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Standardizing Canadian Fruit Packages

Alex. McNeill, Chief, Dominion Fruit Division, Ottawa, Ont.

So long as Canadian fruit growers confined themselves to supplying the local markets only, the question of uniformity of packages did not present particularly. Of late years, long distance markets have become more and more important and it is not too much to say that in a short time the long distance market will dominate the fruit trade. Under these circumstances the present is a favorable time to secure uniformity in packages throughout the Dominion. The importance of this feature is realized.



Alex. McNeill

Among the many reasons for having uniform packages none, perhaps, is more important than the question of economy in manufacture. Where the manufac-

turers know that all packages must conform to certain dimensions they can cut their material and they can calculate with reference to it much more readily and with far greater saving than where the matter of size is left to the whim of everyone who wishes to give an order. Manufacturers are intensely interested in uniform packages.

If packages are standardized many things can be done by machinery that otherwise would have to be done by hand. They can use up large quantities of material that might otherwise go to waste and they can give prices with confidence where the matter of dimensions is permanently established. The honest fruit grower has everything to gain through the standardization of packages. He wishes only to secure what is coming to him and is willing and anxious to give full measure. He does not want, however, to use packages five, ten or twenty per cent. larger than his neighbor uses. He is, therefore, often in a quandary to know just what package he may honestly use. Fortunately

in Canada we have already standardized certain packages with very satisfactory results. Nevertheless, much remains to be done.

STANDARD PACKAGES

The apple barrel is standardized as to its minimum size, and this size applies to pears and quinces as well. The box is standardized for capacity for the home market as well as for the export market. The fruit basket is defined in four sizes, fifteen quarts or more, eleven quarts, six quarts, and two and two-fifths quarts. Dimensions are prescribed for the eleven and the six quart baskets. So far as these packages are concerned, it may be said with perfect truth that they are giving good satisfaction. However, if the Inspection and Sale Act is to be amended certain improvements probably will be made in all packages. For instance, in the case of the barrel it has been suggested that two sizes be prescribed, one corresponding to our minimum size and the other to the size used more frequently in Ontario. It is, I think, the general impression that to



Packing Apples in the Farmers' Exchange, Kelowna, B.C.

standardize two sizes of barrels so nearly alike, would be a great mistake. No doubt there will be further consideration of this subject which will enable the fruit growers to arrive at some standard for one size alone. At present there seems no better compromise than to define a minimum size only, though the dimensions used do not quite harmonize.

The ten by eleven by twenty inch box is giving excellent satisfaction. British Columbia fruit growers who use the box exclusively, find no difficulty in packing any size of apple. Beginners, perhaps, would find two or three sizes convenient, but the objections to having several sizes in a packinghouse are too strong to be easily overcome.

The berry box in two sizes—a four-fifth quart and a two-fifth quart—have proved satisfactory. The four-fifth size is large enough for the best results with strawberries, and the two-fifth box is extremely convenient for the softer raspberries.

In baskets, the four sizes prescribed by the Inspection and Sale Act, fill the bill perhaps as well as any size that could be prescribed. Suggestions have been made that a round bushel basket should be prescribed, inasmuch as a bushel basket is an extremely convenient package for local markets and even for markets more or less distant. But the want of uniformity in the capacity of the reputed bushel basket makes it difficult to quote prices.

It may be fairly said, therefore, that Canada has, up to date, done well to standardize packages, and we are saved from the chaos that prevails in the English local markets and the markets of the United States. The want of uniformity in packages used by English fruit growers has done, perhaps, as much as anything to curtail and limit the extension of the local fruit industry, especially

with reference to the use of fresh fruit. It can be said, too, that very great difficulties are experienced in the large markets of the United States owing to the want of uniformity in fruit packages from different parts of the Union.

IMPORTANT NEEDS

There are, however, certain needs developed by a long distance market that require consideration. For instance, a standard pear box is very much needed; the apple box is somewhat too large, and the half size might with advantage be prescribed. The half box, again, is considered by some unnecessarily small, and it has been suggested that the ordinary apple box be used with the depth cut down to eight inches, and it is a question whether the five by eleven by twenty inches, the eight by eleven by twenty inches or some other size should be the standard for pears. One thing is certain, the size of the apple and the pear box must agree in two dimensions at least so as to facilitate packing both apples and pears in cars.

Another objection to the five by eleven by twenty inch box is that the length is too great for the depth for good looks or for strength. Some weight, of course, must be attached to this objection, but it would take experience to prove that the objection is serious.

PEACH PACKAGES

Up to date the basket has been the favorite package for peaches and serves the purpose fairly well, so long as we confine it to local markets. But there are grave objections to the basket when we come to ship to long distance markets. So long as the basket is handled quickly and without piling in large lots, the fruit is well protected; but it will not bear shipping in full carload lots to advantage. The sides are weak and are not braced to resist a side strain, and the motion of the cars as well as the

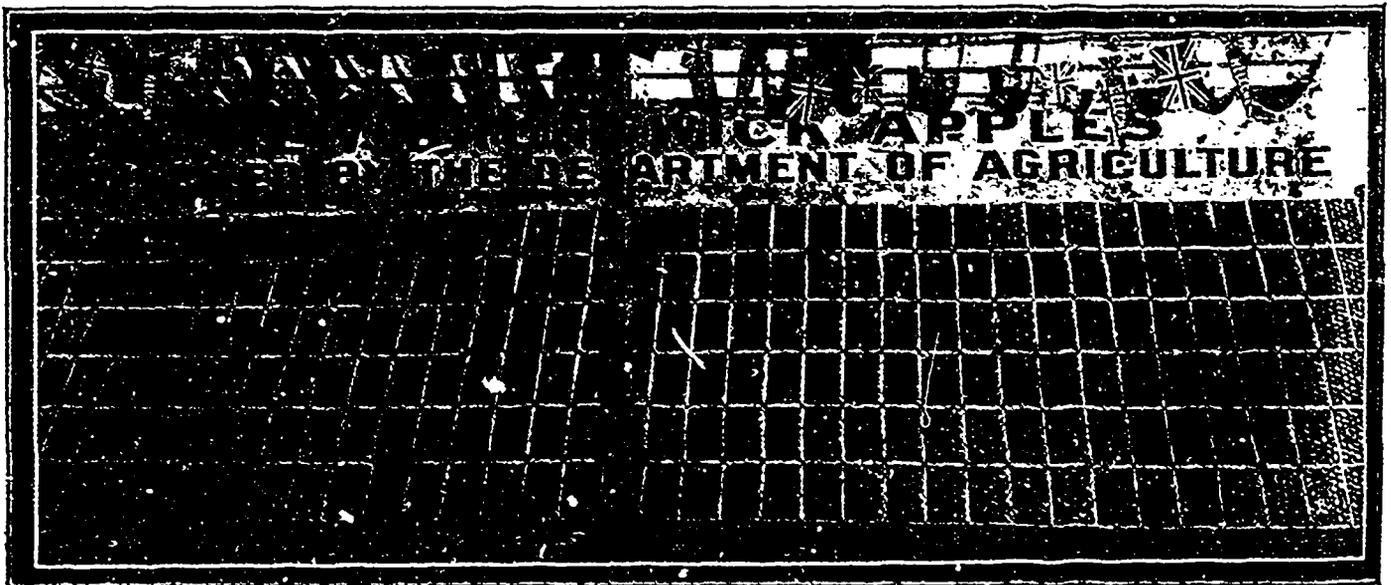
pressure of the upper layers of the fruit, damage the fruit below. For these reasons the stiff package, corresponding to a shallow box with or without a middle division, appears to meet the needs. Here again it would be convenient if it were possible to get this box to conform in two dimensions at least to the apple and pear box to facilitate loading mixed cars.

Cherries in Ontario so far have been marketed, for the most part, in six and eleven quart baskets, but these packages are quite unsuitable for the long-distance market, and there seems to be no reason why a four-basket crate, such as is used in British Columbia, should not be used for cherries and plums to take the place of the six and eleven quart basket. Be it said here that there is no thought whatever that such a crate as this would entirely supplant the basket. The basket is the cheapest and most convenient package, and for the nearby market serves every purpose, and there appears to be no disposition to dispense with it. The same package, or something very similar, might also be used for tomatoes, especially the early.

The whole question would be the matter of the size of the baskets and whether they could be conveniently put into a crate that would ship with other packages. It is extremely desirable that this should be done, if possible, and the problem before the Canadian fruit growers—and one that cannot be solved otherwise—is to harmonize the outside measurements of the packages so as to make the loading, storing, and packing as simple a matter as possible.

If a standard outside size could be set for all these packages, it would make it particularly convenient for the manufacturer who wants as few sizes as possible in his raw material.

(Concluded on page 219)



An Evidence of what New Brunswick Can Do in the Production and Packing of High Grade Apples. Notice the Different Packs Used

Cooperation in Packing and Selling Fruit

Dr. H. Johnson, Grimsby, Ont.

COOPERATION on the part of growers in the packing and sale of apples, or other fruit, has met with unqualified success in every case where any society or organization has been conducted on a proper business footing. Contrariwise, every case of failure in cooperation can be traced to inefficient

management. Yet the fact remains that there are still many fruit growers very half-hearted, if not actually hostile, in their attitude towards cooperation. It will be found that growers of this class are either unaware of the benefits to be derived from cooperation on a business basis, or else that they have been disappointed in the results achieved by some organization of which they have formed part, and which has not had the advantage of capable management.

is given to selling fruit. No grower who looks after his orchards has time to study markets. A salesman, on the other hand, has little else to do. Practically speaking, therefore, the success or failure of a cooperative organization is narrowed down to the question of obtaining a good salesman and an

fruit, it is better to keep the management and sales departments separate, and have each under the charge of a suitable man.

That cooperation has benefitted the grower in many sections is evidenced by the prices now obtained for the produce raised. In the case of apples a price frequently offered by the buyer, and judged by the farmer to be a good one, was one dollar a barrel on the tree. Many sales, as a matter of fact, took place at lower figures, and some were effected at not more than fifty cents. In sales of this kind the buyers put up the pack while the grower usually supplied labor for picking.

In Norfolk county, Ontario, under cooperation the price to the grower for the years 1909 and 1910 rose to two dollars a barrel on the tree. The average f.o.b. price under the Norfolk association was three dollars a barrel, which is really equivalent to two dollars on the tree, expenses being counted as follow: Cost of selling, twenty cents; picking, fifteen cents; packing, fifteen cents; barrel, forty cents; hauling and loading, ten cents; total, one dollar.

Around Oshawa the net return also now averages two dollars a barrel on the tree. In the Burlington district, which has worked up an export trade to England, the price to the grower averages not less than two dollars ten cents on the tree.

The case of the Hood River (Oregon) organization, however, supplies the best argument in favor of cooperation. Before the Hood River Apple Growers' Union was formed the average price realized by growers was one dollar twenty-five cents a bushel box. Since



The Fruit Producing Possibilities of Eastern Ontario as Demonstrated at the Last Ontario Horticultural Exhibition

efficient manager to look after the concern. These two qualities may be united in one man, and in small societies money could be saved by combining the two functions. But in a large concern, which handles a big amount of

The trend of all modern business or industrial operations is the sub-division of labor, and the greater the degree to which this sub-division is carried, the cheaper will prove the production or distribution of the goods, whatever they may be, and the higher the ratio of profit. Hence, on merely theoretical grounds, cooperation in packing and selling fruit is a great step in advance, because it creates a sub-division in the labor of the fruit grower, whose time should be given entirely to raising produce and not to selling it. A fruit grower may be, but as a rule is not, a business man. In either case he is not taking a mistake if he attempts to sell his own fruit, because it may be taken as a sine qua non that better prices could be secured by a salesman whose sole time

is given to selling fruit. No grower who looks after his orchards has time to study markets. A salesman, on the other hand, has little else to do. Practically speaking, therefore, the success or failure of a cooperative organization is narrowed down to the question of obtaining a good salesman and an



Picking Prunes in Mr. Stirling's Orchard, Kelowna, B. C.



Picking Rhode Island Greenings, Beaver Valley, Georgian Bay Dist., Ont., Average, six barrels a tree

organization the average f.o.b. price netted is two dollars fifteen cents a box.

In this connection the question might be asked whether Canadian growers are not making a mistake in retaining the barrel as the chief package. It would seem that better prices can be obtained for boxed apples. At present the supply of boxed apples in the United States is not equal to the demand, while the inquiry for barrelled apples has been small.

One of the first difficulties met with in all cooperative societies is to find a way of paying each member a fair price for all fruit sold through the organization. All growers do not produce the same quality of fruit. Some are careless, some indifferent, while others are not content unless they raise really first-class stuff. If all sales are pooled the latter category of growers naturally suffer and do not receive the extra reward due to them.

The only way out of this difficulty is to have all fruit graded or packed at central receiving stations, and to pool sales of each grade separately, crediting each member with the number of packages of the particular grades delivered. This is a fair way out of the difficulty, and one that is not difficult to put into practise, as it merely entails the services at the central station of a receiver who is a good judge of fruit (in the case where the fruit is put up by the grower) and an efficient staff of packers for fruit put up in central stations.

In the case of berries of all kinds the number of grades should be strictly

limited to two: First-class berries and poor berries.

It is poor policy for any individual, and much more so for a large organization, to market poor quality stuff, and all berries which are not first-class should be sent to the canning factories. It will be found that the factories are prepared to contract with large cooperative societies at much better prices than with individuals, the reason for this being obvious: They can afford to give a better price, as they do not have to send round a lot of men touting for small contracts among growers. In no case should poor fruit be thrown on to the market, as it merely breaks the price and does not satisfy the consumer. The general Canadian public is wealthy enough and is prepared to pay a fair price for good fruit, but it does not require trash at any price.

As regards cherries, there is no particular difficulty in grading. They may be classed conveniently as Number One Sours, Sweets, and Number Two Sours, Sweets. Samples of the same variety will not be found to vary greatly from one orchard to another in the same season, although there may be a good deal of variation from one year to another.

It is when we come to apples or peaches that the real difficulties begin, since in the case of these fruits the differences in quality from one orchard to another are tremendous. Hard and fast rules as regards packing and grading must be made by each organization according to the market in which it is selling.

In the organization of an apple union the following are the chief points, as emphasized by an expert from the Hood River Valley, which are essential for success: The organization must be a large and powerful one in command of a wide acreage. This gives the society a large quantity of apples for sale and enables it to a certain extent to make its own price. It is advisable to sell the whole output to one man, or corporation. In putting up the apples, the packer is the judge and not the grower. Each packer must be registered, given a number, and made responsible for grade and pack. In no case must the packers have any interest in the orchards or in the sale of fruit.

