

# The Canadian Horticulturist

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TORONTO

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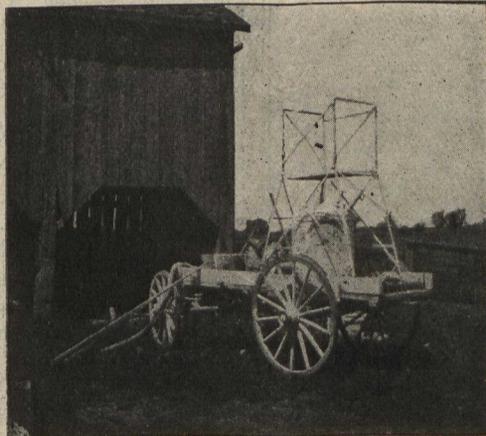
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# The Canadian Horticulturist

Vol. XXIX

JULY, 1906

No. 7

## The New Experiment Station in the Niagara District

THE establishment of the new fruit and vegetable experiment station in the Niagara district marks an epoch in the horticultural development of Canada. It should become the most important station of its kind in the Dominion, and ultimately one of the best on the continent. The older stations have done good work, but have been handicapped by their locations and, therefore, greater things may be expected from the new one. It is located near Jordan in the centre of the best fruit district in Canada. It will be of value, not only to the Niagara district, where it is located, but it should be an important factor in the advancement of fruit matters all over the Dominion, but particularly to portions of British Columbia where conditions are closely similar to those in Southern Ontario.

The ground for the new station comprises about 90 acres, and has been given to the Ontario government by Mr. M. F. Rittenhouse, of Chicago, who was born and brought up near Jordan. While otherwise well suited to its purpose, it has two defects: it lacks the protection of the mountain, only two and a half miles away, and as a consequence, its crops are a week late in season; and, in the judgment of a representative of THE HORTICULTURIST who thoroughly examined the soil, it lacks a sufficient quantity of light soil to be ideal for experimental work with peaches and other tender fruits. This latter objection can be overcome by the purchase of additional land of that character. It is understood that Mr. Rittenhouse has given the government an option on an excellent farm of this type, across the road from the farms already donated.

Except, as already stated, that it lacks the protection of the mountain, the farm otherwise is ideally situated, being almost in the centre of the Niagara fruit district. It is located on the extreme north-east corner of the township of Clinton in the county of Lincoln. The farm faces on the line between Clinton and Louth townships, and has a shore line on Lake Ontario of about one-quarter of a mile.

It is about 12 miles from St. Catharines and 24 miles from Hamilton, or

about midway between Hamilton and the Niagara river. Although, at present, somewhat difficult of access, there being no railway station within three miles, it is expected a station will be established where the railway tracks pass the farm about half a mile away. The projected electric railway line from Toronto to Niagara Falls, also, probably will pass near the farm.

It is interesting to note that the town line between Louth and Clinton, if extended across the lake, would run directly up Yonge street, Toronto. In other words, the new station will be directly across the lake from the city.

### STRONG AND PROGRESSIVE

I congratulate you on the very interesting and profitable horticultural journal you are publishing in THE CANADIAN HORTICULTURIST. I prize it as highly as any periodical coming to my desk. You deserve the patronage of every progressive citizen of Canada. Few people appreciate as they ought the value of a paper that is as progressive and so strong and forceful as is THE CANADIAN HORTICULTURIST.—A. N. Brown, Middleport, N.Y.

In the vicinity of the Rittenhouse farm are a number of excellent fruit farms, worth from \$150 to \$250 an acre. The land for the station consists of two farms that were given to the government by Mr. Rittenhouse, in two instalments.

### AREA OF THE STATION

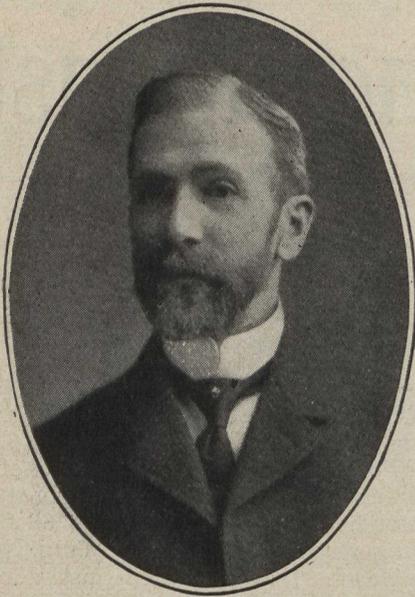
The original offer comprised some 46 acres of land, after deducting the lots for the school and school gardens and a strip along the road required for road purposes. In the second gift, known as the Harris farm, there was originally about 50 acres, but the lake has worn away a small portion of it, causing the shore road to encroach slightly upon the original area; this, together with a strip required to widen the road to 66 feet on the east side, lessens the area

to about 44 acres. Together, the two farms comprise about 90 acres.

When Mr. Rittenhouse's first offer was made, he agreed also to give the government an option on an 88-acre farm, owned by Mr. A. H. Culp, Jordan Harbor, and located just across the road from the original Rittenhouse farm. Mr. Rittenhouse had obtained an option on the farm from Mr. Culp at \$150 an acre, and agreed to turn it over to the government at \$100 an acre, any time within the next three years. Mr. Culp's farm is sandy in character, and is one of the best fruit farms in the locality. When the first 50 acres, given by Mr. Rittenhouse, were being examined by Mr. C. C. James, Deputy Minister of Agriculture; President Creelman of the O.A.C., and others, it was suggested by some one that it would be much more convenient to have the land for the experimental farm in a block extending from the Rittenhouse school to the lake. After Mr. Rittenhouse returned to Chicago he thought likewise. With Mr. Rittenhouse, whose generosity is unbounded, to think is to act. A few days later he visited St. Catharines and bought the Harris farm for \$4,500, and presented it to the government.

### CONTOUR AND SOIL

On the first farm of 46 acres, the contour of the surface is uneven. There is a variety of soils. In the south-east corner, by the school, are about two and a half acres of light sandy loam about two feet deep. This is the best soil on the farm, and it is to be regretted that there is not more of it. There is, also, a sandy loam strip of about six and a half acres running through the farm, from north-east to south-west, on the north-west side of the ravine. This strip, although sandy in character and excellent for peaches and small fruits, is rather shallow, being only about one foot deep on the average, and it rests upon hard pan. In the ravine, there are about four acres of black muck, rich bottom land, and valuable for experimental work in vegetables. West of the ravine there are one and a half acres of bush. In the north-west corner of the farm there are about four and a half acres of stiff



Mr. M. F. Rittenhouse

Whose name stands for generosity and benevolence in his native county of Lincoln.

red clay. The remainder of this farm is composed of clay loam, some 27 acres, incumbent upon a heavier subsoil about 15 inches deep.

The contour of the Harris farm of 44 acres is more level, in fact, almost all level, with an occasional knoll. On this farm there is also about four acres of red clay. The largest part of the surface, however, is clay loam, about 30 acres, but it is shallow and lies mostly on a red clay subsoil at an average depth of nine inches. There are about 10 acres of sandy loam, six acres of which is more or less in a block, and four acres scattered over the farm in sandy knolls. The light soil averages 15 inches deep, and is incumbent upon a clayey subsoil.

The character of the soil on the two farms, as examined and estimated by a representative of THE HORTICULTURIST, may be summed up as follows:

Sandy loam, in blocks	8½ acres
Sandy loam, scattered	10½ "
Clay loam	57 "
Red clay	8½ "
Black muck, clayey	4 "
Bush land	1½ "
	90 acres

From this it will be seen that clay loam constitutes 65 per cent. of the soil, and sandy loam a little over 20 per cent. While the farm, as a whole, is an excellent one for experimental purposes, yet the percentage of light soil for the culture of peaches, English cherries, small fruits, etc., is too small. This defect can be obviated by the purchase of the land across the road, on which Mr. Rittenhouse has given the government an option, where there is at least 75 acres of excellent light sandy soil, from one foot to three feet in depth,

and lying upon a subsoil also sandy, although slightly heavier in texture. Since the acceptance by the government of these farms, for the purposes of the station, several deputations of practical fruit growers have visited the place, and have expressed themselves as being, on the whole, well satisfied with the property.

OTHER ADVANTAGES

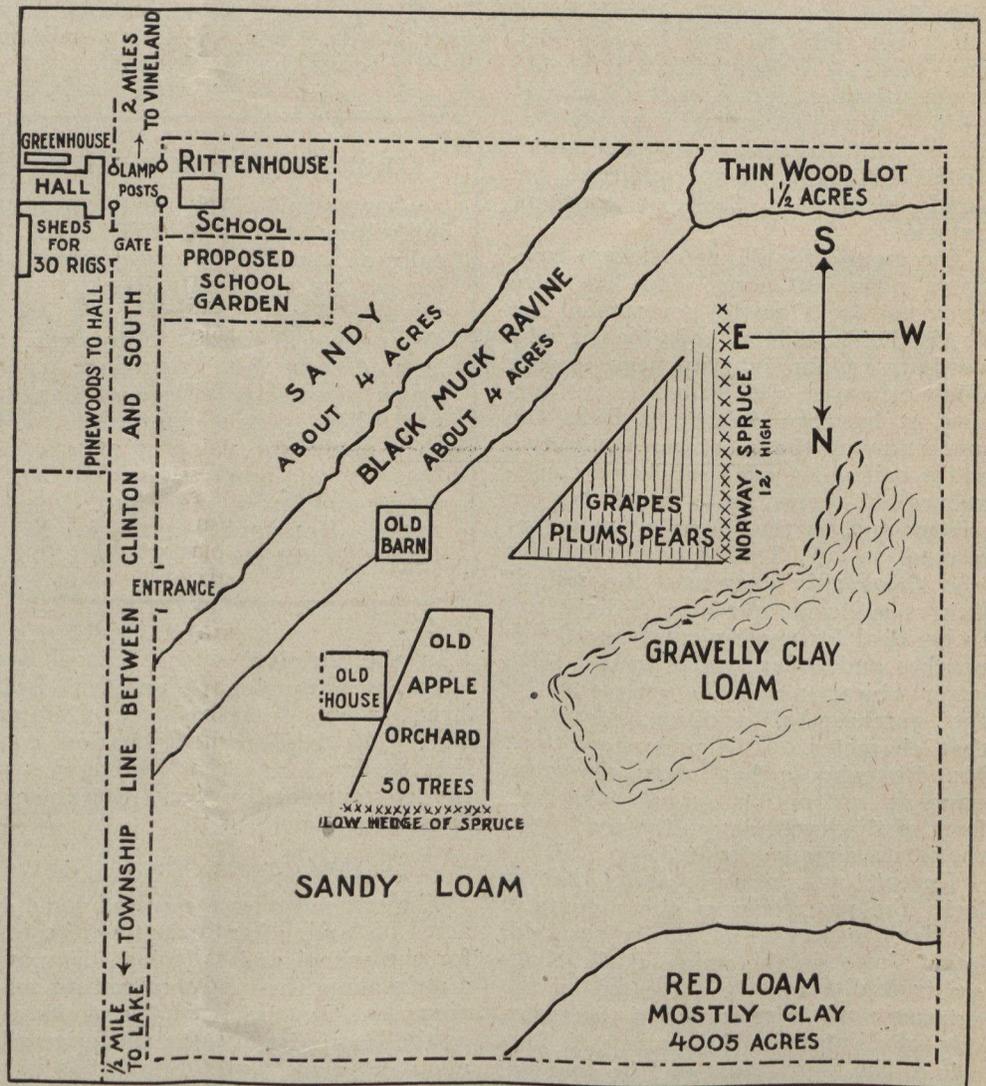
Immediately adjoining it is the Rittenhouse school and school grounds, which are models of their kind. Across the road is "Victoria Hall," splendidly equipped and built for public meetings and entertainments. Both these handsome structures have been donated to the section by Mr. Rittenhouse. On one side of the hall are large, well-built sheds for horses and carriages. There is an excellent system of waterworks in connection. The buildings are lighted with acetylene gas. The grounds around and about the hall and schoolhouse are well laid out and planted with trees, shrubbery and flowers. Nearby

is also a small public park for the use of picnic parties, and others who desire it.

Mr. Rittenhouse has agreed to give the farm the use of Victoria Hall for meetings, classes, etc. The pumping station will supply water to the farm and buildings at cost price. It is understood that Mr. Rittenhouse intends to macadamize the road on the town line from the lake to the stone road under the mountain; and probably he will lay a cement walk from the lake to the G.T.R. tracks.

PRESENT EQUIPMENT

There is now growing on these farms a few small plantations of various fruits. On the first farm that was given there are about one acre of grapes, two acres of apple orchard, one and one-half acres of pear orchard, and a couple of acres of plum trees, the latter of no value. On the Harris farm there are two acres of grapes, nine acres of apple orchard and about one acre of peach trees. The buildings now on the place



Plan of a Portion of the New Experiment Station

This diagram is a fair representation of the contour of the first farm given to the Ontario Government by Mr. M. F. Rittenhouse, of Chicago, for an experiment station in the Niagara district. It was drawn before THE HORTICULTURIST examined the premises as reported in this issue. We believe that a close examination will show that the area marked sandy loam in the diagram, is largely clay loam instead. The area of red clay is 4 or 5 acres, not 4005 acres, and in the left upper corner the word "South" should be "Louth."

consist of two houses and two barns. They are old and of little value.

All that will be done this year will be to put the farm in shape for experimental work. This will require a lot of cleaning, fencing, and draining. The farm is run down, and careful work will have to be done to put it in order.

This year it is proposed to put a good fence around the entire farm. The farm will be cleaned up, old and worthless trees will be removed, some summer fallowing will be done. Probably a man from the Ontario Agricultural College will be put in charge for this summer. Next year experimental work will be taken up and planting will be commenced.

#### APPOINTMENT OF THE DIRECTOR

The government has stated that it intends to take plenty of time to select a competent man for the position of director. Not until such a man is found will the appointment be made. The future of the undertaking will rest largely with the man who is appointed

to superintend the work. It is not likely that any class rooms will be built on the farm just now.

The farm will be attached to the O. A. College, Guelph, and the director made an additional professor of horticulture. Probably the specialists in horticulture at Guelph will be required to take considerable practical training on this farm. In time, perhaps a separate institution for students of horticulture will be established on the farm. Adjoining the farm, as already stated, is the Rittenhouse school. This school is splendidly equipped with a library, museum and other accessories necessary for work in natural science and nature study, and has beautiful grounds and a school garden. This itself might be developed into a school of horticulture. Public school teachers could take courses in nature study right on the farm as well as at Guelph.

