

The Canadian Horticulturist

Bethune Rev CJSOAC

SEPTEMBER, 1908

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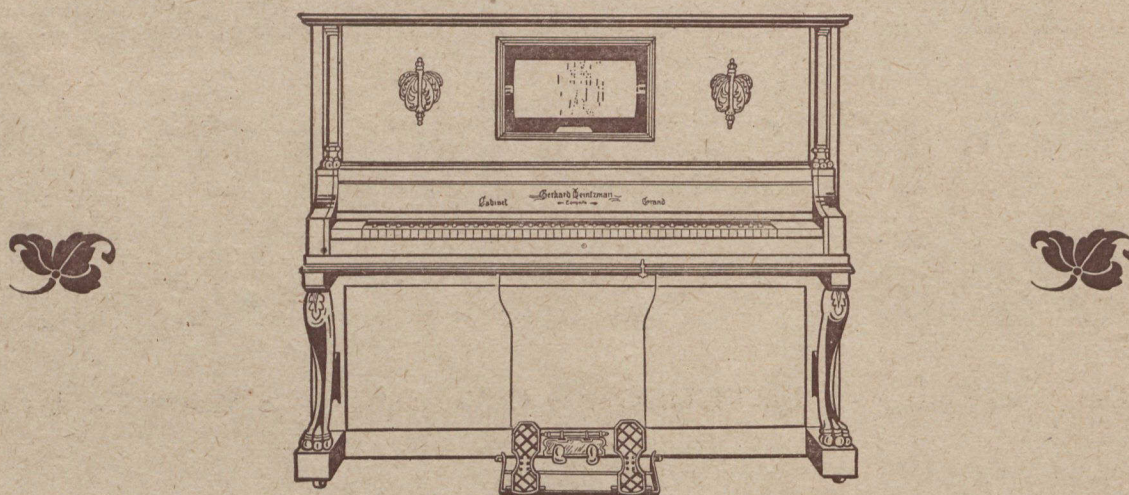
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The Canadian Horticulturist

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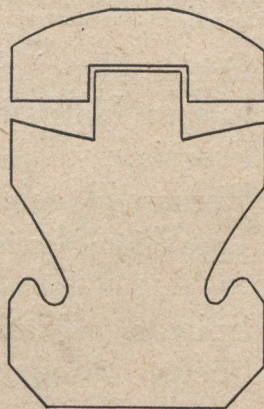
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The Canadian Horticulturist

Vol. XXXI

SEPTEMBER, 1908

No. 9

The Picking, Packing and Marketing of Fruit*

P. J. Carey, Dominion Fruit Inspector, Toronto

ONE would think that after half a century had passed in practical experience along the line of picking, packing and marketing of fruit, that little remained to be said that would be of any great value to operators. Volumes have been written along educational lines, addresses by the thousands have been delivered bearing on the subject, millions of packages have been marketed and every conceivable method has been practised. There have been object lessons in every form. Experiment after experiment has been tried. Operators, some of whom have been in the business for upwards of thirty years, have had an opportunity of profiting from past experience. One would naturally think, therefore, that the subject "Picking, Packing and Marketing of Fruit" would be worn threadbare. But it would seem that there is much yet to be learned by the growers and handlers of fruit in order that their operations may prove successful. The question then we must ask ourselves is: "Wherein does the trouble lie?"—and if we are fortunate enough to trace it to its proper source, then apply the remedy.

Why is it that fruit handling has proven to be such a problem? Is it because there are insurmountable difficulties and conditions standing in the way of its successful carrying out, or is it because of the indifference and bad judgment of the operators? As I have no desire to be unfair in my criticism of those who are engaged in the trade, I am ready to admit that there are more conditions surrounding the fruit trade in all its branches than in all other trades along agricultural lines combined. While this is true, and while it calls for the closest possible care and attention, I am prepared to show that there is no trade in Canada in the handling of which can be shown the same indifference and bad judgment or a greater lack of good methods. I know that the difference between its being well and poorly handled is the difference between success and failure.

When is the proper time to pick? This is a debatable question. There is one

general rule, however, on which there can be no debate, and that is that every variety should be at least fairly well-matured and showing at least a fair share of color, character and finish, before being plucked from the tree. It is a well known fact that thousands of barrels of our apples are hurried off to the market at such a stage of immaturity that, if one were not guided by the name of the variety on the package, even an expert would be puzzled in some cases to name the variety.

WHEN TO PICK

It is the picking of our winter apples at the proper time in which there is so much involved. We had a striking object lesson last season. Thousands of barrels of our best fruit were damaged

Deserves Support

THE CANADIAN HORTICULTURIST is a credit to the publishers and deserves the support of every householder in the country. I sincerely hope that its circulation may be doubled each year until it may be found in the home of every respectable family in Canada.—Thos. Beall, Lindsay, Ont.

on the trees by frost. This frosted fruit went forward, some of it in a very bad condition. In my judgment this was partly, if not largely, the cause of the bad condition of the market. The frost came on the 20th of last October.

Now, the question is: Should our winter apples be picked before that date?" A learned judge, in giving judgment last season at Shannonville, in a case where frozen apples were in question, remarked that the Lord had sent the frost and we should not question what he had sent. Of course we all agree with him, but could we not agree with him and, at the same time, save our apples from frost?

HARVESTING WINTER APPLES

I am going to take strong ground here as to the proper time to pick our winter apples. The period for harvesting of our winter apples is, and has been, too long. I hold that this period should not extend over more than three weeks.

When the end of that three weeks should be, is a debatable question; but from past experience, it would seem that there is grave danger of damage from frost when fruit is left on trees later than the 20th of October.

The dealers will say with one voice that this is impossible. Of course it is under the present methods. When a single buyer will purchase 20,000, and often 30,000 barrels, a part of September, all of October, and often a part of November is consumed in picking winter apples off the trees. There is something radically wrong with this system. Each year there are thousands of barrels picked immaturity on the one hand, and on the other hand, there are thousands of barrels left to wind and frost to be gathered up and marketed in some way.

There is but one way to carry out what I contend—namely; that the picking period should not extend longer than three weeks—and that is that the growers must pick their own apples. I care not how they sell their fruit or whether they pack for sale or not. It is impossible to harvest our fruit properly and in season any other way; all other ways have been tried and found wanting.

PACKING

Packing the fruit is, perhaps, the most responsible part of the whole proposition. What constitutes a good packer? Ten years ago a good packer was a man that could take two-thirds of a barrel of poor apples and one-third good, and turn out a barrel of choice XXX Canadian apples. A good packer to-day is a man who, if he finds there are no No. 1 apples, in the orchard, will put them up as No. 2. (all that are fit for that grade), and do his work well and as rapid as possible.

It is in the packing after all that the whole trouble is centred. No matter how good the intention of those who direct the work and have their money invested, they are forced to employ all classes of men, in respect to some of whom, to say that they are careless and unscrupulous, would be using mild expressions. Those who employ the latter class are certainly "in the hands of the Philistines."

One of the common faults of packers is that, when they enter an orchard or

* Adapted from addresses delivered at Fruit Institute last winter.

packing house, they feel in duty bound to put up a percentage of No. 1, whether there is any fruit of that grade in sight or not. Thus, it is in this particular to which the greater trouble can be traced. I do not wish to be too severe in my criticism of the packers, but it is surprising, to say the least, to see the indifference and carelessness displayed by the ordinary packer in his work. Until such time as some system can be devised to induce those, who are actually engaged in the work of selecting and packing, to take a greater interest, the trade operations can be called little better than a game of chance.

We have two classes of packers: There are those that are simply employed to do the work, and those who are small dealers and superintend their own work. I scarcely know how to designate the latter class. Some of them come forward with a pious and God-fearing sort of an expression and declare that they are unable to sleep at night, through a fear that some of their packers might depart from the path of righteousness. One of the latter class told me that he always made it a practice to put better apples in the middle of the barrel than on the face. This, of course, pleased me and I asked him for his photograph to add to my little collection of curiosities. Another seemed to justify his actions by saying that the first man the world ever saw, showed a little weakness along the apple line, and all down through the centuries that weakness seemed to stick to the apple-man.

THE WORKMANSHIP OF PACKING

In Ontario, we have an army of, perhaps, the best barrel packers in the world, but unfortunately when the busy season comes, men who know little or nothing about the business must necessarily be employed. It is to this class of packers that most of the trouble can be traced, as to poor workmanship.

I wish to call attention specially to what is called "over-pressing." When a packer asks my opinion as to whether a certain package is over-pressed, and while I can plainly see that it is, I feel that I dare not tell him so. It is a well-known fact that barrels showing signs of slackness, will sell from two to four shillings less than "tights."

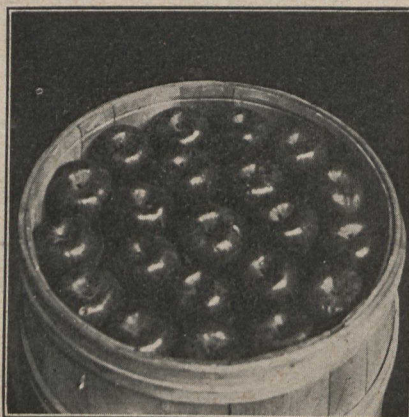
OVER-PRESSING AND SLACKS

There is a prejudice against "slacks," but the slackness produced by waste fruit is what is in the mind of the dealer and he has no time to discriminate between such a "slack" and what is known as an "easy pack"; therefore, when a package shows signs of slackness, it must fall. This is unfortunate, as the "easy pack" is worth shillings more to the fancy trade than the over-pressed package,

where almost every fruit is disfigured by press marks; but having the dollars and cents to the dealers in my mind, I must say to him, have your packages arrive tight if possible. I am not referring here to the hundreds of packages in which the fruit is needlessly crushed and broken, producing the worst kind of "slacks," especially in warm weather packing. These are the kind of "slacks" that are in the minds of the dealers. When tapping the barrel in the head, it has a hollow sound.

MARKETING

In regard to marketing, we have not yet arrived at a perfect plan. The nearest to the ideal is the plan of selling f.o.b. cars at points of shipment. We



A Well-faced Barrel of Ontario Apples

have recommended this from every platform for the last few years, and the idea has been received with such favor that some half a million barrels were sold in this way last season. But what happened? I have discovered that with the ordinary dealer, as soon as he is fully conscious of the fact that his fruit is sold and the price fixed, the same old human weakness creeps in and he does not display the same care in selecting the fruit or in workmanship as he would if the prices depended on the manner that the fruit is put on the market. This, however, does not apply to all the "packs" sold in that way and can be remedied by inspectors paying special attention to "packs" when sales are made in this way.

CO-OPERATIVE MARKETING

I will not discuss the co-operative plan of marketing at any length at present, but it is a matter of regret that in many instances, the growers cannot stand the temptation and abandon the co-operative plan, when speculative buyers offer them apparently big prices.

Under no method has the return been as satisfactory to growers, nor has the reputation of the trade been as well safe-guarded, as under the co-operative plan. Some 200,000 barrels were pack-

ed under this plan last season and the bulk was sold f.o.b. cars, points of shipment. With a few exceptions, the pack turned out satisfactory. Under no other method, can the same uniformity and control of pack be maintained.

With the knowledge of these facts in possession of the growers, it is surprising that they are so easily turned aside and reach a market through some other channel. There is no denying the fact that an effort is being made by the speculative dealers to give this movement a death-blow. The proof of this was shown last season by the very high prices paid here and there in sections where co-operation was in full swing, and this in sections where a few years ago apples remained on the trees for the want of buyers, and where the co-operative movement was started as a remedy.

IRRESPONSIBLE BUYERS

There is another method of marketing which has worked much mischief and that is, where irresponsible buyers swarm the country early in the season and secure thousands of barrels of apples without any means to finance the deals. They then wait for their victim, who very soon turns up. A handsome profit is handed over to buyer No. 1 for his deals, and in the deal he and his relations get fat wages for doing the packing. Buyer No. 2 finds at the close of the season that there is a great shortage in the numbers of barrels represented, that the work has been fraudulently done and that the prospects that seemed so rosy in the early season were only a dream. Of course, it is every man's privilege to engage in any business he wishes to, so long as he does not violate the laws of the land. We have a right to criticise the methods employed, however, and to suggest improvements.

Growers fared well last season, but they must not forget that if the season's operations did not show a profit to the dealers, that they will have to make it good sooner or later. There is a common saying that, "The place to look for a thing is where you lose it." The fruit trade of Canada has assumed enormous proportions. It is up to the growers to look well to their interests and do everything in their power to place the trade on a sound basis.

Feeble growing and unhealthy trees are, as a rule, the results of starvation, poor attention or unfavorable climate.

THE CANADIAN HORTICULTURIST would like to hear oftener from readers who grow raspberries, blackberries, currants, or gooseberries. Send for publication a description of your patch, and tell how you plant, cultivate, prune, pick and market.

The Marketing of Peaches

A. F. Stevenson, Niagara Falls South, Ontario

AS WE look over our orchards, the questions arise in our mind: "What is the most satisfactory way towards the disposal of our crops?" and "Can we improve upon our methods followed last season?" A number of us will say: "Yes," experience having taught us.

It is a most unfortunate thing for all concerned in the fruit growing business that a closer observation is not made by individual growers respecting the grading and packing of our fruit, particularly noticeable in peach shipments. As far as possible oversee this important branch of the business yourself. No man will look after your interests in the same way.

We should see that the contents of each package is of uniform size—not fine and attractive fruit on top and miserable marbles underneath. Have fruit not too ripe nor too hard. Strike a happy medium. This can be done by making two or three pickings at intervals of a few days. Have fruit in such layers that it comes even with top of basket so that, when it reaches its destination, instead of being bruised and discolored, it will have as sound and fresh an appearance as the express companies will allow.

We have three chances to choose from for the disposal of our fruit—the commission men, retail stores and canning factories. It is a good thing that we have these openings for the distribution of our fruit. If we were confined, say, to shipping to commission men, what would the result be? We would be at their mercy more than ever. As it is in many cases, the consumer pays high prices and the producer does not get barely clearing expenses. Certainly his price is not in proportion to what the consumer pays. We would be only too willing to pay more than the regular 10 per cent. if we were sure of receiving what our produce actually sold for.

There is not sufficient rivalry between commission men. There is too much of a "combine spirit." They are grinding the producer on the one hand and the consumer on the other. Is it any wonder that the growers are looking for a more direct channel for the disposition of their fruit?

The key note to successful marketing is the closer relationship between the producer and the consumer. It would be much better for all concerned and much more profitable for both sides. It insures the buyer a better article at less cost and likewise the producer, if he

and villages. Heretofore, Toronto, and Montreal were the chief distributing centres, our fruit going to these cities, then re-shipped broadcast over the land, this necessitating considerable expense which comes out of both consumer and producer.

The canning factories give the growers a good opportunity for the disposal of large quantities of fruit. A great many of us, who have not the gambling spirit, think a "bird in the hand worth two in the bush," and, consequently, dispose of our entire orchards in this way, knowing that we have no commission and express charges to be deducted from our bills of sale. Our baskets are returned, and there is no packing or grading which is a great saving of money and time.

Canadian Grapes

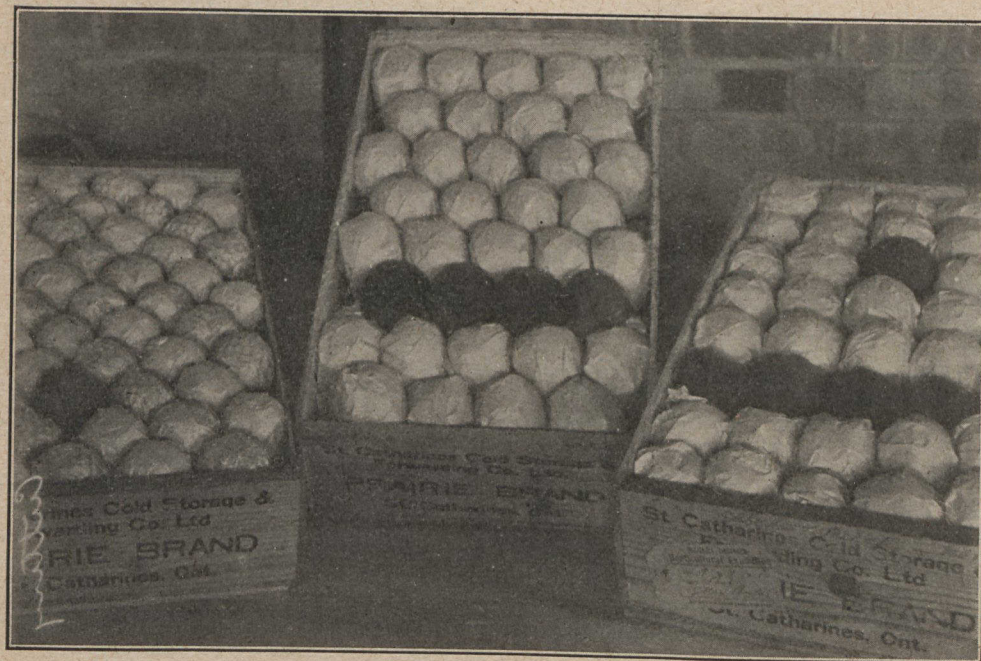
W. T. Macoun, Ottawa

There have been a few grapes originated, some of which are sold by nurserymen and some are not to be found on any trade list. Those which may be mentioned here are the Brant, Canada, Moyer, Kensington, Burnet, Jessica and Northern Light.

Brant and Canada were originated by the late Charles Arnold, Paris, Ont., and are crosses between Clinton and one of the *vinifera* varieties. Both of these grapes are small, and are acid and sprightly, with a pleasant flavor. Their value lies in their earliness and ability to ripen in the north, even in cool seasons. Moyer, while an unproductive variety, is also valuable for home gardens, as it is a sure ripener where most grapes do not mature.

