier mixed. One orchard had barn manure put on part of it to see what advantage it has over commercial fertilizer.

The three demonstration orchards are as follows: One in Prince Edward County, at Wellington, the property of H. B. Collins and son, of two hundred acres. One in Ontario County at Whitby, the property of Mrs. J. J. Fothergill, containing two hundred and eleven trees. This was leased last year, and the work will be a continuation of that which was commenced then.

The third orchard is that of G. A. Parkhill, at Paris, in Brant County, containing eight acres of orchard.

Items of Interest

Prof. T. D. Jarvis, B.S.A., for some years past Associate Professor of Entomology at the Ontario Agricultural College, has resigned his position to take up active farming operations on his property in the Grimsby district. His resignation has resulted in a rearrangement of the work of the Department and general promotions. L. Cesar is promoted from the position of lecturer to that of associate professor, and A. W. Baker, who has been demonstrator, is made lecturer in fungus diseases and insects. G. J. Spencer, a graduate of the 1914 class, who has taken a special interest in entomological work, has been appointed demonstrator in succession to Mr. Baker. These appointments went into effect on the first of July.

At the annual conference of the Ministers of Agriculture in the Australian states, opened at Brisbane during the summer, it was resolved that "what is known as the Canadian standard fruit case be included in the list of Australian fruit cases already accepted by the authorities.—i.e., that fruit imported from Canada, packed in standard cases, could be sold in Australia without re-packing. Should the New South Wales Government decide to give effect to the resolution passed by the conference, in time for the Canadian export season of 1914, cabled advices will be forwarded to the Department of Trade and Commerce, Ottawa, from which Canadian shippers will be advised.

About fifty prominent fruit growers of the Grimsby District in Ontario met recently, and decided to appeal to the Railway Commission in reference to the poor service that has been given the fruit growers of that district this year by the Canadian Express Company. It is claimed that the delay in shipments through Montreal has cost thousands of dollars. Growers who shipped to Vipond & Company, of Montreal, claim that the delay and the way the shipments were handled, resulted in a ten thousand dollar loss in two days.

Reports which are coming in from the English fruit growing districts tend to indicate that this season's apple crop will be a short one. Frost has been the main setback, but drought and insect pests have also been harmful.

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It is Odorless, Sanitary and Holds 14 Times its own Weight in Moisture.
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Ti.e War and Fruit Prices

(Continued from page 232.)

decisive developments take place. Under these circumstances, the wisest attitude for fruit growers to adopt is to wait until the crop is ready to handle, to harvest and pack it, and if at that time the facilities for marketing abroad are inadequate, and the demand at home is not sufficiently keen to keep prices at a satisfactory level, then the only logical alternative will be to hold what

remains of the crop in storage for later distribution, and hope for the best."

Robert Thompson: Manager, St. Catharines Cold Storage and Forwarding Co., St. Catharines, Ont.: "I fear that the war situation is likely to have a depressing effect upon the sale of fruits in general in our local markets, and especially in apples for export. The higher prices likely to prevail for good products may create more of a home demand for our fruits and vegetables, especially if they are lower in price."

Effect of the War on the Bulb and Seed Trade

The war situation has led many to wonder what the effect is likely to be on next year's supply of bulbs and seeds, as large quantities are imported annually from Germany, France, Belgium, Denmark, Holland and England. In an effort to gain information on this point The Canadian Horticulturist recently wrote to a number of the leading seed firms and florists. Their replies indicate that there is likely to be a sufficient supply of bulbs, but that the seed trade may be considerably affected. The letters received from these firms follow:

J. A. Simmers, Limited, Toronto, Ont.— "It is too early to give an intelligent reply but we anticipate that we are going to be able to supply most of the European stock of bulbs that we usually list this fall. We consider that it is entirely too early to make an estimate of the outlook on seeds."

Steele, Briggs Seed Co., Toronto, Ont.: "We believe that we shall have sufficient bulbs this fall to cover all orders, with the exception of, possibly, *Spiraea* which, of course, matures very much later than other stocks. Owing to the war conditions we cannot give any definite information regarding them. As regards the balance of bulbs such as tulips, hyacinths, narcissus,

crocus, etc., we have already received advice that they have been shipped and should reach New York during this week. At this writing it is impossible to give any information regarding seeds, as no one can say what percentage of the German crop will be harvested and ready for the market."