In the Hood River Valley the packers are paid at the rate of thirty-five cents an hour, with board; or if they prefer it, at the rate of seven cents a box. This is a good wage, but a good class of labor is required, as the work is of a responsible nature. All members contract to sell the whole output of their orchard through the medium of the union, and every year they come in and sign a paper giving as close an estimate as possible of the expected return of each variety of fruit. Tenders for the purchase of the crop are invited on this estimate.

Every box of apples delivered by the Hood River Apple Growers' Union is guaranteed true to grade and all layers uniform with the top.

The foregoing simple principles, which have been strictly carried out, have made for the phenomenal success of the Hood River Union: and all fruit selling organizations which have not been equally successful should apply these principles in the future. It does not matter whether the fruit is apples, peaches, or otherwise. All fruit sold must be guaranteed true to grade and this cannot be done except in the manner outlined.

THE BEST METHODS

Any well managed organization will quickly discover which methods of grading and packing are the best suited to its particular requirements. At the same time it would be a step in advance for the fruit industry if all organizations could agree to a universal system of packing and grading.

There is one point on which Canadian growers and dealers in fruit seem to make a great mistake, and that is in over-estimating the value of large fruit. A large apple or a large peach has no better flavor than a medium-sized or even a small specimen. Yet in Canadian wholesale markets all peaches which do not attain a certain size are put out of the number one class. The same thing applies to apples in the manner in which they are packed by some of the Canadian organizations. Better prices would be obtained by the grower if less attention was paid to size and more to quality.

Apple Packs and Packing

R. M. Winslow, Provincial Horticulturist, Victoria, B.C.

WHILE a packed box of apples looks simple enough, it must fulfil certain requirements to be considered well put up. First, and most

is necessary with the end-on packs than with the side packs. This applies also to the height of the ends.

Regularity of pack is very important. When an irregularly packed box is opened at the side, it shows how the packer may start to pack a box in one size, and may change half-way through the box. Where the change is made apples are liable to be very much bruised, on which account this practice is to be condemned, and the application of the term "stacked pack" indicates the essential dishonesty of this proceeding, which is poor packing and worse morality.

ATTRACTIVENESS ESSENTIAL

The attractiveness of the finished pack is very essential. Our apples rely a great deal on their appearance for high-priced sale, and the finished pack should be attractive in the regularity of size, smoothness of the wrap, and the alignment of the fruit in the box.

The above points deal only with the mechanical operation of packing. Not less essential, but even more so, is the grading of the fruit to size and to color. Grading to size is usually done in British Columbia by the packer himself, and he should use every effort to make the box uniform throughout. A good packer must be conscientious, quick, and accurate. The ability to learn to pack fruit is natural, and a big percentage of people do not possess it. Packers are born, not made.

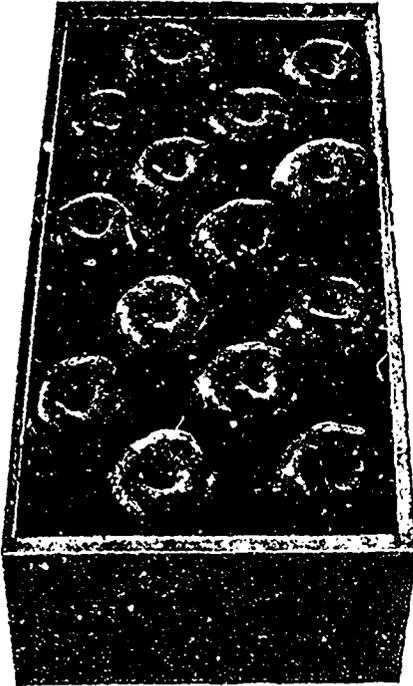
Our apple box, twenty by eleven by ten inches, is the result of many experi-

ments, some twenty or more sizes having been extensively used in California before the present sizes were finally adopted. The result is that practically all sizes and shapes of apples can be put into our boxes in the diagonal packs. In the very large sizes it is necessary to pack some apples on the square, three across and three deep in the box. The square packs, as well as the offset, we know from actual trial, are usually unnecessary. The buyers are beginning to be suspicious of packers who still insist on their use, and quite rightly so.

In the accompanying illustrations there are shown the principal diagonal packs. A study of these will show the beautiful regularity of the diagonal system. The flexibility of this pack to meet the requirements of apples of different sizes is learned only by experience, but as soon as a packer grasps the underlying principles of the diagonal pack there is no incentive to the use of the older and undesirable methods.

THE DIFFERENT PACKS

For the two-one diagonal pack the apples must be too large to fit in three in a straight line across the box. Start with two apples, one in each corner, then one between these, the two at sides, and so on. Second tier—Start with one in the centre of the end, over blank space, then two, and so on, covering the blank spaces. The third tier comes directly over the first, covering the blank spaces in the second tier. All two-one packs go on the side.



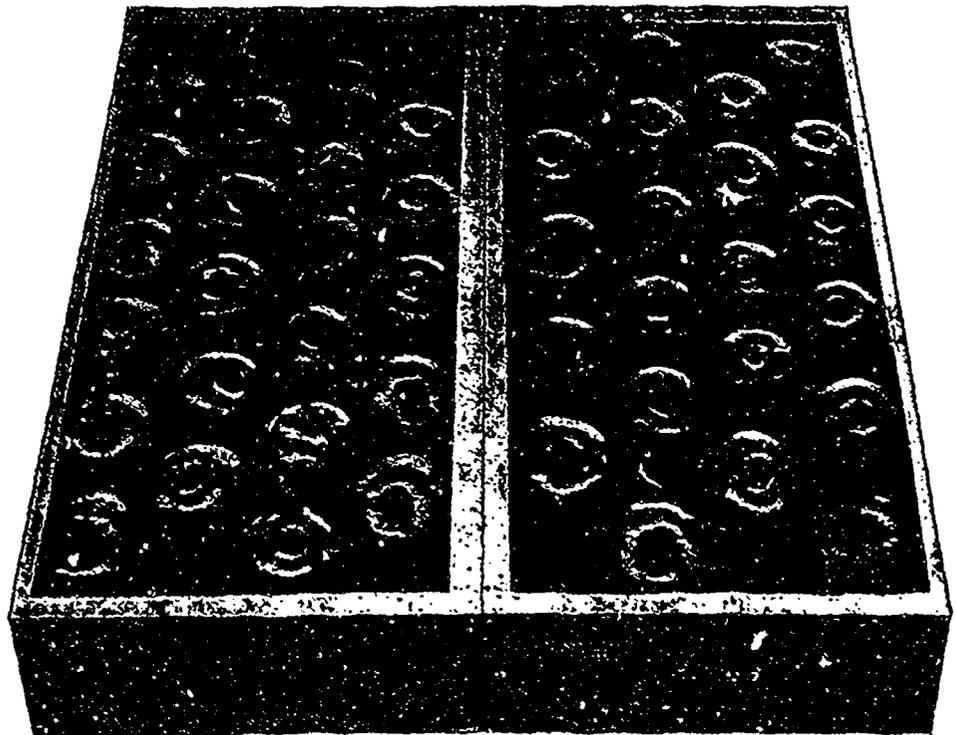
A Two-Two, Three-Four Pack—Fifty-six Apples in a Box.

important, the pack must be firm. There must be no room for the fruit to shift in any way. It is often possible to stand a box on end without the cover nailed without any of the apples falling out. This is usually impossible if each apple does not touch all those surrounding it in the proper way.

The bulge or swell is also important. The idea is that as the apples lose moisture and shrink, the cover which has been pressed down tightly over the bulge will contract and continue to hold the apples firmly. The bulge is secured by turning the apples when packing, so that the slightly longer diameter is vertical. Doing this becomes second nature by practise. It is sometimes necessary to turn the end apples on their side, in the end-on packs, in order to get this just right.

In order to create some pressure on the end rows of apples, the fruit at both ends should be from one-quarter to three-eighths of an inch above the top of the box. The cover presses this down that much quite easily without bruising, and the elasticity of the fruit will keep it tight for some considerable time.

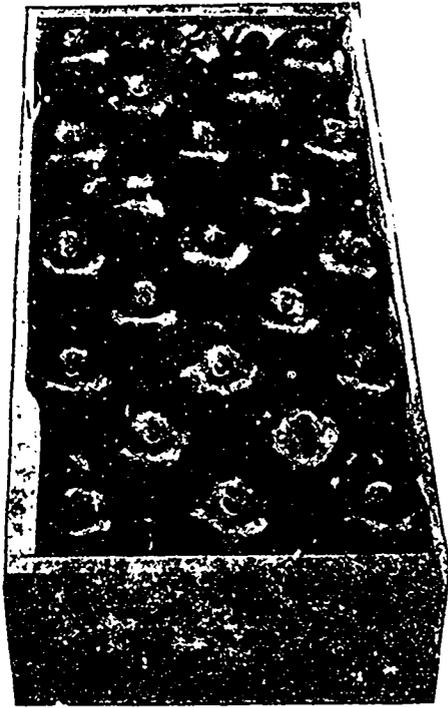
There is at present some reaction against the bulges of one and one-half to two inches common a few years ago. Experience has shown that a bulge of one and one-quarter inches, counting both top and bottom, is sufficient. More



A Two-Two, Six-Six Pack—Ninety-six Apples to the Box.

A Two-Two, Five-Six Pack—Eighty-eight Apples to the Box.

In the two-two diagonal pack the apples must be large enough to fit in, four in a straight line across the box. Start with two apples, one in left-hand corner and one half-way to right corner, both



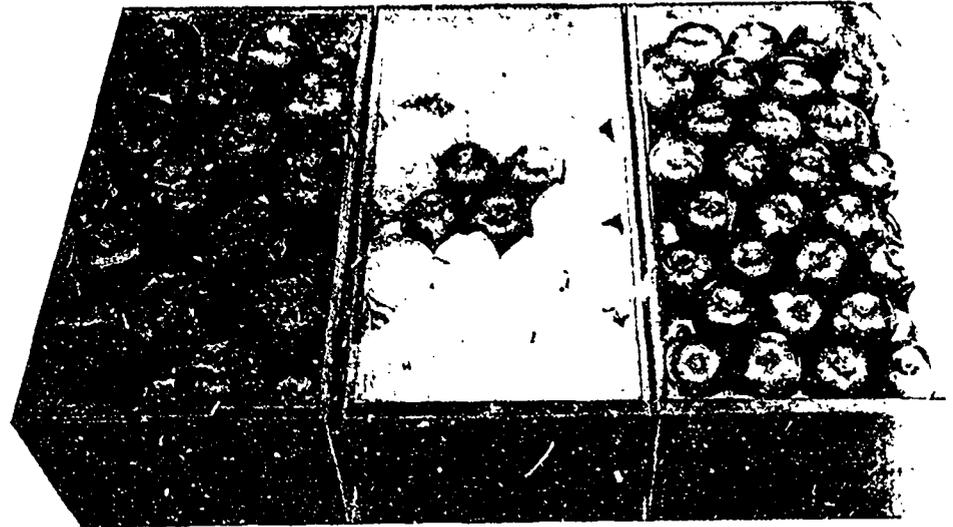
A Two-Three, Four-Five Pack. One hundred and thirteen apples to the box.

with stem towards packer. Then two more—one between first two and the other between the second apple and the right side of the box—both calyx towards the packer. Then two more, each in line with first and second apple, and so on, keeping each two in straight line across the box to ensure diagonal lines being straight. Finish tier with apples in same relative positions at far end as at near end, that is, farthest two, stem to end.

Second tier—Start with two again, one in right-hand corner and one half-way to left corner, over blank spaces, stem to packer, and follow on with next two, calyx to packer. Finish tier with farthest two covering the two blank spaces at far end of first tier, with stem to end of box again.

All open spaces between apples in the lower tier are now covered by apples in the second tier, so that the bottom of the box cannot be seen. The third tier follows directly above the apples of the first tier; the fourth tier is directly above the second tier.

The proper bulge is secured when the ends are slightly above the level of the top of the box, with a gradual rise to the centre from each end. An inch and a quarter to an inch and a half bulge at the centre is correct. The cover should touch every apple in the top tier, thus giving equal pressure on every apple in the box. This applies to every apple-pack. To get the bulge correctly,



A Two-Two and a Three-Four Pack.

Note the improvement in the appearance of the wrapped fruit.

choose apples slightly larger or longer for the centre of the box.

For the two-three diagonal pack—The apples that will fit in, four in straight line across the box, and not small enough to fit in five across, come in this pack. They all should be packed on end, calyx up. Start with three apples, one in each corner, and one exactly half-way between them. Then two in next row, then three again, and so on, keeping each row of two and three in straight line across box to ensure a good alignment always. Work in the longer specimens towards the centre of the box, and flat ones in the ends, to give the bulge. This done in every tier brings the bulge without perceptible difference in the size of apples.

Second tier—Start with two, covering the blank spaces left between the first three of first tier, then three and two, and so on. Third tier—Same position as first. Fourth tier—Same position as second. Fifth tier—Same position as first and third.

Long-shaped apples come high in this pack, to avoid which reverse alternate tiers—that is, put the second tier stem up, instead of calyx; third tier, calyx up; fourth tier, stem up; fifth tier, calyx up.

It is sometimes necessary to get the correct height to set the centre layers slightly on a slope, lengthwise with the box, which brings the pack lower.

Nova Scotia Methods

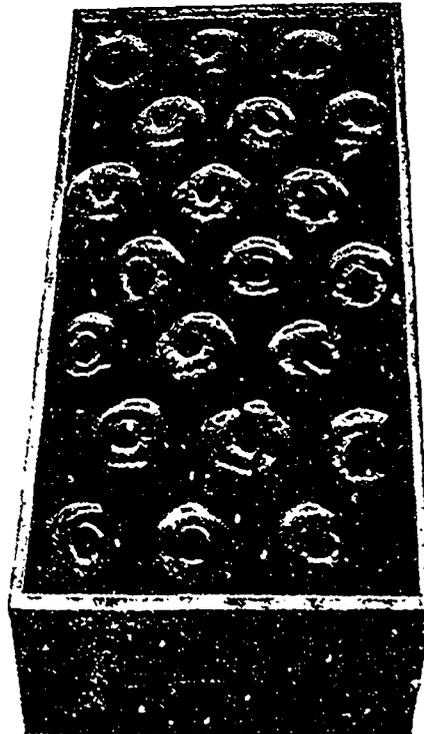
G. H. Vroom, Middleton, N.S.