One of the best grapes of Canadian origin is the Kensington, a white grape, originated by Dr. Wm. Saunders, director of the Dominion Experimental Farms. It is a little too late in ripening to be useful at Ottawa, but farther south it should be very desirable. It was originated by Dr. Wm. Saunders, at London, Ont., by crossing Clinton female with Buckland's Sweetwater male. The vine is a strong grower, and moderately productive; bunch, large, long, compact, shouldered; fruit, medium size, oval, pale green, translucent, firm, thin skin, sweet, sprightly, pulp melting, quality, good; season, late.

For the benefit of readers of THE CANADIAN HORTICULTURIST in British Columbia, the October issue will be devoted largely to the fruit interests of that province. Tell your friends about it, and ask them to subscribe this month.



Ontario Peaches Packed for Shipment to the West

Note the different styles of packing. Box at right contains a 5-5 pack and box in centre, a 4-5 pack.

It is a regrettable fact that transportation companies handle our produce as if it were baggage. How often word comes back: "Fruit arrived in poor condition." We are the losers but the companies get their charges just the same.

is shipping to a reputable retailer, receives a more satisfactory price than if his shipments went through a middleman.

A great number of growers are now shipping direct to retail stores in towns

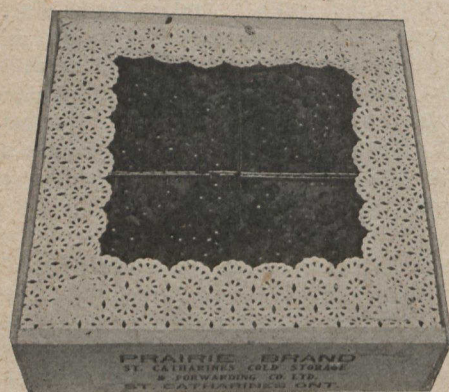
Harvesting and Marketing Grapes

G. H. Carpenter, Fruitland, Ontario

CARE and intelligence must be exercised in the handling and marketing of grapes. The fruit will not ripen off the vines. It must be picked when mature; consequently, the picking must be carefully done in order that the fruit will reach the consumer in good condition.

PACKAGES AND PACKING

For commercial purposes, the fruit is picked in nine-quart baskets. Where a high-class trade is being supplied, small-



High Quality Grapes Well Packed

er and fancier packages are used. In this latter instance, the finest should be re-packed in a packing house in order to ensure a high-class article. In any case, if a superior and attractive looking package is desired, the fruit should be re-packed, care being taken in the final packing to pick off all green and broken berries. This requires a little more work than where the fruit is handled only once, but it is work well expended.

CO-OPERATIVE MARKETING

There are various ways of disposing of the crop after it is harvested. Local fruit associations are important factors in this regard. When a number of growers co-operate to sell their fruit, a more uniform product is put up, a better market usually is secured and more remunerative prices are obtained, than though growers were to work individually and possibly cut one another as is frequently done.

SELLING TO CANNERIES

The canning factory, too, presents a good market for this fruit. When a factory is being supplied, the fruit is picked in large baskets and shipped in them or in barrels. No second handling is required. The expense for harvesting thereby is considerably lessened and the general price ruling for wine grapes admits of as large a net profit almost as is realized on the fruit when sold for direct consumption. The factory also offers a place for the disposal of all over-

ripe fruit, which otherwise would be wasted.

SELLING TO LOCAL BUYERS

The local buyer offers another means of disposing of the fruit. This method is frequently much less satisfactory than the others. It suggests the great need for grading this class of fruit. Where the fruit is bought indiscriminately, the price frequently is knocked down because of the presence in a consignment of the inferior product of some careless grower. The producer of the superior article, in this case, is the loser. He does not get full value for his product and for the extra labor he has expended in putting it up in an attractive form.

THE SKILL OF MARKETING

The successful growing of fruit and the profitable marketing of that fruit are entirely different problems. A man may be a successful grower yet, owing to a lack of business ability, placing the fruit on a poor market may result in a financial failure. The great point is to put the fruit up in an attractive package. Good fruit well packed in a smart and tasty package will sell itself anywhere, and bring a good price. In fact, the package will sell it. Then, study the markets and get the product in when good prices are ruling.

Manures for Orchards

Alex. Muir, Niagara-on-the-Lake, Ont.

My experience has been that worn out soil can be brought back to a good state of fertility by the application of good long or green manure, plowed under, thus putting life and humus into the soil. But there is a great difference in the qualities of manures. The common barnyard manure puts humus into the soil, but there is not the body nor substance in it that there is in manure from well grain-fed stock and littered with straw to absorb all urine and liquid matters. The best manure that I have ever used is S. W. Marchment's Complete Compost. I have always got the best results from it both for grain and fruit farming.

My experience and belief as to the proper use for barnyard manure is to put it on the land as it is made and not allow it to remain in the barnyard to fire-fang, evaporate and have all the essence leak out and run into some creek or ravine. Marchment's Sure Growth Compost is composed of all kinds of manures, which I have seen handled and mixed in such a way that the manure is kept from heating or fire-fanging, while at the same time the ammonia in the manure is re-

tained, which makes it one of the most valuable of plant foods.

Worn out land, after filled with humus and brought up to a good state of fertility, is very easily kept in that state by top dressing with from four to five tons per acre of good rotted manure, such as Marchment's, which I have found gives first class crops. A good take of clover also is beneficial to any kind of soil. My experience is that the old saying, "If ever you get into debt, go for manure," is a true one.

Land bearing heavy crops year after year must be fed well with good manure. For a number of years I have top-dressed my grain fields, orchards and small fruits. I usually do this in the winter time when there is not so much of other work to be done and at a much smaller cost than in the spring. I have always had the best of results.

With regards to commercial fertilizers, I have bought every brand of commercial fertilizer that was ever offered to me for sale, for my private experimental purposes, but have had poor results without a generous application of the ordinary raw manure.

I have had fairly good results from wood ashes and muriate of potash. Sandy soil is lacking in potash; therefore, I use a little of muriate of potash in conjunction with good compost manure which makes good stiff straw, and more bushels, also a good quality of fruit and lots of it. Moreover, I am convinced and my experience goes to prove that I am correct, that the application of good manure is not only very beneficial to the land, but very profitable to the producer.

Picking Plums

The exact time for picking plums can be determined only by experience. It will depend on the distance from the market and on the shipping qualities of the variety. Plums will bear picking when quite green, particularly the Japanese varieties. When intended for a nearby market, they may be left on the tree as long as possible.

Most of the Japanese varieties and some others ripen very nicely after picking. They can be kept for three or four weeks in a fairly cool, dark place, and come out in good condition. Sometimes they can be kept much longer. As some of the American varieties are apt to break their skins when ripe, care should be taken to pick them on the green side.

For the benefit of readers of THE CANADIAN HORTICULTURIST in British Columbia, the October issue will be devoted largely to the fruit interests of that province. Tell your friends about it, and ask them to subscribe this month.

The Dahlia and its Care in Fall

Col. H. P. Van Wagner, Hamilton

It is nearly a hundred years since the first double-flowered dahlias were produced, and, after many ups-and-downs, the dahlia has recently had a

a mixture of four parts of bone meal and one part of nitrate of soda. Dry sheep manure (sold by seed men) lightly raked in the soil is a convenient form of fertilizer. It is generally advisable to commence to feed the plant as soon as it comes into flower. Too rich a soil results in large plants and few flowers, therefore it is advisable to apply the fertilizer when needed.

WHEN TO PICK

September is the month for dahlias. It is then in perfection, as it delights in a cool, humid atmosphere. It will not do well in a hot, dry summer. In a very

hot season, I have found dahlias to do better in a partially shaded situation. The best flowers are on young plants, and if large, perfect blossoms are desired, pick off the side buds. Dahlia blooms should, if possible, always be cut before sunrise or after sunset, and immediately put in a pail of water and put in a cellar or other cool place, and left there for six hours before being shipped or otherwise disposed of. By changing the water every

spray with Paris green. If planted near a meadow, grasshoppers often destroy the blooms.

FALL TREATMENT OF TUBERS

The dahlia root should not be lifted until a week after the frost has killed the plant. This gives the tubers time to ripen, and they ripen much better after the tops have been killed than before, and the tubers are not so liable to shrivel up during the winter. Cut the stalks off within six inches of the tubers, remove all the soil possible, allow them to dry, then place in a cellar or other place secure from frost. Place in barrels or boxes and cover with dry, clean sand. Some growers use tanbark or sawdust, but I have never used anything but sand. Some growers lift the roots early in the morning of a bright day, place the roots upwards without removing the soil from the roots, let them dry in the sun for half a day, then remove to cellar, and place in a box or on a shelf. I have found this to work well on light soils, but on heavy soils the tubers are likely to decay. If the roots are left uncovered in a dry cellar, they will shrivel and lose their vitality. If covered with damp sand or soil, they will decay. Many say that any treatment which will keep the potato during the winter, will keep the dahlia equally well. This has not been my ex-



An Amateur Gardener

At residence of Mr. T. H. Taylor, Hamilton

renewed popularity. This is largely due to the introduction of improved varieties of the cactus-flowering sorts, which are more graceful for cutting than the older varieties. The improved single-flowered sorts, especially the "century" family, are also very fine for cutting, while, in the decorative class the new peony-flowered dahlias, with their bold, artistic flowers, of elegant form and beautiful colors, supply an entirely new form in this class. Now, each year gives many new varieties of dahlias of such wonderful form and color that hundreds who never cultivated the old-fashioned dahlias are now growing the newer types. As the dahlia is of the easiest culture, and its varieties of every conceivable color, their culture cannot fail to give satisfaction to the lover of flowers.

It is now too late to write of the soil and cultivation best adapted to the dahlia, further than to remark that the deep cultivation which was beneficial at the early stages of the dahlia's growth, should cease as soon as the plant comes into bloom. After that the surface of the soil should be kept well cultivated to the depth of an inch or two, to conserve the moisture. The frequent stirring of the soil will give better results than watering, but where dahlias are planted near trees or shrubs which take the moisture from the soil, it is well in dry weather to water them.

FERTILIZING

Sometimes the flowers of dahlias, which have come into bloom early, gradually become smaller and smaller. This generally results from a lack of plant food in the soil. This may be prevented by broadcasting around the plant a small quantity of some good fertilizer, such as

morning, clipping the stems a little, and setting the base or bowl in a pan of cold water in a cool place at night, the flowers can be made to last a week.

There are few insects affecting the dahlia. The chinch bug sometimes eats off the buds. The best remedy is to

perience, although tubers of early planted roots, well ripened, will often keep well uncovered in a cellar.

Photographs of horticultural interest are always welcome for publication in THE CANADIAN HORTICULTURIST.



Dahlias Growing in Front of a Verandah

Residence of Mr. H. R. Nixon, St. George, Ont.

Transplanting Herbaceous Plants in the Fall

J. McPherson Ross, Toronto

TO have herbaceous plants in the best possible flowering condition, it is necessary to transplant them frequently; that is every three or four years. Being rank growers and strong feeders, they soon exhaust the soil unless they get an annual top dressing of rich manure, which should be thoroughly forked in in the spring. This operation permits the checking of strong growers, such as rudbeckias and other kinds that multiply by rhizomes and layers. It is easy to dig them under which practice keeps your plants within bounds when you do not sell them or give them away. When borders become congested with growths of this kind, it is a good plan to make an entire new border, and plant the varieties in clumps of each kind, massing them, as it were, which makes a much finer effect.

All herbaceous plants are the better for such dividing, with the exception of pæonias, which are better if left undisturbed for many years, so long as you keep them manured. Phloxes have to be divided and replanted every three years, if you wish to have fine flowers. Any variety may be divided and replanted after its flowering season is over. September is a good time to do this work. Gardeners find this a busy month. There is so much to do with transplanting perennials that have been grown from seed, also biennials such as hollyhocks, foxgloves, pansies, daisies, and so forth.

To have the best possible success with perennials, the bed or border in which they are to grow must be thoroughly drained, and even with good drainage, it is well to make the bed good and high above the surrounding ground, so as to insure good surface drainage. The best results are obtained by subsoiling the bed; that is, to dig in a good coating of manure, and to dig the bed as well two spades deep. This may mean a little extra labor, but by so doing you provide deep loose soil for the roots to go down in, which means larger and richer growth of foliage and flower, besides enabling the plants to withstand dry spells when and where it might not be convenient to water.

When your bed or border is ready for planting, cut off this season's tops. Dig up the plants and divide them into three or more plants as you desire, or if anxious to have as many as possible you can divide them into smaller sizes. Dig the hole plenty large enough. Place in your plants, fill in the soil and tramp firmly. Finish by watering liberally and leveling the surface soil evenly and neatly.

Any of the following plants may thus be treated during the month: Phloxes,

summer and autumn flowering; pæonias, if you desire to propagate; *Diletea spectabilis*; achillea, in variety, campanulas, delphiniums, aconitum, rudbeckias, heleniums, heliopsis, lily of the valley, pyrethrum, potentiallas, tradescantias, lilies, pulmonias, physostegias, boltonias, lychnis, armerias, iris, spireas, hemerocallis, *Papaver orientalis*, and veronicas. In short, nearly all our hardy garden favorites, bear transplanting well at this season.

As this season's observations of the habits of each plant, their height, space required, and so forth, are fresh in the grower's memory, you can better arrange the massing and order of the plants in your bed, than by putting it off to the following spring. You can also arrange your beds for bulbs at the same time and plan floral effects for other seasons better when you have specimens in full growth before your eyes.

When planting, the stereotyped advice is to put the tallest growing at the back, the medium in the centre, and low growing in the front, or to serve as edging. Anyway, avoid straight lines. Vary the arrangement as much as you please but keep the various sorts in masses or clumps, allowing for contrasts and a continuity of bloom.

The majority of perennials bloom in the spring. This being so, it is well to have clumps of phloxes at different parts of your border so as to give abundance of bloom, as it were, all over your beds. A useful and showy flower for this purpose is the tiger lily. This in strong

the too promiscuous use of the rudbeckia almost make this plant tiresome, if not kept well to the back. It should be but sparingly planted as it is apt to overshadow and over-balance your other flowers. For late summer blooming we cannot recommend the phloxes too much. Good vigorous plants of this useful flower make the garden radiant. The physostegias and bocconias are valuable for their late summer blooming habit, likewise the heleniums.

The great interest taken in herbaceous plants of late, shows that the public are beginning to appreciate them, not only for their beautiful flowers and foliage, and hardiness, but for their practical and economic value and permanence. They are always on hand to do with as you wish. You can purchase them as cheaply as geraniums but, unlike bedding plants that only get to their best when they are destroyed by frost, the perennials are always on hand to grow again with but little care. They reward the grower by their permanence. You may admire the bedding plants, but it is always with a certain sympathy and regret for their certain doom, but the hardy delphinium and phlox yields to the flower lover a certain satisfaction in their possession not given by the geranium, aster or coleus. Newly planted herbaceous beds should be well mulched with strawy manure as a winter protection.

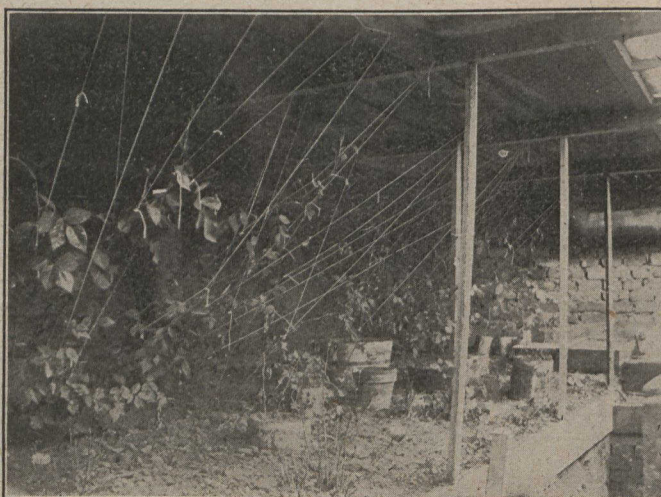
Roses in Saskatchewan

G. T. Barley, Prince Albert

In preparing for a group of roses and shrubs, I planted the bed in the open ground. For the summer, I left it open;

or the winter I built a frame around it, about three feet high, and banked with soil and manure, and used some stove heat. The top was covered with boards and sawdust on one side, and a row of glass on the other, with an extra covering of cotton frames for nights, and very cold weather.

By digging a path three feet deep, and a door in one end, the plants could be easily seen at any time. I kept the frost out until the first of the year, and then, for two months, allowed a little frost in, in order to en-



Growing Roses in Saskatchewan

In February with thermometer outside registering at times thirty to fifty degrees below zero.

clumps at effective points of garden, lights up the whole place. Judicious grouping of gladiolus with a few masses of *Hydrangea paniculata*, makes a showy sight of color. The vigorous habit, and

sure that everything was dormant. This is only one evidence of what may be done along horticultural lines in Saskatchewan. Many others might be cited. I shall contribute another article soon.

The Fall Care of Lawns

R. L. Canning, Earls court, Ontario

THE time is now approaching when those who have the care of lawns and grass plots in their charge, must consider what is to be done to make them perfect for another season. As the summer is drawing to a close we must examine the grass, and make ourselves acquainted with its conditions and faults.

In the first place, be careful about weeds. Have all noxious and gross-growing weeds eradicated. Hand weeding will be best, by going on one's knees with a knife and cutting them out by the root. When this is done fill the holes with fine earth, and drop a pinch of seed on top, and make firm with your foot or a spade. When this work is completed, roll it well, and make it solid.

TREATMENT OF SMALL PLOTS

To those who have limited space, and less soil at their command, care should be taken to save every little refuse that will turn into mould or manure. The grass which you cut from your lawns during the summer, and placed in a corner, will help. The edgings and the sweepings and the leaves from the shade trees will help also. The domestic soot gathered from the stove flues makes a fine top dressing, and the wood ashes made during the summer months will, when blended together, make a fine compost for the small lawn. This should be applied in the spring, after the frost has left the ground, and should be put on in as fine a condition as possible, spreading it evenly, and raking off any large or stony substance. Be sure and fill any small holes previously overlooked. Should the lawn be generally uneven, it will be wise to have the turf lifted, and the ground underneath levelled. Make smooth before placing the turf back again. When once a lawn is relaid, whether in the fall or in the spring, be sure and roll well.