#### VEGETABLE EXPERIMENTS

Experiments in growing vegetables

will likely be given equal importance with fruit. At Guelph the work with hardy vegetables and with vegetables under glass will be carried on; while at the new place, investigations will be conducted in the growing of early market vegetables under glass and in vegetables for canning.

Within three and a half miles of the farm is being erected E. D. Smith's canning factory, a big plant, which will tend to stimulate the work of growing fruits and vegetables for canning purposes. This factory, in conjunction with the farm, will greatly increase the value of farms in the neighborhood.

While primarily the farm is to benefit the Niagara district, other sections of Ontario are alive to the fact that the province as a whole will have to pay for the equipment and for keeping it up, and not the Niagara district alone. For this reason it will be so managed as to be of benefit to the entire province, and necessarily to the whole Dominion.

## Ontario Fruit Grower's Opinion of British Columbia

Robert Thompson, St. Catharines, Ont.

**D**URING a recent trip to British Columbia in the interests of farmers' institute meetings in the fruit districts, I had an excellent chance to size up the situation and compare the conditions of the fruit grower of that western province with those of Ontario growers, more particularly those in the Niagara district. In some sections the possibilities in the fruit business are exceedingly great, but there is a large market in the prairie provinces which the production of the immediate future in British Columbia orchards cannot hope to fill.

When I arrived at Victoria on March 5, I found the peach and apricot trees in bloom, and the pears well out. One week later they had four degrees of frost that caused considerable damage to early fruits. On Vancouver Island the fruit grower is sadly handicapped, owing to the long distance from market and a lack of enough growers in one locality to make up car lots. As soon as they form cooperative associations and make up car lots they will be able to ship to some of the northern coast markets.

In the lower country and along the Fraser delta they have to do a great deal of spraying, and fruit growing is not increasing very rapidly. In the upper country valleys, however, you hear fruit talked of everywhere. The fruit industry bids fair to be the largest cultivated crop in the province. Excursions are run in from Winnipeg to the Okanagan valley, and land is being sold in many places at \$40 to \$200 an acre unimproved. In many places the

land is sold in 10 and 20 acre lots. The greatest boom is from Enderby to Vernon, and down the shores of the Okanagan lake to Peachland and Summerland.

Around Salmon Arm there appears to be a large area suitable for apples for sale at reasonable prices. In the Kootenays there are some places where it is claimed that apples and berries will do better than in the Okanagan. The Kamloops district is too dry without irrigation, and I do not look on this section as likely to be a heavy fruit producing section. From 800,000 to 1,000,000 trees were planted last spring, but as a conservative estimate not one-fourth of them will ever produce fruit. Many unsuitable varieties are purchased. Peaches and Japan plums are planted where the frost will kill the bloom. In British Columbia, trees should be planted not over one year old, but the people persist in buying trees two or three years old. Others plant them in wheat fields and in meadows, where they stand for one, two or even three years, and have made little, if any, headway.

Nevertheless, Ontario fruit growers need not be jealous of their western brethren, as the growth of the Territories will absorb all the fruit produced by them for many years. The apple trees bear very young; in fact, too young, as it checks their growth if the orchard is not well cared for. In many sections the blight is very bad on the pear trees. Our fruit growers think that they have a hard time fighting in-

sect pests, and suppose that our western friends have no troubles, but I found it was only the wideawake, active grower, who cultivated, pruned and sprayed, who was making a success of his business. The climate is ideal, and possibly in some sections too dry in summer, but where they can get a sufficient water supply irrigation takes the place of the rain.

The packing is nearly all done after the western states style in boxes. Grapes will never be a great success, owing to the cool nights. The people are whole-souled, generous and hospitable, very ready to give information, and as ready to learn and adopt anything that they consider may benefit them in any way. British Columbia is sharing in the boom of the Northwest, as many of the older settlers in the prairie provinces are selling out and moving west. Many English and Scotch settlers are coming in and settling on fruit lands.

After seeing the country and the conditions under which the fruit grower has to produce the fruit in the west, and comparing our lot in the Niagara district with theirs, I have no hesitation in saying that we have as good a chance to succeed here. We have no more drawbacks than our western friends, and we have a larger and more varied market. Canada is a great country. We think we have the Garden of Eden in our section, and our western friends are also justified in thinking that they have it in a dozen places in their many valleys.

## Summer Treatment of Orchards

ORCHARDISTS in the leading fruit sections are adopting clean cultivation and cover crops in late summer more commonly as the years go by. There are a few fruit growers who do not consider the benefits derived from such system sufficient to cause them to go to the extra labor and expense, and so prefer to leave the fruiting land in grass. The experiences of many of the most successful growers and the results of experiments at colleges and stations, however, have shown that in most cases, for successive crops of good fruit, it is advisable to practise clean cultivation.

most successful orchardists have been obtained by THE HORTICULTURIST.

"My orchard," wrote Mr. F. G. Stewart, of Homer, "is so very stony that I cannot cultivate it as I would wish. I keep it in sod, cut the crop, let it lie on the land and feed it one year with ashes, 50 to 60 bushels an acre, and the next year with tankage 400 to 500 lbs. an acre. Prior to 1905 I had eight successive crops. Last year I had but very few.

"If I could cultivate the orchard, I should put in a cover crop of mammoth clover. I intend to do this with my plum and cherry orchards as soon as the

growth is very vigorous at the expense of fruit buds, I have found it advisable to let the orchard remain in clover sod without cultivation for one or even two years. This treatment gives a very noticeable increase in blossom buds.

"Among the cover crops used generally throughout Ontario, the common red clover is found the most desirable for the St. Lawrence valley. Crimson clover is not hardy and will very seldom or never pass the winter alive. Soy beans, or Soja beans, and vetches are valuable in their fertilizing qualities, but are difficult to move among, and wet in the mornings for the pickers.

"The most serious losses from winter killing during the past four years have been in orchards under clean cultivation, and the fewest losses in orchards in sod. But, we must bear in mind the value of our orchards under the several treatments from a commercial standpoint, and it is up to us, as fruit growers, to bring our orchards into the highest state of fertility and productiveness, keeping in mind the importance of getting our wood growth thoroughly ripened before winter sets in."

### PRIZE-WINNING FRUIT ON SOD

That some orchardists produce excellent fruit without cultivating is shown by the record made by Mr. C. W. Challand, of Marbourg. Last fall, at Toronto, he had seven entries and carried away five first prizes. In 1904, three first prizes were awarded for three entries. Last fall his sales amounted to \$675, while scarcely another grower in the neighborhood had saleable fruit.

In a recent letter to THE HORTICULTURIST, Mr. Challand wrote: "The orchard has been in sod for 14 years, pastured by sheep and divided into parts in order to give fresh pasture. It is eaten off much more evenly than when the whole run is given at once. Last spring I plowed the orchard because so much manure had been added around the trees that the grass grew so long and so wiry that the sheep would not eat it. After about two years I shall seed it down again. During July, I intend sowing rye, and it will be plowed under next spring. The soil is clay loam.

"For the last eight years half the trees each year had a dressing of barnyard manure at the rate of about one load to four trees, according to size of trees, spread out nearly as far as the branches reach. The last two years no ashes have been used. During the four years previous about 1,200 bushels of ashes were used at the rate of one to two bushels per tree, according to size of tree, scattered around about as far out as the top reaches.

"In 1896 I purchased a sprayer and



The Work that Generally Results in Large Crops

View of a quarter mile row of Gravenstein and King apples in Hillcrest Orchards, Kentville, N.S., showing reversible extension disc harrow, sulky gang plow, and two low wagons with 100-gallon hogsheads used for spraying.

If cultivation is kept up until late in the season, tree growth continues, and the wood is not ripened when heavy frosts come. The result is that many trees are ruined. In recent years orchardists have adopted the planting of cover crops to overcome this feature. Many kinds can be used to advantage, but it has been learned that the locality and the climatic conditions regulate to a certain extent the cover crop that will give best results.

The general benefits are numerous. In most cases some of the leguminous crops, such as clovers or vetches, are used, because considerable nitrogen is incorporated with the soil. In any case, humus is added and the plant food rendered more available. Rains and snows are held until they have time to soak into the ground; and, in spring, the evaporation through the leaves causes the land to dry and be in fit condition for cultivation earlier than in orchards where no crop is grown.

The experiences of some of Ontario's

crop is picked. I have tried rape, but although it makes plenty of humus, I do not find it adds enough nitrogen. Clover does both."

"In the St. Lawrence valley, east of Kingston, wrote Mr. Harold Jones, of Maitland, "my experience has been a clean cultivation during the summer, with a cover crop sown as late as August 1 or 15, produces a late succulent growth of green wood, not sufficiently ripened to withstand our winter. Taking these conditions into consideration, I should advise that clean cultivation practised up to and not later than July 1, and then sowing thickly with red clover, say at the rate of 10 or 12 lbs. to the acre, gives our trees every chance for rapid and vigorous growth in the early summer, as well as rapidly developed fruit. Then a heavy seeding of clover has a tendency to check growth sufficiently to have the twigs well-ripened before winter sets in, besides giving us a clean sod for the fruit that falls.

"In heavy, strong soils, where wood

used the Bordeaux mixture with  $\frac{1}{4}$  lb. Paris green added to each barrel. The last two years I have used a mixture I like much better. The mixture I use now for one barrel is: Blue vitriol, four

pounds; fresh lime, 16 lbs.; Paris green,  $\frac{1}{2}$  lb.; white arsenic,  $\frac{1}{8}$  lb. The white arsenic is prepared by boiling one pound white arsenic with two pounds of sal soda for 45 minutes in an iron kettle

with two gallons of soft water. Apply with a good sprayer that has a good agitator and don't be afraid that your barrel will be empty too soon for your pocket book.

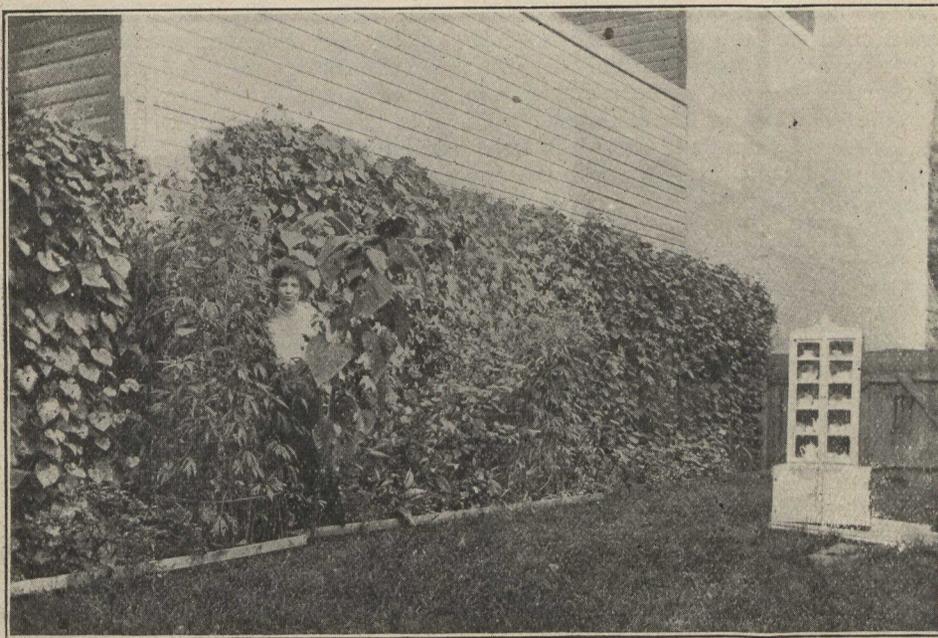
## Improving a Child's Playground

THE views here shown were taken by Mr. W. A. Code, of 327 Waverley St., Ottawa, showing his yard in August of last year, and while Mr. Code primarily intended the photographs to display his handiwork, as evidenced by

thrown back a very strong glare and heat, and all round an uninviting board fence the same vines were struggling for supremacy with the result seen in the photos.

The strip, termed a garden, also

ums and a variety of other plants not easily discernible. Having put so little effort into the undertaking, Mr. Code naturally felt amply repaid and encouraged over the result. The same returns might be obtained by others of our readers as a reward for the expenditure of a little energy and a few cents. The influence such pleasant surroundings have on the children is an important consideration.



A Screen of Vines and Perennials

the little cabinet he had just completed for his daughter of five, he has reproduced them with a view of showing; in a small way, what a little trouble will accomplish toward improving unattractive surroundings.

Having inherited a slight taste for gardening, Mr. Code, when first he took up his residence at his present address, some seven years ago, attempted growing vegetables of different kinds in a small plot in the rear of his premises, but the soil, not being good, and his little daughter requiring a play-ground, he levelled off the whole plot—an L-shaped space about 45 feet long by 33 feet wide at the rear half—and sowed grass seed thereon. His desire, however, for some sort of garden was too strong, and accordingly a narrow strip of one and a half to two and a half feet was encroached upon all the way round the yard, and this plot prepared with a cart load or two of sand and loam, which was mixed with the original soil.

Morning glory, wild cucumber and scarlet runner vines were soon growing up the side of a neighbor's back

kitchen, which on hot afternoons had lent its quota, for therein, as may be seen, flourished golden-glow, gerani-

## Destroying Cut Worms

T. D. Jarvis, B.S.A., Guelph

What is the best remedy for the cut worm on tomatoes and peppers? The worms assume the color of the soil in which they work, and burrow themselves under the plants they cut off.—W. C., Burlington.

The larvæ of cut worms are about  $1\frac{1}{4}$  inches long, smooth and naked, presenting a greasy appearance. The colors are generally some shade of green, grey, brown or black. Most of them are night feeders. The natural home of the cut worm is on sod land, and it is well to avoid planting tomatoes and peppers and other crops specially liable to their attacks after grass.

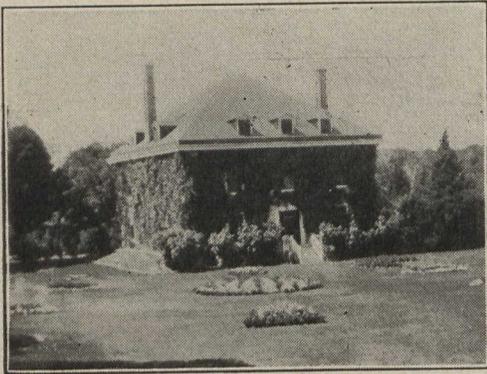
Poisoned baits, such as small bunches of clover or cabbage leaves dipped in Paris green solution (one pound Paris green to 100 gallons of water) and placed near the attacked plants, may be used to advantage. The cut worms feed on these and are destroyed. Poisoned bran, sweetened with a little molasses and made into moist balls the size of plums, has given excellent results.