Box packing is being taken up by the cooperative fruit growers associations in Nova Scotia. Gravenstein, King, McIntosh, Wolf River, Blenheim, and a few more of the showy varieties are put in boxes for export. The local market is also claiming a share of the box fruit.

The standard box is used. It is made of spruce, three quarter inch ends, half inch sides, and quarter inch top and bottom. The barrels and boxes are carefully branded in accordance with the Fruit Marks Act.

The transportation facilities have been greatly improved. The railway service is ample and carefully managed so that fruit is not injured in transit. The steamship companies are painstaking and see that the ships are well ventilated, and also that the barrels are carefully handled and properly stowed on board ship.

There has been an improvement in the quality of the barrels used for apples. The ninety-six quart barrel is used exclusively, made from soft wood, mostly spruce. The ends are planed. The hoops are nearly all birch split in half, and shaved even and smooth. This hoop does not give the barrel so good an ap-



Three Tier, Seven-Long. Sixty-three apples to the box.

pearance as the flat hoop does but it is durable and answers the purpose well. Some barrel makers use the flat hoop for part of their output.

This applies almost entirely to the county of Kings, where large and up-to-date factories are in operation. Second grade material is used for potato barrels.

The advancement in method in Nova Scotia has been very marked in recent

years, and yet we feel that the apple growing industry is still in its infancy. The next fifteen or twenty years will see still greater improvement and advancement. The country is capable of much greater development, and the industry needs improving in many ways before it will be what it can be made. The motto of the Nova Scotia fruit growers is "advance."

How We Pack the "Fameuse" Apple for Export

R. W. Shepherd, Como, Que.

THE famous apple, celebrated as the most delicious apple of its season, and raised in the orchards of Quebec and eastern Ontario, seems to be dying out. At least the areas of Fameuse orchards in the province of Quebec have been much curtailed by the recent development of building and real estate boom in the vicinity of the city of Montreal. Hundreds of acres of orchards, principally planted with Fameuse, have been sold within the last four or five years for building lots.

If the orchards that are being planted out on the Island of Montreal contained a greater proportion of trees of the Fameuse variety, there would be some hope that our most famous dessert apple might be retained, but, unfortunately, most of the large orchards planted in recent years contain a very small proportion of that most delicious variety. The McIntosh Red, said to be a seedling of the Fameuse has become popular with our growers. It is easier to grow, it is a handsome variety, and it has commanded high prices up to the present. Therefore, it is being largely planted.

There is no variety that commands such a high price as the Fameuse, when

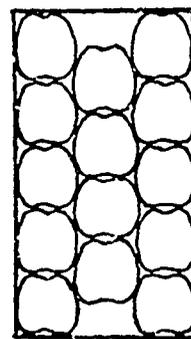
it is landed in England in good condition. I say "when landed in good condition." That is the important point. Everyone knows of what delicate texture is the flesh of the Fameuse and how thin the skin. Not much profit can be expected from shipping number one Fameuse to England in barrels. To be carried in barrels all fruit must be pressed tight, and the delicate Fameuse apple will not stand that kind of treatment. For years Montreal exporters of Fameuse in barrels have found that this apple is a "risky" variety to export. Therefore it is necessary to adopt some other package than the barrel.

The Government box, twenty by eleven by ten inches, does not carry this fruit in as good a condition, for the table of the rich, as is required. The mere fact of tightening the box by the "bulging sides" is too much pressure on the fruit. Of course, wrapping each specimen in paper improves matters, but I have found, after thirty years' experience in exporting this delicate apple, that the only sure and certain method is to pack the fruit in the pasteboard compartment case, as shown in the accompanying illustration.

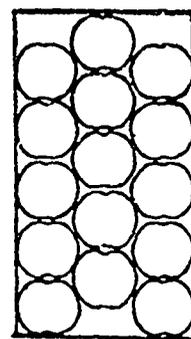
Great care should be taken in picking

the fruit. The insides of all the baskets of the pickers should be lined with some such material as burlap. The sorting tables in the orchard should be covered with canvas and the baskets of fruit emptied carefully on them. An old friend of mine always insisted upon his pickers' hands being gloved, when picking Fameuse, in order to prevent any possibility of bruising. The less handling the Fameuse apple gets before being placed in the export package the better. Therefore, I always prefer to pack my Fameuse in the compartment case in the orchard.

Until the compartment case was adopted for transporting the highest



A Two-One, Four-Five Pack. Forty-one Apples.



A Two-One, Five-Five Pack. Forty-five Apples.

class of Fameuse apples to England, the English people never obtained that superb dessert apple in the condition in which we know it. They had been accustomed to receive barrels of Fameuse from friends, but always in a bruised and damaged condition, and, therefore, its reputation as a dessert apple did not reach the pinnacle which it maintains amongst those who receive them, annually, in Government cases. If the fruit is carefully handled and carefully packed in these cases, the apples, as a rule, reach the consumer in perfect condition and even with the bloom on them.

METHODS OF PACKING

The apples are not wrapped in paper but are selected on the packing table for the sized squares in the three sizes of cases which we use for the Fameuse, viz.:

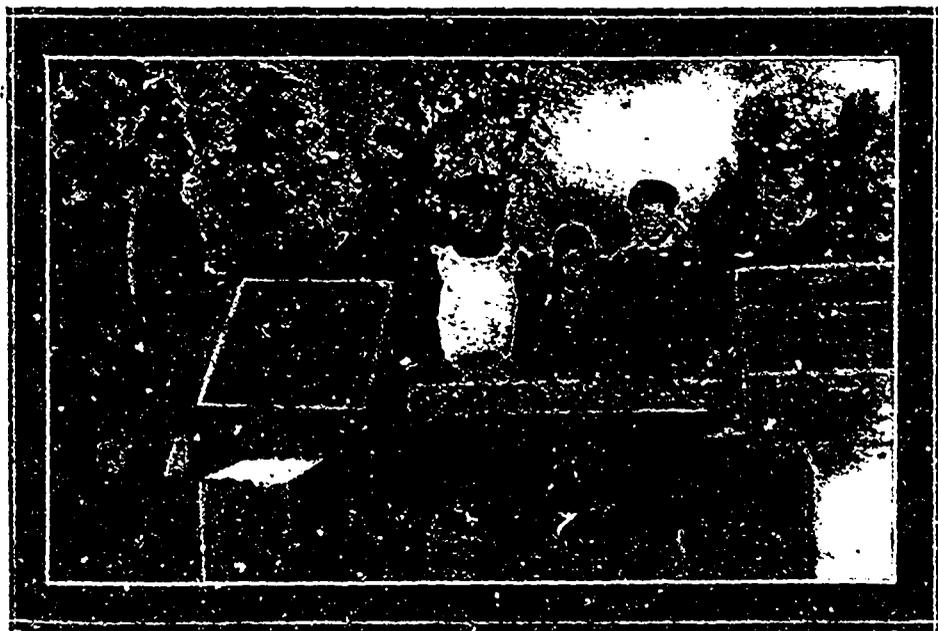
A Case—Two and five-eighths inches diameter of apple, contains one hundred and ninety-six apples.

D Case—Two and a half inches diameter of apple, contains two hundred and twenty-four apples.

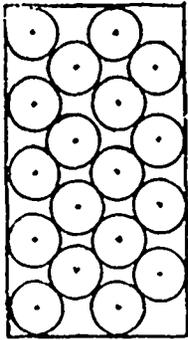
G Case—Two and three-eighths inches diameter of apple, contains two hundred and fifty-two apples.

A sheet of white paper is placed on the bottom of the case, then a rack of squares, then a pasteboard tray, and so on. The top layer is covered with a second sheet of white paper—which is stencilled with the name of the orchard.

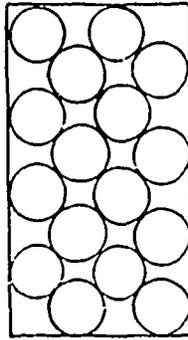
After the cover is nailed on with two wire nails, the corners are bound around



Packing Fameuse Apples for Export in Mr. Shepherd's Orchard at Como, Que.



A Two-Two, Four-Five
Pack. Seventy-two
Apples.



A Two-Two, Four-Four
Pack. Sixty-four
Apples.

with a special hoop iron, one-half inch wide. The case is then stencilled with the name of the orchard, the variety of the apple, and the grade, "Fancy" or "number one" as the case may be. Great care must be taken to see that the paste-board fillings, and the fruit after being packed, come flush with the top of the case and that there is no slackness. In other words, the fillings must fit the case exactly and have not more than a quarter of an inch play any way.

The fruit must not be squeezed into the squares, nor yet be so slack in them as to turn around. The fruit is placed in the squares stems up. The packers soon get accustomed and select the correct size of apple for each square readily. A good and careful packer can pack about twenty cases a day. I do not ask them to do more, because the chief thing is to select perfect fruit and fit them correctly into the squares.

DIRECT SHIPMENTS

The package is too costly to export for sale on the open market. My trade is shipping direct to the consumers, either on orders from this side or on orders from the consumer on the other side of the Atlantic.

If shipped to the open market you do not get compensation for the excellence of the selection of the fruit or for the expensive package. But private customers' orders increase from year to year; for the fruit reaching the consumer in such excellent condition is a recommendation. Customers tell their friends and thus the business grows steadily.

It takes time to establish such a business, that is, a trade direct with the high-class consumer. It is not a trade that can be worked up in a day, or a year, but like every other trade in a specialty, it is the excellence of the goods that sells them.

THE GENTRY LIKE IT

La Fameuse, as a dessert apple, seems to meet the requirements of the English gentry. They use the Fameuse for the fruit course at the dinner table and they do not require a large apple. They prefer the medium size, say two and a half

inches in diameter to any other size. They consider the McIntosh Red too large for the dessert table—and moreover, the quality of the Fameuse is considered preferable. There is that rare delicacy of skin, texture of flesh, and a peculiar slightly saccharine flavor in the Fameuse which no other apple of its season possesses. It is this that makes it so popular with English people who can afford to pay almost any price for fruit which suits their palates.

My advice to growers in districts where the Fameuse attains its greatest excellence is to plant more trees. The Fameuse is a difficult tree to grow, its constitution seems not so robust as in days gone by—and McIntosh is supplanting it; but the day is not far distant when McIntosh, which is being produced in greater abundance every year, is bound to enhance in price. Therefore, it will be a very profitable apple to grow in the future.

Packing Fruit for the Western Market

Robert Thompson, St. Catharines, Ont.

MY subject covers a large variety of tree fruits as well as tomatoes.

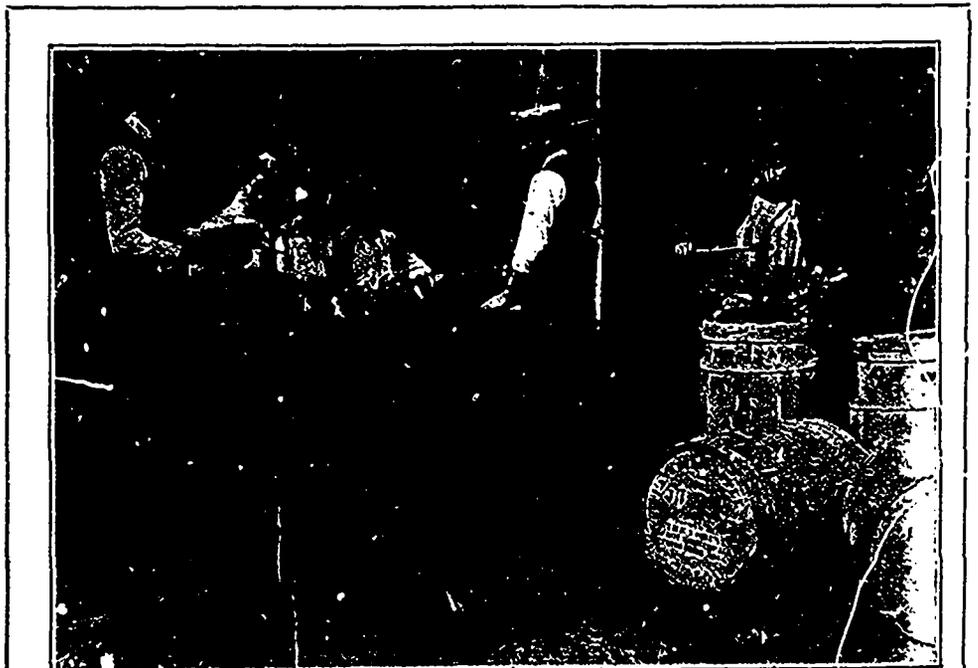
I will therefore only try to give a few of the points that have come under my observation, and which have been put in practice, during some twenty years' shipping and packing. This includes the experience of looking after the loading of one hundred and fifty cars of fruit yearly, packed by various shippers and by our company.

The first point we must realize is that while fruit may be well packed during the warm months, that alone is not sufficient. It should first be taken from the orchard quickly to the cold storage, to refrigerator cars, or to the coolest spot available. If it is taken to a refrigerator car, the cars must be well iced and kept so, and the bunkers should be full when the cars start on their journey. The cars must be fitted so that there will be a circulation of air through the fruit and over the ice. The car or cars should rarely be loaded to their full capacity with soft fruits.

Plums have been found to carry well if picked when they are about half colored and then packed in small baskets or fillers. We have had good success with Burbanks, Bradshaws, and even more tender varieties in six day trips.

Peaches should be picked when full grown and just nicely colored. They are then firm. They can be wrapped and packed in the California box, eighteen and a half by eleven by four and a half inches, or in the Georgia carrier. Another way in which they carry fairly well is to pack in six quart baskets, two tiers unwrapped. The price for these is not as good as for wrapped boxes. The western market does not net more than from three to four cents a pound, and if this price can be obtained in Ontario I would not advise anyone to ship west.

Tomatoes should be gathered when just red all over and firm to the touch. They will then carry to perfection as far as Winnipeg and Brandon. For more distant points they will require to be a trifle greener. The stems should be



Packing Fruit in the Orchards of Johnson Bros., Forest, Ont.

The work is usually done in the Packing Shed. Mr. D. Johnson, who stands in the centre, is the president of the Ontario Fruit Growers' Association.

rubbed off wherever they will touch another tomato. The six quart basket appears to be the popular package for the trade. Tomatoes do not require wrapping.