For my part, I would re-lay all my grass in the fall, say, the end of September, or the beginning of October. By doing it in the fall, nature assists us, as we have the rain in abundance to help the new-laid grass to make sufficient roots to support itself during the coming winter.

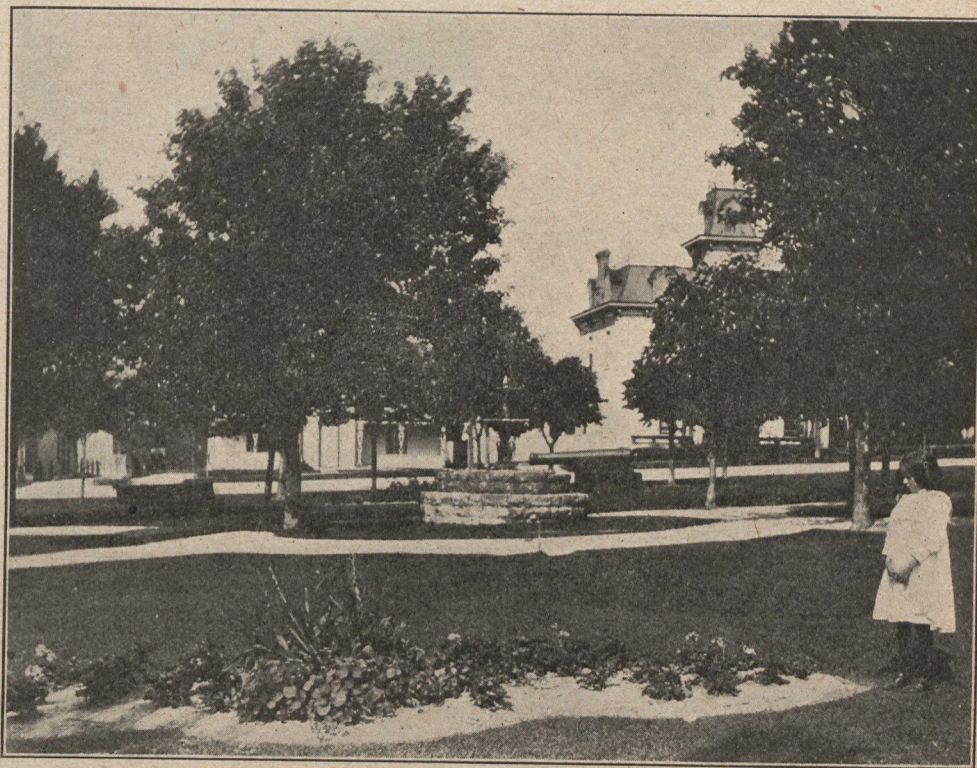
TOP DRESSING IN SPRING

Where the grass is in good condition, a simple top dressing of manure will be of great advantage in the spring, in assisting the grass to take in fresh food when assisted by the rain, the salts and ammonia being worked in to the roots, leaving the solid matter on the surface to be raked and swept off.

When contemplating making an en-

tirely new lawn, care and consideration must be given to the project in hand. Not merely sowing of grass seed, and laying new turf, is sufficient. The land should be prepared in the fall. The

lightly, and then any bare patches can be seeded. These should be made good at once. Scratch with a sharp-pointed rake and sow thickly with grass seed, and sprinkle with some fine soil. Roll



Victoria Park, Kincardine, Ontario, under care of Local Horticultural Society

drainage must be in good order. If it is naturally drained so that no surface water remains on top after a storm, all well and good; but, if it is wet and soggy, put a course of drain pipes in so as to ensure a good drainage, and a dry bottom. It will be more trouble, but it will pay in the long run. A good, green sward will be the reward of your labors.

VALUE OF FALL PREPARATION

By preparing the land in the fall, it will have time to settle, and in the spring any little indentations can be made good and levelled. The surface ground will then be in a fine, friable condition to be worked at will and ease, and will be fit for the laying of the turf, or for the sowing of the seed.

LAYING SOD

The former way is the quickest and the best, as the "turf" is there at once. When the sod is laid, keep the hose-pipe going judiciously, not too much, but sufficient to keep the grass moist. The roller must be used often and well to ensure levelness and solidity. Lay the sod as early as possible, consistent with the weather.

When the turf has taken root, mow

in a day or so. Be careful when mowing to have the knives raised high for the first fortnight, so as not to pull up the new grass, or destroy that which was sown.

Winter Protection for Roses

C. Craig, Ottawa

The best method of winter protection for roses is a question which has been much discussed by rose growers. From my experience, the most satisfactory way is to lay each plant down and tie it to a stake driven in the ground, afterwards covering with leaves or rough litter to the depth of six to nine inches. In this way, I have never failed to bring through all the varieties I shall mention in this paper.

Great care must be taken in the spring as to the right time to uncover and prune the bushes. If the sap is allowed to run freely before uncovering, there is danger of the bark shrivelling and drying up. The plants must be kept as dormant as possible until all danger of severe frost is past, which should be from the middle of April to the first of May in this locality.

A House-front Improved in One Year

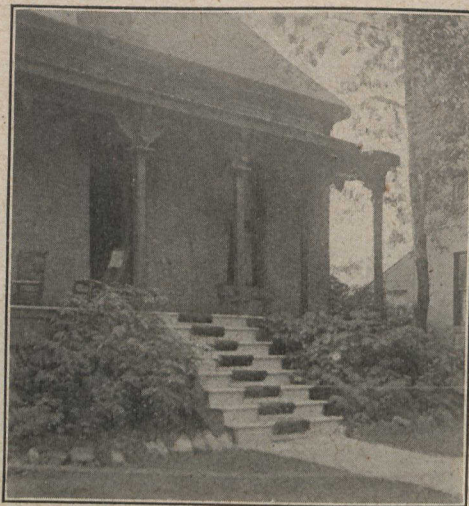
Mrs. A. G. H. White, Toronto

THE improvement of the house-front shown in the illustration, was rather difficult to work out. The floor of the veranda was about five feet above the street level. The latticed foundation looked bare and common—not at all in keeping with the quaint little house. The sun shone but little in the spot, and few plants would grow in such deep shade.

The first step was procuring from the city four loads of earth, not sweepings. This was banked on each side of the steps to a width of about four feet. Then a load of rough stones of all sizes and shapes, was procured at a cost of four and one-half dollars. These were laid along the edge of the earth as unevenly as possible; that is, all the jagged edges and points were placed to show to the best advantage. Inside of the stones a line of Alpine cress, which blooms so profusely in early spring, was planted.

The next step was a long one—to the woods. The worker returned laden with

spoil in shape of red-berried elder, black-berried elder, purple-flowering raspberry, and wild clematis. These were



One Year from Planting

planted along the veranda and cost only car-fare, and a lot of fun. An addition of a Japanese clematis and a couple of bridal wreath spiraea, was made, and the worker called on nature for the rest.

When this spring the shrubs were tipped with dainty green, and the white masses of bloom of the cress fell over the rough stones, the worker was more than repaid for the little amount of time, labor, and money expended. All through the summer the cool freshness of the shrubs has been a delight. As the vines grow, the effect will be even prettier.

The mass of foliage adding weight to the base of the veranda has lowered, in appearance, its height. Being open and close to the street, where mongrel dogs abound, expensive plants would be but a source of grief to the owner. Although planted only a year, the plants chosen are producing an admirable effect, and one that will be even more beautiful in after seasons.

Fall Treatment of Bulbs Indoors

Thos. Bog, Picton, Ontario

THERE are four requisites for the successful culture of all kinds of bulbs in pots, but more particularly for hyacinths: 1st, Quality of the bulbs; 2nd, soil; 3rd, potting; 4th, treatment.

To have good results in pot culture, the quality of the bulbs should be good. Purchase from a reliable dealer. Cheap mixtures or immatured roots will not give satisfactory blooms. The soil should be a rich loam, not stiff.

If the pots are new they should be well soaked in water before using. Put a small piece of broken pot over the hole

to prevent the roots growing out. Fill up with soil about three-quarters full. On the top of this put a little sand, then set the bulb, and fill up with soil to the top of the pot. Do not press bulb. The soil must not be too wet when potting, otherwise the bulb may rot before the roots begin to grow.

STORE FOR ABOUT TEN WEEKS

After potting, store in a dark, cool place for about ten weeks before bringing to the light, say until the flower stalk shows signs of shooting. Examine the pots occasionally during the time

that they are in the dark. If dry, water slightly. Great care should be taken in keeping the soil moist, but not too damp. If the pots are brought out too soon, the flower stalk is apt to be short and the blooms low down. After bringing the pots to the light, set them in the sun and water freely.

The same treatment will answer for narcissi, but they do not require to be so long in the storage. Tulips do not prove very satisfactory for winter blooming unless you have a sunny, cool place for maturing the blossoms.

Fall Treatment of Bulbs Outdoors

J. T. Rose, Brantford, Ontario

TO be successful with the cultivation of bulbs in bed outside, we must first decide on the location of the bed. It should be facing any point from the south-east to the south-west, so that we will be sure of sunlight to make good, strong, healthy stalks, and also deep, rich color of bloom. In the second place we must have rich soil. I am a heavy feeder of either horse or cow manure. I prefer the latter, as it is free from weed seeds and will not burn the plants.

After taking up the bulbs in the spring I cover the ground with all the manure

that I can dig in, leaving it to rot for ten days, when I apply another coat of manure, and also dig it in. My ground is then ready for geraniums and other plants to bloom through the summer. After the first frost that kills these, I clear off the ground. I then loosen the earth for the bulbs. As my space is limited to a bed around a bay window, and the side of the house, which faces the south, I put the bulbs in very close. Different kinds are in the same bed, and they do not trouble each other.

I first put in a row of tulips or hya-

cinths about six inches from the wall, and about the same distance apart in the rows, and from four to six inches deep in the ground. In the space between these bulbs, I put crocus, which bloom quite early, and are much admired, before the tulips and hyacinths are in bloom. I do not cover the bed with manure until the ground has been frozen quite hard, for that treatment helps the bulbs.

Now, I must tell you what I do with the bulbs after they get through blooming. I dig them up very carefully, so

as not to break the stalks from the bulbs. I then make a shallow trench in the vegetable garden in which I place them, keeping each color separate. I cover them a little deeper than before

taking up. When the leaves become parched and dried, the bulbs are taken up, and placed in paper bags or boxes. Be sure and mark each color so that you will have no trouble in arranging

the colors in the beds when planting in the fall. This short article is written in the hope that it may help some one who is a beginner in the cultivation of bulbs in beds outdoors.

Lawn and Garden Hints for September

THERE is plenty of work for gardeners in September. The early garden of next spring must be started now. Prepare for winter now. Send for and read the bulb catalogues. If you want bulbs, either indoors or outdoors, read the articles that appear on page 188 of this issue. Start your indoor bulbs now, and have bloom for New Years.

If you have a conservatory, repair the benches and heating apparatus and put them in good condition before the end of the month. Pot Bermuda lilies and a few freesias. Sow seeds of calceolaria and cineraria. Seeds of stocks for winter bloom may be sown. Princess Alice is a good variety. Sow some sweet peas in the greenhouse. They will bloom all winter. The best varieties are Christmas, pink, and Miss Florence Denzer, white.

FLOWERS OUTDOORS

Commence harvesting the gladiolus corms, taking the young stock first. Place them in pots and allow to dry for a day or two. Then carry them to the cellar, and put in a box or paper bags on a dry shelf.

House plants that have been outdoors all summer should be taken in when the temperature of the house is about the same as that outside. Do not leave them out too long.

Many perennials may be planted in the fall. Read the article on another page.

Save some flower seeds from your own garden. Dry them slowly for a few days and then store in a cool, dry place.

Dig the bulbs of tigridias before frosts. Dry and store in dry sand in a warm room or cellar where the temperature is not lower than 50 degrees.

Caladiums in the border should be dug as soon as frosts turn their foliage. After drying, pack them in dry sand in boxes, and store in a temperature of 45 or 50 degrees.

If you intend making a new lawn next spring, prepare the ground now. Plow or dig deeply and evenly, and drain, if necessary.

THE KITCHEN GARDEN

When frost comes, or just before, gather all the remaining fruits from the tomato and squash vines, and store them where it is dry.

Bleach the celery with boards or with

earth. Mulch the rhubarb bed with rotted manure.

Sow winter varieties of radish early in the month. Harvest before severe frosts and store in sand in a cool cellar. A sowing or two of summer radishes may yet be made.

In sheltered locations, spinach for cutting next spring may be sown now. Protect in winter with frames.

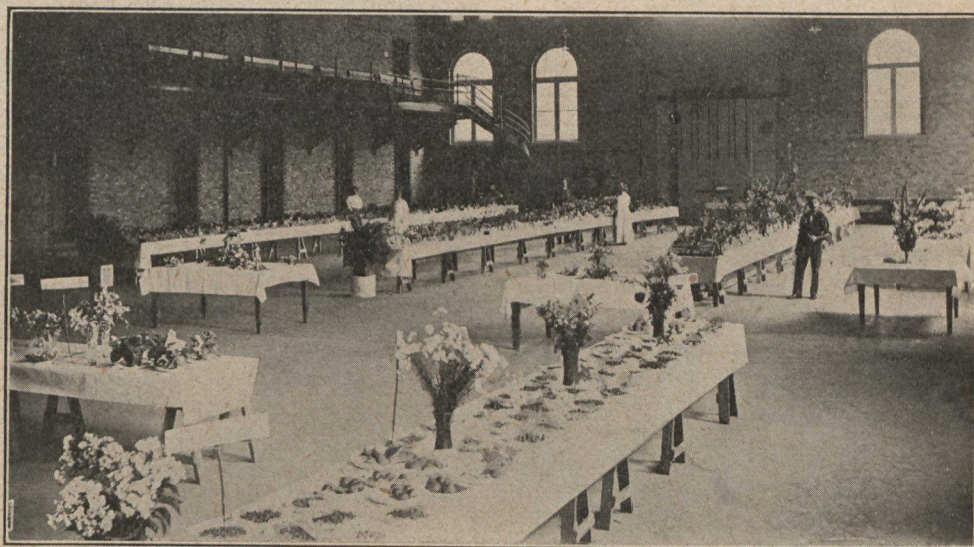
Plant a few Egyptian tree onions.

Have you a strawberry patch? If so, how did you plant it, and what are your methods of growing. Tell your experience to the readers of THE CANADIAN HORTICULTURIST. Send a photograph of the plantation, if you have one.

Largest Fuchsia in Ontario

J. B. Young, Trenton, Ont.

The fuchsia shown in the illustration, on the next page, is about thirty-three



Flower Show Held in July by St. Catharines Horticultural Society.

They will be ready in spring before other onions can be had.

If you want salsify early next season, sow the seed now. It will start this fall. Protect through the winter.

WITH THE FRUITS

Bud peach trees that have not done well. Choose a variety that is usually successful in your district.

Prune currant and gooseberry bushes. New plants may be set now. Take cuttings for planting next spring. Tie them in bundles and store in deep sand in the cellar.

If you think that you will not have time for the work next spring, remove the old canes from the raspberry and blackberry patch. It is safer not to clip the tops of the new canes until spring.

If your trees are infested with fall web-worms, either cut out the branches to which the web is fastened and burn or destroy the nest while on the tree by holding a lighted torch beneath it.

years old, and was grown from a slip in my own house. In shape, it is round, with a drooping top, giving the appearance of a miniature elm tree covered with fuchsia bloom. It is about seven feet high, and the limbs spread about the same distance in every direction without artificial support. The stem at some distance from the soil is over two inches in diameter. This fuchsia is thought to be the largest in Ontario and, perhaps, in Canada, growing on a single, self-supporting stalk.

For the first few years it was treated as an ordinary house plant, then the top was cut down to the root, except one strong shoot, which was left to form the stalk. This was supported and allowed to grow to the desired height. No lower growth was permitted. All sprouts or buds were rubbed off from the lower part. It has been re-tubbed every three or four years and each time some ordinary, but rich soil was added.

For many years, it has been self-sup-

porting. The stalk and principal limbs have now become so strong that they support the smaller branches in a most graceful manner. In consequence of the size of my conservatory, the main limbs have not been permitted to increase in length for several years. Every December the small branches have been pruned back severely.

For over twenty years this plant has stood in the conservatory, taking its chances with other kinds. It has never been put away to rest. About the first of December, it suddenly stops growing and blooming and until the first of February no amount of stimulating will induce it to send out a new leaf or flower. Most of the old foliage remains on the plant until replaced by new. Every flower wants to go to seed, and if they were permitted to do so, the plant, within a short time, would look like a small tree filled with red cherries.

As this plant increases in age, it increases in vigor and acts as though it were just commencing life in earnest. I do not know to what age fuchsias will live, but have been told that there is one near London, England, that is said to be about a century old.

Note—If any readers of THE CANADIAN HORTICULTURIST know of a fuchsia that is larger and older than the one here il-



The Largest Fuchsia in Ontario

Photograph was taken about three years ago and when the plant had about finished blooming for the season.

lustrated, will they kindly send information regarding same and a photograph for publication.—Editor.