A Child's Playground Beautified

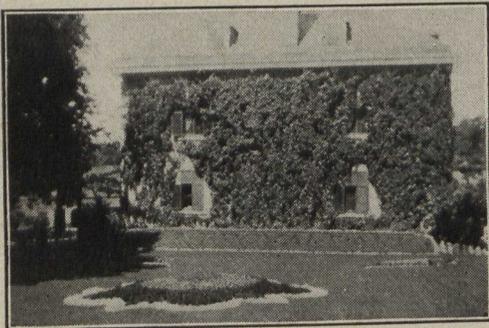
### A Montreal Vine-Clad Home

The home of Mr. J. Henderson, superintendent of Mount Royal Park, Montreal, is shown in these two illustrations. The grounds in the foreground



A Beautiful Vine-Clad Home

are beautifully planned and planted. The grand old vine on the residence is the common Virginia creeper, *Ampelopsis quinquefolia*. It is at least 30 years old, and climbs on wires fastened to the brick walls. A house is seldom beautiful without climbers to add a touch of color and to relieve the bareness of the walls. The old-fashioned Virginia creeper is one of the most popular for the purpose. Luxuriant



A Virginia Creeper in Montreal

in its cool, dark green growth in summer, and dying off in resplendent hues in autumn, it rightly deserves its popularity.

The Virginia creeper is one of the hardiest of hardy climbers. It is easily propagated and easily grown. It is best for the amateur to buy the plants from some reliable nurseryman, as they are not expensive, and a year's time will be saved. The vine is increased by cuttings of moderately ripened shoots, which should be taken in late fall and stored until spring, or where facilities are available, the cuttings may be started in a house or in a cold frame. By the following autumn these cuttings, under ordinary treatment, will make good plants.

### Chinese Lilies

Some Chinese lily bulbs that I put in water grew well but failed to produce bloom. What might have been the cause?—C.B., Ottawa.

This might be due to two causes. It may be that the bulbs used were not

matured, or it might be that at the time the flower was starting to come the bulb had not sufficient nourishment to develop its florets. The Chinese select three grades of bulbs, first, second and third. The thirds are very inferior, and very seldom flower. Seconds will flower very well. Firsts will give satisfaction to any person.

I do not think it is any fault on the

part of the grower with the exception that a little ammonia in the water might have helped the bulb to develop its florets. It is more than likely that the bulb was such a small size, it had not sufficient nourishment to develop the perfect plant. Be sure to have a large bulb another time, and I think you will have no difficulty in securing flowers.—Herman Simmers.

## Wild Flowers for the Hardy Herbaceous Border

A. Alexander, Hamilton, Ont.

IN the April number of THE HORTICULTURIST, a few of the earlier plants native to our woods and fields were named as having been satisfactory additions to the hardy garden. In this short article we will name a few more desirable subjects for the same use.

The first we would call attention to is *Phlox divaricata*. It is found growing plentifully in many of our woods and shady places. It is a very attractive plant of a fine light lilac color, the loosely flowered panicles growing to a height of nine inches or a foot. It flowers for four or five weeks during May and June. A partial shade is preferred, though I have had it thrive in the open border, among its sun-hardened new acquaintances.

*Geranium maculatum* is another native that always gives satisfaction. After being planted it will increase in size and profuseness of bloom from year to year. My specimen has been in the same spot for at least 10 years, and has been blooming all through June and was conspicuous during part of May. The flowers are light purple.

*Smilacina racemosa*, False Solomon's Seal, is quite an acquisition to any garden. It is found growing in rich woods. With its very graceful, bending stems and its terminal plume of creamy white flowers, it is a thing of beauty. It

is also fragrant and the flower is succeeded by a cluster of pale red berries, spotted with purple. Why it should be called *false* Solomon's Seal I am at a loss to know, unless it be that it is very often found in close companionship with Solomon's Seal. It surely has originality enough to have a name to itself.

There is a little flower, a favorite of mine, *Tiarella cordifolia*, the foam flower, or False Mitrewort, which I intended to have referred to in my last talk of the wild flowers, is a beautiful little gem and fragrant. The leaves are very persistent, and are often richly colored in the fall.

Those who have room should have some members of the aristocratic orchid family, especially the *Cypripediums*, or Ladies' Slippers. They are still to be found in many shady woods and dells. The easiest of cultivation are *Cypripedium pubescens* and *C. spectabile*. I have had the former of the two for many years. It is yellow and responds to good treatment in the shape of good soil and favorable locality.

The only other plant I would refer to is *Actaea spicata rubra* (Baneberry). It has a spike of white flowers early in the season. These are succeeded by clusters of cherry-red berries, which are very beautiful.



*Actaea Spicata*, Baneberry



False Solomon's Seal

# Summer Treatment of Plants for Winter Beauty

TO grow plants and flowers successfully during the balmy days of summer is easy for the most amateur enthusiast who is willing to devote a little time and to exercise common sense in the treatment accorded. Success during the dull cold days of changeable weather common in Canada during the winter months is, however, a more difficult proposition. Too many who have beautiful gardens in summer forget that plants cannot maintain their cheering beauty for 12 months of the year unless they are given special treatment, care and attention. Professional florists, with every facility for controlling heat and moisture conditions, do not, as a rule, attempt to induce bloom continuously. How, then, can the amateur with ordinary house temperatures and conditions such as they are in the average living room hope to do so? The plants must be prevented from producing bloom in summer if they are wanted for brightening up the windows of the home during the dreary days of winter. If this is done and care taken to maintain a temperature sufficiently high and to give the proper amount of water, plants put in fresh potting soil will repay the owner with a liberal supply of bloom in the winter season.

There are many plants that can be used to advantage. Of the flowering plants, geraniums are perhaps most frequently used. Begonias and fuschias and the ever-flowering member of the balsam family, *Impatiens Sultani*, too, are common. Although these produce bloom of better quality in the warmer season, they are worth having for window culture in winter. Many horticulturists, however, prefer the non-flowering plants such as ferns, palms, rubber plants, etc., for decorating the living room in the cold months.

THE CANADIAN HORTICULTURIST recently obtained the opinions of successful growers, who have had lengthy experience, regarding the best treatment of the different plants during summer and fall to have a brilliant display of foliage or bloom in winter.

## POT DURING JULY

"Where there is no gas and no coal stoves," said Mr. Thos. Manton, of Eglinton, "lovely window plants can be had by potting geraniums early in the summer in four or six inch pots, and plunging them outside until fall. The plants make a stout and rugged growth, and if the flower buds are nipped off during the summer an abundance of bloom will be produced during the dull months of winter, provided the air is pure and the temperature not lower than 50 degrees. Plants are like persons. If they are left outside in

the fresh air, where they get plenty of sun, they become strong and able to stand the hardships of winter.

"Boston ferns, too, should be plunged outside in pots the same as geraniums. If given plenty of water they grow rapidly, and although they may be hard lookers in the fall, they go into the house healthy and strong, and present an attractive appearance all winter.

"The rubber plant is an old favorite. It, too, should be plunged outside. In a healthy plant the roots are located chiefly around the edge of the receptacle. When plunged these roots do not become scorched, and the plant becomes



Geranium Maculatum

strong and robust and in fit condition to endure the conditions to which it must be subjected during the winter months.

"Winter flowering begonias are much sought after by flower lovers. By plunging the pots outside during the warm months, a desirable short-jointed growth results, and the plants are ready for bloom almost immediately after being taken in. *Begonia manicata aurea* is one of the most beautiful plants for winter culture. Besides, there are the desirable varieties: *Begonia incarnata*, *Begonia fuchsioides*, *Begonia multiflora*, and many others."

"Ferns are the most satisfactory plants for window decoration during winter in the private house," said Mr. A. Houston, head gardener at the Parliament Buildings, Toronto. "Tulips and hyacinths, however, give the best returns for the labor that is required in attending to them. For this reason many amateur flower growers prefer them to any other plant for window decoration during the winter months. Palms are excellent house plants. The members of the *Kentia* family are most desirable. Care must be taken, how-

ever, not to give them too much water. The average amateur is too lavish in supplying water to his window plants. In many cases a saucer is kept underneath and water kept in the saucer. No plant can be expected to thrive under such conditions.

## WINTER TREATMENT

"It is a difficult matter to have continual success in inducing plants to bloom during the winter months in the temperatures that are found in ordinary living rooms. It is too much of a strain on the vitality of the plants. In greenhouses the temperature can be kept more uniform and better returns repay the grower for his labors. The *Nephrolepis* ferns can be made to present an attractive appearance, but they do not make the growth that is common under greenhouse cultivation. With window conditions, in the average dwelling, the plants can be kept alive over winter, but usually the results are not very encouraging.

"Among the bulbous plants, for forcing in winter, hyacinths are the most satisfactory. Tulips also are good. The former frequently do fairly well in glasses of water, but the results are much better when soil is used. The best plan is to purchase the bulbs in October, and bury them in the cellar until February. Some of the tulips may be taken up in January. In some instances the bulbs are buried in ashes outside with success. The time of taking them up depends on the amount of roots in the pots. While the bulbs are lying dormant roots develop. They are not injured if the temperature goes a few degrees below freezing. When uncovered they must be kept for a few days where the atmosphere is about the freezing point. The temperature can be raised gradually to 45 or 50 degrees, under which conditions they do best.

## GERANIUMS

"Geraniums are common plants for window culture. To induce bloom during the dull months of winter it is necessary to keep the flowering buds pinched off during the summer. The pots should be plunged outside about June, and the plants left there until September, at which time they should be shifted to larger pots, in which they can be left until spring. Flossoms will come in a very short time, but they will not be so good as those that appear in the summer. The addition of liquid manure helps to make the bloom of better quality.

"*Impatiens Sultani* is a marvel for bloom. If treated much the same as recommended for geraniums, a pleas-

ing effect will be produced throughout the winter. It is very difficult to induce fuschias to bloom copiously during the cold months.

"Most house plants should be plunged outside. The objection to setting them out of the pots is that in taking them up again in the fall the roots are mutilated. Under outdoor conditions the moisture is more uniform. A handful of cinders should be placed underneath each pot to ensure perfect drainage. In September the pots should be lifted. If they can be put in a cold frame and left there until October, better results will be had in winter. Care must be taken not to have too much moisture around the plants. Never allow water to lie at the roots. It is much better to have the plants too dry than too wet."

In a recent interview with Mr. O. Grainger, of Deer Park, he stated that geraniums are the staple plant for window decoration in private houses during winter. "For best results," said Mr. Grainger, "new soil must be given every year. The growth made during the winter months exhausts the earth in the pots. In the spring the best plan is to take the plants out of the pots and set them in the garden. Stout,

strong growth is made during the summer, and before frosts come in the fall the plants can be taken up, put in fresh potting soil, and set in a sunny window. If the plants are cut back and the shoots taken off, young growth is induced, and in a short time flower buds appear.

"Begonias, too, are excellent for winter window decorations. If kept outside all summer the same as geraniums, they will do well throughout the winter. The tuberous-rooted specimens cannot be treated in this way because they die down in the fall and must have a rest until spring. Rex begonias are very desirable for winter use, while the tuberous begonias should be cultivated for spring decoration in the spring.

"Fuschias, if bedded outside during summer, and put into pots when taken up in the fall, are very desirable. They immediately shed their leaves, but if carefully attended to and kept moist new growth soon appears, and an abundance of blossoms burst open late in the winter or early spring.

"Impatiens Sultani is almost a perpetual bloomer, and should be found in every collection of window plants. If well attended to and given suitable

soil, this plant will present a pleasing appearance all through the winter.

"Petunias are of little value for the window collection during winter. With most specimens new plants have to be raised each spring, and by fall they have become too large. Some of the double varieties can be propagated from young shoots, and are used in windows for winter decoration.

"There are a few plants that can be used to advantage in winter by sowing seed late in the summer or early in the fall. Cinerarias, if sown in the latter part of July or early in August, will come into bloom about March 1. The seed should be placed in pans, and as soon as the seedlings are large enough to handle they should be transplanted into flats. In a short time they can be placed in small pots. After a few weeks, a final shift can be made to pots large enough for them to flower in. Calceolarias are not usually a success under winter conditions. They require high temperature. If the seed is sown in August and favorable conditions are maintained throughout the winter, these plants make a brilliant display in May. As soon as the warm summer weather comes they make vigorous growth and give lots of bloom."

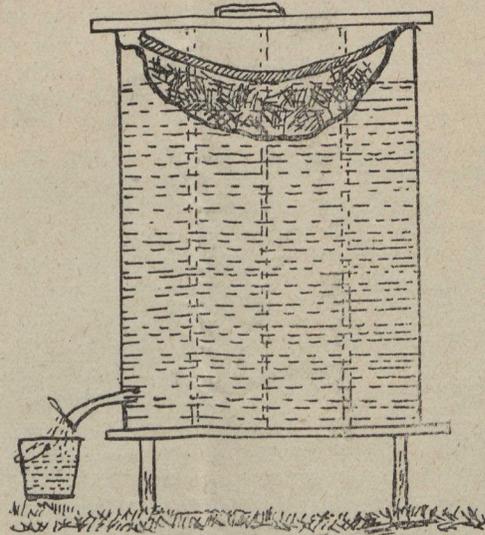
## Hints for City Gardens During July

**W**ATER, water, water is the cry from the garden during the hot days of July, and your success with your plants will depend on how you answer it. Every garden makes a special demand upon some method of watering or irrigation. There are various ways of watering the garden, each best adapted to certain conditions under which the gardener works. Those favored with a city water supply are to be envied.

It is better to give plenty of water every few days, than a little each day. The surface is kept moist by the latter method, and the roots rise for the moisture, and thus are easily injured by the heat of the following day by being near the surface. Enough water should be given to wash the leaves and sink deep. The best time for amateurs to water is at night. Then the moisture has a chance to do its best work before evaporation begins under the hot sun the next day.

Scarcely any amateur gardener will go to the trouble and bother of preparing a supply of liquid manure at frequent intervals. This may be done easily and simply, in the following manner: Hunt up any old paint or oil barrel. Half a hogshead will do if available, or even a large packing case, although the barrel is better, as it has no corners and is more watertight. Sus-

pend a half empty sack in the top of barrel, as shown in the illustration, fastening the sacking to an old iron hoop, caught over the top edge of the barrel, or to sticks placed across the top. Fill this sack with fresh cow manure



A Simple Method of Mixing Your Liquid Fertilizer

and suspend it in the barrel as shown. Nearly fill the barrel with water, put the cover on, and in a short time the liquid will be ready for use.

A spigot, fastened at the bottom of barrel, will be found a handy means to draw off the liquid for use in the gar-

den. Several refillings of the barrel with water may be made before the sack of manure has to be refilled. By suspending the manure in the sack, no sediment will form at the spigot to stop the drawing off of the water for use.