Pears should be picked when full grown and firm, and then graded and wrapped and packed in boxes, eight by eleven by twenty inches or eight and three-quarters by eleven by eighteen and a half inches, with a good bulge. The boxes always sell better than baskets. There is no serious competition in pears from British Columbia.

Grapes are usually gathered and placed in six quart baskets in the vineyard and shipped the same day or next. Our grapes should be cut into the baskets loosely and taken to the packing house and held for a day or two. The baskets can then be filled and covered. The grape stems are then wilted and will carry longer distances, and the fruit will arrive in good condition.

Summer and fall apples can be packed in baskets and boxes, according to their distinction, and late fall and winter varieties in boxes and barrels. The boxes can be packed almost as quickly as barrels if there is a central packing house to take the apples to when picked.

Those growers who intend to ship

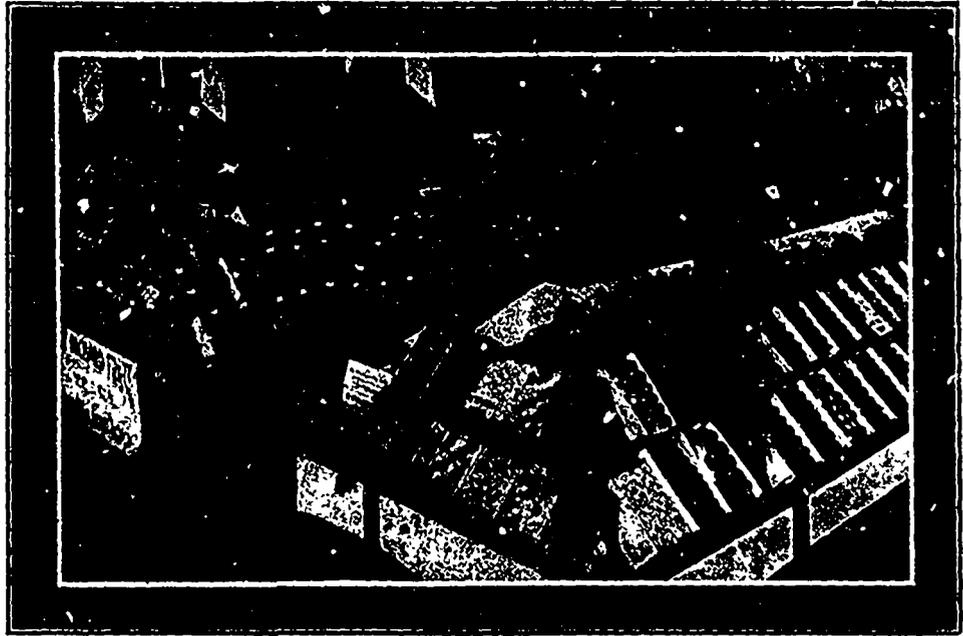


Figure Attractively Packed and Well Arranged Exhibits of British Columbia Coast Fruits

west should make up their minds that they will follow up their shipments for a number of years. It is a mistake to ship only a few cars and then quit. There is an unlimited market there for our fruit if we will only get after it.

blooming, putting the finishing touches to seed and bulb beds, getting a place ready to dump all the dead leaves I can get together for covering purposes as a protection against the cold winter, as well as preparing a place to put fresh manure, which should be procured just as soon as the ground is hard. Keep this all winter, so that you can have it early in the spring to start work with. Keep all grass clippings and weeds and mix these with the manure.

I take note of the coloring of my back-ground, which is chiefly of the perennial phlox. This is in order that when sowing or planting annuals in front of them I can get what color effect I desire. Try as much as possible to have one color throughout the other and yet not be offensive to the eye. I do not water my beds during the month of September, unless the weather is very hot and dry, more than three times a week, and sometimes not that often, if the evenings are chilly.

Towards the end of September comes the time to slip the plants that you want to keep and also for potting plants for house culture. Having no greenhouse we use all the windows facing south.

When potting plants for the house, if you have to use a new pot, give it a thorough soaking in a tub of water, as on account of its great porosity it will absorb a large quantity of moisture. If an unsoaked pot is used young plants are often robbed of moisture when they need it the most. Before this is discovered your plants will be too far gone to be of much use.

I do as much work during the latter part of September as I can in order that I may have the beds ready for their winter covering, as during October and the beginning of November one is simply

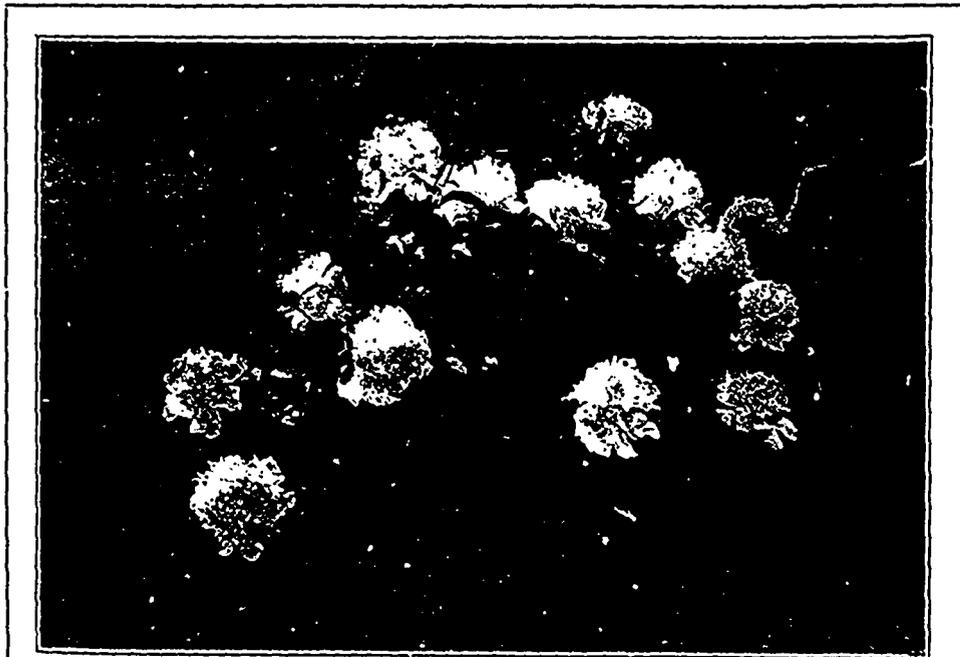
September and Autumn Work in the Garden

R. S. Rose, Peterboro, Ont.

AUTUMN is now nearly upon us, so it is time that we looked around our gardens to see what plants did well, and to note those that did not do what was expected of them. Mark a place where they should do better next summer, for those worthy of a further trial. Some may not have received

enough sunshine, while others may have had too much.

I have heard some gardeners (amateur) say that there was nothing to do in the month of September. I do not agree with them, as in my small garden I can always find plenty to do, such as cutting down the plants that have finished



Paeonies Grown by Miss Anna Moyle, Richmond Hill, Ont. (See Article on Page 214)

Floral Suggestions

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

Freesias are the sweetest possible little flowers for the window. The bulbs should be potted early in September. Six or seven bulbs should be put in a five inch pot in good loamy potting soil with plenty of drainage. Put them in the window at once after potting. Do not give them too much water until well started. Dry off the bulbs gradually after they are through flowering. Place the pot away, when the foliage is turning yellow, in a cool, dry place. Keep them dry until the following autumn. Shake them out of the soil then and pot the large bulbs only as before. The small bulbs are of little use for growing again.

Valotta and Amaryllis should be brought into the window before frost. Some liquid manure should be given them after they are well started in the winter, especially if they have not been re-potted.

Old petunia plants should be cut well back when in the border late in September, and potted early in October into small pots in rather sandy soil. If re-potted later into larger pots in good potting soil they will give a lot of bloom nearly all the winter. They must, however, be cut back before being potted in the fall, to be successful with them.

Bring Epiphyllum or Lobster Cactus into the house early in September before frost. Light soil, not too rich in fertilizers, with plenty of drainage, is necessary for these plants.

Winter flowering bulbs cannot be done without if the window is to be kept bright. By potting these in the fall and rooting them well first in a dark, cool

cellar, room, or cupboard, and bringing them into the window as required, a succession of their bright, cheery blossoms can be had from Christmas until Easter.

Success With Asters

J. H. H. Waring, Galt, Ont.

Having met with some success in the growing of asters and Sweet William it has occurred to me that possibly readers of The Canadian Horticulturist would like to hear how it was obtained. The accompanying illustration will give an idea of how some of them looked. The asters shown are the White Crego.

From one packet of seed I raised about two hundred plants, and lost none from either insects or disease.

The hot-bed, when well cared for, is ahead of the greenhouse for raising strong, healthy stock. Many of our asters were over five inches in diameter. Had a few flowers only on each plant been allowed to form they would have averaged six inches in diameter. There were over a thousand blooms on a small number of plants open together and they made a fine effect.

Nothing suits the aster better than a strong clay made quite friable by freely working it when dry and adding a liberal dressing of good, rich, rotted stable manure. If the clay has been well dug in the fall so much the better. If the soil is sandy a liberal dressing of land plaster will improve the chances for a good display. The aster should not be allowed to suffer from lack of water.

My Sweet William were superior to any I have yet seen. They were greatly admired by many visitors.



Asters and Sweet William
See article this page

rushed off one's feet, cutting down, pruning, cleaning up and covering before the heavy frosts set in.

Do not leave any of this work until the spring, as you will then need all the time you can get for more important work. This method also kills all germs and weeds, which is one of the most important factors if one wants to have a good garden.

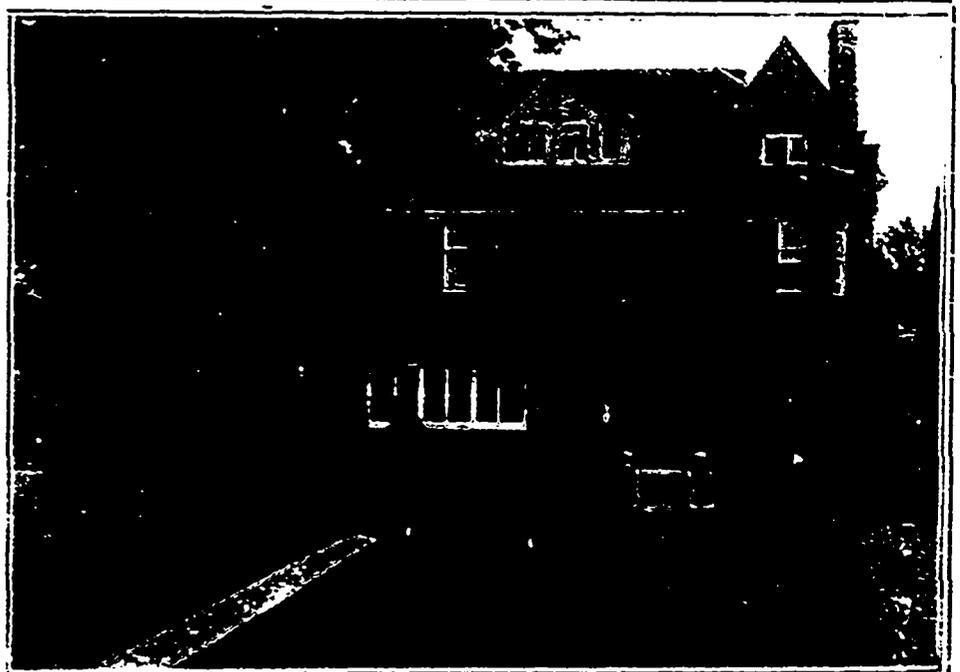
Do not think that because it is the between period of summer and winter that your garden does not require the same attention you have been giving it during the hot months. This is a great mistake. All plants, shrubs, and so forth, require just the same attention during September, and a great deal more during October and November. In fact from April until November your work should never cease if you desire good results.

An Experience With Paeonies

Miss Anna Moyle, Wyacraft, Richmond Hill, Ont.

The illustration on a preceding page shows a peony in my perennial border. In September, 1910, while setting out the first plants in my border, a friend asked me, "What are you going to do with those long strips of ground?" When I told her she said: "You may have all the plants in my bed. I am going to seed it down; the old things won't flower." I assured her that they would if well fed, but she was equally certain that they never would. I dug up, and divided eight small, sickly-looking peony plants.

The following June nine had one fair-sized bloom each. This year the one shown in the illustration had eighteen flowers when the photograph was taken, four of which do not show, and seventeen buds, all of which opened.



A Back View of the Home of Mr. W. Martin, Lowther Ave., Toronto
On the balcony are Wistaria rose and flower boxes.

Canadian Gardens--An Attractive Spot in London

A. J. Elliott, Aylmer, Ont.

ARTICLE No. 9

AMONG the many enticing gardens owned by citizens of London is one on Dundas Street that is char-

acteristic of its owner, Mr. Metherall. Having retired from his former pursuits Mr. Metherall is free to enjoy his garden to the full. Thus he has become quite expert in his experiments with plants and flowers as well as in the manufacture of rustic work, principally articles made from cedar saplings.

The first thing that catches one's eye as they approach Mr. Metherall's large brick residence are the rustic arch and fence entrances on both sides of the house. The verandah is also fronted with a long rustic flower box filled with geraniums, fuschias, begonias, and creepers.

Passing through the archway I found

that the garden was one large lawn. In this respect it is unique. There is not a path in it. Although Mr. Metherall keeps an automobile and has a garage at the back end of his garden, there is not a roadway even for that. It just runs over the sod to get in and out. When I spoke to him about this, Mr. Metherall asked me what were the use of paths. He contended that they only took up land, and said that he did not need them. On looking around his garden I concluded that in his case he was right.

Dotted all over the lawn are beds of tube-rooted begonias, foliages, hydrangeas, altheas, roses, pansies, geraniums, ageratums, and cannas, while close up to the house were planted beds of geraniums, daisies, heliotrope, pinks, ferns and orchids. There were round beds, square beds, oval beds, and beds of geometrical and other figures and all alive

beds of cannas make a fine ending to an especially fine stretch of mixed lawn and flower garden.



The Entrance to the Garden



Flower Beds and One of the Side Fences



The Center of the Garden

with fine bloom. Dropped in here and there were isolated shrubs, roses, seats, a dove cot, and a not-to-be-forgotten cast-iron wolf and rabbits.

In the centre of the lawn, for so I must name it, is a rustic summer house, under climbers, and a row of rustic vases filled with geraniums, nasturtiums, and creepers. This sets off the garden nicely.