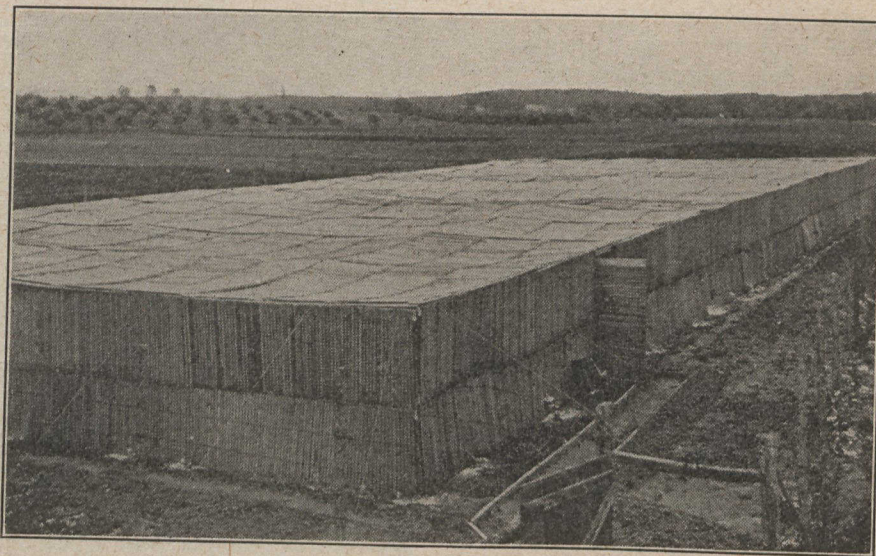
If you like this issue of THE CANADIAN HORTICULTURIST, show it to a friend, and secure a subscription for us. Thus you will help to make the next issue even better.

The Culture of Ginseng

J. E. Janelle, Caughnawaga, Quebec

THE soil for ginseng must be rich, cool, sandy, well-drained, and the surroundings shady. Ginseng thrives best where oak, hickory, beech, maple and basswood used to thrive, but

ly come up in May and June. When the young plants have grown two summers they are transplanted to other beds, and planted eight inches apart each way. The plant begins to bear fruit when



Lattice Shade over a Ginseng Garden

Establishment of J. E. Janelle. Caughnawaga, Que.

will not grow in low, wet, marshy soil, nor will it stand an overflow during its growing period. However, any soil can easily and cheaply be made suitable for growing ginseng. Any soil that grows fruit trees or vegetables, especially the common carrot, will produce ginseng equally as well.

If "woods dirt," or leaf mould, is not handy to use as fertilizers, the rich soil around the base of an old straw-stack, or well-rotted horse manure, with a little wood ashes mixed with it, will be a good substitute. If the soil is already very rich, it needs no, or very little fertilizers. No green manure or any other kinds of fertilizers than those mentioned above, should be used on beds of a ginseng garden.

Ginseng must be grown in shade. The natural shade of trees will regulate itself. The artificial shade made with boards, laths or brush must be erected when the leaves of trees begin to grow in the spring, and must be removed in the fall, about October first. The idea is to imitate nature in forests, where ginseng grows in its wild state. In all cases shade must exclude about three-fourths or four-fifths of the sun's rays.

Ginseng seeds germinate eighteen months after they are gathered. They are planted in beds, either as soon as harvested or twelve months after, in rows three inches apart, with the seeds two inches apart in the rows. Seeds usual-

two or three years old and gives ten to seventy seeds, according to the quality of the soil, and the age of the plant. The berries turn red about the first of September, and a few days later begin to fall off; it is then time to gather them. When the seeds are not planted as soon as harvested growers keep them alive by the process of stratification, in order to preserve their germinating powers. They must not be allowed to dry out, or they will not grow. Such seeds are called "stratified seeds," and may be planted at any time until eighteen months old. When planted at twelve months, that is in September or October, they come up the next spring.

On the other hand, plants or roots are transplanted only in the fall, when the stem dies, and the root is dormant, that is, after the 15th of September, until the ground is frozen hard. The operation can also be done early in the spring, but the season is very short, and risks are great for a beginner to do it in the spring.

Cultivated roots are generally dug at seven years old, that is, five years after the plants were transplanted to regular beds. They then average ten or twelve dry roots to a pound, and their commercial value is from \$6 to \$8 a pound, according to size and quality. An acre of ginseng, if well managed, and with reasonable success, will produce at least 6,000 pounds of dry ginseng roots in seven years.

Commercial Fertilizers for the Market Garden

Frank T. Shutt, M.A., Chemist, Dominion Experimental Farms

MUCH has been said and printed regarding special brands of fertilizers for special crops. We cannot, as a rule, recommend them, for they are seldom prepared from a scientific basis in the first place, and it is very doubtful, in the second place, if our present knowledge of crop requirements is sufficient to justify us in saying that any particular ratio or proportion of the fertilizer element for any particular crop, is the best. However, it is true that there is a dominant fertilizer for each class of crops, and the system that adopts this view is a good one, if not followed too closely or too severely. Thus the cereals respond to fertilizers in which soluble nitrogen predominates; turnips require phosphoric acid more particularly; clover and the legumes need potash specially. Perhaps, soluble nitrogen, as in nitrate of soda, is the most important element in the growing of leafy crops. By noticing the particular "liking" or peculiarities as it were of a crop, it is true that we can frequently economize in the matter of fertilizers, but in the first place it would be well to consider what might be termed a "basis fertilizer," serviceable for many crops.

Prof. Voorhees, of New Jersey, an authority on fertilizers, suggests as a basic fertilizer, for market garden purposes, one having the following percentage composition: Nitrogen, four per cent.; phosphoric acid, eight per cent.; potash, ten per cent. On the light soils in the eastern and southern states from 1,000 to 1,500 pounds may be applied, and this further supplemented later in the season by additional dressing of nitrate of soda. Though we seek to have an excess of plant food present, it would be wiser for us, with our better soils, to experiment at first with smaller amounts. For loams that have been constantly enriched by heavy applications of manure, probably 500 pounds an acre will give as large a yield as 1,000 pounds. Again, if our soil is, as just described, it might be more profitable to reduce the amount of nitrogen in the fertilizer. Nitrogen is a costly element and, moreover, can always be given to the crop just as the crop can utilize it. It is better, therefore, in the majority of cases, to reserve the greater part of the nitrogen for application in one or more top dressings after the crop is up, and actively growing.

Let us see what amount of plant food would be furnished by such an application of 1,000 pounds an acre of the basic fertilizer mentioned. They are as follows: Nitrogen, 40 pounds; phosphoric

acid, 80 pounds; potash, 100 pounds. My impression is that with land in good condition, and to which stable manure in moderate quantities, is annually added, that from one-half to three-fourths of the above amounts will be sufficient, to be supplemented, if necessary by subsequent top dressings of nitrate of soda of 50 to 100 pounds each at intervals of two or three weeks in the early part of the season.

Selecting the ingredients from among those we have spoken of, we have the following: Nitrate of soda, 100 pounds; bone meal, 200 pounds; superphosphate, 200 pounds; sulphate of potash, 100 pounds. This mixture would contain four per cent. nitrogen, ten per cent. of phosphoric acid, (five per cent. of which is available), and eight per cent. of potash, and could be used at the rate of 600 to 800 pounds an acre, broadcasted and harrowed in or drilled into the prepared land before seeding in the spring. After the crop is up a few inches, if the color is a pale green, or there is a general lack of vigor, give a top dressing of fifty to seventy-five pounds of nitrate of soda, to be repeated, if necessary, some three weeks later. The addition of sand or dry earth to the fertilizer will facilitate the distribution of small dressings.

Slight variations on the foregoing may be given as follows: Nitrate of soda, 50 pounds; dried blood, 100 pounds; bone meal, 200 pounds; superphosphate, 300 pounds; muriate or sulphate of potash, 200 pounds. This mixture should contain 3.5 per cent. of nitrogen, 8 per cent. of phosphoric acid, and 11.5 per cent. of potash. Applied at the rate of 850

pounds an acre, we should be furnishing approximately: Nitrogen, 28 pounds; phosphoric acid, 85 pounds; and potash, 100 pounds.

The following formulæ, from Voorhees, have been used with good effect for general garden crops: Ground bone, one part; superphosphate, one part, muriate or sulphate of potash, one part; applied at the rate of 500 to 800 pounds an acre. Top dress the growing crop with 100 pounds of nitrate of soda an acre. Such a mixture (including the nitrate subsequently applied) contains 5 per cent. of nitrogen; 9.5 per cent. of phosphoric acid, and 12.5 per cent. of potash; and 500 pounds of the mixture (including 100 pounds of nitrate) would furnish 20 to 25 pounds of nitrogen, 38 to 45 pounds of phosphoric acid, (one-third of which is immediately available) and 60 pounds of potash.

If a larger percentage of soluble phosphoric acid is required, the following formulæ will be better than the preceding: Ground bone, $1\frac{1}{2}$ parts; superphosphate, $1\frac{1}{2}$ parts; muriate or sulphate of potash, 1 part; applied at the rate of 500 to 800 pounds an acre. Top dress with nitrate of soda as already indicated.

This mixture (including 100 pounds of nitrate) would have the following composition: Nitrogen, four and a half per cent.; phosphoric acid, eleven per cent.; potash, ten per cent.—500 pounds (including the nitrate) would furnish: nitrogen, 22 pounds; phosphoric acid, 58 pounds, (nearly two-thirds available); and potash 50 pounds.

I would impress on growers that excess of phosphoric acid and potash, will not be lost; such excess will remain for



Growing Celery for the Toronto Market

Note boards on centre row placed for bleaching. Farm of Geo. Syme & Son, Carleton West, Ont.

another season's growth. It is wise, therefore, to use these minerals, as they are called, liberally, so that if the crop's growth is arrested at any time by drought or excessive wet, the plant may find an abundant supply of food and make increased growth when favorable conditions are again established. With

nitrate of soda and sulphate of ammonia the case is somewhat different. The most economical plan with regard to nitrate is to apply little and often when the crop is growing. In this way there will be no loss by leaching, and the plant will be supplied.

I cannot, in closing, do better than re-

commend market gardeners to read Voorhees' book on fertilizers, (McMillan & Co.); it will give a great deal of useful information. And I would further say that I shall always be pleased to help the market gardeners of Canada at any time with advice in the compounding and use of fertilizers.

Growing Cauliflowers for Market

George Syme, Jr., Carleton West, Ontario

WHEN the cauliflowers begin to form, they should be well watered and tied by going through every day. They should be tied loosely with a string about two-thirds of the way up. Do not tie until the flower be-

packed in boxes. Cover carefully to protect from the air.

The most profitable cauliflowers to grow are the intermediate ones, coming in between the early and late varieties. They are the most difficult to secure,

altogether, leaving the plants to become hardened.

When setting in the field, plant in rows thirty inches apart, and from eighteen to thirty inches in the rows. When the plants are in, do not cultivate too much at first as it is better to leave the soil a little stiff as the insects cannot work to such good advantage. At the end of June or the beginning of July, when the plants become well rooted, get the cultivator to work. Cultivate deeply and often until your land is rolling before the cultivator like a bed of ashes. When a plant dies or becomes destroyed by insects or "buttoning-up," keep planting. In this way you will have a crop coming in, one after the other all season, besides always having your ground occupied.

The soil should be prepared in the fall, being well manured with good barnyard manure. This land should be well ridged so that no surface water stays on it during the winter or early spring. An application of lime and salt put on after plowing and harrowing, helps materially.

Bleaching Celery

T. Benstead, Strathroy, Ont.

For bleaching early celery, I use boards one foot wide and sixteen feet long. I wire through from one side to the other. If the boards are put up straightly, they will not warp. As I calculate about four dozen and a half of celery to each sixteen feet, I know just how many boards to remove when I intend to ship.

For bleaching with muck, which constitutes my celery soil, I start about September 20. I throw up some muck with a Planet Junior cultivator, and finish the operation by using a bush scraper, with a man on each side of the row. It takes three weeks to bleach with muck. If the muck is not allowed to dry on the stalks, it will wash off easily. This must be done as soon as the celery is taken up.

Vegetable gardeners are requested to contribute articles for publication. Tell your experience in growing crops for market, and send some photographs.



A Field of Cauliflower Ready for Tying

Two plants in foreground marked with crosses have been tied. Farm of Geo. Syme & Son, Carleton West, Ont

comes visible. Tying too early or too tightly will destroy the flower. The leaves should be pulled together just enough to shield the flower; if too tight they become blanched at the top and, with the first shower runs in and destroys the flowers. Do not allow the flower to get too large or too old as it is much better to have a small, solid flower than a large, open one. In this way much better results will be had as the flowers will hold up much longer after being cut. When cutting cauliflowers, they should be pulled carefully in rows and hauled to a shed before trimming, where they should be trimmed, sorted, and

and being planted at a time when insect pests are most troublesome, it is almost impossible to grow them on ordinary cauliflower soil. The best varieties are Early Snow Ball and Early Erfurt. The soil best adapted to this crop is a damp clay loam, rather inclined to be stiff. The plants should be sown in a cold frame about the first of April. Sow rather thinly. Leave the frames on until the seedlings begin to show through the soil, then air them by lifting the frame alternately at each end with a chip to stop damping-off, which is very prevalent at that season of the year. When the plants are a fair size remove the frames

QUESTION AND ANSWER DEPARTMENT

Predicting Frost

I have been told that frosts can be predicted by the use of an instrument called the psychrometer. Is this so, and how is it done?—E. A. F., Sudbury Co., N. B.

An instrument known as the sling psychrometer or the wet- and dry-bulb thermometer is used for this purpose. As the name indicates, there are two thermometers, one of which has a dry bulb, and the other is kept wet. A comparison of the two readings is made and, with the aid of a tabulated table, the dew point is determined. The difference in the readings of the two thermometers will show the decrease of cold produced by evaporation. Evaporation will be more rapid in dry air, and hence the cold caused by evaporation will be greater. By thus determining the dew point, we may predict the approach of frost. When the dew point is low, frost may be expected. The tabulated table that is necessary is too long for publication. It can be found, with further information on this subject, in "The Horticulturist's Rule Book," by Bailey, which will be supplied through this office on receipt of the price, seventy-five cents, or in THE CANADIAN HORTICULTURIST for 1905, page 333.

How to use Pyrethrum

Can insect powder, or pyrethrum, be used in liquid form?—H. H. T., St. John's Co., Que.

Pyrethrum may be diluted in warm water (one ounce to a gallon) when the dry powder is not desirable or practicable. It is usually applied in the dry form, for small insects and larvæ; diluted with flour two or three times its own bulk, for plant lice, particularly in green-houses; or sprinkled upon hot coals, for fumigation.

Rhus Cotinus—Yucca

Kindly give some information about *Rhus Cotinus atropurpurea*,—class of shrub, height, hardness, and color of fringe. Tell something about *Yucca elegantissima*. Is the flower double? Does the flower stand erect or droop? Is the leaf broad and sword-like, with appendages like hair drooping from the leaves? Have I the right name for this particular yucca? Is it hardy, or should it be covered in winter?—C. E. V., Lincoln Co., Ont.

Rhus Cotinus atropurpurea is a very dark purple variety of the shrub usually known as purple fringe or smoke tree. This variety much resembles the common purple fringe, except that the feathery plumes are much darker in color. It

varies in height from ten to twelve feet, depending upon the character of the soil and age of the shrub, and should be perfectly hardy at Grimsby.

There are eight or nine species of yucca, but none of them bear the name, "*Elegantissima*." From your description of it, I think you must mean *Yucca filamentosa*, one of the most commonly grown in this country. This bears single white flowers which droop. The leaves are sword-shaped, and about an inch in width, with numerous filaments or thread-like appendages from the margin of the leaves. This species is usually quite hardy in certain parts of the province and stands the winter about Grimsby without protection.—Prof. H. L. Hutt, O. A. C., Guelph.

Moles—Damping off Fungus

What do ground moles feed upon? Give cause and remedies for the disease that causes young plants to wilt and die.—C. L. K., Essex Co., Ont.

Moles are said to feed upon the roots of grass, trees and garden crops, but it is probable that much, if not all, of the injury that is attributed to them is really due to mice. Moles are almost exclusively insectivorous in feeding habits and burrow through the ground in pursuit of insects. While beneficial on account of these habits they may cause considerable damage when they burrow extensively in lawns, or about the roots of some garden plants. They may be exterminated by capturing them in their burrows in the evening with a shovel and spade, by the use of traps, or by carbon bisulphide injected into their burrows. Carbon bisulphide may be poured into the holes and the holes immediately closed, or it may be injected into the soil by means of a syringe.

It is presumed that the disease referred to is what is known as the damping-off fungus (*Pythium de baryanum*.) It is a disease of seedlings which is characterized by the falling over and dying of the plantlets, due to the destruction of the tissue of the stem just above the ground. The disease occurs most frequently where the ground is very wet and the light dull. The fungus may be held in check by locating the seed beds where the drainage is good, and where a fair amount of sunshine and ventilation may be allowed. See that the seedlings are not crowded. Where the seed beds are not so located, and the disease appears, it is difficult to treat. Hot sand sifted

over the plants will check it, but there is no complete remedy. As soon as the disease appears, give more air, and prick out the plants.

Planting Asparagus

I sowed some asparagus seed last spring. Can the young plants be transplanted this fall, and how should it be done?—C. R., Antigonish Co., N. S.

It should make but little difference whether asparagus is planted in spring or fall, provided the roots are in proper condition and have been allowed to complete their season's growth. If planted in fall, it should be done late in September or the first of October. As the plants will be less than one year old, it probably would be advisable to plant them closer than usual in the rows so as to insure the chances of a better and surer stand. The customary distance is three or four feet apart. Set the plants four or five inches deep. If the crowns are much less than four inches below the surface they may be injured if the ground is harrowed or hoed before the plants sprout in spring.

Poison Ivy

I have a patch of poison ivy, about 20 feet square, in a wood lot. How can I get rid of it?—B. C., York Co., Ont.

About the only way to get rid of poison ivy in a woodlot is to grub, or dig it out, protecting the hands with leather mits or gloves. In a patch that is only twenty feet square, it should not be a difficult job. You might try spraying with sulphate of iron—two pounds to one gallon of water, or even one pound to a gallon, might answer.

Harvesting Cauliflower

J. N. Watts, Portsmouth, Ont.

When the young flowers begin to show themselves they must be covered up by using the outside leaves or by tying until they have attained the size for market.

Should the crop not be all sold before the weather becomes too cold to make any more cauliflower, they may be pulled and stood on a cellar or roothouse floor, until as late as January, when good money can be realized for them.