One of the most expensive habits of most gardeners is the wasting of time between crops. Many think as soon as September comes, that the garden is about over for the year. Waste no days in the garden. There are at least 11 vegetables that can be planted in July: beans, early peas, corn, beets, carrots, cucumbers, lettuce, radishes, okra, cress, and white French turnip. As fast as crops mature, put in something else. Don't let your garden run out the first of September or October. Use your land for "all it's worth" till the cold weather won't let you use it any more.

Don't supply your men with poor tools and expect them to get the best crops in the neighborhood. You can get more work out of a man and better results by giving him a good wheel hoe, than letting him shift for any old thing to hoe with.

Plenty of manure water for young celery plants will amply repay for trouble in maintaining a supply constantly on hand. It is hard to overfeed or over-water celery plants.

Don't let the tomato vines run glori-

ously to vines. Cut out the many spindly, weak shoots, which only take the strength and vitality of the plant from the larger branches. Get larger and better tomatoes by letting in some of God's sunlight and daylight.

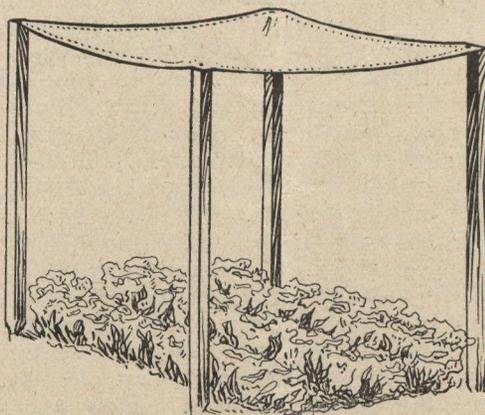
Draw up the earth carefully around the leeks to blanch them well. You will get enough more for your crop to pay for the little extra labor. Onions should not be hilled up as they naturally grow on the surface of the ground.

If you have a vacant spot in the garden in some corner, where nothing has been planted, utilize it by setting out late cabbages in July. Should the midsummer bring with it the pretty little white butterflies, whose young are so destructive to your cabbage, they can be turned out of your domain by dusting with hellebore or some special preparation used for such purposes.

When the lima beans have reached the limit of their supports, they should be topped off, to throw their strength into the pod and beans proper.

No amount of care will produce good, tender vegetables, should they once get a check in their growth. Hot weather is bound to check them unless they are given plenty of water. A

good way to look after this is to keep in the ground the moisture already in it. It is not pleasant to hoe the garden in the scalding sunshine, with the thermometer at 90 deg. or more. Get a little wheel hoe and go out in the early morning or after sunset, and note the difference in the garden and yourself as well.



An Inexpensive Shade for Your Lettuce Plants During July

Black seeded varieties of lettuce are much the best for hot weather. At the hottest period of summer, the lettuce will become bitter and run to seed.

Screen the lettuce with an inexpensive home-made affair like the one shown in the illustration. Cheesecloth is used to stretch over the frame, made but roughly out of available sticks around every one's place, and such a screen, stretched over the lettuce bed sufficiently far above the plants to allow a circulation of air, will help out wonderfully. The summer crop might be planted in that shady corner you were wondering what you would use for earlier in the season.

Keep surface soil well loosened around the maturing beets, or their growth will be checked. Keep them well thinned.

The runners of the squash and melon vines are making growth while the sun shines, and are using up all the good moisture for themselves, while the fruits are thirsting for a drink. Cut off these beggars and throw the growth into the melons and squashes. Give the vines plenty of manure water, which will satisfy their hunger as well as their thirst at the same time. Pinch out the ends of the main vines, and stop the lateral shoots, making your fruit sweeter, and of better flavor as the sun gets at it, and who or what is not better for the sunshine?

## Making the Most from the Market Garden

VEGETABLE growers in the vicinity of Toronto are forced to make the most out of their land. Property is valuable and taxes are high; market gardeners, therefore, cannot be satisfied with obtaining one crop in a season. Everything possible has to be done to make the land yield returns throughout the growing season.

Various ways are tried by different growers with the object of obtaining maximum profits. A representative of THE CANADIAN HORTICULTURIST, who visited Mr. Geo. Syme, Jr., of Carleton West, president of the Toronto branch of the Vegetable Growers' Association, was much interested in the methods adopted on the Syme farm, which comprises about 30 acres. The farm is in excellent condition. Part of it comprises some flat, low land, of black, loamy soil, and the remainder is higher land and more of a sandy loam. This gives an excellent chance to grow the various garden crops, and have them coming in at different seasons.

The lower part of the farm is specially adapted to celery growing. On account of its location it is naturally inclined to be wet, but a thorough system of drainage, with tile drains about 15 yards apart, has remedied that defect. Six inch sewer pipes of second grade are used in the main drains, while in some of the laterals ordinary

two inch tile are used. The small pipes, however, do not give entire satisfaction as they frequently become plugged.

"Authorities," said Mr. Syme, "claim that a rotation of crops should be practised. On part of our farm, celery has been grown every year for 30 years, and last year's crop has been as good as any that has been grown there. In fact, the celery seems to be better every year. Every year we put on as much manure as can be plowed under. Within certain limits vegetable growing pays in proportion to the amount of manure added to the soil. Some growers say that black loam adapted to celery growing requires no manure, but this is not so. In the spring, as soon as the ground can be worked, it is plowed and harrowed. Then a coat of fertilizer is used, and the harrow again run over it. The young plants are then put in, and as soon as they become established, more fertilizer is scattered between the double rows. We use Bradley's Fertilizer at the rate of about 800 to 1,000 pounds per acre. In applying it, however, special care must be taken not to let any of it touch the leaves of the plants as it is very strong and burns them.

"In setting the early crop of celery, I prefer planting in double rows, because more can be grown to the acre, and the bleaching can be done more

easily. The inside of the rows is bleached by their own shade, and by placing boards on either side, the bleaching can be completed in 10 to 14 days. If the ground is not rich, however, the plants should be set in single rows. The first planting is done about May 10, and frequent plantings are made until July 1. Then, for a very late crop, more is put in as late as August in soil from which potatoes have been taken. Before planting it is wise to pack the soil firmly where the plants are to be placed.

Each plant is planted by hand, the roots being placed over the ball of the thumb and pressed under the surface of the soil. In this way the work can be done very quickly. One man can easily plant over 1,000 in an hour. (One of Mr. Syme's men was planting while the representative of THE HORTICULTURIST was there. He took out his watch and timed the planter without his knowing it. Twenty-seven plants were put in in one minute.)

"The double rows are placed three and a half to four feet apart and a space of six inches left between the rows with the plants 12 inches apart, those of one row being opposite the spaces of the other. Careful cultivation is necessary, and it is essential that the weeds be kept down. In the early part of the season, shallow horse

cultivation can be practised, but the roots of celery plants forage widely, and after about two months horse cultivation must be discarded. After that time it is not safe to hoe deeply. It is much better to pull the weeds by hand. Where the ground is not comparatively clean, single rows should be planted.

"Within the past few years we have changed our methods of planting celery. At one time it was thought that a good crop could not be produced unless a trench were dug and three or four inches of manure placed in the bottom of it, soil put on the top and the plants set in this soil. It was found, however, that when the roots reached the manure they went no farther. The result was that the root system was partially destroyed, and soon the top became blighted as well.

"The place of planting late celery is regulated by the nature of the season. If there has been little rain single rows are planted between the double rows that were put in for an early crop, because celery would not thrive on higher land of a more sandy nature in such a season. If, however, there has been plenty of rain, the late crop is planted on the high ground from which an early crop of potatoes has been taken. It can be put in as late as August. Single rows are preferred because it must be placed by banking with clay. If an attempt were made to bleach double rows by boards late in the season, the celery would be seriously damaged by frost. In fact, more injury would result to celery with boards around it than if it were standing naked. I have left the crop out as late as November 15.

#### BLEACHING CELERY

"In bleaching celery care must be taken not to have more of the early crop boarded in than will be sold within two weeks. It is better to have it too green when marketed than to have it overbleached. The difference is so great that some customers think that there is a difference in the soil. The

main essential, however, is to regulate the bleaching to suit the sales. Late celery should never be put on low, wet ground, because the fall rains cause the ground to become wet and cold, and the roots are injured, making the plants susceptible to blight.

"Many schemes are adopted to avoid wasting ground or let it go idle. Lettuce can be planted about May 24, and in the latter part of June single rows of celery can be placed between these. The lettuce will be done in time to allow banking up the celery. Early cabbage can be set out as soon as the ground is fit for cultivation, and Brussels' sprouts set between these about the middle of June. When the ground is kept busy the weeds are more easily kept in check. Onion sets are put in early in the spring in rows about 15 inches apart. Then about June 15, cauliflowers are planted in every second space. Beets, carrots, onions, etc., are planted in rows 14 or 15 inches apart. Silver skin onions are planted extensively because there is no difficulty in cleaning them.

"An early crop of peas can be produced by sowing the peas between onions from California sets. These sets are planted about the last of August, or as soon as the onions of the previous season have ripened their sets sufficiently for use. They are planted in rows about three feet apart and kept well cultivated until late fall. As soon as the snow has gone in the spring they are ready for market. A few are kept to produce sets for planting the following August. Early in the spring the scuffler is run between these rows and peas planted there. Knott's Excelsior is the most satisfactory for early production. There are dwarf growers that are well podded with peas of good quality. This year the first was taken to market on June 19 and brought \$2 a bushel.

#### CAULIFLOWERS

"A sandy loam suits cauliflowers well, but the early crop cannot be grown successfully in such soil on account of the maggot. When the plants are set in

stiffer soil the damage due to this insect is very slight, while if the plants were put in a sandy loam almost all of them would be destroyed. About July 1 the pest ceases to work, and very few plants set out after that date are lost. With the early crop all that can be done is to set new plants in places where the maggots have played havoc. In this way a full stand is had by early July. This suits for marketing, as the crop does not all come in at once, but the grower hates to have to plant a second time.

"The green cabbage worm sometimes makes inroads on the cabbage and cauliflower patches, but it is easily kept in check either by hellebore or Paris green. The best plan is to mix these ingredients with land plaster or lime and dust a little in the heart of each plant. The hellebore is most satisfactory because it destroys every insect it touches, while the Paris green must be eaten before the pests are killed."

#### TRANSPLANTING POTATOES

An experiment has been tried in transplanting potatoes from the greenhouse. The tops are large and healthy, but the tubers are not as large as those in a patch planted early in the ordinary way. Transplanting was done about May 10, while the field planting was done as soon as the ground could be worked.

The potato bugs are kept down by frequent sprayings of Paris green. Mr. Syme claims that it is not essential to have force supplied by means of a pump. The plan he has adopted is to place a barrel in a high dump cart. Sufficient pressure is supplied by siphon system to spray the potatoes. Lines of hose extend from the bottom of the barrel far enough to reach the potato vines. On the end of each hose is a rosette to form a spray. All that is necessary is to start the flow, and it continues as long as the rosette is not raised above the level of the mixture in the barrel. Spraying can be done rapidly. This system has given thorough satisfaction.

## Troublesome Diseases of Beans

**B**EAN growers of Canada will be greatly interested in a bulletin recently issued by Prof. H. H. Whetzel, of Cornell University, Ithaca, N.Y., in which is given a description, life history and effective treatment for the three most disastrous diseases of the bean crop. After discussing how these diseases are confused by growers, Bulletin 239 says in part:

"In order to combat them successfully it is necessary that the grower have

some idea of the differences in these troubles, or at least that he apply the correct name so that he may intelligently consult bulletins or books dealing with them. The following key will enable you to determine this with considerable certainty: 1. Rusty brown or black spots on stems, pods or leaves. These spots occur on the seed leaves of plants just up. On the leaves of older plants they blacken and kill the veins on the underside. Diseased seeds show red-

dish brown or black spots and are often shrunken or shrivelled. This disease is the *Anthracnose*.

2. Leaves at first with large watery brown patches which shortly become dry and brittle. The diseased leaves curl more or less and look as though they had been scorched. Affected pods show "watery" spots, which do not become black as in the case of anthracnose. Entire pod may become soft and rotten. This disease is the *Blight*.

3. Leaves usually remaining green or in severe cases becoming of a sickly yellowish color. Spots on the underside of the leaf very small, rusty brown or black. Sometimes showing on the upper surface of the leaf as black spots with yellow borders, seldom occurring on the stems or pods. This is the true *Rust*.

#### BEAN ANTHRACNOSE

"The anthracnose is the most common and destructive disease of beans. It is very probably the disease that is destroying your crop. Its most apparent injury is on the pods, where it forms large dark rusty brown or black spots. It is on this account frequently known as "pod spot." The disease may and usually does occur, however, on all parts of the plant except the roots. It is caused by a fungus known to botanists as *Colletotrichum lindemuthianum*, which lives as a parasite in the tissues of the bean.

"The disease makes its first appearance on the bean seedlings, as they come up. It may then be detected, on at least some of the young plants, as brown discolored sunken spots or cankers on the seed-leaves or the stem. This early appearance of the disease is due to the fact that the fungus is usually carried over winter in the seed and so is already in the bean when it is planted.

"From the spots on stem and seed-leaves of the seedlings the spores find their way to the large leaves and branches of the rapidly growing plants. The large veins of the leaf are frequently eaten through and killed by the fungus, and holes or cracks with blackened margins appear in the blade. While this may not kill the leaf, it greatly lessens its efficiency as a starch maker, and so indirectly but effectively reduces the yield of seed.

"It is from the attack of the disease on the pods that the most direct and apparent damage to the crop results. During the time of blossoming and previous, the fungus has been spreading and becoming established on the stems and leaves, and it now attacks the young and succulent pods. With their tender growing tissue full of water and food materials, these pods offer the best conditions for the growth and development of the parasite. Spores from the spots on the leaves and stems fall on the pods where, in the presence of moisture and the high summer temperature, they germinate, forming a little sprout or germ tube, which penetrates the tender skin of the pod and, branching in the juicy tissues, gives rise to an anthracnose canker. These first appear as little brown or rusty spots, which enlarge and darken until nearly or quite black. The dead tissue dries and settles, leaving a sunken place in the pod. The spores may be scattered by the cultivator, the pickers, by animals, or by the wind in

damp or rainy weather. As the threads or mycelium of the fungus penetrate deeper into the pod they finally reach the seed within. Unless the seed is destroyed by the fungus, it ripens and the enclosed mycelium becomes dormant. The presence of the fungus in the seed may usually be detected by the brown or yellowish discoloration of the seed-coat. When the seeds are badly affected, they become more or less shrivelled as well as discolored. It is thus easy to tell with considerable certainty whether seed to be planted is affected with anthracnose. When the seed is planted in the spring the enclosed but dormant fungus is planted with it. In the soft and fleshy seed-leaves in which it is imbedded the mycelium finds an abundance of food and grows rapidly, soon forming a spot or canker and producing spores which at once begin again to spread the disease to neighboring healthy plants.