THE BORDER BEDS

Down both sides run borders composed mostly of perennials, although some annuals have been given a place there. There were: Perennial phlox, petunias, columbine, begonias, Sweet William, peonies, salfraglossis, geraniums, sweet peas, golden glow, asters, snap dragons, salvia, gladiolus, larkspur, and shrubs. These borders stop at the lawn where two semi-circular

Considering the soil, which is a light sand, nothing like the clay soil of London South, that roses delight in, Mr. Metherall has by hard work, the application of manure, and close attention, obtained some fine bushes, that while they are blooming this year, give hopes for better things next season. His choice in this line is Madame Leawood, Mrs. Sharman Crawford, Magna Charta, Frau Karl Druschki, Prince Camille de Rohan, Ulrich Brunner, Mrs. John Lang, General Jacquinmot, Baron Rothschild, though, of course, he has the ramblers Tanschendon and Dorothy Perkins. For manure he uses barnyard manure and the commercial dried manure from the stock yards. For the in-



The Effect at the Side of the House



The Route the Automobile Travels

sects that infest the rose, he finds that common soap suds sprayed on are the best remedy.

The barn and garage are situated in the centre of the back end of Mr. Metherall's property. On either side, and separated from them by fences, are his vegetable garden and nursery ground. As Mr. Metherall has only owned this property for some eighteen months, the accompanying illustrations serve to show the amount of work he has done to bring it up to its present attractive con-

dition. He is expecting better results as the years roll on, and as he is one of nature's gardeners, although he never dreams that he is a good one, he expects by reading, experimenting, and listening to others, to achieve success in this line as he did commercially in days gone by. One point I have noticed as I visit different gardens is that their proprietors all take *The Canadian Horticulturist*, and they all state freely that it has helped them to achieve the success with their gardens that they have.

Harvesting Onions

P. E. French, Dept. of Agriculture, Victoria, B. C.

IF the onion tops do not fall down flat on the ground at the proper time about the middle of August to middle of September, it is good practice to go over the patch and pound the upright ones down. Harvesting should commence as soon as most of the necks have turned yellow and are considerably wilted. Do not delay harvesting simply because there may be some green tops when the main crop is ready. If left too long the bulbs are liable to make new roots, especially if the weather is damp, and the quality of the onion is injured.

Pull the onions by hand and deposit them in windrows containing the onions from two or three rows. If they are taken out with rakes they are apt to be bruised, and thus will not keep as well. The crop is left in the windrows until fully cured, which takes about ten days in good weather. During this time they should be topped with knives, cutting the tops off about half an inch from the bulb. On bright days the curing will be hastened by stirring with a wooden rake, being careful not to bruise the bulbs. If there is danger of a rainy season, the onions may be cured in open sheds or on the barn floor. After the crop is cured the bulbs should be sorted and properly stored. All weeds and refuse should be removed from the field, and, if possible, a fall crop grown.

Onions should be sold as soon as a fair price can be obtained, and not stored for the winter unless there is a very good chance of a rise. If you have an extra favorable season, they may be shipped right from the field, but it is generally advisable to empty them out in open sheds and pick them over again. All the small onions should be picked out and sold separately for pickling purposes.

It is not advisable for the inexperienced grower to try winter storing, of course. Unless thoroughly cured, many bulbs will sprout, while others with only a slight bruise will decay. There will be more or less shrinkage, and a large percentage of the onions will be lost if proper care is not given to ventilating and maintaining the desired temperature. However, it is desirable that

growers should understand the conditions necessary to keep onions through the winter months, so that they may store part of their crop. I would not advise storing very many unless one has the facilities for doing so. It is essential that the bulbs should be well matured, thoroughly cured, not bruised, and in a perfectly dormant state for successful winter storing.

Onions may be wintered by two different processes—namely, by freezing the bulbs and keeping them in this condition all the winter, or by storing them in a dry apartment where the temperature can be maintained just above the freezing point. The former method is very satisfactory where the weather is cold during the entire winter. The onions are placed in a barn or outbuilding and allowed to freeze. They are then covered with hay, straw, or bags, and are allowed to remain in this condition all the winter. The covering should not be removed in the spring until the bulbs are entirely thawed out. The temperature should not run above thirty-two degrees or below fifteen degrees Fahrenheit. Successive freezing and thawing or severe freezing will injure the bulbs.

Lifting Rhubarb for Forcing

John Gall, Weston, Ont.

Most persons will admit that forced rhubarb in point of flavor surpasses that grown naturally. This is one of the reasons why it is so eagerly sought after. To obtain the earliest supplies the first batch of roots should be lifted as soon as the leaves of the past season's crop have died down. A sharp frost or a continuation of cold, damp weather will soon bring about this condition of plants of this subject.

If the roots on being lifted are left exposed to the open they usually start into growth better when placed in heat. The roots should be lifted so as to avoid damaging them more than can be helped. Large roots need to have a trench dug all round them, otherwise it is impossible to get well down under the roots, which is quite necessary if lifting is to be done properly. Rhubarb roots after forcing are not usually replanted.

The earliest batch of lifted roots should be placed in boxes, barrels, tubs, large pots, or any receptacle large enough to accommodate them, thus enabling the grower to move them about from time to time. Fairly light soil should be placed about the roots. A suitable compost may be made up of leaf mould and good garden soil. As a matter of fact, any good soil will suit the purpose very well.

An excellent position for these receptacles is under the stage of a warm greenhouse, where the temperature can be maintained at from forty to forty-five degrees. By these means a supply of rhubarb may be had at Christmas. Warmth and darkness are essential factors in the successful forcing of rhubarb.

The lifted roots should be taken indoors from time to time in succession.



Prize Winning Vegetables Grown and Shown by E. A. Sanderson, Dauphin, Man.



Packing Fancy Tomatoes: M. O. Field & Sons, Grimsby, Ont.

so as to maintain a continuous supply of solid, crisp stalks. To ensure that the color may be good, and also that rough and weak growths may not be developed, the roots and soil should be maintained in a thoroughly moist condition by frequent applications of tepid

water. I should like to emphasize the fact that it is a great mistake to water plants with ice-cold water just taken from the tap. Water which has to be used for watering plants, no matter what they may be, should be allowed to stand in the greenhouse tank over night.

Grading Vegetables for Market*

Paul Work, Cornell University, Ithaca, N. Y.

EVERY year sees the work of grading cutting a larger figure in the work of marketing vegetables than it did before. Grading was once unknown. To-day the producer of fruits and vegetables is following close upon the trail of the manufacturer who long ago realized the necessity of uniformity. The citrus people took the lead in this. The western apple shippers were next, with the vegetable shippers close upon their heels. The progressive market gardeners are now awake to the fact that two gnarled cucumbers cut the price of the whole bushel. Hundreds of growers are still asleep.

Every man and every community must make its own plan of grading. What suits one market does not suit another. Many are discouraged in setting the standard high because the lower grades are becoming increasingly difficult to sell. We had to discard a considerable portion of the second grade tomatoes at Cornell during the past season, but they were paid. At one time ordinary run-of-the-field fruit was bringing twenty-five

cents a basket. Our primes sold at forty cents, and seconds at twenty and twenty-five cents.

Seconds are not wanted in large quantity on most markets. Many hold that the moral of this is, "Don't grade. If the consumer doesn't want seconds, make him take them with the best." But the true moral is, "Don't grow seconds." Of course, there will be some inferior fruit, but if by selecting a well bred strain of a good variety, and by giving the best of culture, we can reduce the seconds to very low proportions, we will not mind leaving a few culls in the field.

A COMMON MISTAKE

One of the most common mistakes in grading is in reducing the standards when the price drops. When markets are glutted, the question ceases to be one of securing a high price, but it becomes a question of moving the crop or letting it rot. People continue to use the product, and that in large quantities. They are willing to pay a price which will cover marketing cost and a good share of production, but the question is, which grower sells and which does not? Naturally, the one with the best sells.

The following clipping, which is typical of a large number that appeared in our trade papers last season, furnishes good evidence on this point:

"Lettuce from State points has been in free receipt, and much has been sold for less than charges. Fancy, heavy-headed stock is worth fifty to seventy-five cents a bushel, but average grades neglected at ten to twenty-five cents a package."

The time of oversupply is the time when grading counts. The grower has established his trade on a basis of quality, and by maintaining that basis, he is able to hold on while the other fellow drops out. Moreover, Mr. Grader still holds the trade when the market picks up.

It is by no means easy to maintain a standard of grading. One naturally desires a maximum of primes and a minimum of seconds, and he even unconsciously tends downward. With hired help, the problem is much more difficult. The first essential is to form a mental image of the standard for each grade, working it out carefully and making it neither too high nor too low. Fix these standards as far as possible by the use of sizing boards and the like. Constant and rigid inspection is then necessary. If a large quantity is handled, each worker should have a number to be placed in each basket. Thus responsibility is fixed. Just here is one of the greatest advantages of machine-grading. A machine is free from the failing of human nature.

Mulching Ginseng

E. A. Russell, Brantford, Ont.

We have tried several methods of protecting the ginseng seed bed. A bed on which a half inch of sawdust was used gave the best results. In the beds on which leaves were used the seeds did not germinate so quickly and a number of plants were lost by being smothered or by the stems breaking because they were too long after growing through the leaves. In another bed the leaves were removed in April and the plants did well. The sawdust permits the air to get at the young plants as soon as they appear above the ground and the result is that the stem is stronger than when anything else is used. For older plants a mulch of leaves or rotted manure is suitable as the stem of the plant is strong enough to grow through without injury.

In the spring, when the plants appear, shade must be provided, which is usually done by erecting a lath screen. If this is delayed the plants may be injured and if they are left unprotected from the sun until June they will wither and die. During the growing season the only attention required is to keep the plants free from weeds and these will not be numerous on account of the mulch,

*Extract from an address delivered at the last annual convention of the Ontario Vegetable Growers' Association.

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H. BRONSON COWAN, Managing Director

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

CIRCULATION STATEMENT

The following is a sworn statement of the net paid circulation of The Canadian Horticulturist for the year ending with December, 1911. The figures given are exclusive of samples and spoiled copies. Most months, including the sample copies, from 11,000 to 12,000 copies of The Canadian Horticulturist are mailed to people known to be interested in the growing of fruits, flowers or vegetables.

January, 1911	8,082
February, 1911	8,260
March, 1911	8,523
April, 1911	9,469
May, 1911	9,763
June, 1911	10,178
July, 1911	10,062
August, 1911	10,043
September, 1911	9,973
October, 1911	9,991
November, 1911	9,968
December, 1911	10,157
Total	114,489

Average each issue in 1907	6,627
" " " " 1908	8,095
" " " " 1909	8,970
" " " " 1910	9,967
" " " " 1911	9,541
August, 1912	11,403

Sworn detailed statements will be mailed upon application.

OUR PROTECTIVE POLICY

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

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THE CANADIAN HORTICULTURIST,
PETERBORO, ONT.

EDITORIAL

A MARKET TRANSFORMATION

Slowly at first but of late years more rapidly the control of the fruit markets of the world has been passing from the hands of the dealers into those of the growers. Ten years ago the grower was at the mercy of the buyer when the time came for him to market his crop. He had little or no authentic information concerning crop conditions throughout his own province, not to mention those of the world. Therefore he was compelled, unwillingly, to accept the statements of the buyers, who naturally always knew of large crops in some portion of the world that were certain to ensure low prices prevailing during the season to follow. In consequence, growers were forced year by year to accept unduly low prices for their products, and the fruit industry in general suffered therefrom. For the most part orchards were sold tree run, and little or no encouragement was given growers to produce a superior quality of fruit.

The transformation that has taken place in these conditions during the past ten years has been marvellous. The first sign of the change that was coming developed when the first cooperative apple growers' association was formed. One by one these came into existence in different parts of the country. Some lived for only a season or so, but for the most part they succeeded. Confidence in them increased as the years passed by and the benefits that accompanied their operations became evident.

Some six years ago in Ontario a provincial association was formed composed of representatives of the various local associations. This association gathered authentic information in regard to crop conditions and prices and posted its members accordingly. Thus they were no longer dependent upon the buyers, but instead were enabled largely to set their own prices.

Gradually the reports issued privately among the local associations by the provincial association were supplemented by reports issued by the various provincial departments of agriculture. These reports, published broadcast through the press, helped to keep growers posted in regard to crop conditions. Coincident with the publication of these reports, the Dominion Fruit Division commenced the publication of a national crop report, including a summary of crop conditions in other countries, that has helped materially to strengthen the hands of the growers. Across the border the Crop Reporter, issued by the United States Department of Agriculture, has served to reveal fruit conditions and prospects in that country. Still more recently the International Institute of Agriculture, representing all the leading nations of the world, has commenced the publication of regular international reports dealing with world-wide conditions. In consequence of these developments there is no reason to-day for any wide-awake fruit grower who desires to be informed in regard to crop conditions lacking information. Instead, it is a simple matter for him to be comparatively as well informed in regard to fruit conditions as any buyer.

Another and almost equally important development is now being effected. For a while after the opening of the great west-

ern fruit market local associations were largely dependent for their information concerning it upon reports furnished by such representatives as they might send to the censuring centres of the west. Three years ago the British Columbia Provincial Government appointed a market commissioner to visit these markets and report weekly the conditions there existing for the benefit of the growers of that province. This year the Ontario Government has followed the example thus set, and in this way the position of the growers is being still further strengthened.

As a result of all these changes the prices obtained by fruit growers for their crops have been steadily advancing, especially in the case of those growers who are members of cooperative associations. To-day the old system under which the buyers dealt with the individual growers has almost completely disappeared in many portions of Ontario, Nova Scotia and British Columbia. Instead the buyers deal direct with the associations, sometimes purchasing from twenty to forty thousand barrels of graded fruit from an individual association.

All that has thus been accomplished is but preliminary to further changes still to come. The better returns they are receiving in their fruit are encouraging the growers to produce fruit of a higher quality and to adopt more modern styles of packages. Box packing is becoming more and more general. The pre-cooling of fruit, with all it will mean, is now within sight. A new spirit of optimism and confidence is evident among the growers in all the fruit districts of the Dominion. This new spirit is the most encouraging augury we have of the further improvements and successes the future holds in store for us.