Never handle tomatoes when they are wet with rain or dew.

Do not let the boys kill the toads. They kill thousands of insects during the summer.

The Canadian Horticulturist

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The Only Horticultural Magazine in the Dominion

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BEC, NEW BRUNSWICK AND PRINCE EDWARD ISLAND
FRUIT GROWERS' ASSOCIATIONS AND OF THE ONT-
ARIO VEGETABLE GROWERS' ASSOCIATION

H. BRONSON COWAN,

Managing Editor and Business Manager

A. B. CUTTING, B.S.A., Horticultural Editor

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CIRCULATION STATEMENT

Since the subscription price of The Canadian
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following is a sworn statement of the net paid
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are exclusive of sample and spoiled copies
and of papers sent to advertisers. Some months,
including the sample copies, from 10,000 to 12,000
copies of The Canadian Horticulturist are mailed
to people known to be interested in the grow-
ing of fruit, flowers or vegetables.

Circulation Statement

January, 1907.....4,947	January, 1908.....7,650
February, 1907.....5,520	February, 1908.....7,824
March, 1907.....6,380	March, 1908.....8,056
April, 1907.....6,460	April, 1908.....8,250
May, 1907.....6,620	May, 1908.....8,573
June, 1907.....6,780	June, 1908.....8,840
July, 1907.....6,920	July, 1908.....9,015
August, 1907.....6,880	August, 1908.....9,070
September, 1907.....7,080	
October, 1907.....7,210	
November, 1907.....7,257	
December, 1907.....7,500	

Total for the year, 79,525

Average each issue in 1907, 6,627

Sworn detailed statements will be mailed upon
application.

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We want the readers of The Canadian Horti-
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EDITORIAL

BE FAIR WHEN PICKING GRAPES

Our market for grapes is almost ruined
every year by careless and dishonest grow-
ers, who persist in picking the fruit be-
fore it is ripe. Some fruits, like the pear,
are better picked before fully ripe, but the
grape has not this characteristic, as no
maturing development goes on after the
fruit is harvested.

In scores of our vineyards, grapes are
picked too green. Sometimes Champions
are picked before they even turn red, and
are placed in baskets under green lino to
deceive the eye. Tons of Niagaras are har-
vested before they are fit to eat. Some
growers err so much in this respect that
all their grapes are off the vines and sold,
before honest growers have commenced to
harvest. They are after the few additional
dollars that grapes command at the begin-
ning of the season—but it is penny wisdom
and pound foolishness. By placing such
stuff on the market early in the season,
the confidence of the buyer and of the con-
sumer is sacrificed. One taste of green,
hard Champions, or any other variety pick-
ed before maturity, will cause the unfortun-
ate partaker to shun grapes for the balance
of that year.

Grape growers, who respect themselves,
and their business, will do well to harvest
their fruit when it is ready to harvest, and
not before. By this means only, can the
grape market be made satisfactory
throughout the season.

PROFIT IN GARDENING

The value of home and civic improvement
has been emphasized many times in the
columns of THE CANADIAN HORTICULTURIST,
but it is a question so important to the
welfare of our country that it deserves every
good word that can be said in its favor.
There is nothing that is so pleasing to our-
selves and to wanderers in our country
from other lands as the effect produced
by sensible gardening about our private and
public places.

The exercise of landscape art in our
country, towns and cities determines, to a
great extent, the class of people that will
be tempted to settle in these communities.
The communities will be better off when
their population is increased by newcomers
who are artistic in temperament and who
appreciate the beautiful. Persons of this
nature prefer to live in a community of im-
proved homes. To secure that privilege,
they will pay a higher price for such prop-
erty than they would for homes in an
ordinary, common-place locality.

That rural or civic improvement increases
the value of property is a self-evident fact.
Every day farms and town lots are being
bought and sold. The prices paid for them
depend not only upon their value as prop-
erty, but also upon their value as homes.
In many cases, the appearance of the build-
ing and its surroundings closes the deal.

Some persons may deem this kind of
improvement an extravagance. Such, how-
ever, is not the case. When they consider
the probability of a remunerative reward
for their efforts, they will see the fallacy of
the contention. What is the price of a small
plot of ground devoted to this purpose, the
price of a few trees and shrubs and a little
grass and flower seed, compared with the
improved appearance, the pleasure and
pride afforded the owner or occupant and
the increase in the value of the property?

Every Canadian citizen who is fortunate
enough to be so situated as to have the
opportunity, should be a personal factor in
making all Canada a place "of beauty and
a joy forever."

STORING LOW GRADE APPLES

Last season's experience showed dealers
that the shipping of "No. 3" grade apples
or "culls" with the hope of making a profit
is little short of madness. There were stor-
ed in Colborne, Brighton and Trenton last
year for the purpose of re-packing, 100,000
barrels of absolute trash. It has been shown
that if this large amount had been given
to the dealers free of cost they would even
then have lost money by handling it. And
this was not the only effect. The placing
of this large quantity of disreputable stuff
on the market had the tendency of reducing
the price of the "No. 2" grade perhaps
half a dollar a barrel.

There are two ways in which the grower
can meet the "cull" proposition. First,
reduce the proportion of "culls" in his ap-
ple crop by taking proper care of his or-
chard; and secondly, take those that he
may have to the evaporator, the canning
factory, or the cider mill, where they be-
long.

That one or more fruit inspectors should
be appointed for the Niagara peninsula has
been pointed out in these columns more
than once. Recent reports from leading
growers in that district state that each sea-
son the need becomes more acute. Such an
appointment would benefit both the grower
and the buyer. It would insure more uni-
form and honest packing, the use of a
correct package and it would enable the
buyer to purchase fruit almost on a guaran-
tee basis. The grower then would get more
money. This matter should receive the
consideration of the Dominion Government
at once so that an inspector may be appoint-
ed at an early date.

That the Fruit Marks Act is a valuable
and important asset to fruit growers, is
evidenced by the attempts at copying it or
at observing similar regulations that are
being made by the apple growers of the
United States. One of the latest reports
from across the line states that a co-opera-
tive association has been formed in Maine
and that all of its members must pack and
grade their fruit according to the require-
ments of the Canadian Fruit Marks Act.

Fruit growers who get together and or-
ganize co-operative fruit growers' associa-
tions assume a responsibility that is not
always recognized. They have in their
hands the reputation of Canadian fruit in
a greater degree than the individual grower
or shipper. The foreign markets look to
our co-operative associations for the highest
quality of fruit, packed correctly and honest-
ly. The associations are the models for
others to imitate. It behooves them, there-
fore, always to maintain and even to ad-
vance the standard that they have establish-
ed. They should be imbued not only with
the purpose of gain but also with the spirit
of patriotism.

A Foreign Visitor

Mr. B. W. Heikel, State Pomologist, Fin-
land, recently visited THE CANADIAN
HORTICULTURIST, at its Toronto office. Mr.
Heikel is visiting Canada and the United
States on behalf of the Finland Government.

He will visit the various agricultural colleges and experimental farms throughout Canada and will look into fruit conditions in British Columbia. From there he will visit the western states and will return across the continent to New York. From New York he will go to Nova Scotia. There he will make a study of the growing of cranberries. Mr. Heikel informed us that in Finland there are considerable areas that the government believes might be utilized advantageously for the growing of cranberries.

Mr. Heikel expects to spend six months in America. He informed us that he subscribed for THE CANADIAN HORTICULTURIST when he could not read a word of English. He studied the paper for a year and stated that it helped him to master the English language. He thinks so much of the paper that he gives his copies around to friends in Finland who are interested in horticulture and who can read English. A representative of THE CANADIAN HORTICULTURIST visited a number of the leading horticultural establishments around Toronto in company with Mr. Heikel.

Iced Cars for Fruit

Editor, THE CANADIAN HORTICULTURIST.—I am authorized to announce that arrangements have again been made with the railway companies to supply iced cars for the carriage of fruit in carloads, intended for export via Montreal or Quebec.

Cars will be supplied on request of shippers to railway agents, and the Department of Agriculture will pay icing charges to the extent of \$5 a car. This arrangement will be effective from August 3rd to October 3rd. —J. A. Ruddick, Commissioner of Dairying and Cold Storage, Ottawa.

Niagara Exhibition

The Niagara District Horticultural Exhibition will be held on Thursday and Friday, Sept. 17th and 18th, at the Armouries, St. Catharines. The prize list which has been prepared shows that there is no decrease in the enterprise and courage of those who manage this important event. The awards offered total about \$1400, an advance over last year. There is every reason to believe that the coming exhibition will surpass in extent and quality the exhibitions of 1906 and 1907, both of which were eminently successful from the broad horticultural standpoint.

Readers of THE CANADIAN HORTICULTURIST who are interested in learning how a live horticultural society can do things—how a society from small beginnings has grown to be one of the largest in the province, carrying on a business which last year equalled nearly one-sixth of the total expenditure of all the horticultural societies of the province—and would do well to visit this district exhibition, and at the same time see the best exhibition of fresh fruits grow in this famous "Garden of Canada" and the best products of the amateur as well as professional flower growers of St. Catharines. It is hoped to secure reduced railway rates from Toronto and intermediate stations.

Seeing is Believing.—During this season many prominent fruit growers, and others interested in fruit and ornamental trees and shrubs, have visited the Brown's Nurseries and have expressed great admiration and surprise upon seeing the hundreds and thousands of ornamental deciduous trees and shrubs, and evergreens, as well as the hundreds of acres of fruit stock. This nursery stands in the front rank, if not the largest, of the Canadian firms.

NOTES FROM THE PROVINCES

Similkameen Valley, B.C.

J. D. Harkness

A series of demonstrations in fruit growing, including one at Keremeos on Aug. 12, under the auspices of the British Columbia Fruit Growers' Association was cancelled, owing to a death in the family of one of the speakers.

Only one thing can be said of the fruit crop here, gathered and yet to ripen—that it goes 100 per cent. in quantity and quality.

A fruit growers' institute and picnic held at the house and grounds of Mr. R. Elm-hirst, Keremeos, on July 16, was largely attended by the orchardists of this district. It was one of a series of "fruit demonstrations" arranged by the provincial government, others in the series being held at various points in the Similkameen and Okanagan. The usual procedure is to hold an outdoor meeting in the daytime and an indoor meeting in the evening, but in this case the latter was dispensed with.

The speakers were Professor Thornber of the Washington Agricultural College and Mr. N. H. Dobie of Victoria, the former dealing with such subjects as selection of fruit trees, planting, pruning, spraying, irrigating, pests, packing, etc.; while the latter presented in a most convincing manner the extreme importance of fertilization.

After the meeting the party visited the famous orchard and gardens of Mr. Frank Richter at Keremeos, which must have been a revelation, even to such experienced men, of what can be accomplished in horticulture in the Similkameen. Mr. Richter's place is rather like an agricultural college farm than a private ranch, both in extent and in the variety and excellence of its products, and as such is one of the valuable assets of the Valley. As one of the few places where fruit growing has been carried on on a considerable scale for decades, it is especially useful in showing to newcomers the Valley's capabilities. The thousands of acres of pasture land and irrigated alfalfa land, supporting a multitude of cattle and horses, afford an equally striking example of the Similkameen's resources as a pastoral country.

Manitoba

James Murray, Supt. Expt'l Farm, Brandon

The season throughout has been most favorable one, and there are bright prospects for a good crop of all small fruits and the larger wild fruits.

In our orchards we have a splendid show of bloom and a great deal of fruit set. Since blossoming time, our apple and crab trees have been severely attacked with blight, and to all appearances many trees will succumb. On the plums, there is an unusually large amount of plum pocket which will greatly reduce the crop.

This year we have nearly all our best varieties of apples producing fruit, such as Hibernial, Wealthy, Repka Kislaga, Transcendent, Hyslop and a number of good cross-breeds. All of these are grafted on *Pyrus baccata*, and came through the winter with very little winter killing, although as usual a number have been killed back at the tips.

The development of suitable apple trees for this climate is proceeding slowly but surely. For several years after this farm

was established, not a single apple tree survived the winter, and now we have several hundred hardy trees and a considerable quantity of good fruit each year. The progress made is largely due to the use of the *Pyrus baccata* as a stock. Many disappointments in planting fruit trees is attributable to growing trees on tender stocks, and the importation of trees that are not acclimatized. With the development of our own nurseries, and as people appreciate that special precautions are necessary, our progress in fruit growing will doubtless be more rapid.

Montreal

E. H. Wartman, Dominion Fruit Inspector

Large quantities of California fruits are being sold by auction three times a week. On July 28, the first arrival of California Early Crawford peaches appeared and were sold by auction at \$1.90 per 2 layer crate. On the same day, Astrachan apples from California sold for \$1.70 per 10-11-20 inch crate, beating the California delicious Bartlett pears by 20 cents on a box—rather remarkable, but apples were scarcer than pears.

Large quantities of melons have been arriving from Ontario in crates and are selling very well; but, after all, Montreal leads the world in its own Island-grown melons, some tipping the scales at 42 pounds. Pricing a nice one on Bonsecoun market a few days ago, I learned that \$1.25 was the cash price. These melons are sold with a guarantee attached from the grower that they are ripe.

Duchess apples in vicinity of Montreal are selling from 75 cents to \$1 a barrel, tree run. Crab apples are a good crop in all directions. I look for low prices in early apples as there are such large quantities of other fruits coming in. Bartlett pears of superior quality have arrived from New York state. The owner said that the duty killed the trade.

Quebec

August Dupuis

The apple crop is a failure from Quebec to Rimouski. The Duchess of Oldenburg, Wealthy, Yellow Transparent and Tetsfky are the only varieties bearing a medium crop. Thousands of bushels of fall apples will be needed and winter apples No. 1 and No. 2, will have to be brought from Huntingdon county and from Ontario to satisfy the demand of the prosperous people all along the Intercolonial Railway. It has been the custom of orchardists and traders to bring down here carloads of fall apples in bulk, and winter apples both in bulk and bags, which sell quickly.

The plum crop also has failed. The fruit which seemed to have set well, dropped after a few days of very hot weather. The curculio has caused some damage. The only varieties bearing medium crops are the Green Gage, Coe's Golden, Moore's Arctic, Gueii and Washington.

The small fruit crop is abundant, especially the raspberries. Insects have not caused much damage.

Apple trees in most localities have dead branches, even large trees which seemed perfectly healthy last year. In young orchards, the rows of trees far from fences

or hedges suffered last winter even in the eastern townships. "The trees, either banked with earth or well mulched with coarse manure, were not damaged," so writes Mr. House of Messrs. Miller & House, nurserymen of Stanstead county.

A large number of new orchards were planted last spring and old ones enlarged in eastern Quebec, which have a good appearance. Some farmers who bought of tree pedlars, good strong trees at \$5.00 a dozen received weak, knotty trees which they should not have accepted. In our cold country only strong vigorous trees can succeed.

The Kincardine Horticultural Society will hold its annual flower show on Sept. 2. The president of the society is Mr. J. C. Cook and the secretary, Mr. Jos. Barker.

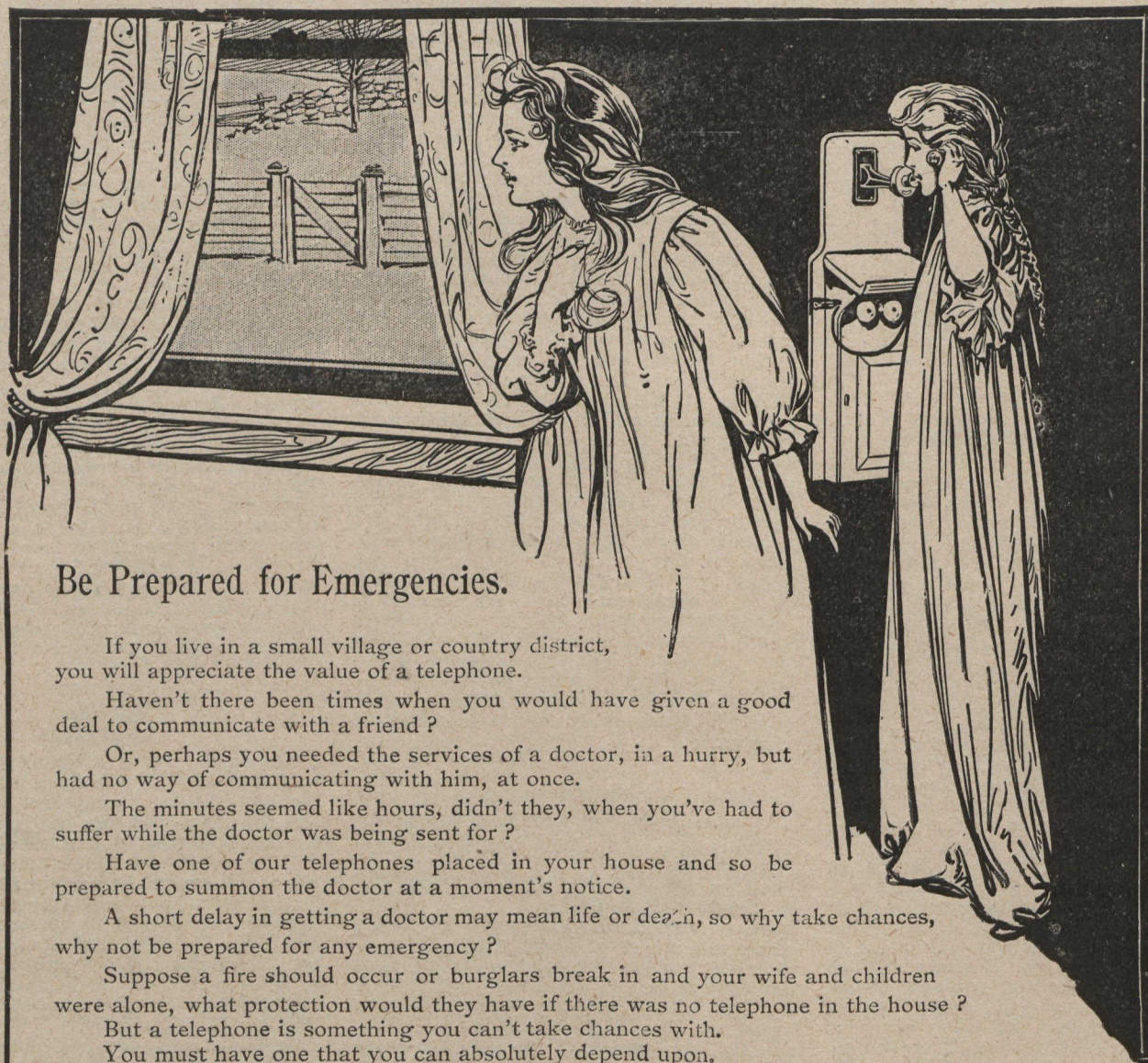
Irrigation Convention

The second annual convention of the Western Canada Irrigation Association was held in Vernon, B. C. on Aug. 10-15. The program for the week included business sessions, papers by authorities on irrigation and several excursions to points in the valley. Many matters of great importance were discussed and a number of resolutions were passed. It was decided to hold the third annual convention at Lethbridge, Alta. next year.