#### TREATMENT OF ANTHRACNOSE

"Soaking the seed in formalin, corrosive sublimate and other poisons, and in hot water, have been tried by different experimenters with varying results. So far no one has been able to prevent the disease entirely by such treatment. The fungus mycelium is imbedded in the bean itself. Any poison that will penetrate sufficiently to kill the fungus will usually kill the seed. There are also other objections: that soaked seeds cannot be conveniently handled in the planter and if allowed to dry, many will 'slip' their coats; the reduction in 'stand' and consequent necessity of planting a larger quantity of seed is also another objection. On the whole, seed treatment cannot yet be recommended.

"*Selection of clean seed* is of first importance in growing a clean crop. All beans to be planted should be most carefully "hand picked" and all beans showing discolorations, wrinkles or blisters should be discarded. It has been found that in some cases where 95% of the beans were marketable, *only one per cent. was fit for seed*. As soon as the bean plants are well through the ground, they should be carefully examined and *all diseased seedlings pulled up, carried from the field in a sack, and burned*. This is the second step in the contest with the anthracnose and it is important, since even the most expert will overlook some of the diseased seeds in sorting.

#### SPRAYING WITH BORDEAUX

"As soon as the plants are well up, and the first pair of true leaves begins to unfold, *spray thoroughly with Bordeaux mixture*. Probably the best formula to use is five pounds copper sulphate, and four pounds of stone lime to 50 gallons of water. A stronger solution has been found to dwarf the plants, while the weaker solution is equally as effective in preventing the anthracnose. This should be so *thoroughly applied that every*

*plant above ground will be completely covered*. In about 10 days or two weeks the plants should have a second spraying, using the same strength of mixture. This application should be as thorough as the first to cover and protect the new growth of leaves and branches. Unless excessive rains wash the mixture off, it will not be necessary to spray again until the pods are forming, shortly after blossoming. A third application of the same strength and thoroughness should now be made. The nozzles should be so arranged that the *Pods as well as stems and leaves will be thoroughly coated*.

"In most cases three sprayings will be sufficient. If the seed was badly diseased and if the plants show an abundance of the anthracnose, more sprayings will probably be necessary to insure a clean crop. The effect of heavy rains in washing off the mixture may be overcome by adding to the Bordeaux mixture the following: two pounds resin, one pound sal soda, one gallon of water. Boil together until of a clear brown color. Add one-half this amount to each barrel of the Bordeaux. An extra spraying between the second and third, and another after the third when the pods are nearly full grown, will be sufficient in the worst cases.

"*The removal and destruction of diseased pods and stalks* is also a matter not to be overlooked. While the disease is most commonly carried over in the seed, it has also been demonstrated that diseased pods and stems thrown on the fields in which beans are to be planted will result in a marked increase of the disease the next season. For this reason all diseased pods and stalks should be burned, or, if they go into the manure pile, the manure should not be put on fields in which beans are to be planted.

"*Cultivating or working in the beans when wet* should be avoided as much as possible.

#### SUSCEPTIBILITY OF VARIETIES

"Certain varieties are more susceptible than others to this disease. This is notably true of the common 'Wax' varieties. Numerous 'Rust Proof' varieties have been placed on the market, but while some of them are more or less resistant, probably all will spot under conditions most favorable to the fungus. Dependence, therefore, should not be placed on the resistance ability of any variety. *All should be thoroughly sprayed if immunity to the disease is to be expected*. No record has been discovered of anthracnose on Lima beans.

If the vegetable grower wishes to obtain the maximum profit from growing vegetables under glass he must pay strict attention to details from the time the seed is sown until the crop is marketed, and then immediately put another crop in its place.—H. E. Reid, Toronto.

## The Canadian Horticulturist

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### THE NEW EXPERIMENT STATION

While the new experiment station in the Niagara district is not ideal in soil and climate, yet, in view of the facts that it is centrally located and that it was presented free to the province, the government could not very well have done otherwise than accept it. The reports of the officials sent by the Department of Agriculture to investigate the conditions and also the statements of many practical fruit growers who visited the farm, are, in the most instances favorable towards the choice. It is to be recognized, also, that it would be practically impossible to obtain a site against which no objection could be raised.

The two fundamental defects of the farm are those of climate and of soil. Both these defects, we believe, can be remedied.

The climatic defect is in the matter of earliness in season. The chosen farm, lying as it does on the lake shore, like other farms in the Niagara district similarly situated, is about a week later than farms located under the mountain. This means that there is more danger of frost at the lake, and it also may mean the barring out of certain varieties that require long seasons for maturity. This climatic detriment can be mitigated later on, if found necessary, by the purchase of a few acres directly under the mountain two miles away, where investigations could be carried on with any classes and varieties of fruits that experience may show cannot be grown so successfully at the lake.

The soil detriment lies in the fact that the percentage of light soil, as compared with the quantity of clay and clay loam, is too small. An experimental farm for best work with fruits and vegetables should have at least fifty per cent. of soil that is sandy in character. The new experiment station has very little over twenty per cent.; this is to be regretted. The defect, however, can be remedied by the purchase of the farm, or a portion of it, across the road from the station, upon which Mr. Rittenhouse has an option, and which he will turn over to the government at \$100 an

acre. Since it is possible to eliminate these two objections, the whole fruit growing community should unite in a whole-hearted effort to make this experiment station one of the most important on the continent.

Although peach soil on the farm is in the minority, there is a great variety of soils for work with other fruits and vegetables. The fact, that the nature of the soil varies from black muck and clay to clay loam and a certain amount of sandy loam, is important. It will make possible the carrying on of the wide range of experiments that the work will be expected to cover. This diversity of soil is of even greater import to the vegetable than the fruit interests.

While not much has been said on this point, it must not be forgotten that the vegetable growers of Ontario are keenly alive to the value of the work that can be carried on at the station, and that they are determined to see that their interests are not neglected. This diversity of soil will permit the growing of not only grapes, pears and plums on the heavier land, but the production of peaches and other small fruits on the lighter soil; and it also affords excellent opportunity for work with the different classes of vegetables. The question of geographical position is the next most vital consideration. In this connection we have only to consider the howl that would have been raised had the land selected been at any considerable distance to the east or west of the point chosen, to conclude that not much fault can be found on this score. It is unfortunate that the farm is not nearer a railway station. There is reason, however, to believe that this drawback is likely to be largely overcome.

While the generous donor is not the stamp of man who is looking for praise, he is deserving of the gratitude of the growers of not only the Niagara district, but of Canada, because if the station fulfils its mission, it should become the most important one of the kind in the Dominion. The comparative number of varieties of fruit and vegetables that can be grown successfully at Guelph and Ottawa, and at the experimental points in the Northwest, Quebec and the Maritime Provinces, is so limited as to leave a vast field of research work open for exploration at the new station.

It is not often we see a Canadian who has made his fortune in another country, so loyal to the land of his birth and boyhood, that he welcomes an opportunity to expend the riches gained among the people of another nation for the upbuilding of his own. Would we had more like him.

A word or two in regard to the man who will have charge of the station. He must be a big man in every sense of the word, or with the possibilities of becoming one plainly evident. The success of the work will depend on the man who has it in charge. A mistake in his selection must not be made. The fact that the station is to be allied with the Guelph Agricultural College sets a limit to the salary that can be paid, but it should not be less than \$2,000 a year and a free house.

The plans for future work will be made as soon as the superintendent is appointed. There should be no plans or proportioning of the land for the different fruits that will require radical changes at a later date. Hence, it is important that more sandy soil be bought before the appointment. The director will then know what he has to work with, and better plans will be laid out accordingly. In the meantime Hon. Mr. Monteith is to be congratulated on the proof he has given that his department is alive to the needs of the Niagara district. The interest he has shown in this matter is sufficient to warrant the belief that it is the intention of the department to make the conditions at the new experiment station as nearly ideal as possible.

During the past two years we have greatly improved THE CANADIAN HORTICULTURIST, and now feel that the paper compares favorably with

any of the other fruit papers published on the continent. What we want now is a larger circulation. We feel that many more fruit growers should be taking the paper, than are. This has led us to make the very generous offer which appears in this issue, to give \$1,200 to any one who obtains 1,000 new subscribers for the paper. There are numerous sections in Canada where it should not be difficult to obtain this number of subscribers. Our readers can do a great deal to help us obtain new subscriptions by recommending THE HORTICULTURIST to their friends. A few timely words by our subscribers among their neighbors would be of material assistance to us in helping us increase our subscription list.

It is to be hoped that the establishment of a large experiment station in the Niagara District will not be the cause, for some time to come, of doing away with any of the smaller stations, now well established. Although conducted for some years, the variety tests on the small stations are just now proving of practical value to fruit growers. Varieties of grapes and tree fruits cannot be grown in a day. It takes the fruiting of more than one year to show up the characteristics that mark one variety distinct from another, whether the distinctions are for better or for worse. The government will do well to continue the sub-stations for a few years, at least until the new experiment station is in a position to give results.

THE CANADIAN HORTICULTURIST congratulates the fruit and vegetable growers of the various provinces on the fact that the express companies, operating in Canada, are to be under the control of the Railway Commission at Ottawa. The various fruit growers' associations of Canada repeatedly have urged the Federal Government to pass legislative measures to bring about this important condition of affairs. It is gratifying to know that, at last, their efforts have been rewarded.

### Ontario Horticultural Exhibition

Believing that the Ont. horticultural exhibition has been established on a permanent basis, the directors have taken hold this year in a manner which indicates that the exhibition next Nov. will far surpass the past two attempts. The Toronto city council has accepted an invitation to appoint three members of the city council to act on the board of directors. This means that the city will take a greater interest in the exhibition this year than ever before. Already this year, several meetings of the board of directors have been held, whereas up to this date last year only one had been held. At the last meeting it was reported that half rates had been obtained over the railroads, and that it was probable that the railways will take hold of the exhibition and advertise it extensively along their lines, with the object of inducing a large attendance.

The prize lists will be ready for distribution early in July. They were not ready until October last year, which shows how much more energy is being put into the exhibition this year than before. Several new features will be added this year which it is calculated will draw a large attendance.

Every grower on any considerable scale should get a connection with dealers in various parts of the country so they may be able to consign their fruit where it will bring the best price under the conditions. If this method of selling should become the rule, the glut would become a thing of the past.

Kindly do not remove my name from the mailing list for THE CANADIAN HORTICULTURIST. The magazine is too interesting and I could not do without it.—R. S. Hood, Galt, Ont

## Prince Edward Island Letter

Rev. Father Burke

Cold, wet spring that it is, exfoliation has been very slow; indeed, at present writing, the apple leaves are not more than half expanded. This, however, while it will make the harvest late of necessity, may not be adverse to a good fruit crop. There are blossom buds in abundance, and as the cold and wet weather must now, of necessity, be over, we may anticipate a splendid period of pollination and the setting of an excellent crop of apples at least. The cherry show is also encouraging. Under suitable circumstances there will be a full crop. We have not had many cherries for two years now. The plums are the only trees on which fruit buds are not noticeable in great quantity. Last year when everything else was slack the plum trees bore well. There can only be a very moderate crop at best this season.

The second spraying is just in progress. Many more are interested in it than previously. It is, however, a very disagreeable job at best, and if some means of procuring a skilled sprayer with good materials and appliances could be produced when wanted, we are sure but few would bother with the work themselves. The public sprayer is at work elsewhere; we hope he may not long be an unknown quantity here.

The Federal Government have sent their power sprayers hither and thither over Canada to meet this need, and help out systematic orcharding; we cannot get them to come here. Too small a country they think, we presume. Still, we have our rights even if the privileges are to be withheld, and must defend them. The power sprayer would find much to do this spring.

The orchard meetings, late as they were and held often in undesirable quarters, have created in many places much interest. Our Secretary of Agriculture, Mr. John C. Ready, has resigned; Theodore Ross, B.A., the *locum tenens*, went about with Mr. Richard Burke, the inspector, and as both are patriotic islanders, with deep faith in island horticulture, a good deal of enthusiasm was engendered. Inspector Burke should be employed permanently, and have a free hand in these instruction tours. Officialdom can't do it all—and often it has designs of its own to prosecute.

The Dominion Exhibition of 1906 is billed for Halifax, Nova Scotia, and that veteran manager, Mr. Bigelow, of Wolfville, has charge of the horticultural exhibit. He is working it up even now, as is meet and proper. The date, September, will however find all kinds of late fruits green and immature in Western Canada.

## Packing and Marketing Fruit

J. J. Philp, Winnipeg, Man.

The way in which a grower packs his fruit is a very good index of that man's character. Into no other operation does a grower's individuality enter so largely as it does into the manner in which he prepares for the market the produce he raises. How to impress this upon the growers as a body and force the truth home to the betterment both of the man himself and his pocket-book is the problem. With the various object lessons before our eyes as to the success of others known to be the most careful packers or of the methods which have won precedence in the general market for the most carefully packed western fruit, it is indeed strange that so much of Ontario fruit bears an evil reputation.

To what cause must we assign the condition? Is it because of shiftlessness, carelessness, lack of proper pride in the occupation we follow, a desire to get a price we want for an article we have not for sale, or what is it? The individual offender is really the only one who can truthfully answer the question, and he will probably dodge it.

When we think of all the Ontario peaches that came to Winnipeg last season, and how nearly

impossible it was to get a single basket of uniformly good fruit, we began to believe that something is rotten, not so much in Denmark, as in Ontario. And in what does this condition result? Just this—Ontario fruit is viewed with disfavor wherever it appears and is handled with a wide margin of safety; and until that province learns to label the bottom of its fruit by the top, she will not enjoy the favor of the buying public that naturally belongs to her fruits.

The first requisite in packing fruit is to get fruit that is fit to be packed. Many growers think they are selling the package instead of the fruit. Try as we may, our best efforts will not bring us entire crops of wholly perfect fruit. Some will always be deformed, off-color or undersized. A large proportion of this fruit has no legitimate place in the general market. It is all of value but should be consigned to its proper place in the cannery. Not more than 3 grades of peaches should ever be found on the stand or in the store—fancy, number one, and a family grade. In the case of apples and pears, I see no place usually for more than 2 grades. Small fruits ought to be handled with as much care and caution as to grades and uniformity of packing, although handled differently from orchard fruits. It pays with an average crop of grapes to pack in two grades.