A POWER IN PUBLICITY

Few horticultural societies realize what assistance they might gain for the work they are doing were they to make greater use of the reading columns of their local papers. The two most successful horticultural societies in Ontario are those located in St. Catharines and Ottawa. The president of the former is the editor of one of the local papers. Through his efforts and publicity has been given to the work of the society the whole city has been interested in its accomplishments. In Ottawa all the city papers have, time and again, liberally assisted the local society. In some instances full page descriptions of the work it was doing have been published. Thus thousands of people have been interested in the society, who otherwise might never have heard of it.

The average editor is a busy man. Many are not directly interested in horticulture. Therefore they do not appreciate its importance or give to it the attention they otherwise would. This has led many societies to conclude that their local papers are not interested in this work, and they will not give the publicity that should be given to horticultural affairs. Some societies claim to have sent their local papers reports which have been suppressed or emasculated as to be of little value.

In nine cases out of ten the first conclusion is not well founded, and an explanation may be found for the abbreviated reports. The officers of societies often do not know how to write their reports in an interesting manner. Their reports, therefore, do not appeal to the editor nor to the public. When, however, a society discovers how to describe its doings in an interesting manner it will be found almost invariably

that the local papers will be glad to give each reports publicity. The success the Hamilton Horticultural society is meeting with this year in the publication of descriptions of local gardens demonstrates this fact.

Once a society recognizes that the value of its work can be greatly augmented by interesting the public in its doings through the reading columns of its local papers and then undertakes to supply its papers with short and newsy reports of its proceedings, it can depend upon obtaining an increase in its power and influence.

Year by year our record of the causes which have led to the success or failure of different cooperative fruit growers' associations increases in value. It demonstrates that has long been realized by our leading growers that the principle of cooperation is sound. Failure results only where the principle is not properly applied. More and more it becomes evident that the chief corner stone of every successful cooperative association is its manager. Where other conditions are reasonably favorable a cooperative association that has a good manager and values him at his true worth is assured of almost certain success.

Standardizing Canadian Fruit Packages

(Continued from page 206)

It would appear that it might be possible to make the outside dimensions of the apple or the standard for two outside dimen-

Simply Immense

"We might add that we have never received such results from advertising as we have had from The Canadian Horticulturist this year. It is simply immense. We are getting enquiries and orders from Prince Edward Island, Nova Scotia, New Brunswick, Quebec and Ontario. It only goes to show that The Canadian Horticulturist is the right journal in which to advertise to reach the fruit growers."
—J. J. Roblin & Son, Brighton, Ont.

The foregoing is a portion of a letter received recently from one of our advertisers. It speaks for itself. As this firm is advertising box and barrel presses, articles which are used only by commercial fruit growers, men who grow and pack large quantities of fruit for shipment, their experience goes to show the extensive circulation which The Canadian Horticulturist has among this desirable class of readers. These are people who make good money, who live in good homes, and who are good prospective buyers of every kind of high-class goods for their fruit farms, for their homes, or for the improvement of their homes and home surroundings. They are people who can and do afford the luxuries as well as the necessities of life.

Note also the extensive territory over which the buying power of The Canadian Horticulturist is distributed as evidenced by the fact that orders were received from almost all parts of Canada. The Canadian Horticulturist offers to its advertisers a select class of buying power, picking them, as it were just the class of people who are likely to prove good buyers for any class of advertised goods.

sions for the package for crab-apples, pears, peaches and for the four-basket crate used in plums, cherries and tomatoes. It is possible, too, that these same outside dimensions might be used for the small fruit box crate for shipping raspberries, strawberries, currants and similar fruit. Grapes are apparently quite satisfactorily shipped in the six-quart basket.

BOX VS. BARREL

A few words may not be out of place with reference to the box vs. the barrel. Many fruit growers are impressed with the idea that the box will supplant the barrel. I cannot think that this will be the case. The barrel is an eminently cheap and convenient package, possessing many advantages over the box and, of course, some disadvantages, but upon the whole it would appear that the sentiment divides itself along two lines:

First: Those who want the poorer grade of fruit prefer, almost universally, the barrel.

Second: Those who deal exclusively in the higher grades must have the box.

Then again there are those who for purely sentimental reasons prefer the box or the barrel, as the case may be. I have two letters before me from merchants in the north-west, one asking for well packed barrel fruit and the other denouncing the barrel as an altogether unsuitable package and insisting upon the box only. Both of

these dealers probably have good and sufficient reasons for their preference. It, therefore, cannot be said that either the barrel or the box is the best package. Each has a place to fill, and the discretion of the packer must be used in deciding which is the proper package for his purpose, the box or the barrel.

In the trial shipments of peaches, made by the Dairy Commissioner's Branch in 1910, a package was used, eighteen inches long, eleven inches wide and three and a half inches deep. This package was designed to contain only one row of very fancy peaches, wrapped in paper and packed in wood wool. The package served the purpose admirably, and there seems no reason why for certain markets the depth of the package could not be increased so as to take in two layers, and correspond in two dimensions with all other box packages.

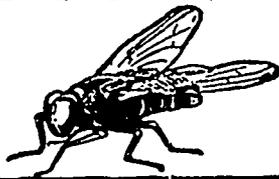
It may be noted that the great bulk of the Pacific Coast apples are shipped in what is known as the Oregon standard box, ten and a half by eleven and a half by eighteen inches.

With these dimensions before us, it would seem that there is a possibility of standardizing all our boxes and crate packages at least in two dimensions, and thus meet the needs fairly well of those who wish to ship mixed cars and, at the same time, make a convenient package for all purposes.

British Columbia Packages

Bulletin number forty-five of the British Columbia Department of Agriculture publishes the following as the packages used by British Columbia fruit growers:--

	Size of Box, etc., Inches	Average Weights (Net)	Remarks
	(Inside measurements)		
Apples.....	10 x 11 x 20.....	...41 lbs.....	The half apple box is also used on Lower Mainland. As used in Upper Country; half pear-box and peach-box (20 lbs.) also sometimes used.....
Crab-apples.....	10 x 11 x 20 (apple).....	...50 lbs.....	
	18 3/4 x 11 x 8 1/2 (pear) ..	...40 lbs.....	
Pears.....	18 1/2 x 11 x 8 1/2.....	...46-48 lbs.....	
Peaches.....	18 3/4 x 11 3/4 x 4.....	...17-21 lbs.....	
	18 1/2 x 11 3/4 x 4 1/4.....	.....
Plums.....	18 1/2 x 11 1/2 x 4 1/2.....	...20-22 lbs.....	4-basket crate.....
Prunes.....	15 3/4 x 15 1/2 x 4 1/4.....	...20-25 lbs.....	Shipped largely in peach-boxes.....
Apricots.....	15 3/4 x 15 1/2 x 4 1/4.....	...19-20 lbs.....	4-basket crate.....
Cherries.....	18 1/2 x 9 x 2 1/4.....	...8 1/2-9 lbs.....	Sour cherries (4-basket crate) equals 16-18 lbs. Sour cherries (special pack) equals 24 lbs.....
Raspberries.....	2-5 quart carton (24 to 1 crate).....	.....
	Size of carton, 5 1/4 x 5 1/2 x 1.....	...14 lbs.....	Size of crate, 16 1/2 x 23 1/2 x 5 1/4.....
Strawberries.....	4-5 quart carton (24 to 1 crate).....	.....
	Size of carton, 5 1/2 x 5 1/2 x 8.....	...24 lbs.....	Size of crate, 16 1/2 x 23 1/2 x 6 1/4.....
Loganberries....	2-5 quart carton (24 to 1 crate).....	...16 lbs.....	As for strawberries.....
Currants.....	.....	.....
Grapes.....	6 quart basket (approximately).....	.....	Six 6-quart baskets reckoned as 100 lbs. by the Express Co.....
Rhubarb.....	20 x 15 1/2 x 7 1/4.....	...40 lbs.....	
Cantaloupes.....	12 x 11 1/2 x 20 1/4.....	.....
Tomatoes.....	18 1/2 x 11 1/2 x 5.....	...23 lbs.....	
Cabbage.....	25 x 23 x 18.....	.....
Lettuce.....	28 1/2 x 16 x 12.....	.....



"INTERNATIONAL FLY WAY"
Prevents the Tremendous
Loss from Flies

Flies cost the Farmers of Canada millions of dollars annually by retarding the growth or fattening of animals and by greatly reducing the production of milk by constantly annoying the animals all summer. Every farmer or stock raiser knows this statement to be true from his own experience.

Flies also cause a great loss of life by spreading diseases from farm to farm. "International Fly Way" will keep flies off your animals and give them perfect rest from these pestiferous insects, which will make you more money in a larger production of milk or much quicker growth of all animals.

SAVE YOUR STOCK
By Using

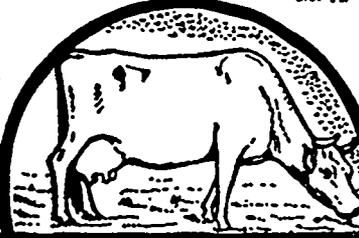
"INTERNATIONAL FLY WAY"

It is positively guaranteed to be effective in driving away Flies, Mosquitoes, and other insects which worry stock and reduce their earning capacity. It is harmless to the hair and skin and will be found perfectly satisfactory when used according to directions.

We place our twenty years of reputation back of "International Fly Way," and ask you to test it on our positive guarantee.

FOR SALE AT ALL DEALERS.

INTERNATIONAL STOCK FOOD CO. Limited, TORONTO
No. 74



Standard Packs of Apples

THE following table, as taken from circular number eight, issued by the British Columbia Department of Agriculture, gives complete information on the make-up of almost all the most common packs of apples. This table, with the

information contained in the article by Mr. R. M. Winslow, published in the front pages of this issue, should prove a valuable guide to beginners in apple packing and even to experts, and is well worth preserving for reference purposes.

No of Apples in Box	Type of Pack	Tier Designation	Actual Tiers	Position of Apples	Apples in Top Tier	Size of Apples
36	Diagonal, 2-1	3 tier	3	Side	2, 1-4, 4 equals 12	Very large 3 1/2 in. and up
41	Diagonal, 2-1	3 tier	3	Side	2, 1-4, 5 equals 14	Very large 3 1/2 in. and up
45	Diagonal, 2-1	3 tier	3	Side	2, 1-5, 5 equals 15	Very large 3 1/2 in. and up
45	Straight 3	3 tier	3	Side	3, 5 equals 15	Very large 3 1/2 in. and up
51	Straight 3	3 tier	3	Side	3, 6 equals 18	Large 3 1/2 in.
56	Diagonal, 2-2	3 tier	4	End, usually	2, 2-3, 4 equals 14	Large 3 1/2 in.
61	Diagonal, 2-2	3 tier	4	End, usually	2, 2-4, 4 equals 16	Large 3 1/2 in.
72	Diagonal, 2-2	3 tier	4	End, usually	2, 2-4, 5 equals 18	Large 3 1/2 in.
80	Diagonal, 2-2	3 tier	4	End, usually	2, 2-5, 5 equals 20	Large 3 1/2 in.
88	Diagonal, 2-2	3 tier	4	End, usually	2, 2-5, 6 equals 22	Large 3 1/2 in.
96	Diagonal, 2-2	4 tier	4	Side	2, 2-6, 6 equals 24	Medium to large
104	Diagonal, 2-2	4 tier	4	Side	2, 2-6, 7 equals 23	Medium to large
112	Diagonal, 2-2	4 tier	4	Side	2, 2-7, 7 equals 28	Medium to large
120	Diagonal, 2-2	4 tier	4	Side	2, 2-7, 8 equals 29	Medium to large
128	Diagonal, 2-2	4 tier	4	Side	2, 2-8, 8 equals 32	Medium to large
133	Diagonal, 2-3	4 tier	5	End	2, 2-8, 4 equals 23	Medium
135	Diagonal, 2-3	4 tier	5	End	2, 2-5, 5 equals 25	Medium
138	Diagonal, 2-3	4 tier	5	End	2, 2-5, 6 equals 28	Medium
151	Diagonal, 2-3	4 tier	5	End	2, 2-6, 6 equals 30	Medium
163	Diagonal, 2-3	4 tier	5	End	2, 2-6, 7 equals 33	Medium to small
175	Diagonal, 2-3	4 tier	5	End	2, 2-7, 7 equals 35	Small
188	Diagonal, 2-3	5 tier	5	End	2, 2-7, 8 equals 38	Small
200	Diagonal, 2-3	5 tier	5	End	2, 2-8, 8 equals 40	Very small
213	Diagonal, 2-3	5 tier	5	End	2, 2-8, 9 equals 43	Very small
225	Diagonal, 2-3	5 tier	5	End	2, 2-9, 9 equals 45	Too small

Elm Leads in Cooperage

Although elm still leads among the woods used for slack cooperage, spruce is rapidly supplanting it. In the total output of barrels in the Dominion last year, there were used, according to figures compiled by the Forestry Branch of the Department of the Interior, 80,016,000 pieces of elm, in staves,

headings and hoops, as against 37,704,000 pieces of spruce. There were, however, over 11,000,000 more spruce staves and 900,000 fewer elm staves reported for 1911 than for 1910. In time, elm will probably be used only for hoops, as it is the best wood for the purpose, the supply is fast diminishing and other species can be used to advantage in staves and headings. The ultimate sub-

Apple Trees

We are producing hardy varieties of Apples and other fruits for the North. Our Nurseries at Pointe Claire, extending over 170 acres, are devoted to the growing of Hardy Fruit Stocks and Ornamentals, Roses, etc., etc. Our Apple Trees are budded on whole roots and grown under all the rigorous climatic conditions of this section. For this reason they are pronounced by experts to be best suited as stock for Northern planters, both in the Garden and Orchard.

Intending customers are urged to place their orders now while we have a full selection of the best standard varieties.

Catalogues and Lists cheerfully furnished
Free of Charge

Canadian Nursery Co., Ltd.
(Charles K. Baillie, General Manager)
10 Phillips Place - Montreal, P. Q.

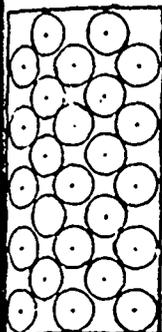
Apple Boxes

WE make a good box at the right price. It is especially suited for the apple grower and shipper.

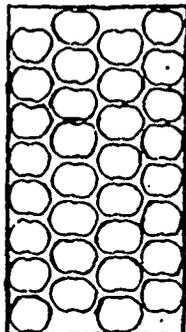
One of our large customers last year used thousands of our boxes for the export trade. Such trade demands a strong, durable box. Our boxes gave every satisfaction.