The election of officers resulted as follows: Hon. Pres., Hon. H. G. V. Bulyea, Lieut.-Governor of Alberta; president, J. S. Dennis Calgary; 1st vice-president, Hon. F. J. Fulton, Victoria; 2nd vice-president, P. L. Nasmith; secy-treas., W. H. Fairfield, Lethbridge; executive, C. W. Rowley, Calgary; J. P. Hall, Medicine Hat; R. R. Bruce,

Windermere; Wm. Pearce, Calgary; R. D. Bennett, Calgary; W. C. Ricardo, Vernon and T. W. Stirling, Kelowna. The more important features of the convention will be mentioned at greater length in the October issue.

Last month the Owen Sound Horticultural Society held a two-day exhibition. While flowers and plants were the leading features, fruits and vegetables were exhibited and showed much merit. The exhibition also included a highly creditable display of ladies' work which lent variety to the show. Those present, including Mr. Wm. Hunt, Ontario Agricultural College, Guelph, who judged the horticultural exhibits, were well pleased with the show in all respects. Mr. Hunt stated that it equalled and probably surpassed any exhibition of similar nature held in Ontario this year.



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Preserving Fruits for Exhibition

J. W. Crow, B.S.A., Ontario Agricultural College, Guelph

Of late years considerable attention has been paid to the preservation of fruits in their natural condition for use at shows and exhibitions out of season. Exhibits of the kind have become a commendable feature of horticultural exhibitions in Canada, and Canadian fruits preserved in this manner have been seen at many important expositions in other countries.

Specimens selected for preservation should be as perfect as possible. They should be put down when at their very best and should of course, be handled throughout with the utmost care. Different styles of glass jars may be used, but for general use, tall, round, plain ones with either ground glass or screw-clamp tops are preferable. Fancy jars may be used for particularly fine fruits or for the sake of relieving the monotony of a large exhibit.

From the results of experiments conducted several years ago at the Central Experimental Farm, Ottawa, the following formulae are quoted as having been used successfully:

from the fruit, it should be poured off and replaced by fresh fluid."

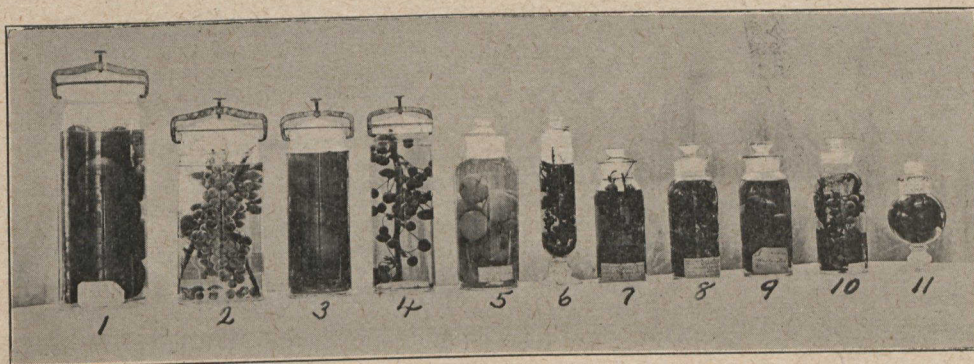
This formula is recommended for plums, grapes, cherries and gooseberries: Formalin, 3 to 5 parts; saturated solution common table salt, 10 parts; water boiled and cooled to make 100 parts. When made up, the solution will keep indefinitely.

For raspberries, the following has been recommended:—Formalin, 1 part; glycerine, 10 parts; water to make 100 parts.

Strawberries are best preserved in:—Formalin, 1 ounce; alum, 1 drachm; glycerine, 5 ounces, water, 3 pints.

Red currants keep best in a solution of:—corrosive sublimate, 1 part; glycerine, 10 parts; water 90 parts. The corrosive sublimate should be dissolved in hot water and the solution and fruit preserved in it should be labelled "Poison" as it is very deadly if swallowed.

The glass stoppers of bottles may be remedied perfectly tight by smearing the ground surface with a small amount of light colored vaseline. This will also prevent in



Proper Sizes of Jars for Different Fruits

No. 1 (4 quarts)—Suitable for apples and pears, medium to large in size. No. 2 (3 quarts)—Same uses as No. 1. Grapes may be preserved in this or in shorter jars of same diameter. Nos. 3, 4 and 5 (2 quarts)—Suitable for small pears and apples, peaches, large plums and cherries or other branches as in No. 4. No. 6—Contains a branch of currant but the leaves and clusters of fruit are too crowded. Suitable for small size fruits such as gooseberries. Nos. 7, 8, 9 and 10 (1 quart)—Suitable for strawberries (fastened to supports) as in No. 7; raspberry sprays as in No. 9; gooseberry sprays as in No. 10. No. 11—Suitable for small size fruits such as gooseberries.

"Kerosene oil was found to be the most satisfactory fluid for preserving strawberries, having just about the right density to allow them to settle to the bottom of the jars.

"For red and black cherries, black currants, red and black raspberries, and other red and very dark colored fruits, including the red and dark grapes and red apples, a one and one-half to two per cent. solution of boric acid in water. For the yellow varieties of raspberries, white and yellow cherries, peaches, gooseberries, white currants and other light colored fruits, including yellow and green apples, a two per cent. solution of zinc chloride. Sulphurous acid was found very useful in brightening up and bleaching all discolored specimens of white and yellow fruits and gave them a very attractive appearance. The acid was used of the ordinary strength in the proportion of four ounces to the gallon of fluid. It was found that the use of 15 per cent. commercial alcohol was sufficient to prevent injury from freezing during transportation in winter.

The following notes are taken from a publication by the Colorado Agricultural College bearing on the subject:

After filling, the jars should be "kept in a cool, dark place until the time for exhibition. Frequent examination should be made to determine how well the fruit is keeping. If the liquid becomes colored

great measure the sticking of the stoppers when it is desired to remove them."

Mr. D. W. Buchanan, of St. Charles, Man., who has experimented considerably with different materials sends the following notes:

"Plums may be preserved in corrosive sublimate, one ounce to the gallon of distilled water. Ten per cent. of glycerine may be added to prevent shrinkage of pulpy specimens. More may be used to advantage if expense is not a consideration. Salicylic acid, one ounce to five of water, with glycerine, has not given good results with plums. We have used coal oil for strawberries, blackberries and black cherries, but this should not be used only in perfectly tight bottles. Cork stoppers, even when sealed with wax, are not suitable for use with coal oil. Allow for expansion of the oil in warm weather. Formalin, two to three per cent. and alcohol 10 per cent. is useful for strawberries, and also for soft colored specimens.

"Zinc chloride, two per cent., is good for white and red currants. Ten per cent. of alcohol may be added. Boric acid, one ounce to four gallons of water, for black currants, with ten per cent. of alcohol added. For gooseberries, copper sulphate one per cent. and alcohol as above is excellent.

"Sulphurous acid, one part, alcohol, one part, water eight parts, is the best thing we have found for white and light colored

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IT WILL PAY YOU TO SEND TODAY FOR OUR BARN BOOKLET.

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You will also need Excelsior Barrel Cushions, Excelsior Box Cushions, Parchment and Wax Caps, Manilla and White Tissue Wrappers, Lace Circles and Box Lace, Curved Elm Liners.

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apples, but for red and green apples we have not found a good preservative."

There is still some valuable experimental work to be done on this question. The writer would be glad to receive any further information regarding it.

Cherries, raspberries, currants and gooseberries look best when preserved on the branch. Jars used for this purpose should be large enough to permit of the fruit taking its natural position without crowding. Strawberries may be prevented from crushing each other by tying the stem to a small twig with a bit of thread.

POULTRY DEPT.

Conducted by S. Short, Ottawa

To prevent injury to the smaller chicks and harmful annoyance to the pullets, the earliest hatched and largest cockrels should be separated from the other chickens by this time of year. If these cockrels are of no special breeding they should be disposed of now. April and May hatched cockrels should, in condition, now weigh from four to six pounds each, according to the breed to which they belong. There is therefore, no profit in holding them until November or December, for they will consume the value of the one or two pounds gain in flesh in the two months, besides very likely selling cheaper than now, for the farmers have not time to market their spare fowl at this season but rush them all to market in the cold weather of late November, or December; thus the large supply lowers the price.

There is also the question as to which

are the best males to keep for breeding next season. If the object of the poultry keeper is to develop a winter egg-laying strain he should have started last spring by hatching from eggs laid only by females of marked qualities for egg production, judged from the records of last winter. Presuming this was done, now arises the question of which cockrels to keep over for next season to improve the strain in egg production.

The first pullets to lay in the autumn are those that matured the fastest, for a female cannot lay until she has made the necessary growth or mature development. The corresponding condition in the males would be early crowing and inclination to mate.

At this season there should be no difficulty in noting these characteristics in the cockrels, and where there are a number showing equal growth and sprightliness, preference first should be given to those having the best body shape, and most promising points of the breed they represent.

The old hens should now be weeded out. They have, in most cases, laid nearly all the eggs they intended to lay this year and will if not soon disposed of, begin to moult, which reduces their flesh and owing to pin feathers make them almost unfit for table use until the new feathers are fully grown and they have regained their normal weight, all of which takes from two to three months. Discard them now and give the growing pullets the benefit of the extra yard space.

The October issue of THE CANADIAN HORTICULTURIST will be devoted chiefly to the fruit industry of British Columbia. Growers in that province should not fail to secure that edition. Those who are not already subscribers should become such this month. The subscription price is only 60 cents a year, or two years for \$1.

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ESTABLISHED QUARTER-OF-A-CENTURY.

Fruit Meetings in Quebec

THE Pomological and Fruit Growing Society of the province of Quebec held an interesting two-day meeting in August. President Robert Brodie of Westmount occupied the chair. The first meeting was held at Hemmingford, and the second at Covey Hill.

A paper on "The Planting of a Family Orchard in Eastern Quebec" was read by Mr. J. C. Chapais, of St. Denis. This paper pointed out the advisability of every farmer having a piece of ground in fruit so that the family table could be supplied the year round. Extracts from this paper will be published in a subsequent issue of THE CANADIAN HORTICULTURIST.

Mr. W. T. Macoun of the Central Experimental Farm, Ottawa, gave a very practical and interesting address on "Strawberry Culture" in which he dealt with the methods of culture and the best varieties to grow.

At the evening session, Prof. W. S. Blair, of Macdonald College, gave an orchard talk. He dealt with the location of the orchard, soil, planting of the tree and caring for it during the early years of its life.

Prof. G. Reynaud of La Trappe, contributed a paper on "The Evaporating of Fruits and Vegetables," in which he pointed out that this process of preservation could be commercially carried out on a large scale. The advantage of dried fruits was that they could be kept in a condition fit for consumption in a much smaller space than was the case with fresh fruit. In Newington, much has been done in this direction and large quantities were exported to the European market at a good profit. Mr. Reynaud then went on to point out that when the apple crop in France was a failure, there would

be a good market for the evaporated fruit, which was suitable for cider making. He also remarked that peas, beans, carrots, cauliflower, onions and cabbage could be dried very easily and would be a profitable product on the market.

At Covey Hill, Mr. Macoun spoke on "The Development of Experimental Work." This paper will be published in a subsequent issue of THE CANADIAN HORTICULTURIST.

Professor Swaine of Macdonald College gave a very practical talk on "Orchard Insects and Their Control," in which he pointed out that there were two kinds of these insects, biting and sucking. The former fed upon the leaves of the plants and trees and the latter sucked up the juices and deprived vegetation of its vitality. He enumerated several of these enemies of the orchard, briefly sketching their life history, mentioned the parasites to which some of them are prey and gave formulae for remedial measures that might be adopted, laying special emphasis on thorough spraying at particular seasons. He pointed out that by the adoption of the latter, a very large percentage of fruit which was now practically worthless could be made a valuable market product.

In a paper on "Roses," Mr. G. P. Hitchcock, of Massawippi, gave some very interesting historical details concerning this much admired flower, of which he said there were between 300 and 400 distinct species and the cultivation of certain of these for commercial purposes gave employment to thousands of people. He then touched on the culture of roses, mentioning the kind of soil, fertilizers, and so forth, required for

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PLAYER-PIANO HANDSOME COMBINATION PLAYER-PIANO, with \$15.00 worth of music, made by a first-class American manufacturer, beautiful mahogany case, 7 1-3 octaves, 3 pedals, full length music rack, full metal plate, a first-class piano in every respect, both for hand playing and machine, and is an exceptional bargain, due to our desire to clean out our stock for the Fall trade. We offer this special \$750 Player-Piano for \$500. \$15 worth of music goes with the piano, subject to your selection from catalogue. Terms, \$100 cash, balance \$30 or more per quarter, with 6 per cent. interest. If you want a first-class Player-Piano communicate with us in reference to this one.

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STANDARD, TORONTO, Cabinet Grand, walnut case, 7 1-3 octaves, full length music rack, nicely decorated top door, 3 pedals; regular price \$225 \$375. Special at.....

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WORMWITH & CO., large cabinet grand, handsome mahogany case, rented a short time only, handsomely decorated top door, full length music rack; Boston fall, 7 1-3 octaves, 3 pedals and orchestral attachment, susceptible of banjo, mandolin, and harp effects, etc., double trusses, an exceptionally fine piano and in first-class condition and elegant value. Fully guaranteed.... \$275

LISZT, TORONTO, extra handsome mahogany case, with Colonial design, plain top door; Boston fall, double trusses, 7 1-3 octaves, 3 pedals, full metal plate, used less than six months, fully guaranteed. Regular price \$400. Special \$285 at.....

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their successful cultivation. He referred to the different means of propagation, touched on the insect pests to which the plants are liable and named varieties which he considered might be fairly easily grown and give much satisfaction.

Professor Blair of Macdonald College gave an interesting talk on "Orchard Work," particularly with reference to the planting of trees and the care of the orchard in the earlier stages of its growth. He also pointed out that in horticulture, as in any other business, a man must take a deep interest in his work, must keep in touch with up-to-date methods and do nothing slovenly or by rule-of-thumb if he would make a success of the occupation in which he is engaged.

New Society in Quebec

At a meeting held at Macdonald College on June 24th, a new Society called the Quebec Society for the Protection of Plants from Insects and Fungous Pests was organized. The following officers were elected: President, Prof. W. Lochhead, Macdonald College; vice-president, Frere Liguori, La Trappe, Que.; sec-treas., Douglas Weir, Macdonald College; directors, Rev. Dr. Fyles, Levis, Que., Rev. G. Ducharme, Rigaud, Que.; Auguste Dupuis, Village des Aulnaies, Que.; A. F. Winn, Montreal; Dr. W. Grignon, Ste. Adele, Que.; curator-librarian, J. M. Swaine, Macdonald College.

A substantial grant has been given the society by the Department of Agriculture of Quebec. The success of the society is practically assured on account of the interest manifested by both French and English workers. It is truly provincial in its aims, work and membership. There will be two meetings each year, a general winter meeting at Macdonald College for the trans-

action of necessary business, the reading of reports and papers, and a general review of the year's work; and a summer field meeting at some outside point in the province of Quebec. As the society exists for the benefit of the province, it is urged that all outbreaks of insect and fungous pests be reported to the secretary, Macdonald College, so that possible help may be given promptly.

Vegetable Growers' Picnic

Frank Whitehall, London,

That the London branch of the Ontario Vegetable Growers' Association is very much alive was evidenced at their picnic held at Springbank on July 25th. The picnic committee aimed high with the result of having the best picnic yet.

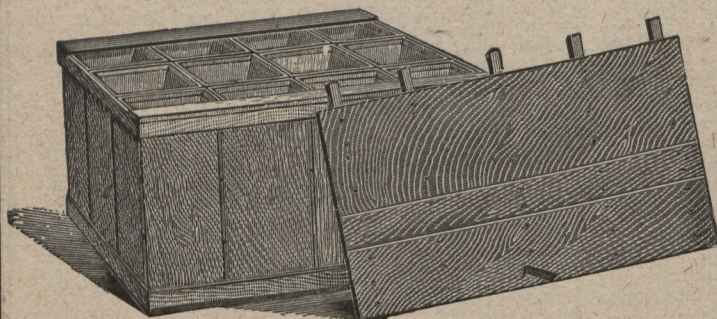
A big program of sports was enthusiastically carried out by those present, and the thanks of the association are tendered to those who so kindly denoted prizes, thus adding greatly to the success of the picnic.

After a sumptuous repast to which about 300 of the gardeners and their friends sat down, the prizes were distributed, and the merry makers returned to their homes, to look forward to next years' picnic.

The large range of houses that is being erected for the Dominion Orchard Co., of Rougemont, Que., is being built by the King Construction Company of Toronto. These houses will be used for the forcing of fruit and vegetables. There are six houses in the range, averaging 125 feet long by 21 feet 8½ inches wide. They are all style A, King Construction. Mr. R. W. King personally surveyed the ground and furnished plans for the entire effect, including the heating apparatus.