When expert packers advise growers regarding the packing to use and the essential points to be observed in grading, packing and shipping, the average producer says all this means extra work, a variety of packages, loss of time, and added expense in many ways. The buyer's first answer is that it affords him great pleasure and satisfaction to put fruit on the market in this way. He knows it is the same quality from top to bottom; that the purchaser gets equal value all the way through the package; and, in the main, that he is well satisfied to buy from him again. He is sure of the top price all season. Some one says this is not bread and butter, only sentiment. That is true, but it would be much better for the Ontario fruit interests if some wholesome, healthy sentiment should permeate more thoroughly the rank and file of the growers. Close grading of our fruit and careful packing pays in money returns, and the expenditure in time and extra cost of packages is a good investment. I recommend a thorough, persistent trial of the plan to those who have never tried it, and feel assured that in the end it will be found a good working plan.

## Prizes for Vegetables

The vegetable section will be one of the most important features of the Ontario Horticultural Exhibition to be held in Toronto Nov. 6-10, next. The prize list this year has been considerably extended, and special efforts will be made to obtain exhibits from all parts of the province. One of the rules requires that all roots exhibited must be washed. The prize list will be issued some time during July.

First, second and third prizes of \$2, \$1, and 50 cts. will be given for artichoke, red, 12; artichoke, white, 12; beet, long, 6 roots; beet, round or flat, 6 roots; parsley, 6 bunches; radish, winter, 6 roots each, red, white, black; radish, forcing, 3 bunches of 12.

Three prizes of \$2, \$1.50 and \$1, will be given for borecole, or kale, 1 tub; brussels sprouts, 3 stalks; cabbage, red, 3 heads; cabbage, Savoy, 3 heads; cabbage, pointed, 3 heads; cabbage, flat, 3 heads; cabbage Danish, baldhead, 3 heads; carrots, oxheart, 12 roots; carrot, intermediate or pointed, rooted, 12 roots; cucumber, greenhouse, 2; citron, large preserving, 2; egg plants, 3; endive, 6 heads; kohlrabbi, green, 3 roots; kohlrabbi, purple, 3 roots; leek, 6; lettuce, Grand Rapids, 3 heads; lettuce head, 3 heads; onion, white globe, 12; onion, yellow G. Danvers, 12; onion, Red Wethersfield, 12; onion, Red Globe, 12; onion, Prize Taker, 12; onion, Rocca, 2; onion, white pickling, quart; onion, yellow pickled, quart; parsnips, 6 roots; tomato, 12, any variety; potatoes, red Ohio,

12; potato, white, 12; potato, any other variety, 12; turnip, table, white, 6; turnip, table, Swede, 6; salsify, 12 roots.

Prizes of \$3, \$2, and \$1 are offered for cauliflower, Erfurt, 3 heads; cauliflower, Snowball, 3 heads; celery, White Plume, 6 heads; celery, Paris Golden, 6 heads; celery, red, 6 heads; celery, winter, 6 heads; mushrooms, 1 lb.; onion, best string (not to exceed 3 ft.); peppers, 12 large red; squash, Hubbard, table green, 2; squash, yellow, table; vegetable marrow, bush or English; herbs, collection not to exceed 12 varieties.

For the best collection of onions, 8 varieties, 5 of each, a cup donated by Cruickshank Wagon Co., of Weston, Ont., valued at \$10, is offered for first prize; second prize, \$5; third prize, \$3.

For the best collection of vegetables grown in York County, not to exceed 25 varieties, 3 of each variety; 3 prizes of \$12, \$8, and \$5 are offered by the York County Council.

## Fruit Prize List

Several important additions have been made this year to the fruit prize list for the Ontario Horticultural Exhibition, to be held in Massey Hall, Toronto, Nov. 6-10. All prize-winning packages become the property of the Association except in class 9. The prize list is as follows:

### APPLES

Class 1.—Export or foreign market varieties.

Barrels ready for shipment. Prizes of \$8, \$7, and \$6 are offered for Baldwin, Ben Davis, Golden Russet, Greening (Rhode Island), King, Spy, and Stark.

Standard boxes ready for shipment (fruit unwrapped). Prizes of \$5, \$4, and \$3 for Baldwin, Fameuse, Golden Russet, Greening (Rhode Island), King, McIntosh, and Spy.

Standard boxes ready for shipment (fruit wrapped). Prizes of \$5, \$4, and \$3 for Fameuse, Gravenstein, King, McIntosh, Spy, and Wealthy.

Class 2.—Domestic or home market varieties.

Barrels ready for shipment. Prizes of \$6, \$5, and \$4 for Blenheim, Gravenstein, Ontario, Tolman, Roxberry Russet, and any other desirable variety not included in class 1.

Standard boxes ready for shipment (fruit unwrapped). Prizes of \$4, \$3, and \$2 for Blenheim, Gravenstein, Ontario, Ribston, St. Lawrence, and for any other desirable variety not included in class 1.

Class 3.—Dessert varieties.

For plates of five, prizes of \$1.50, \$1, and 75 cts. are offered for Fameuse, Golden Russet, King, McIntosh, Wealthy, Spy, Spitzenburg, or any other desirable variety named and for any desirable seedling.

Class 4.—Cooking varieties.

For plates of 5, prizes of \$1.50, \$1, and 75 cts. are offered for Alexander, Baldwin, Blenheim, Cayuga, Greening (Rhode Island), King, Ribston, Spy, or any other desirable variety named, and any desirable seedling.

Class 5.—Pyramids of fruit.

For pyramids with a circular base of 17 in. diameter, or barrel hoop size, prizes of \$3, \$2, and \$1 are offered for Ben Davis, Baldwin, Blenheim, Gravenstein, Fallawater, Fameuse, King, McIntosh, Ontario, Scarlet Pippin, Spy, and Wolf River.

### PEARS

Class 6.—Plate exhibits.

For plates of 5, prizes of \$1.50 and 75 cts. are offered for Anjou, Bosc, Clairgeau, Diel, Duchess, Hardy, Howell, Kieffer, Lawrence, Winter Nelis, and any other desirable variety, correctly named.

Class 7.—Export varieties.

For boxes ready for shipment (fruit wrapped), prizes of \$3, \$2, and \$1 are offered for Anjou, Bosc, Clairgeau, Duchess, Winter Nelis, Kieffer,

Lawrence, and any other desirable variety, correctly named.

## GRAPES

## Class 8.

Prizes of \$1.50, \$1, and 75 cts. are offered for Agawam, Concord, Lindley, Niagara, Vergennes, Wilder, and any other desirable variety.

Prizes of \$2, \$1.50 and \$1 are offered for black grapes, best 9 lb. basket; red grapes, best 9 lb. basket, and white grapes, best 9 lb. basket.

Prizes of \$3, \$2.50, and \$1.50 are offered for black grapes, best fancy package; red grapes, best fancy package; white grapes, best fancy package.

## DISPLAY FRUIT

## Class 9.

Prizes of \$25, \$20, \$10, \$8, and \$5, are offered for best display of fruit in commercial packages exhibited by an agricultural or horticultural society, or fruit growers' association; table space limited to 30 sq. ft. for each exhibit.

Prizes of \$12, \$8, \$5, \$4, and \$3, are offered for best display of fruit not in commercial packages exhibited by an agricultural or horticultural society or fruit growers' association; table space limited to 30 sq. ft. for each exhibit.

## PRESERVED FRUIT.

## Class 10.

Prizes of \$2.50, \$1.50, and \$1, are offered for best quart sealer of canned fruit of each of the following: Blackberries, Cherries black or red, Cherries white or yellow, Gooseberries, Grapes black or red, Grapes white, Peaches white fleshed, Peaches yellow fleshed, Pears, Plums blue or red, Plums green or white, Raspberries red, Raspberries black, and Strawberries.

Prizes of \$2.50, \$1.50, and \$1 are offered for best pint of jam of each of the following: Currant black, Gooseberry, Grape, Peach, Pear, Plum, Raspberry, and Strawberry.

Prizes of \$1.50, \$1, and 75 cts. are offered for best half-pint jar of jelly of each of the following: Apple, Crab Apple, Currant red, Grape, Quince, and Raspberry red.

Prizes of \$3, \$2, and \$1 are offered for Grape Juice, unfermented, best 1 qt. bottle.

## The Marketing of Vegetables

J. W. Rush, Humber Bay, Ont.

One of the secrets of success in the marketing of vegetables is to have the right thing at the right time, put up in the right way. The Ontario Vegetable Growers' Association is fairly well organized, and it has adopted THE CANADIAN HORTICULTURIST as its official organ.

It would be a good plan for our association to arrange a system of bunching for early vegetables. For early beets six in a bunch, nicely graded, might do. Let the large ones be put in bunches and the smaller ones in bunches instead of mixed together as we so often see them. Radishes, three-quarters to one inch in diameter, 10 in a bunch. In the smaller ones 12 to 14 would make a nice saleable bunch. Carrots, very early and of nice size, one inch in diameter, might go six in a bunch, and very early onions 12 in a bunch. Later on, when the onions are larger, six in a bunch might do. Other vegetables could be bunched in the same way.

If bunches of regular sizes were adopted by our association, we would know when we see market prices quoted, what was meant. Bunches of the size mentioned would sell for 40c. per dozen, and retail for five cents per bunch. I give these suggestions to set the ball rolling, and would like to hear from others on the bunching question.

**A Warning.**—THE HORTICULTURIST has received word that some fruit growers and farmers in different parts of Canada are using as a remedy for insects, certain substances placed in a hole bored in the trees. Although the folly of this practice has been exposed many times in our columns, THE HORTICULTURIST again directs the attention of fruit growers to the fact that remedies of this kind are absolutely useless.

## Vegetable Growers are Pushing Matters

**M**ANY important matters were discussed at a meeting of the directors of the Ontario Vegetable Growers' Assn. held in Toronto June 21. It was reported that the assn. has branches at Ottawa, Kingston, Napanee, Toronto, Hamilton, St. Catharines, Brantford, Sarnia, Tecumseh, and Chatham, with a total membership of 426. Directors were present from most of these branches, those in attendance being Messrs. F. F. Reeves, the pres. of the assn.; Jos. Rush, R. Lankin, Geo. Syme, T. Dellworth and A. W. Shuter, of the Toronto branch; T. Mockett, of Ottawa; W. A. Broughton, of Sarnia; D. Rocheau, of Tecumseh; W. A. Emory, of Hamilton; A. McMeans, of Guelph; and the sec'y. H. B. Cowan.

It was decided not to hold the celery competition that had been proposed. A letter was read from the Kingston branch asking what by-laws are in force in the different cities to prevent the purchase of vegetables on the market before a certain hour in the morning. The meeting decided to gain this information from the different cities and to make it public.

On the tariff question it was decided that as the assn. has already laid its views before the government, nothing further can be done until the government informs the House of Commons what its intentions in this matter are, when, if it is necessary, a special meeting of the directors will be called to discuss the government's intentions and to decide on the taking of such action as may be deemed necessary.

The representatives from the different branches reported on what has been done by their branches so far this year. These reports were very encouraging. Several of the branches have purchased goods for their members at greatly reduced prices, interesting meetings have been held, at which discussions on vegetable growing have taken place, and some of the branches are arranging to hold picnics during the summer.

On motion of Mr. Rocheau it was decided to have copies of the constitution printed in French, as it is believed several branches of the assn. can be formed in French sections. Methods of improving the crop reports, which are obtained monthly by the assn., were considered.

It was decided to make a grant of \$150. to the vegetable section of the Ont. Horticultural Exhibition, and in addition to pay the express charges on all exhibits sent in from points outside of Toronto. Prize-winning exhibits, and exhibits on which the express charges have been paid, will become the property of the assn. after the

exhibition. It was decided to offer 3 prizes of \$12, \$8, and \$5, or a total of \$125, for the best essays on the growing of each of the following varieties of vegetables: potatoes, cauliflower, celery, tomatoes, and onions. Competitors must be members of the assn. and the essays must deal with the soil and its preparation, varieties, planting, cultivation, harvesting and storing. Essays must not exceed 1,000 words. The best essay will be read at the annual convention and published in the annual report.

Mr. McMeans was asked to explain what work is being done at the Guelph Agri. College, for the benefit of vegetable growers. He reported that the college is conducting variety tests in 55 kinds of onions, 28 of carrots, 55 of beets, 10 of salsify, 68 of radishes, 88 of tomatoes, 36 of cauliflower, and about 80 of lettuce. Many of the varieties are practically the same. The college is investigating also the germinating power of the seed, and will publish a report on this, giving the names of the seedsmen. This latter announcement was heard with much approval. Mr. Rush stated that he had been at the college recently, and found that the college was raising the same insect pests on their vegetables as the growers. Mr. McMeans was asked what was being done at the college to find remedies for these pests. He reported that work along that line is being conducted by the entomologist.

On motion of Mr. Mockett, seconded by Mr. Broughton, a committee, composed of Messrs. Rush, Dellworth, and McCalla, was appointed to visit Guelph and investigate the work being done there on behalf of the vegetable growers, and in the combatting of vegetable insect pests. The committee was instructed to prepare suggestions for new lines of work that might be taken up at the college, and to report on the work now being done there, the result of their investigation to be made known by Sept. 1. It was decided to have a representative of the Kingston branch, and two from the Ottawa branch visit the Central Expt. Farm at Ottawa for the same purpose. It is decided to hold the annual convention of the assn. Nov. 8 and 9, at the time of the Ont. Horticultural Exhibition, and to hold a directors' meeting on Nov. 7.

The secy. was instructed to endeavor to make arrangements to have a capable speaker attend meetings of the branch assns. during Oct. Considerable enthusiasm was manifested at the meeting, the belief being freely expressed that the assn. will soon grow to much larger proportions.

## Spraying Experiments at Meaford

T. B. Rivett, B.S.A.

**T**HE Ont. Dept. of Agri. is conducting experiments near Meaford with Bordeaux mixture to demonstrate the practical value of spraying to check the ravages of the apple scab. Previously this trouble has been so great as to render the greater amount of apples in this township unsaleable.

Last year the results were not as satisfactory as expected, so, in arranging this year's work, fewer orchards were chosen, and these were the pick of last year's experimentation. They are 8 in number, containing about 1,400 trees, and situated within a radius of 5 miles of Meaford and on 3 different concession roads, thereby easily enabling the farmers in the township to watch the result. It is the intention to spray 3 times and should the scab develop to any degree a fourth application will be given.

Poisoned Bordeaux is being used in all sprayings. The formula adopted is as follows: blue stone, 4 lbs.; lime, 5 lbs.; Paris green, 8 ozs.; water, 40 gallons. The first spraying was applied in the early part of May, and was completed before blossom; the second immediately after bloom had fallen, and the third will be applied in July.