Carters Tested Seeds, Inc., Toronto, Ont.: "Last week we received news from our parent house in England which indicated that we should not obtain very much of our stock of bulbs. The major portion of these, of course, come from Holland, and although this is one of the very few countries not at war, their troops are mobilized and their ports are practically closed, and all business is at a standstill. Later news has been more favorable, and it would seem that after all, shipments are being made, and present indications point to there being very little shortage of Dutch bulbs. We are not yet in a position to give any definite information regarding French bulbs. The outlook is dark regarding them, but we hope and feel that eventually matters will work out as satisfactorily with them, as with the Dutch bulbs. It must be remembered that customary freight rates across the Atlantic are suspended,

and we now have to pay in some cases, double this, and a partial shortage should mean a slight tendency to enhancement in prices, which we suspect will be largely modified by the present stringent conditions here, there being indications that the demand for bulbs this fall in Canada will not be so brisk as in former seasons."

W. W. Gammage, London, Ont.: "As this is a wholly new experience it is but a conjecture what or when the termination may be. So far as the bulb situation is concerned there seems to be some prospects of shipments coming through although this is as uncertain as are the dates of delivery. Azalias and other plant stocks are quite uncertain. American agents for European concerns can give no information. Their opinion is that there will be no shipments this fall. What the effect will be is problematical. It may be a blessing in disguise. The public have been educated to buy this class of stock but at a margin of profit to the grower that is not commensurate with the risk. There is little anticipation of a falling off in demand. Crops are good—and with the cutting off of supplies from Germany and other European countries, new industries will spring up that will create a wave of prosperity which will be shared in by those who are prepared."

Kenneth McDonald & Sons, Limited, Ottawa, Ont.: "It is our impression that while numerous delays in transit will surely occur, still there is a likelihood that a sufficient proportion of Dutch and French bulbs will reach this side of the water to satisfy early orders. After our first supplies are exhausted, however, we would not venture sending repeat orders depending upon the goods reaching us in time for planting. The larger portion of our French bulbs have, we understand, just reached New York, while the bulk of our Dutch grown bulbs have left Holland. Regarding seeds, just a few varieties which can

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It is light yet strongly built to meet rough usage. It folds compactly and can be readily carried from place to place in the orchard. It is thoroughly tested for strength and efficiency.

The table frame is of oak and all metal parts are of first-class malleable, thus being interchangeable in case of breakage. The cover is of No. 10 canvas.

An Article Every Packer Should Have This Season

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The bulbs come from Holland's
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be harvested early have reached us, and we
 feel that many sorts which are produced in
 Germany and France will not be harvested.
 This will prove disastrous to the seed trade
 throughout the world. Seedsmen every-
 where depend largely upon France for its
 supplies of such seeds as carrot, beet
 celery, mangel, etc., and upon Germany for
 fine varieties of stocks, asters, pansies and
 other flowers. Great Britain also produce
 annually immense quantities of various
 seeds and we expect they will be harvested
 as usual, but it will be impossible for Brit-
 ain to supply sufficient quantities to make
 up for the shortages of these other coun-
 tries. This will result in higher prices rul-
 ing generally."

Morgan's Supply House, London, Ont.
 "We have had information which assure
 us that our supply of bulbs from Holland,
 with very little doubt, will be here at the
 usual time. We think that in all probability
 Canada will be supplied as usual, with
 these goods."

Wm. Rennie Co., Limited, Toronto, Ont.
 "Owing to the European war it is possibl
 that certain varieties of high class flowe-
 seeds will be somewhat difficult to obtain,
 and particularly so as many of these spec-
 ial seeds lose their vitality in a year, and
 any stocks that may be carried over would
 scarcely be saleable. This refers to certain
 varieties produced in Germany and France.
 As far as our own position is concerned,
 we are large growers of home product
 seeds, and with a fair harvest, will be in
 moderately good shape for the coming sea-
 son's trade. Some varieties, of course, will
 be sure to be short and unobtainable from
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 be sufficient seed of satisfactory varieties
 of both field and garden seeds to supply
 the demands for the coming season at
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This wrapper is a product of many years
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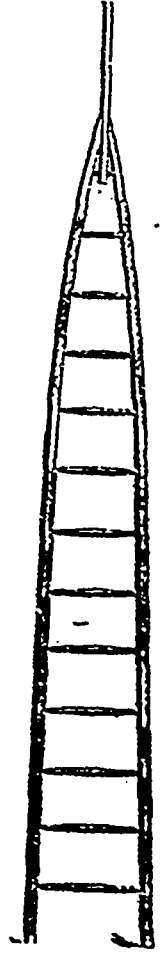
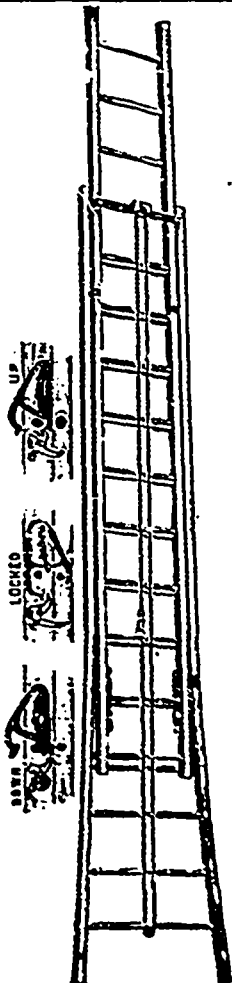