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ENGLAND

or to the Canadian Representative

A. LAWRIE

FOREST, ONTARIO

Notice to Fruit Shippers

J. A. Ruddick, Cold Storage Commissioner, Ottawa

On Aug. 7th, a circular was sent from this office to the leading fruit growers and shippers, and to the press as well, stating that the entire space of one cold storage chamber had been engaged on the steamers "Ontarian" and "Sicilian," sailing from Montreal for London on Aug. 22nd and 29th respectively, and that the space in these chambers would be available for shipments of early apples, or other tender fruits, at the regular rate of freight (30 shillings per ton measurement of 40 cubic feet), payable to the steamship companies in the usual manner.

As the response to this notice has been very encouraging, I beg to announce that I have contracted with the agents of the Thomson Line for one chamber on the SS. "Hurona," sailing from Montreal for London on Sept. 5th. Shipments for this steamer should reach Montreal not later than the morning of Sept. 4th, and intending shippers should apply to this office for space without delay, stating the number and size of the packages to be shipped, so that a proper estimate of the space required may be made.

Enclosed find a remittance for two years' subscription to THE CANADIAN HORTICULTURIST. I feel that I cannot be without your paper.—Wm. Craig, Sunny Beach Farm, Auburn, Me., U. S. A.

The 16th international convention of the North-west Fruit Growers' Association will be held in Portland, Ore., December 2, 3 and 4. Preparations for a big convention are being made. Prof. E. R. Lake of Corvallis, Ore., is the secretary for 1908.

F. O. B. Contracts for Apples

P. J. Carey, Dominion Fruit Inspector, Toronto

An important matter for the consideration of growers and dealers is "sale contracts." Almost every contract made in the sale of apples last season was violated one way or another. It is true that the "money stringency" had considerable to do with the upsetting of contracts, but the fact remains that with contracts made as they were made last year, it is little use in making a sale at all.

It is being advocated, and rightly, from ocean to ocean, that f.o.b. car sales, as much as possible, is the proper way to dispose of our fruit; and surely contracts can be made secure, so that our apples will stay sold when they are sold, whether the markets go up or down.

Ship to Reliable Firms.—The disastrous season experienced by some of the growers last year, will have the effect of making them more cautious regarding the firms to whom they ship their apples. Mr. A. E. W. Peterson, of Toronto, has for years been connected with Jas. Adam, Son & Co., of Liverpool, Jas. Lindsay & Son of Glasgow, and Nothard & Low of London. Each of these firms have a splendid record for reliable dealings with fruit growers. One of the firms was established in 1819; the others have been almost as long in the business. Judging from the reports received from the growers that have been consigning their apples to these firms, they have been very satisfactory. Mr. Peterson will be very pleased to correspond with any of the growers for their fall crop of apples.

PACKERS' "SAFETY"

**Fruit Wrapper
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Used with perfect results by largest growers

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In addition to Fruit Wrapper, following supplies necessary to the modern Fruit Export Business are carried in stock at our Hamilton warehouse. Prices supplied on application.

Wrapping Papers. Twines. Pulp Board
Box Linings. Corrugated Straw Boards.
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Buntin, Gillies & Co.

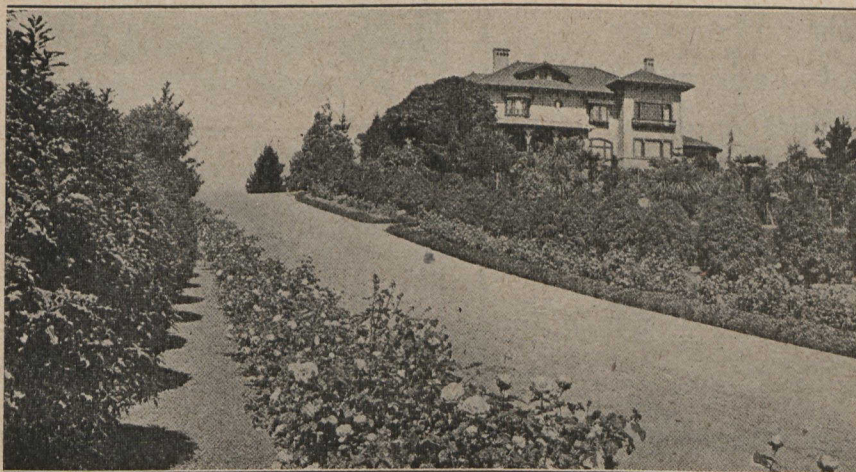
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Our list embraces a full assortment of both Fruit and Ornamental lines.

Our Stock has made a wonderful growth this season, and customers can depend on receiving Extra Choice Stock. Healthy and vigorous, and true to label.

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APPLES FOR EXPORT

REPRESENTING

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GLASGOW

J. & H. GOODWIN

Manchester, Liverpool and Hull

Will be pleased to keep you advised
regarding the condition of the Euro-
pean Markets. If you have any
apples for export, call or write

FRED. BARKER

25 CHURCH ST., TORONTO, CANADA

Prospects in England

J. and H. Goodwin, Manchester

Crops in England and on the European continent, which were at first expected to be heavy, are now said to be only a little larger than last year when the supply of apples on this side was generally short. There is no doubt under any circumstances that there will be a free demand in this country again for good American stock, especially red varieties, but as it is more than likely that supplies both from the United States and Canada will be large, early in the season, high prices must not be looked for. Our opinion is that after the heavy losses suffered last year on stored fruit, growers and dealers will be inclined to place their stock on the market early.

The trade in American apples in Manchester last season, compared with other markets, gave very good results and we are pleased to see that shippers are beginning to realize more the important position this port holds. The fruit auction sales held here regularly, attended by the best buyers from all the leading centres in this country, and the quantity of foreign fruit of all descriptions, shows a considerable increase every year. We anticipate that the coming

season will show an even greater advance in shipments from America to Manchester, most of our friends having expressed their satisfaction with the results obtained here.

Coopers' Fluids

Further evidence of the satisfactory results that have been had from the use of the V1 and V2 Fluids since they were introduced into Canada last spring by Wm. Cooper and Nephews, whose advertisement appears in another column, is given in the following letters:

Mr. F. G. Stewart, Homer, Ont.—“I used your V2 Fluid on the aphids this May and in a short time there was not one living aphid to be seen. I have great pleasure, therefore in recommending it to all my friends and the public.”

Mr. S. R. Wallace, President, Burgessville Fruit Growers Shipping Association, Burgessville, Ont.—“I used V2 Fluid on the 15th of June and am pleased to say that the trees sprayed are looking very healthy and the fruit seems quite free of spots or fungus. Of course fungus may develop yet. I may say that the V1 Fluid has killed the oyster-shell scale wherever it came into contact with them.”

Mr. N. E. Anderson, Vernon, B. C.—“I have used your sprays this year for all my sprayings and have had excellent results although some of the old hands have kept saying, “oh! it's no use.” I have charge of 13 acres of bearing trees, apples, pears, plums, cherries and prunes, and outsiders say that they have never seen trees looking better. No rust of any kind in orchard can be seen, and as far as clean fruit goes, fully 90 per cent. will grade No. 1. One corner in particular of 40 Starks has always been scabby but this year there is very little to be seen.”

A copy of the catalogue for bulbs for 1908 offered by M. Herb Naples, Italy, has been received. All kinds of bulbs and tuberous rooted plants are illustrated and descriptions are published in English, German and French.

IMITATION PROVES THE WORTH OF THE ORIGINAL

The “**SOVEREIGN**” is the original hot water boiler with “**the larger first section.**” It is this improvement that reduces the coal consumption of the hot water heating apparatus to an economical basis. The larger first section is only one point of merit in the “**SOVEREIGN**” there are nineteen other.

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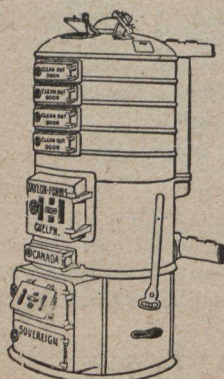
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Invite consignments

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For Best Family Trade. Boxes Preferred.

For particulars refer to Editor of this Journal

IF YOU HAVE APPLES
OR POULTRY TO CONSIGN

we can handle them for you to
advantage. If apples are in car
lots, write us and we can sell
them for you f.o.b. your station

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TORONTO - - - - - ONTARIO

Our Trade in France

Manufacturers and dealers in produce wishing to cultivate trade in France should write to the British Chamber of Commerce (Canadian Section), 17, Boulevard de la Madeleine, Paris, France. What the Chamber does for its members:

1. Offers the experience of 40 years of continental trade.
2. Puts Canadian houses in touch with suitable agents.
3. Obtains information on the commercial standing of French firms.
4. Notifies changes in French customs duties, proposed commercial legislation, likely to affect special trades, etc.
5. Communicates inquiries from the French buyers of Canadian goods.
6. Files members' catalogues for the information of buyers.
7. Gives commercial and statistical information of all kinds.
8. Aids members in customs and technical difficulties.

Bogus Paris Greens

Editor, THE CANADIAN HORTICULTURIST: In the July issue I noticed an article by Mr. R. J. Messenger, Bridgetown, N. S., on "Spraying Mixtures," in which he speaks of "the gullibility of farmers" in respect to spraying mixtures of different kinds, which is all very true. While I have not tried many of the new preparations, I have tried some of them and found them wanting.

Mr. Messenger seems to have much faith in the Paris green, and this is what I want to draw attention to. We now have to pay 35 and 40 cents a pound for Paris green and do not get the results that we received when we paid 17 or 18 cents a pound. We have

to use from three quarters of a pound to one pound to 40 gallons of water to get the same results that we used to receive from a quarter of a pound. We are being gulled as badly in the purchasing of Paris green as we are in some of the other preparations.

This season, I bought a one-pound package of Paris green that would not mix with water at all. A neighbor had the same experience. We should have some way of getting redress from parties putting such inferior stuff on the market.

As fruit growers we have to put a first class article on the market when we see fit to put it up in a closed package, and it is perfectly right; but I want to see the fellows who put up the articles that we have to use, placed on the same footing, so that when we buy a package of Paris green to spray our trees or potatoes we are reasonably sure that we will accomplish what we are working for—a clean crop of fruit or a good crop of potatoes.—M. G. Bruner, Olinda, Ont.

Canadian Exhibitions in 1908

Charlottetown, P. E. I.	Sept. 22-25
Halifax, Nova Scotia	Sept. 2-10
Kentville, N.S., Horticultural	Oct. 7-9
London, Western Fair	Sept. 11-19
New Westminster, B. C.	Sept. 29-Oct. 3
Ottawa, Central Canada	Sept. 18--26
Sherbrooke, Que.	Aug. 29-Sept. 5
St. Catharines, Niagara District	Sept. 17-18
St. John, New Brunswick	Sept. 12-19
Toronto, Canadian National	Aug. 29-Sept. 14
Toronto, Ontario Horticultural	Nov. 10-14
Victoria, B. C.	Sept. 22-26
Winnipeg, Horticultural	Sept. 3-5

HARDY PERENNIAL PLANTS

Secure a WEALTH OF BLOOM
next summer by planting

Pæonies Oriental Poppies
Iris Hardy Phlox
Boltonia Physostegia
Delphiniums Pyrethrums

and other hardy Perennials

NOW

SPECIAL OFFER

To introduce these lovely plants
we offer (our selection)

50 Plants for **\$5.00**

25 Plants for **\$2.75**

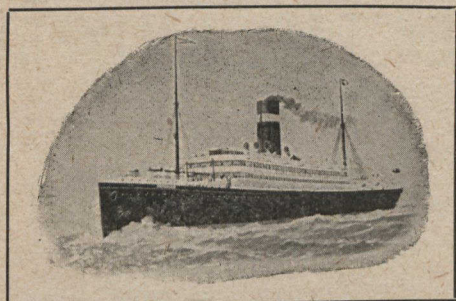
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Montreal to Glasgow

(New Twin Screw Steamers)

Montreal to London

(calling at Havre, France)

Boston to Glasgow

To Liverpool

STEAMER	From MONTREAL	From QUEBEC
VICTORIAN	Friday, 11 Sept., 5.00 a.m.	- 12.00 p.m.
CORSICAN	Friday, 18 " 6.00 a.m.	- 6.00 p.m.
VIRGINIAN	Friday, 25 " 5.00 a.m.	- 12.00 p.m.
TUNISIAN	Friday, 2 Oct. 5.30 a.m.	- 4.30 p.m.
VICTORIAN	Thursday, 8 " 10.00 a.m.	Fri., 9, 11.30 a.m.

To Glasgow

STEAMER	From MONTREAL
GRAMPIAN, new	Saturday, 12 Sept., Daylight
PRETORIAN	Saturday, 19 " Daylight
HESPERIAN, new	Saturday, 26 " Daylight
IONIAN	Saturday, 3 Oct., Daylight
GRAMPIAN, new	Saturday, 10 " Daylight

To London, via Havre, France

STEAMER	From MONTREAL
HIBERNIAN	Saturday, Sept. 5th
CORINTHIAN	Saturday, " 12th
HUNGARIAN	Saturday, " 19th

STEAMER	From MONTREAL
PARISIAN	Saturday, Sept. 26th
ONTARIAN	Saturday, Oct. 3rd
SICILIAN	Saturday, " 10th

Write for descriptive pamphlet of New Allan Liners. All Steamers are fitted with most modern appliances to insure the safe carriage of all kinds of perishable cargo. For further information apply to

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DO YOU KNOW

THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER?

NOW IF YOU HAVE A PIECE OF LAND THAT WON'T GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST

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CONSULT US FREELY IT IS OUR BUSINESS TO KNOW ENQUIRIES FREELY ANSWERED AGENTS WANTED FOR TERRITORY NOT TAKEN UP
THE W.A. FREEMAN CO. LIMITED
HAMILTON ONTARIO

Horticultural Exhibition

In connection with the Ontario Horticultural Exhibition which will be held this year in the St. Lawrence Market Arena, King St., E., Toronto, the county exhibit promises to be of special interest. While the number of counties is somewhat reduced from a year ago, and some of the best counties are not represented, those remaining have in many cases increased their grant. Huron county has again voted \$75 for their exhibit, and those in charge state that they will far surpass the show that they made last year. Norfolk county has voted the sum of \$50, which will be

used along similar lines to that of Huron, the intention being not to allot the money in prizes, but to spend it in sending a representative exhibit of fruit and its products to the show.

The Oxford county council refused the request for a grant this year, but thanks to the generosity of Mr. J. C. Harris of Ingersoll, the county will again be represented. Mr. Harris has collected the sum of \$25 which is necessary for the prize list, and is in addition doing all he can to promote the exhibit of fruit from this county.

The St. Lawrence Arena lends itself particularly well to an exhibit of this kind. The entire show will be on the one floor and not divided as was required in Massey Hall. The entrance to the Hall will be beautifully decorated and altogether the show promises to far surpass any previously held in Toronto.

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ESTABLISHED 1875

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Capital Authorized, \$10,000,000.00

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Fruit Packing Appliances.—The successful fruit packer is always looking for ways of improving the condition of his fruit when it reaches the market. He will miss no opportunity and will spare no pains in investigating methods and appliances to preserve his fruit in transit. Competition is becoming so keen both in the home and foreign market that it is only the careful packers who can hope to be successful in obtaining good prices. Nowhere will be found a better or more complete stock of these appliances than that of Thos. Gain & Son, whose advertisement appears in another column. They are Canadian agents for G. P. Read of New York, and can meet your every need with goods of the best quality and at reasonable prices. They will be pleased to go into this matter with you at their exhibit at the Canadian National Exhibition.

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Order your Evergreens and Stone Fruits to be shipped in the Spring. Have all the rest of your Stock shipped this Fall; you will meet with the best of success.

Place your Order at once for both seasons. Our Stock is better than ever and we have more of it. Over 500 acres in Trees and Plants.

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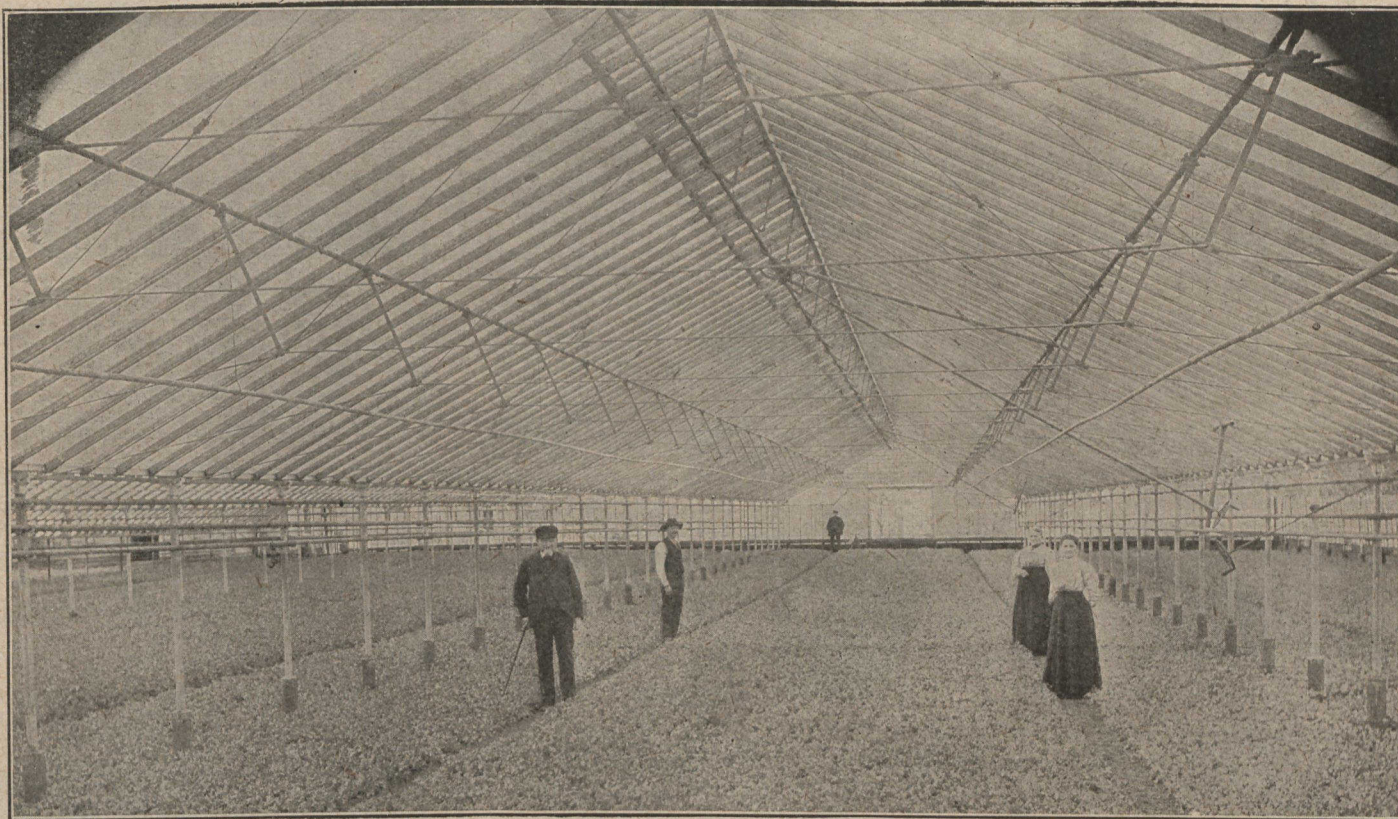
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PLANS PREPARED, MATERIALS SUPPLIED, AND HOUSES OF
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A Large Vegetable Growing Plant in Pennsylvania, erected by King Construction Co.