We are testing, also, the value of lead acetate as compared with Paris green as a poison. Two blocks, side by side, were chosen, 1 being sprayed with the above-mentioned formula, and the other with two bbls. of lead acetate as a substitute for 4 ozs. Paris green. The lead acetate is somewhat harder to dissolve, but will stay in solution longer. It spreads through the solution more easily, and offers less obstruction in the nozzles. The poisoning quality, however, will not be definitely ascertained until the fruit is mature.

Owing to some trouble occurring last year with regard to the russetting of apples, test trees have been left in every orchard, and a strict record is being kept of the climatic conditions, so as to observe the relation between atmospheric conditions, spraying and russetting. The machine used in this series of experiments is a gas power machine, and is giving very fair results, the power costing from \$1.50 to \$2 a day.

We consider THE CANADIAN HORTICULTURIST the leading horticultural magazine for our province. All success to it.—M. S. Middleton, Vernon, B.C.

# Vegetable Crop Outlook in Ontario

**A**LTHOUGH rather backward in season, the vegetable crop in Ontario is looking well. The prospects are bright for large crops of most vegetables, and the ruling prices promise to be slightly higher this season than last. In some sections, considerable damage is being done by insect and fungous pests. The following reports by crop correspondents of the Ont. Vegetable Growers' Assn. show the situation in the various districts:

## OTTAWA

The acreage under vegetables is about the same as usual. Early cabbage is almost double the usual crop. Cauliflower is a fair crop. Beans are a little heavier than other years, tomatoes and peas about the same, and corn nearly double. A pretty heavy crop of celery is being put in now, too much I consider, for the lateness of the season and size of the plants, to produce good celery in the fall. The weather conditions for celery are very unfavorable. Some days extreme heat, others very cold, causing a peculiar soft growth, and rendering all plants liable to disease and grubs. Some of our tomato growers are complaining of a black dry spot on the blossom end of the tomato showing through the crop. Slugs and snails are going to be bad pests this season. Transplanted onions seem to be about double the usual crop, seed onions about the same as usual. The last few hot days are causing a rank, quick growth both of onion and weeds which may hurt the crop, for it is impossible to get on the ground yet. The prices on the market are about as follows: good lettuce, 15c. to 20c. a doz. heads; beets, 50c. a doz. bchs. of 4 each; rhubarb, 20c. to 30c. a doz., according to quality; asparagus, 80c. to \$1 a doz. bchs.; spinach, 25c. a bush.; onions, 15c. to 20c. a doz. bchs.; radish, 15c. to 20c. a doz. bchs.—T. Mockett, June 20.

## NAPANEE

The weather has been quite favorable; no injury from frost. The maggot has troubled onions considerably, some patches being entirely gone; still, I think the crop will compare very favorably with last year. Tomatoes are doing fine, and promise an extra good crop. Beans, potatoes, lettuce, etc., are a splendid crop; no noticeable increase in either. Potatoes (old) are \$1.25 a bag of 90 lbs., and scarce at that.—E. M. Sherman, June 20.

## BURLINGTON

All that is required is warm weather with a few occasional showers to make the crops very fine, both in the growth of cabbage, cauliflower, onions, etc., and the ripening of tomatoes. Strawberries are now in full swing. Asparagus and rhubarb are about finished. Onions, both seed and transplanted, are doing exceptionally well, and unless the maggot begins destructive work, the crop will be 25% above last year. Cabbage, also, has made rapid growth, and cutting has commenced with some growers; the maggot has been rather destructive in some sections. Early cauliflowers are very scarce; some patches have been cleaned out by the maggot; the cutting with one or two of the growers has just commenced. Tomatoes, both early and late, are doing well, although in some places the cut worm has been very destructive. The early tomatoes have set fruit more plentifully than usual. Melons, egg plants and peppers have been planted to about the same extent as last season. The early planted melons suffered a good deal from cold weather, while later planted ones have done very fine. Peppers have been planted rather more extensively than last season. Commercial fertilizers have been used rather freely by a great many of the growers, but up to the present the effect is not noticeable. Celery is doing very nicely.—J. A. Lindley, June 20.

## HAMILTON

The acreage of vegetables has increased about 10% during the last year or two, owing to the increased population of Hamilton. Old pota-

atoes are bringing \$1.00 to \$1.35 a bag. New potatoes are just coming in and selling at 90c. to \$1.10 a 11 qt. bskt. New arrivals are also beets and carrots, and are worth 25c. and 35c. respectively. Green peas are coming in larger quantities, price from 30c. to 45c. a 11 qt. bskt., according to size. Beans have not put in an appearance yet. New cabbage, while quite small, are bringing 75c. to \$1 a doz. heads. The tomato outlook is not so promising as earlier in season. The plants in many instances are very small, and some long and slender, and not having been planted quite so early as usual, will have a tendency to lessen the usual yield. The acreage is not so large this year as contract price is only 25c. a bush., while last year about 60,000 bushels were contracted for, through the efforts of assn., at 30c. a bush. The annual average yield in this district is about 150,000 bush. to 175,000; besides, several thousands are annually shipped to all points in Canada.—Jas. A. Stevens, June 21.

## NIAGARA FALLS SOUTH

All hardy vegetables look well after the recent rains and are growing nicely. The frosts on the nights of June 10 and 11 injured all tender vegetables. On low ground, melons and cucumbers were in some cases killed completely. Beans were also severely affected. Corn shows its tips frozen to a pale straw color. Squash, pumpkin and tomatoes seem to have escaped injury. Cabbage maggot has been very destructive this season; whole patches of early cabbage have been destroyed. Onion maggot has also been very prevalent; it has reduced the crop in many cases. Early peas and beans made their first appearance on the local market on June 16. Old potatoes are in great demand for planting, and are selling for \$1 a bush. The following prices were obtained on local market June 15 to 20: new beets, 50c. a doz. bchs.; peas, 40c. a pkt.; beans, 50c. a pkt.; radish, 20c. a doz. bchs.; onions, green, 20c. a doz. bchs.; head lettuce, 20c. a doz.; asparagus, 50c. a doz. bchs.; rhubarb, 30c. a doz. bchs.; strawberries, \$1.50 to \$2.50 a crate of 24 qts.—Thos. R. Stokes, June 21.

## CHATHAM

Vegetable crops were badly damaged by the recent cyclone. Tomatoes suffered most, and the supply of early ones will be materially reduced. The later ones will pick up; a good demand is anticipated, as another canning factory has started. Onions were badly injured in the path of the storm, but these are recovering and may prove to be a fair crop. Transplanted beets made their first appearance on June 2 and found a very ready sale; seed beets also are coming in. Melons and cucumbers are backward, owing to the cool weather. Potatoes are looking well, and digging will soon commence. Celery and cabbage look promising on account of the frequent showers. Strawberries are a great crop this season.—Fred. Collins, June 19.

## LEAMINGTON

Tomatoes, cabbage, wax beans, cucumbers, peas and melons are doing very well, considering the weather conditions during the last few weeks. Early cabbage is commencing to move, but is not up to the average in size, owing to too much rain and cool weather. It is being sold at \$2 a ½ bush. crate, F.O.B. here. Cucumbers are all under glass, and are selling at \$1.20 a 11 qt. bskt. Peas, 50c. a 11 qt. bskt. Wax beans will be on in about 2 weeks. Tomatoes have set well on the vines in some places, and in others very thinly. The prospect is that there will be small shipments of them made in July; but during Aug. there will be an abundance. In general, there is likely an increase of 25% in the crops, as compared with last season.—E. E. Adams, June 19.

## SARNIA

All kinds of vegetables are looking well. We have had some complaints of loss caused by too much moisture. About the usual acreage

in vegetables, except early potatoes, which are above the average in acreage, but I think about a week later, and showing every indication for a good crop. Some late potatoes have been hurt by the wet weather, and may be replanted. There is a fair demand for vegetables in Sarnia, and prices are steady, bunch stuff coming in freely, and cabbage will be ready in a week.—W. A. Broughton, June 20.

## TORONTO

**HUMBER BAY.**—More potatoes and corn have been planted this year than usual. Onions, not such large patches sown as in other years. The seed has germinated very poorly, not more than half a crop; not many maggots yet. Beets are good, and large quantities are going to market. Parsnips are a very thin crop generally. Carrots good, about the usual quantity sown. Early cabbage are coming on rather slowly; the maggots are working on the light soils. Cauliflowers are just heading; small lots planted so far. Early peas just ready, selling at \$1.50 a bush., 50c. to 65c. a bskt.; no large lot sown. Celery is growing slowly; about the usual quantity has been set out. None ready for market. Mr. J. Gourley, of Deer Park, had 2,000 on the market last week, very small, sold at \$15 a 1,000. Spinach is very good, sells fairly well. Radishes have been very plentiful, are selling much better than other years, about 12c. to 15c. a doz. bchs., 12 in a bch. Rhubarb, good crop, but not so much on the market as in other years. Beans are doing well, about the same patches as other years. Tomatoes are looking very well, having had no setback so far; no very large lots planted—no more than other years. Asparagus will soon be over for this season; has been poor and light cutting generally. The cut worms are numerous this year. I notice the little grey birds are on their tracks, and the robin also will do his part to help clear them until the cherries are ripe. It is likely the slug will be bad on the cabbage. Fresh slacked lime dusted on them is sure death to the slugs, and is good for the cabbage. Try it.—J. W. Rush, June 21.

**BRACONDALE.**—There is an enormous amount of transplanted beets this season, readily selling at 20c. and 25c. a doz. bchs. Seed beets and carrots, also peas, are ready for market. The crop will be about as usual. Early cabbage are coming along splendidly, some already cutting at 60c. doz. The early tomatoes are looking well, the first blossom having set nicely, but the later blossom is falling, owing to the wet weather. We are busy planting celery, late cabbage and cauliflower. The acreage will be about as usual. Potatoes are in blossom. Crops are doing nicely, with the exception of the tomatoes, the second bloom of which will be a failure.—A. W. Shuter, June 19.

**DONCASTER.**—Crops are looking well. Yellow Danver onions have come rather thin with most of the growers which, with rather a smaller quantity sown, will make the crop lighter than last year. Other crops are being grown in about the usual quantities. Tomatoes from greenhouses are coming in in small quantities, and selling readily at 15c. a lb.—C. Gibbard, June 21.

## SCOTLAND

The wet weather has kept the grower from working in the onions, and as the weeds have got the best of some, a number of acres will have to be plowed up. The maggot also is working very fast. The 1st planting of cucumbers have been all frozen, and they are planting them again this week. Strawberries are only about half a crop.—E. G. Malcolm, June 19.

## PRINCE EDWARD COUNTY

Potatoes look well, but the blight has made its appearance in some places. Early peas are looking fine and promise a good crop. Tomatoes and corn are doing well. The berry crop will be light.—Stephen Lake.

# Fruit Prospects on the Whole are Encouraging

**T**HE reports from crop correspondents this month show that for most varieties of fruit, prospects are encouraging. Plums are going to be a very light crop everywhere. Cherries, also, will be below the average. Along the north shore of Lake Ontario and in Eastern Ontario the frequent rains have caused damage by fungous diseases. Winter killing of grapes and small fruits is reported. The following reports will give a good idea of the situation:

## SOUTH-WESTERN ONTARIO

**Kent County.**—The fruit crop with the exception of peaches and Japan plums, which are almost a failure, looks quite promising.

Summer and fall apples promise a full crop. Winter apples of many varieties are loaded, but some varieties that bore heavily last season are light. Pears promise a fairly good crop, although perhaps not an extra heavy one. The plum crop here, like the peaches, is only a small one at best, and the Japanese varieties had their fruit buds winter killed. The recent storm did much damage in spots to fruit and other trees, uprooting a great many, and where hail accompanied it the fruit is somewhat marked and bruised. The apples appear to be free from scab so far, whether on account of the season or as a result of spraying, I cannot say.—W. D. A. Ross.

**Lambton County.**—Fruit prospects are for a fair crop. Apples have set well and promise to be a large crop in orchards that have received proper attention, but have not set very well in neglected orchards. On the whole it will be twice as large as last year. Plums and peaches are practically a failure.—D. Johnson.

## NIAGARA DISTRICT

**Fruitland.**—Apples bloomed on about 50% of the trees, and have set well, and are free from insect and fungus damage, but twig blight is seriously prevalent, especially on Greening. It seems to have a special phase of attack on the fruit spurs, and more especially on the heaviest loaded trees, in many cases fully 4-5ths of the crop being destroyed. The attack must have occurred while in bloom. Many trees are still dying from winter freeze of 1903-04, and from the effects of the past wet seasons. Still the crop from present indications will run an average or as good as last year. Pears are heavy and healthy looking, with some little fire-blight appearing. Some pear psylla, but seems to have been destroyed by the storm. Plums are the lightest crop for years, with a light attack of curculio the past few days, being much later than usual. Sweet cherries have fallen heavily the past few days, and only show a light crop remaining.

Sour cherries are much better, being a good average and free from curculio. Peaches a good crop and looking well, with no curl leaf even where not sprayed. Currants, both black and red, more than an average crop, but with bad attack of aphid on blacks, which now seems to be disappearing. All kinds of berries seem to be looking well, the cool, showery weather being especially favorable for strawberry development. Oyster shell bark louse on sickly Baldwin apple very prevalent last season seems to have been largely parasitized, and will not be so bad this year. The present showery weather will demand thorough spraying now to save the apple crop from fungus. Spraying is much more general than ever before, and is being much better done. There is another promising and beautiful crop and healthy growth of Whitesmith gooseberries, perfectly free from mildew by one application of lime and sulphur as buds were swelling. I think this will mean the successful culture of the English varieties in this country. Some of ours are so heavily laden that they are lying on the ground at present writing with fruit nearly an inch in diameter, and this without other manure than hairy vetches plowed down.—Joseph Tweddle.

**Grimsby.**—On the whole we have an encouraging prospect for fruit. Strawberries are remarkably fine owing to the frequent showers. Cherries, especially the pie cherries, have set a very abundant crop; and the same may be said of some kinds of sweet cherries. But with the latter you never know what you have until after the harvest, for such quantities are lost with cherry rot. Plums are very poor. There are no Japan plums, and very few English plums. Peaches are fine; the "June Drop" is on them at present, and large quantities are falling; but the result is a wholesome thinning of the crop, otherwise too heavy. Pears are fine, abundant, clean, and growing rapidly. Apples have set very well; but the Baldwins and Greenings, which were heavy last year, are very light. Spys show well, but Cranberry and some other varieties are suffering from leaf blight.—Linus Woolverton.