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Phone 3514

Standard Packages for Fruit

ONE of the important subjects that will be discussed at the Dominion Fruit Conference to be held in Grimsby, Ont., early in September, will be the adoption of standard sizes for fruit packages other than the apple box although it too will probably be considered, as the Pacific Coast standard box had many admirers in British Columbia. This being the case, the following report by Dominion Trade Commissioner D. H. Ross, of Melbourne, to the Department of Trade and Commerce, Ottawa, on the Commonwealth regulations in respect to fruit, should be of interest:

Under the Commonwealth Commerce (Trade Descriptions) Act and regulations, the sizes of fruit cases, either for import or export, are not questioned. If, however, the cases are marked 'one bushel' it is stipulated that the contents shall be of a capacity equal to that of the Imperial bushel. The fruit must be correctly described and should the contents be marked on the case it is imperative that the quantity shall be correct. The Commonwealth Quarantine Act applies to all imported fruit, and prohibits the importation of fruit from certain places on account of the existence of fruit pests or diseases.

Montreal

E. H. Wartman, Fruit Inspector, Montreal

We are receiving large quantities of apples from all directions. Delaware and New York State in bushel baskets, and Ontario in barrels, boxes and eleven-quart baskets. For anything but fine quality prices are very low, about one hundred per cent less than last year at this date. This should be the year that number three apples would be better absent from our markets. There is a better use for them, apple chop or animal feed in moderation.

Although this is August 15th, about six hundred baskets of cherries arrived, and quantities of gooseberries and currants. As these fruits come in by the middle of June it has been a long season.

One of our big fruit firms here claim to have sold one hundred thousand baskets of cherries this season. I have no reason to doubt it. This would mean sixty-six cars of ordinary loading. But this is only one firm's sales. What has been the grand aggregate, who knows. I think I might safely say it has been the record crop for the last half century. This crop was predicted and never failed.

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—W. B. Calder, Grimsby.

NIAGARA DISTRICT FRUIT FARMS.—Before buying it will pay you to consult me. I make a specialty of fruit and grain farms.—Melvin Gayman & Co., St. Catharines.

ASK DAWSON. He knows.
IF YOU WANT to sell a farm consult me.
IF YOU WANT to buy a farm consult me.
I HAVE some of the best Fruit, Stock, Grain and Dairy Farms on my list at right prices.
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GOLDEN AND THREE-BANDED ITALIAN AND Carniolan Queens, ready to ship after April 1st. Tested, \$1.00; 3 to 6, 55c each; 6 to 12 or more, 90c each. Untested, 75c each; 3 to 6, 70c each; 6 or more, 45c. Bees, per lb., \$1.50. Nuclei, per frame, \$1.50.—C. B. Bankston, Buffalo, Leon Co., Texas, U.S.A.

FOR SALE.—By return mail. Root and Moor strain select tested Italian Queens, \$1.00 each, untested 75c. Breeder, \$2.00; grades 50c., no disease.—Wilmer Clarke, Box 200, Earlville, Mad. Co., N.Y., U.S.A.

FOR SALE.—25,000 lbs. white honey. Will sell to the highest offer.—Jos. Martineau, Montfort, Que.

WANTED—Situation in greenhouse by man with some experience. Reliable worker, good references, disengaged end of September.—D. Box 114, Listowel, Ont.

WANTED—Clean, bright beeswax and fancy comb honey.—R. N. Smeall, 95 4th Ave., Viauville, Montreal, Que.

FOR SALE—30 empty hives with frames; some are Richardson, nearly new, no disease. Reason for selling—am using the Langstroth. Price for the lot, \$15.00. First money order gets them.—Lawrence Stone, Erie Beach, Ont.

FOR SALE—35 Colonies of Black Bees free from disease in up-to-date hives. Wm. Graham, Box 34, Monklands P.O., Ont.

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