*Our Boxes are Right.
The Price is Right.
Let Us Quote You.*

Barchard & Company, Limited
135-151 Duke St. TORONTO



A Two-Three, Five-Pack. One hundred and twenty-five apples.



A Two-Two, Eight-Pack. One hundred and eighty-eight apples

ate for elm will probably be birch, which is comparatively plentiful.

Slack cooperage is of vastly greater importance than tight cooperage in Canada. This because the majority of Canadian products are of a rough and dry nature, such as lime, potatoes, apples, dry fish, flour, and cereals, and because Canadian woods are best suited to slack cooperage.

White oak, the only wood which can be used for containers of alcoholic liquids, has been practically exhausted in Canadian woodlands. In 1911 only 2,768,000 oak staves were cut, while 7,298,000 were imported.

A rough estimate on the part of the Forestry Branch places the minimum amount of material used in the manufacture of all cases of cooperage as 62,353,190 board feet made up as follows: staves, 29,367,714 feet, heading, 24,466,666 feet, and hoops, 62,353,000 feet.

Selling Associations Needed

A. McNeil, Chief, Dominion Fruit Division, Ottawa

The necessity of organization among all classes of fruit dealers could not be better illustrated than by an incident that occurred in the Toronto market July 8th. Strawberries were particularly scarce this year; that alone would have justified a high price. A further consideration in connection with the price is that the canners were buying all the strawberries that were offered. The Toronto market felt the consequence of these conditions and strawberries for the first week in July ruled very high, so high indeed, that it was suspected that Toronto fruit firms had formed a combination for the purpose of "loosting" prices.

The growers at Clarkson, and other points in the strawberry district noted the high prices in Toronto, and as there was no organization a large number of them shipped independently to Toronto for Saturday's market. The result was that the commission merchants found themselves literally buried under strawberries. Had it been the first of the week, perhaps something could have been done with the berries, but being Saturday large consumers could not use them, and fruit that would quite readily command twelve or fourteen cents a box, was offered at eight and nine cents a box, and a large quantity of it was not sold at all. Had the strawberry growers been organized, even at Clarkson, this condition could not have prevailed.

The losses on strawberries for this one day would pay the expenses of a selling organization for the season.

There would have been some compensation if the consumers had benefitted from this lowering of prices. As a matter of

Douglas Gardens

Oakville, Ontario

The best time to plant Paeonies, German Irises, Japanese Irises, Delphiniums and Phloxes, is in the early fall. The best time to give an order for these is NOW.

We offer 67 varieties of Paeonies at prices from 30 cts. to \$3 per plant;

12 varieties of Irises at 15 cts. to 25 cts. per plant;

Delphiniums, (Larkspurs), Gold Medal Hybrids, a choice mixture, at 15 cts. per plant;

And 6 varieties of Phloxes at 15 cts to 20 cts. per plant.

("Miss Lingard" Phlox at 20 cts. should be in every garden.)

Daffodils must be planted in early fall. We offer 8 fine sorts at prices 2 cts. to 5 cts. each.

Our Fall Planting List, now ready for distribution, describes all of the above. Send name and address for a copy.

JOHN CAVERS



Darr Farm, Niagara-on-the-Lake.

August 1st, 1911

"Regarding the large block of Pedigreed Cherries, Peaches, Pears, Plums and bush fruits we planted last fall, am pleased to tell you the results are in every way satisfactory. The few trees put in this spring do not compare with the fall plant, either in growth or take. We lost considerably more of the spring planted trees, and the growth is much shorter. In future we plant in the fall.

D. A. RODGERS

PEDIGREED CHERRIES, planted November 1910, 99 per cent. thrifty July, 1911.

The property of D. A. R. RODGERS, Darr Farm, Niagara

We strongly recommend the fall planting of all fruits excepting yearling plums, which are inclined to freeze back, and should be planted in the spring. Where the land is suitable and the work well done, fall planting has in every case proved more satisfactory than spring planting. Particularly is this noticeable this dry season. The land is usually in fine planting condition in the fall, the trees quite dormant, the weather cool, and more time can be given to plant carefully. Fall planted trees are well established by spring, and make a much heavier growth than spring planted orchards. These are a few reasons why fall planting pays.

Orders should be sent in early, and we are prepared to make quick delivery as soon as stock is thoroughly matured.

Auburn Nurseries, Ltd., Queenston, Ont.



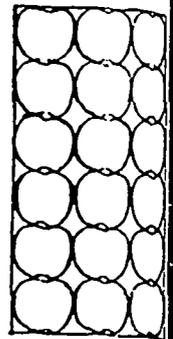
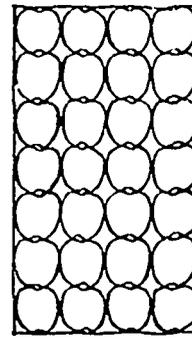
Try it—test it—see for yourself—that “St. Lawrence
Granulated” is as choice a sugar as money can buy.

Get a 100 pound bag—or even a 20 pound bag—and compare
“St. Lawrence” with any other high-grade
granulated sugar.

Note the pure white color of “St. Lawrence”—its
uniform grain—its diamond-like sparkle—its match-
less sweetness. These are the signs of quality.

And Prof. Hersey's analysis is the proof of purity
—“99 99/100 to 100% of pure cane sugar with no
impurities whatever”. Insist on having “ST.
LAWRENCE GRANULATED” at your grocer's.

ST. LAWRENCE SUGAR REFINERIES LIMITED,
MONTREAL. 66A



Three Tier, Eight Long Four Tier, Eight Long

fact the consumers got little or no benefit
from it. Some of the retailers secured a
slight advantage, but there was a large
loss that benefited nobody. A co-operative
Selling Association would have given the
consumers cheaper berries in a more satisfactory
factory condition and the growers would
have much better net returns.

Wrapping Fruit

R. M. Wislaw, Victoria, B.C.

In the fruit-packing, grading and marketing
there is continual progress. Almost a
number one British Columbia apples are
now wrapped. It is to be hoped that small
independent shippers, as well as the large
associations, will see the advantage of the
practice, so that this season all our best
fruit will go to the markets wrapped in
paper.

The advantages of wrapping are as
follows:—

One, wrapping gives a more finished ap-
pearance to the package. It preserves
a high-grade article, so finding a ready
seller and a steady market and a
higher price:

Two, wrapping improves the keeping
quality, preventing disease spreading
from fruit to fruit:

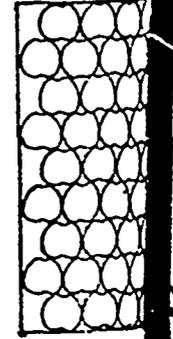
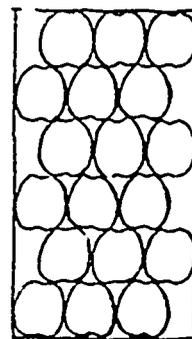
Three, the paper serves as a cushion, pre-
venting bruising, and so prolonging the
life and improving the appearance:

Four, wrapping makes an elastic but
firm pack, much less liable to shift, and
much quicker to put up:

Five, it protects the fruit from changes
in temperature and absorbs surplus
moisture.

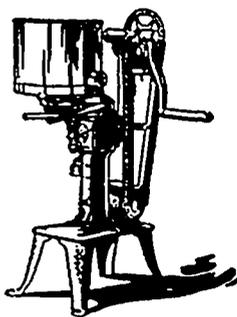
The cost of paper for wrapping is almost
saved by the weight of fruit which the
paper displaces. Experienced packers
do as quick or quicker work wrapping than
without it. There is very little foundation
for any objection to wrapping, save that
there is quite a knack in it, which some
packers seem unable to grasp.

The wrapping-paper most largely used



Four Tier, Nine Long
One hundred and
forty-four apples

Three Tier, Six Long
Fifty-four apples



**I H C
Cream Separators
Have Trouble-Proof
Neck Bearings**

GRANTING that a cream separa-
tor is a money making
necessity on every farm where
three or more cows are kept, there
are two points to make sure of when
you purchase your machine—close
skimming and long life.

There is very little skimming differ-
ence between separators when
new but there is a tremendous difference in the length of service
they will give. The difference is due to design and mechanical
construction. To take one example of mechanical efficiency

**I H C Cream Separators
Dairymaid and Bluebell**

have trouble proof, self aligning, bowl spindle bearings. The bowl
spindle bearing or neck bearing is an extremely important part of the
separator mechanism. Its business is to reduce to the lowest possible
point the vibration of a heavy bowl whirling at the rate of 6,000 or
more revolutions per minute. A rigid bearing in such a place is impos-
sible. To make a flexible bearing capable of withstanding the terrific
strain requires the most accurate balance of strength, firmness, and
elasticity. In I H C cream separators this balance is acquired by the
use of one spring. There is only one wearing part, a phosphor bronze
bushing. The entire bearing is protected from dirt or milk by steel
cases. There is but one adjustment and that easy to make.

Go to the I H C local agent who handles these machines and ask
him to show you how successfully this bearing meets all the difficulties
imposed upon it. He will also show you many other reasons why I H C
cream separators, made in four sizes, are the best. Get cata-
logues and full information from him, or write the nearest branch
house.

CANADIAN BRANCH HOUSES

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)

At Brandon, Calgary, Edmonton, Hamilton, Lethbridge, London, Montreal, N. Battle-
ford, Ottawa, Quebec, Regina, Saskatoon, St. John, Weyburn, Winnipeg, Yorkton
I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on
better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation,
fertilizer, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester
Building, Chicago, U.S.A.



Q Th
BOX
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Men's Residence

The Ontario Agricultural College Guelph - Ontario

The College Year begins September 18th, ends April 15th, 1913, allowing farmers' sons to return to the farm during the summer months.

Courses

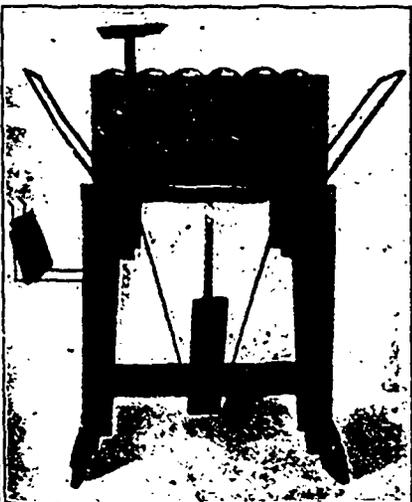
- Two Years' Course for practical farmers, leading to Associate Diploma.
- Four Years' Course, leading to the degree of B.S.A., conferred by Toronto University.

Write for Application Blanks and the College Calendar, which gives information in detail

G. C. CREELMAN, B.S.A., L.L.D., President

Quick and Easy

That is the way the DAISY APPLE BOX PRESS works. A simple pressure of the foot brings the arms up over the ends of the box, automatically draws them down and holds them in place while being nailed. The fastest and only automatic press on the market.



Pat. No. 104,535

If you pack apples in boxes, this machine will be a great convenience to you and will save you time and money. Write for prices to

J. J. ROBLIN & SON

Manufacturers Brighton, Ontario

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Are You Setting Out Your Trees as Economically as Possible and are the Trees when Planted Giving The Best Results Obtainable ?

Let Us Send You FREE OF CHARGE our Pamphlets on the use of

STUMPING POWDERS

USED FOR

- Planting Trees
- Cultivating and Rejuvenating Orchards
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CANADIAN EXPLOSIVES, Limited
MONTREAL, P. Q.

To Protect the Beauty That is Yours



and to enhance it, if that be possible, is a duty none the less binding because it has been made so agreeable. The duty centres in Beauty's chief expression, the skin.

With intelligent care and the regular use of such perfect preparations as Na-Dru-Co Ruby Rose Cold Cream and Witch Hazel Cream, you can preserve its bloom in spite of exposure to burning sun or dry, dusty, scorching winds.

NA-DRU-CO Ruby Rose Cold Cream

does much more than keep the outer skin soft and supple—it feeds the underlying tissues, fills out the tiny hollows, prevents wrinkles, and gives a fresh and wholesome charm. With its subtle odor of fresh roses, and the soothing sensation which it imparts, Ruby Rose Cold Cream is a toilet gem.

In opal glass jars, 25c. at your druggist's.

NA-DRU-CO Witch Hazel Cream



is a refined and altogether delightful preparation of Nature's own cooling, healing specific, Witch Hazel. Under its soothing influence roughness, chaps, sore lips, sunburn, windburn or irritation after shaving vanish like magic. Used freely after washing it keeps the hands and face soft and comfortable.

25c. a bottle, at your Druggist's.

Always look for the Na-Dru-Co Trade Mark when you buy.

National Drug and Chemical Co. of Canada, Limited. 189

in this province is styled the "Duplex," so called because it is calendered on one side and rough on the other, the latter being turned to the fruit. Yellow papers are in favor with the trade.

When apples are not wrapped it is best to use lining-paper for the boxes. The brand used in the province is termed "White News," and sells for four and a half cents a pound in Vancouver. The sheets are cut to size twenty by twenty inches, two being used to each box. A pound contains twenty-five sheets. Laying paper is used only for exhibition fruit and that intended for shipment to Great Britain.

METHOD OF WRAPPING.

The details of the method adopted by packers vary, and it is impossible to describe the details of any particular method on paper. The general system which is used is as follows:—

The right-handed packer stands with his right side to the packing-table, picks up the paper with the left hand, the apple with his right. He places or drops the apple into the paper, the side or end which is to be packed uppermost being placed downwards on the paper in the palm of the left hand. The fingers of both hands are used to make the wrap in the fewest possible motions, and the apple is placed in the box with the left hand.

THE PACKING-TABLE.

Packing on a bench instead of on table is gaining in favor in some districts. This system was used in the Summerland and Penticton packing-schools last year. The operator stands in front of a sloping bench on which are placed five-boxes, with an orchard box of fruit at his right hand. The packer picks up the apple nearest his hand; if it will fit into any of the five boxes before him he wraps it as he puts it in its place. If over or under size, it goes into one or two boxes placed conveniently near and if a cull, is run down to a box on the floor. This system is of advantage to skilful packers, who can tell at a glance what packs will be most useful for the fruit in the orchard boxes. The bench is quick and cheaply constructed, the fruit receives a minimum of handling, and consequently of bruising. Experienced packers have widely different opinions on the relative merits of these two systems. For the beginner and for poorly graded fruit the table is preferable.

Items of Interest

Owing to the fact that the Dominion Exhibition will be held at Ottawa this year the horticultural prize list has been considerably augmented. Over 160 prizes are offered for apples alone, some being as high as twelve dollars. One hundred prizes are offered also for garden vegetables. The exhibition will last from September 5 to 16. The secretary is E. McMahon, Ottawa.