To insure success in growing under glass the houses must be of modern construction. We have been designing and constructing greenhouses for over fifteen years and our "King Construction" houses are giving satisfaction in all parts of America. Growers desiring to erect their own greenhouses can obtain all or part of the materials necessary at our works. Plans and estimates prepared for intending builders at a moderate cost. Write and tell us the kind of a house you purpose erecting and we will send one of our Illustrated Bulletins by return of Mail. ∴ ∴ ∴ ∴ ∴ ∴ ∴ ∴

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The Best Exhibition of the Kind in the Dominion. In the Heart of the Fruit District. At the Height of the Season. In the Garden of Canada.

THIRD ANNUAL

Niagara District Horticultural Exhibition

Under the Auspices of the St. Catharines Horticultural Society

To be Held at the Armory

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ON THURSDAY
AND FRIDAY

SEPT. 17 and 18, 1908

Fruit, & Flowers
Honey, Vegetables

Nearly \$1,400 in Prizes

Many Novel and Interesting Competitions—Mammoth Exhibits for the Rittenhouse Prize—Pyramids of Apples, Pears and Tomatoes—Arms of Grapes—Ropes of Onions—Wrapping and Packing of Apples, Pears and Peaches—Best methods of Preserving Fruits, etc. Send for Prize List.

Reduced Railway Rates

From all stations on the Grand Trunk Railway within a radius of eighty miles of St. Catharines, single fare rates will prevail, good going on afternoon trains on Sept. 16th, and all trains on Sept. 18th and 19th; good to return up to and including Sept. 20th.

W. B. BURGOYNE, President.

W. H. BUNTING, 1st Vice-President.

C. A. HESSON, Treasurer.

ROBT. THOMPSON, Chairman Executive Com.

GEO. GORDON, Secretary Executive Com.,

18 Queen Street, St. Catharines.

Address all communications in regard to Prize Lists, Entries, etc., to the Secretary Mr. Geo. Gordon.

Origin of Windsor Cherry

"Cerasus," Kelowna, B.C.

In August *Better Fruit*, an Oregon publication, I have read an article in which the writer, after congratulating Oregon upon originating Bing and Black Republican cherries, gives credit to some other part (unnamed) of the Pacific coast fruit country, for the production of Windsor cherry. As the writer of the article is a well known fruit man in the cherry growing centre of Oregon, the statement should I think be corrected.

Windsor is quite well thought of in British Columbia, and quite extensively planted, and I would like to state through THE CANADIAN HORTICULTURIST that Windsor is a Canadian variety having its origin at Windsor, Ontario.

4 RASPBERRY PLANTS OR 2 HERBACEOUS PERENNIALS

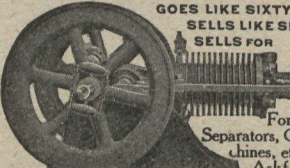
The Raspberries include 3 red varieties:—King, Ruby Red, Herbert; and 1 black, Cumberland. The best that grows. The perennials are Helianthus Maximiliana and Helianthus Rigidus (Prairie Sunflower). The former blooms in late Fall and the latter in the Mid-Summer.

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By special arrangement with Stone and Wellington, Nurseryman, Toronto, we can give either of these for only **ONE NEW SUBSCRIPTION** at 60 cents a year. Get busy.

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GILSON GASOLINE ENGINE
For Pumping, Cream Separators, Churns, Wash Machines, etc. **FREE TESTAL** Ask for catalog—all sizes

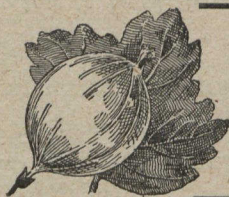
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☞ We have a large stock of all sizes and varieties for spring trade.
☞ Try our pots for growing early tomato plants, etc.
☞ Write for Price List and Catalogue.

The FOSTER POTTERY CO., Limited
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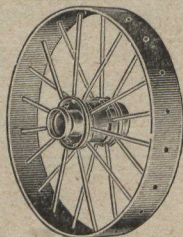
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SMALL FRUIT PLANTS

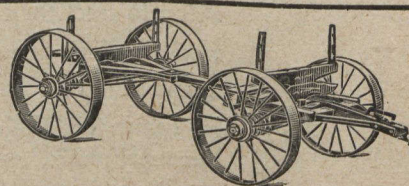
Gooseberries, Josselyn, Downing, Houghton.—Currants, Perfection, Ruby, Cherry, White Grape, Lees Prolific Champion, Black Naples.—Raspberries, Herbert, Cuthbert, Marboro.—Garden Roots, Asparagus, Rhubarb, Perennial Celery.

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Windsor Salt

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just the
right savour.

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CHOICE BEDDING PLANTS
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Home grown. No Scale. No Fumigation.
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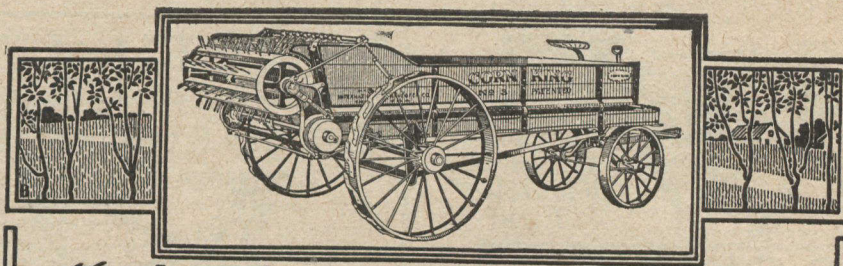
MR. CHARLES ERNEST WOOLVERTON, Grimsby, Ontario, landscape architect, parks, cemeteries, pleasure, school and home grounds laid out, surveys made. Working drawings to a scale so that any gardener can work them out. Terms very reasonable.

BULBS for fall planting. William Rennie, Limited, Toronto.

MUSHROOM SPAWN.—Superior quality fresh spawn for sale. Stock limited. Apply, Kemish, Mushroom Grower, 248 Brock avenue, Toronto.

\$15,000, APPLE ORCHARD for sale of 50 acres, mostly Greenings and Baldwins, age 17 years; good air, and tile drainage; the best of soil; good buildings; \$3,000 cash, easy terms for balance. For particulars and description, address Isaac W. Pearce, Jaffa, Elgin Co., Ont.

IRON PIPE FOR SALE—150,000 feet, all sizes from ½ inch up, in good condition, at half price. Write us what you need.—Imperial Waste and Metal Co., Pipe Merchants, 7 Queen street, Montreal, Que.



*Make the manure bring you
\$4 a ton*

Thousands of Successful Farmers Are Doing It

There is no charm or secret about it. You simply spread it with a machine, and thus make it go twice as far, get twice as much good from it on the first crop, do your land more permanent good, and save half the time and labor of handling.

Manure is generally estimated to be worth \$2.00 a ton handled the old way. There is no doubt that it is worth twice as much to the farmer who spreads with a machine.

Two of the most practical and valuable machines manufactured for farm use today are the **Corn King and Cloverleaf manure spreaders**. They are each made in a number of sizes.

These machines differ somewhat in construction and operation, but both are right working and of great durability.

They are proven machines. They embody the best mechanical ideas, the materials used in construction are the best for the purpose, they are made as simple

as possible, and they handle manure in all conditions to the perfect satisfaction of users. Proof of all this is to be found in the record each machine has made in the field.

Is it not to your interest to own and use one of these spreaders on your farm?

Figure out for yourself and you must agree that it will be a paying investment, even if you do not have over twenty-five loads of manure to spread in a year.

You can't help but be pleased with the work, the easy handling, the light draft and the substantial making which saves you the annoyance of breakage and repairs.

Call and see these spreaders with the local International agent. He will gladly point out to you the superior features of these machines, as well as supply you with catalogue, colored hanger or other information.

The nearest branch house will supply you with any further information desired.
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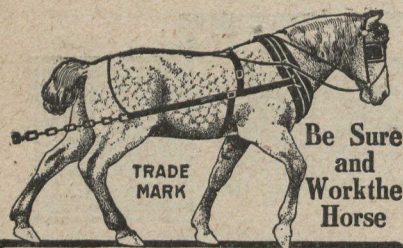


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BULBS—Thousands of people overlook the planting of Spring Flowering Bulbs in the Fall, and have many regrets when they see them blooming in the gardens of their neighbors in the Spring. Send for our catalogue now, make your selection and plant your bulbs out before hard frost comes, or selection of sorts may be left to us.

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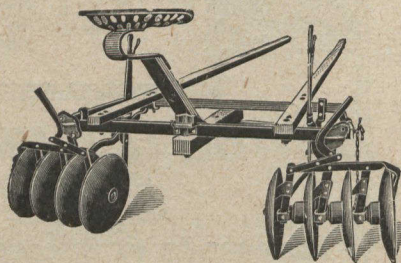
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Built in sizes for one or two horses. Will extend out to cultivate under the fruit trees or narrow up to work between grape vines and berry bushes. They cut cleaner and turn the soil over better than any other cultivator. A money-making implement for all fruit growers—a harrow bargain—it will pay you to know more about. The Bissell Agents will give you prices or please write direct to

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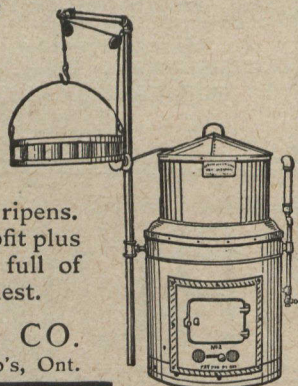
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TORONTO

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Nova Scotia

Ennice Watts

The nests of the fall web-worm (*Hyphantria cunea*) have this year appeared in exceptionally large numbers, not only on orchard but on ornamental trees; also by the wayside and in woods, chiefly on birches and alders, but maples and elms do not escape. When the nests appear in our own orchards, they are at once cut out, and up to the time of writing, about 60 nests have been destroyed. Almost every orchard in this district is infested more or less with these caterpillars, but it is comforting to know that this particular pest has a fashion of becoming abundant in some years and then decreasing to scarcity. However, it is not well to trust to Providence in this way, for if the infested branches are not cut out, the foliage surrounding the nest should be sprayed with an arsenite, otherwise, they may, besides looking unsightly, do considerable damage. In the south there are two broods of this insect, in the north there is but one. When mature the caterpillar descends to the ground, there spinning its cocoon in which it hibernates until next season.

Although the apple crop will not be so great as at first expected, the general opinion is that the fruit will be larger and cleaner than that of last year. Crabs are abundant in some parts.

The very heavy rains have greatly assisted in the swelling of all fruits, and in this part of the province the storms have not done much damage. Wild raspberries and blueberries have yielded enormous crops, and cultivated berries have done well. Fine blackberries were marketed on Aug. 7th. Duchess and Red Astrachan apples were marketed on Aug. 6th.

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We Can Cure It

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over a period of three
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Vacaville

California

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Fruit Crop Prospects

THE present condition of our apple orchards indicates that the crop of winter fruit will be much less than that of last year; in some districts, less than half. The quality and size promise to be good. Early apples are giving a good crop. In some localities buyers have been on the ground for some time offering 50 cents to \$1 a barrel on the trees. Most orchards have been sold but some growers expect better prices. The bulk of the winter crop, except that held by the co-operative associations, has passed into the hands of the dealers. As "lump" buying has been practised so extensively, it is impossible to say anything definite about prices. The crop correspondents of THE CANADIAN HORTICULTURIST report as follows:

YORK COUNTY, N. B.

Murches.—Weather conditions are more favorable this year than last. Early apples, such as Transparent and Duchess, promise a good crop; winter varieties, only medium. High bush cranberries are a light crop.—J. F.

KINGS COUNTY, N. S.

Kentville.—There is a general feeling that there will be more apples than was thought three weeks ago. The size is pretty good and the stock generally is clean. There will probably be as many to ship as last year. Plums are very light, the Japanese varieties being almost a failure.—R. S. E.

QUEENS COUNTY, P.E.I.

Long River.—Prospects are very poor. Some apples are medium; fall apples light; winter, very light. Some late var-

ieties will have to be imported to fill home market. Plums are very light; some orchards have none at all. The trees are injured, especially Moore's Arctic.—J. J.

STANSTEAD COUNTY, QUE.

Beebe Plain.—Early apples are an average crop. Fruit is undersized on account of dry weather. Winter varieties are a light crop. Wealthys are heavy.—D. L. H.

NORFOLK COUNTY, ONT.

Simcoe.—Fall apples and Greenings are a good crop. Winter varieties will be less than last year. The quality is good in well cared for orchards.—J. E. J.

GREY COUNTY, ONT.

Clarksburg.—Plums are a failure; pears, full; apples, though not as heavy as last year, are superior in quality and, on the whole will barrel better.—J. V.

Export Apples

12th YEAR

WOODALL & CO., LIVERPOOL

The Pioneers of the British Export Trade, 1847.

BOYD, BARROW & CO., GLASGOW

35 years' best standing.

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N.B.—To reliable, energetic parties we can offer Good Agencies in Unrepresented Districts. If interested, write for terms.

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In fact, Paris Walking Plows are so good—so much better than ordinary plows—that to buy any other kind is surely a mistake.

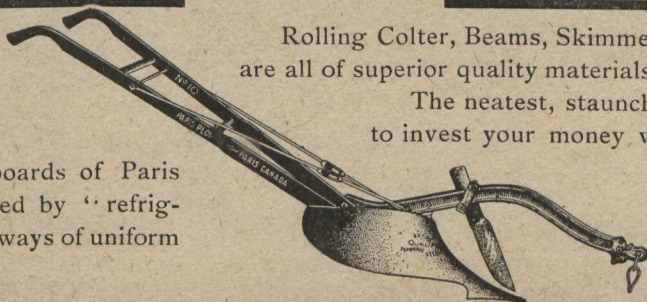
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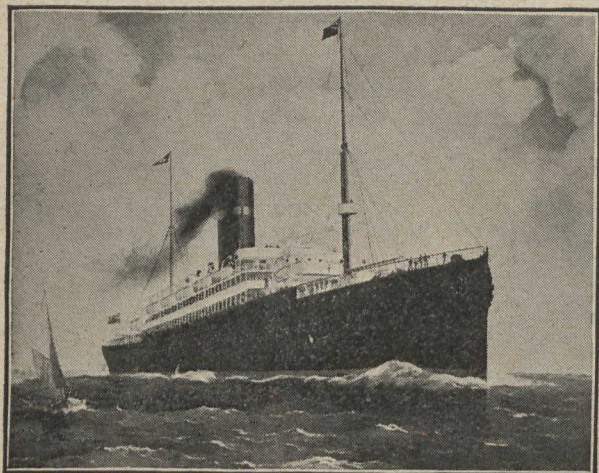
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The neatest, staunchest, best working plows in which to invest your money will be found at the Paris Plow Agency in your locality.

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	PLOT 1	PLOT 2	PLOT 3	
Fertilizer		180		Muriate of Potash
Per acre		420	420	Acid Phosphate
Yield per acre in baskets	702	1194	738	

This experiment shows an increase of 456 baskets, directly due to the Application of POTASH

POTASH

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MURIATE AND SULPHATE OF POTASH

Potash not only increases the yield but also hastens maturity. The accompanying experiment shows what can be accomplished by an intelligent system of fertilizing. Apart from the fact that the Complete Fertilizer (containing POTASH) almost doubled the the yield, the crop on that plot was

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Winter and Summer Spray Fluids

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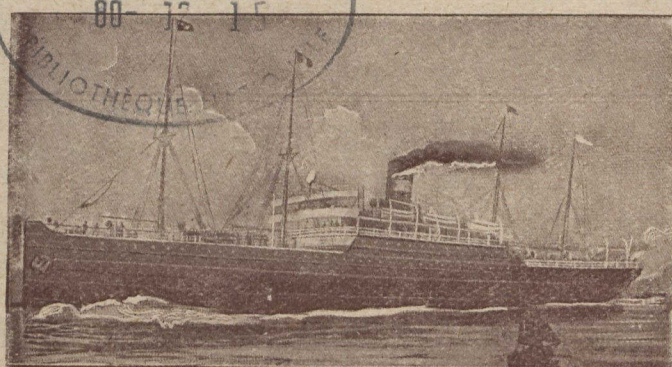
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