Members of the Ottawa branch of the Ontario Vegetable Growers' Association have been holding meetings this season at one another's gardens with marked success. A visit has also been paid to the Experimental Farm. Prizes are being offered for field crop competitions in tomatoes, cauliflower, cabbage, celery, seeded onions, transplanted onions and melons. Special prizes are being offered also for competition at the Central Canada Exhibition in September, and at the Aylmer, Quebec, Exhibition. The prizes in the field crop competition range from ten to twenty-five dollars each.

Sprayers

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For Fighting Every Disease of Cultivated Plants

Knapsack, Pack Saddle or Horse Drawn Power Sprayers

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VERMOREL Manufacturer, VILLEFRANCHE (Rhône), FRANCE



Gerhard Heintzman Pianos

Pianos of Prestige

Piano Tone Quality

There is a certain "indefinable something" about the tone of a

Gerhard Heintzman Piano



that places it on a pedestal as Canada's Greatest Piano. This is not the result of accident but honest endeavor applied by experts through the past fifty years.

If you have in mind the purchase of a GRAND, SELF-PLAYER, or UPRIGHT PIANO, it will be to your interest to see and hear the

GERHARD HEINTZMAN

at the Industrial Exhibition (south side in Manufacturers' Building) where a special display of exclusive designs is on exhibition, or in the salesrooms of the NEW GERHARD HEINTZMAN BUILDING, 41-43 Queen Street West, opposite City Hall, where a duplicate of the Exhibition designs is also on view.

Your present piano will be taken as part payment and liberal terms arranged for paying the balance.

Gerhard Heintzman, Ltd.
City Hall Square, Toronto

BULBS AT SPECIAL PRICES

I have Imported direct from the Growers A LARGE QUANTITY OF EXTRA CHOICE BULBS for House and Garden Culture. Extra Good Named Varieties for Bedding. It will pay you to get my prices. Write at once.

C. MORTIMER BEZZO, Bulb Importer, BERLIN, CANADA

Cold Storage Fruit Warehouse

Finest Apple Rooms in the Dominion for
EXPORT AND LOCAL TRADE
Special Rooms for All Kinds of Perishable Goods

THE CANADA COLD STORAGE CO.
LIMITED
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Send your consignments of APPLES to the
Horse Country to

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COVENT GARDEN

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who specialize in APPLES and PEARS during the Season. Personal attention, prompt account sales and remittance

Correspondence invited



Buy Certainty With Your Wagon

THERE is no longer any need to speculate in wagons. Before you buy a wagon you can be sure of the quality of wood in hubs, spokes, felloes, axles, bolsters, stakes, and boxes; of the weight and quality of metal in tires, skeins and ironing. I H C wagons

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are the easiest running, longest lasting wagons you can buy because the lumber used is carefully selected—first grade oak and hickory for wheels, the finest yellow or bay poplar for box sides, and the very best long-leaf yellow pine for box bottoms—all free from shakes, checks or other defects which would interfere with their giving the best service.

The construction of I H C wagons is worthy of the good material used. The air-dried lumber is machined swiftly by accurate, automatic machines, doing the work uniformly well and at a cost away below that of turning out wagon parts by old fashioned methods. The saving thus made is returned to you in better quality of material. All joints fit snugly. Skeins are paired, assuring easy running. All ironing and other metal parts are extra thick and strong.

Go to the I H C local agent who handles these wagons and ask him to prove our claims. Remember, that our responsibility does not cease when the sale is made. You are the person who must be satisfied.

The I H C local agent will show you the kind best suited to your needs. See him for literature and full information or write the nearest branch house.

EASTERN CANADIAN BRANCHES

INTERNATIONAL HARVESTER COMPANY OF AMERICA
(Incorporated)

At Hamilton, Ont.
Ottawa, Ont.

London, Ont.
Quebec, P. Q.

Montreal, P. Q.
St. John, N. B.

I H C Service Bureau

The purpose of this Bureau is to furnish, free of charge to all, the best information obtainable on better farming. If you have any worthy questions concerning soils, crops, land drainage, irrigation, fertilizers, etc., make your inquiries specific and send them to I H C Service Bureau, Harvester Building, Chicago, U.S.A.



Market Prospects

The conditions of the markets, so far Canadian apples are concerned, are fairly re-assuring. The apple crop in Europe is universally short, and this shortage, though it may be in countries such as Austria, Hungary, Switzerland and Italy, to which Canadian apples are not exported, has a direct influence upon the export price of Canadian apples. Germany imports an average of 3,000,000 barrels of apples from the surrounding continental countries annually. The imports from Canada and the United States so far have not been large, but there seems no reason why there should not be a splendid opening this year in Germany and probably in other countries of the continent. The prospect for improved transportation from Canada direct to Germany is good. If the proper commercial connections can be made at once, there would seem to be a possibility of making up by exports from Canada the shortage that Germany will have in her imports from Continental Europe. France may be expected to take fairly large quantities of late winter varieties. Russets and Ben Davis have been favorites for this trade in the past.

The British markets offer more than ordinary attractions this year. There is a general shortage of fruit. The industrial conditions, while not without disturbing elements, are not such as to discourage generous buying on the part of the English wholesale merchants.

Some uncertainty surrounds the conditions of the United States apple crop. It is only an average crop in any particular locality, but this average crop is so widely distributed that many large markets will be supplied locally with the great bulk of fruit required. The class of fruit that most concerns the Canadian grower is the supply of winter apples or the quantity that will go into cold storage that may come into consumption during the months of December, January, February and March. This grade of fruit is not abnormally large in the United States this year and, if good industrial conditions continue to exist, the greater part of this will be absorbed by the home market at fair prices. Nevertheless, should there be a special demand from European markets, a large portion of this fruit would be immediately available to meet it.

The prospects, therefore, would seem to be for a fair to medium demand in Great Britain for fall and early winter fruit, and perhaps a somewhat better market for winter fruit. Should Canadian apples, suitable for late winter shipments, pass into street hands prices may rule fairly high in Great Britain.

One of the disturbing elements in the Canadian apple market is the large crop of the American Pacific States. These apples compete at a disadvantage in the English market, but are practically on even terms in the North-West markets. It is possible, therefore, that the North-West will receive this year a large quantity of imported apples. It is possible, too, that the British Columbia shippers, having their first large crop for export, may not be so well organized as to meet with advantage the competition of the American growers.—Bull. Dominion Fruit Division, Ottawa.

I think very highly of THE CANADIAN HORTICULTURIST, and find it a great help to me in my work as a fruit grower. I have thirty acres in orchard.—A. J. Turner, Borwick, N. S.

We Want All Fruit Growers



Who are at TORONTO FAIR—August 26th to September 9th, 1912—to visit our Exhibit, where we will be “at home” to our friends, in a Tent, west of Transportation Building, (western part of grounds.) We will exhibit

“REX” LIME AND SULPHUR SOLUTION

“REX” ARSENATE OF LEAD

POWER SPRAY PUMPS, IN VARIOUS SIZES

HAND-SPRAY-PUMPS, IN VARIOUS SIZES

BARREL AND BOX PRESSES, AND ORCHARD SUPPLIES

“COME AND SEE US.”

Agents Wanted where not already represented.

CANADA REX SPRAY CO., Limited : : BRIGHTON, ONT.

Visitors to the Toronto Exhibition

Should make at once for the east wing of the Horticultural Building; we cordially invite you to pay an extended visit to our display of Canadian products of

Carter's Tested Seeds

In any case we desire your address for catalogues, and even if you intend favouring us with a call we ask you to send us a post card now for illustrated literature regarding the products of the House of Carter.

Patterson, Wylde & Co.

65 Front Street East, Toronto

(And at Boston, Mass.)

Sole Canadian Agents for James Carter & Co.

London, England

Seed Growers by Appointment to H. M. King George V.

“Entirely Satisfied”

This is the report which we are receiving from our customers all over the country.

FRUIT GROWERS

GARDENERS

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are all “entirely satisfied” with the results which they are receiving from the use of

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FERTILIZERS

Grow Bigger Crops

MADE IN CANADA

BY

THE HARRIS ABATTOIR CO., LIMITED

TORONTO FERTILIZER DEPT. ONTARIO

DON'T FAIL TO LOOK US UP

ON THE EXHIBITION GROUNDS

APPLES WANTED

and FRUITS OF ALL KINDS

CONSIGNMENT OR, F. O. B.

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BRANCHES: WINNIPEG REGINA OTTAWA

MAXWELL'S

JEWEL FOOD-CUTTER

is a daily necessity in every home. You are always cutting up meats and vegetables for stews, etc.

A knife is awkward and dangerous—a chopping bowl is cumbersome. "MAXWELL'S JEWEL" cuts everything as you wish—fine, medium or coarse because it has five cutting plates.

Easily cleaned—easily worked—very strong, durable and handsomely finished.

Insist on your dealer supplying the "Jewel" because this is the only food cutter made in Canada—and is superior to anything imported.

DAVID MAXWELL
& SONS,
ST. MARYS, ONT.



Ontario's Apples in the West

W. A. Wias, Castleton, Ont.

In the July number of THE CANADIAN HORTICULTURIST I notice an article about the poor quality of Ontario apples in the west. I have just returned from the west, where I talked with the dealers in both Saskatoon and Edmonton about taking Ontario apples. In both places they were disgusted with the apples they have had from Ontario.

Is it not a shame that such a market should be partially lost by those shippers who send poor stuff? Not only the province gains a bad reputation. The dealers I spoke to receive Washington apples packed neatly in boxes, and sell the apples for five cents each.

Why cannot Ontario place good fruit in there and let it be known that it is from Ontario? Freight rates between the east and the west should also be reduced. It costs more to send a barrel to the west than it does to Liverpool. Ontario should wako up if it can.

Fruit Inspection

The force of fruit inspectors has been almost doubled by the Dominion government this year. In consequence, the area over which each inspector has worked hitherto has been considerably reduced. The inspection of fruit, therefore, this season should be more thorough than ever before.

Foreign fruit is to be carefully inspected. In this connection the following circular has been issued for the guidance of fruit inspectors and commission merchants:

"Importers of fruit are again warned that the Inspection and Sale Act, referring to the grading and packing of fruit and the size of fruit packages, will be strictly enforced. Importers of foreign fruit will be held strictly responsible for the packing and marking of the fruit which they sell as well as for the size of the package.

"It is required that there shall be upon every closed package of imported fruit, the name and address of the importer, the variety of the fruit and its grade (section 320). The importer will be held responsible also in the case of violation of section 321."

The Grading of Apples

Our correspondents almost everywhere report that apple scab is very prevalent this season. Undoubtedly there will be more than the usual temptation to brand as "No. 1" apples not strictly up to grade. The reputation of Canadian apples has suffered in the past on account of the fraudulently and carelessly packed fruit of a comparatively few dealers and growers, working a great hardship to those who grow clean fruit and pack it honestly.

Special attention is drawn, therefore, to Section 321 (b) (111) of the Inspection and Sale Act, Part IX., which provides that No. 1 fruit shall "include no culls and consist of well grown specimens of one variety, sound, of not less than medium size and of good color for the variety, or normal shape and not less than 90 per cent free from scab, worm holes, bruises and other defects, and properly packed."

An increased staff of fruit inspectors will be on duty this season both at shipping points and at the points of distribution, and every provision is being made to examine as large a quantity of fruit as possible. Fruit for local markets must conform to the law as well as that for export.

Copies of the Inspection and Sale Act.



Hardy Small Fruits

Condition: of soil and climate make it possible for us to produce stock that is hardy, vigorous, and that will give good satisfaction in almost any locality. We exercise great care in the cultivation and handling of our stock, giving personal supervision to packing and shipping, and warrant all stock absolutely true to name. This explains why we have built up a large list of satisfied customers.

We specialize on small fruits—Raspberries, Gooseberries and Currants—also Garden Roots, including Rhubarb, Asparagus, etc.

List of Varieties:

RASPBERRIES
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GOOSEBERRIES
Jesselyn Red Jacket
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CURRANTS
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Order now while the list of varieties is complete. Send post card for catalogue and price list.

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OWEN SOUND Box 54 Ontario, Can.

GINSENG

Ginseng Roots and Seeds, also Golden Seal Roots for sale at low prices. If you have any Hay for sale see what we can do. Ask for prices.

EASTERN TOWNSHIPS GINSENG GARDENS
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MONEY IN GINSENG

An acre of matured Ginseng worth from \$35,000 to \$40,000. Learn how to grow it and receive price list of seeds and roots, also full information from successful growers.

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GINSENG

Anyone can grow it and make money. For planting this fall we are selling

New Seeds, Stratified Seeds and One-Year-Old Roots

Write us for Price List

I. E. YORK & CO., Waterford, Ont.

SPECIAL NO. 26 Sent to your Express Office carefully packed, for \$5.00

8 BEAUTIFUL HOUSE PLANTS

AND
100 Choice Winter Flowering Bulbs
All for \$5.00

We stake our reputation on this Special Bargain. The most careful buyer cannot select better quality or get more for the money. The plants are all thrifty and healthy, of full blooming size, and such only as will do well in the ordinary home atmosphere. The bulbs are those that are sure to bloom and thrive and give delight to the inmates of the home all through the long Canadian winter. Send us \$5.00 and we will express to you as follows:

PLANTS

1 Choice Ostrich Plume Fern.
1 Fine Boston Fern.
1 Splendid Chinese Primrose
1 Beautiful Cyclamen.
1 Rare Begonia.
1 Fine Cineraria.
1 Strong Asparagus Fern.
1 Large Kentia Palm
Our regular selling price of these plants will average \$6 each, and some of them we retail at One Dollar each.

BULBS

12 Early Narcissus Paper White.
12 Early Roman Hyacinths.
12 Freesia Mammoth size.
The above are for early Xmas bloom:
12 Dutch Hyacinths (all colors)
12 Choice Single Tulips (all colors)
12 Superb Double Tulips (all colors)
12 Double Daffodils, a choice assortment
12 Single Daffodils, a choice assortment
2 Chinese Sacred Lilies
2 Bermuda Easter Lilies

Cultural directions for these Plants and Bulbs are found in our Catalog, which we mail free

The above bulbs will give continuous bloom until Easter. Catalogue order of these bulbs is \$5.00

This Order is Not Good after December 15th

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BROCKVILLE ONT.