## ST. CATHARINES

The earlier predictions of a generous crop of nearly all kinds of fruit seem in a fair way of being carried out; everything looks very promising. The strawberry acreage is not large, but the weather is favorable for large berries, and an extra yield. Raspberries are looking extremely well. Peaches, pears, plums and apples, generally speaking, will be abundant. Grapes are looking exceptionally fine; but, in some cases, the leaf is showing slight symptoms of the dreaded black rot. Timely spraying with the Bordeaux mixture will prove almost a specific if followed up at regular intervals. The questions of suitable packages, and of the rapid and careful transportation of our fruits to the rapidly-increasing markets of our country, are such as will be found to be of vital importance this year.—Wm. H. Bunting.

## HAMILTON

Owing to the continuous excessive rains, strawberries are not ripening very rapidly, which will prolong the season. The acreage grown this season is much less than 1905, owing to the scarcity of plants last year. The open winter killed the plants to a great extent, and, therefore, the prices of berries will remain firm. The canning factories are paying \$1.25 a crate of 24 boxes, having made contracts early in the year, and as the grower gets his

crates and boxes back this is considered a good price, and is equal to \$1.45 shipping. The market price varies according to quality from \$1.50 for Beder Wood, Michael's Early and Crescent, and other soft varieties to \$1.75 and \$2 for Williams, Brandywine and Dunlop, which are the best commercial berries for shipping and preserving purposes; the average lowest price will be about \$1.50 a crate. Cherries will follow strawberries, and will be an abundant crop, particularly Early Richmond and Montmorency, which are the two best varieties for preserving. They are coloring nicely, but should the present rains continue, rotting is to be feared; the price will run about 75c. a 11 qt. bskt. The acreage of cherries is on the increase. Raspberries will be an abundant crop with the exception of early varieties, which are not showing up very well. Marlboro', an early variety, and Cuthbert for late, are the preferred sorts. Price contracted by canning factories is \$1.60 a crate of 24; acreage is a little on the increase.—Jas. A. Stevens.

## NORTHERN ONTARIO

**Clarksburg.**—The south shore of Georgian Bay promises a very good crop of apples. Nearly all varieties well represented except Baldwins, which are rather light. Greenings are unusually heavy. Both Ben Davis and Spy are full crop. Pears were showing to better advantage a week ago, but are still very fair, and not likely to drop much more. Cherries appear to be full crop and quality better than usual. Plums are a complete failure, but probably on account of trees all being old, and no new plantations being made lately. On the whole the situation is most encouraging.—J. G. Mitchell.

## EASTERN ONTARIO

**Durham County.**—The fruit crops should be about as follows: Apples of all kinds very good, equal to or better than last year. Pears a light crop. Cherries, sweet varieties a complete failure; Montmorency and other sour varieties a medium crop. Plums of all kinds are a complete failure. Grapes are nearly all killed to the ground. Currants and gooseberries a good crop. Raspberries and blackberries only medium. Strawberries good, but not many planted. I think the unusually mild winter caused

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The Southern Ontario Fruit Growers' Association  
St. Catharines Horticultural Society  
Niagara Falls Horticultural Society  
Grimsby Horticultural Society  
Hamilton Horticultural Society  
Burlington Horticultural Association  
Jordan Station Fruit and Vegetable Growers' Association  
Township of Grantham Vegetable Growers' Association  
Hamilton Vegetable Growers' Association  
Ontario Fruit Growers' Association, and the  
Ontario Vegetable Growers' Association

UNDER THE DIRECTION OF

The Ontario Department of Agriculture

LIBERAL PRIZES WILL BE OFFERED

\$400 <sup>in Prizes</sup> <sub>for</sub> Fruit — \$250 <sup>in Prizes</sup> <sub>for</sub> Flowers — \$150 <sup>in Prizes</sup> <sub>for</sub> Vegetables

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FOR PRIZE LISTS AND OTHER INFORMATION WRITE TO

MISS M. M. TASKER (Secretary)  
ST. CATHARINES, ONT.

W. B. BURGOYNE (President)  
ST. CATHARINES, ONT.

the blossom buds to start, and being followed by a very cold dip, many of the blossoms were killed.—E. C. Beeman.

Northumberland County.—Strawberries are a light crop. There was considerable winter killing where not protected by covering. Raspberries were also killed back to a more or less extent. Currants are fairly good. Gooseberries are very light, and mildewing some. Grapes that were not laid down for the winter and covered, are dead to the ground, including even the wine grapes that stood the winter of two years ago, and are sprouting from the root. Plums and cherries are practically a failure. Only a few Richmonds and the common red cherries have any fruit on. The others had a good show of blossom but they never opened out, and seemed to prevent the leaf bud from coming out for some time. The buds were all killed on peach trees that were loaded last year and are sending out fictitious buds. There are no Bartlett, Anjous or Bosc pears, and other varieties are very light. Duchess apples are a fair crop; Snow medium; practically no Baldwins or Greenings. Spy, Ontario and Stark are medium. Russets bloomed heavily;

Ben Davis only a medium crop of bloom and have set a fair crop. Insects are on the increase this year. Bud Moth was very injurious. The green worm that eats the fruit has done more damage this year than usual. Canker worm is on the increase. Oyster shell bark louse seemed to be far more numerous than usual; some trees were practically covered with them. Fungus developed very rapidly during the warm foggy days that we have had lately, also fungus has appeared on the foliage. The leaves are turning yellow and dropping. There has been far more spraying done this year with the Bordeaux mixture than usual.—W. H. Dempsey.

Prince Edward County.—The apple crop will not be nearly as heavy as at first thought, on account of the continued wet weather. The bloom was very heavy but did not set well, and the June drop will be very heavy, so that I do not look for any more apples than we had last year, if we have as many. Duchess are a full crop, other fall apples only fair. Ben Davis and Stark are much lighter than last year, while Russets, Spys and Greenings are better than last year. The price of apple barrels will be about the same as last year.—Harry Dempsey.

Dundas County.—Owing to the lack of snow during the winter and to some very mild weather when the frost was nearly all out of the ground, followed by extremely cold weather, several varieties of our tender fruits were injured. Strawberries, except in favored places, are a very light crop, being injured by the winter and the first blossoms by late frosts. Currants and gooseberries a light crop. Raspberries almost a failure. Early apples, as Duchess, are a good crop, while others, as McIntosh Red, Fameuse,

etc., will be a light crop. Cherries and plums a failure.—A. D. Harkness.

WESTERN QUEBEC

Westmount.—Apples in my immediate vicinity promise to be a large crop, especially early varieties. Pears a good crop, principally Flemish Beauty. Plums, of the European varieties, a total failure; trees badly winter killed. It was a very severe winter on strawberry and raspberry plantations, there being very little snow protection. Everything is growing well, especially the weeds. Labor is very scarce, and \$1.75 a day for weeders is more than we can get out of the crops.—R. Brodie.

NOVA SCOTIA

Shelburne County—The weather has been extremely cold and wet, but we have had an

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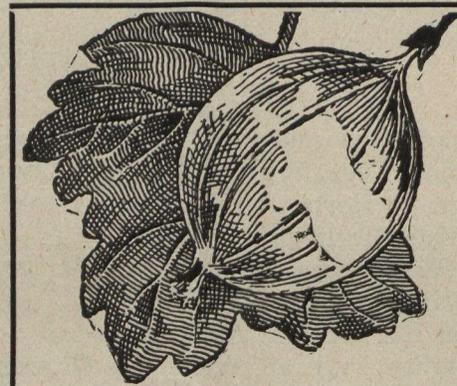
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<p><b>The King Construction Co.</b> 248 Wellington Street, Toronto Mention The Canadian Horticulturist when writing</p>		

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abundance of apple bloom which seems to be setting fairly well. Pears bloomed nicely, but the heavy frost the last of May injured them, as they about all have fallen. Plums seem to be setting well. Gooseberries are a full crop and are about out of danger. Red currants, also, are a full crop. Strawberries were winter killed in some places. Outside of that they are looking well, but they are late. The caterpillar pest seems worse than usual.—J. Lewis McKay.

Kings County.—The prospect for a good crop of apples never looked more promising. The weather conditions have been very favorable. Fruit growers generally have given more than ordinary care to the orchards, pruning, cultivating and especially spraying thoroughly. The third spraying is now about finished. The orchards blossomed exceptionally full, and appear to be setting well. The "black spot" has not made its appearance to any extent yet. Many insects made their appearance, but were effectually stamped out by those who persistently sprayed. It looks as though we will have a full crop of Gravensteins, which have been a partial failure for the past four or five years. Kings, Blenheims, Russets and Baldwins promise well.—J. Howe Cox.

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Why not work up a sure market of your own? There are scores of grocers and fruit dealers throughout Canada who would be glad to take your fruit at good figures if you can supply them regularly with first-class freshly picked fruit.

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**B.C. Fruit Growers' Association**

W. J. Brandrith, Sec.-Treas., Ladner, B.C.  
 The regular quarterly meeting of the B.C. F. G. Assn. convened in the Agri. Hall, Duncan's, on June 22. There was a fair attendance considering the busy time of year. Great interest was manifested in the subjects of the various speakers. The pres., Thos. A. Brydon, of Victoria, called on J. C. Metcalfe, of Hammond, for an address on small fruit. Mr. Metcalfe's remarks were more on the cultivation of the strawberry, and as it was well known that he had made a success of this, what he said carried weight. Henry Kipp, of Chilliwack, described his methods of planting and pruning. Maxwell Smith, Dom. Fruit Inspector, explained the workings of the "Act Respecting the Sale of Certain Commodities." An interesting discussion followed. A resolution calling on the Prov. Govt. not to do away with the inspection of citrus fruit was carried unanimously.  
 The assn. has arranged for meetings to be held as follows: Kelso, July 4; Nelson, July 5; Creston, July 6; Cranbrook, July 7; Revelstoke, July 10—the meetings to be addressed by Thos. A. Brydon, on "Planting and Pruning"; by J. C. Metcalfe, on "Small Fruits," and by Maxwell Smith on "Orchard Cultivation." Another ser-

ies of meetings will be held at Fairview on July 3; Keremeos, July 4; Penticton, July 5; Summerland, July 6; Armstrong and Enderby, July 7; Salmon Arm, July 9; Revelstoke, July 10. The speakers and topics will be as follows: R. M. Palmer on "Transportation and Markets"; Henry Kipp, on "Orchard Cultivation," except at Revelstoke, where his subject will be "Varieties to Plant," and W. J. Brandrith on "Spraying," except at Armstrong, where he will speak on "Beautifying the Home Surroundings."

**Our Nova Scotia Letter**

G. H. Vroom, D.F.I.

It is about the middle of June, and the province of N.S. looks beautiful and is very much admired by the eager sightseer. The cold, wet spring made seeding late, but farmers have their seed about all in the ground. The power sprayer, under the direction of the fruit division, is operating in Falmouth, Hants county, this season, and is doing good work, and insects are on the run. The fruit growers are taking a lively interest in spraying, and have been greatly benefited by the demonstrations given, and have learned how the mixture should be prepared and applied. We are using 6 to 8 ozs. of Paris green to 40 gals. of mixture, as the

caterpillar is very numerous in N.S. this season. Stone fruit probably will be an average crop. Apples bloomed very full, and appear to be setting well, with the exception of Spy and one or two other varieties. Pears are showing an average setting. Strawberries look fair only, and show the effect of an open winter. The crop will be below the average; the berries are small for the time of year. Our markets are well stocked with imported small fruit and a few last year's N.S. apples are yet to be found in the shop windows in Halifax.

Several new fruit packing houses are being built along the lines of the D.A. and H. & S.W. Rys., varying in capacity from 6,000 to 10,000 bbls. This is one more step in the proper direction; for, without proper packing houses, fruit cannot be successfully handled and put on the market in the condition that the trade demands and the law requires. We in N.S. expect a bumper crop of apples this year.

I have always valued THE CANADIAN HORTICULTURIST and look forward to its arrival each month.—Jas. Kay, Aberdeen, Scotland.

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**Items of Interest**

A meeting of apple growers was held in Meaford, Ont., in June, and a new fruit growers' assn. was formed; pres., A. Gifford; sec.-treas., Dr. Hamel. At the meeting interesting addresses were delivered by T. H. Race, of Mitchell, on the value of cooperation; by J. G. Mitchell, Clarksburg, on a similar topic, and by T. B. Rivett, Toronto, on spraying.

THE HORTICULTURIST has received from Mr. J. W. Bigelow, of Wolfville, N.S., who has been appointed supt. of the horticultural dept. of the Dominion exhibition, to be held in Halifax early in Sept., a complete prize list for the fruit section. Lack of space prevents the publication of this prize list, which is a long one. Several prizes are offered in almost every section, the prices being liberal. Copies of the prize list may be obtained by writing direct to Mr. Bigelow.

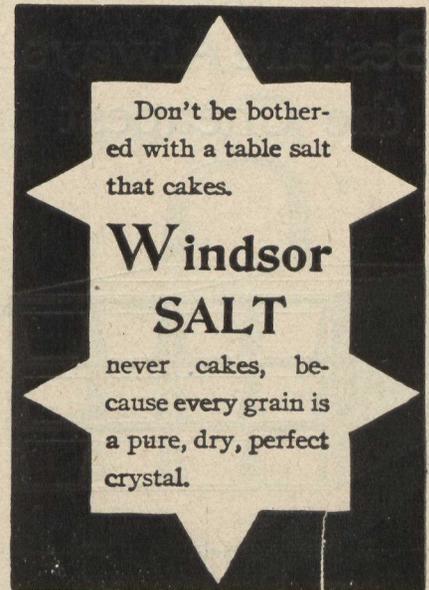
At a recent meeting of fruit growers in the district surrounding Belleville, a committee comprising Jas. Knox, W. S. Morden, Samuel Sills, H. D. Leavens and F. S. Wallbridge, was appointed to arrange for a suitable building in which to pack their fruit this fall. The crops of the various growers will be handled on the cooperative plan. A manager will be engaged to look after picking and packing.

The dept. of physics at O.A.C., Guelph, under the management of Prof. W. H. Day, will continue the work done in helping farmers and fruit and vegetable growers to solve the drainage question. In 1905, Prof. Reynolds, on being requested, visited farms and took drain levels, and advised the farmers as to the best location for drains. The only outlay entailed was in paying Prof. Reynolds' travelling expenses. Several farmers in a locality can make the cost very light by arranging to have each of their farms attended to during the same visit. Applications should be addressed to Wm. H. Day, Dept. of Physics, O.A.C., Guelph.

A number of leading growers in the Grimsby district have formed a co-operative organization for the purpose of handling the products of their orchards to better advantage. The new company is to be known as the Grimsby Co-operative Fruit Growers, Ltd. The officers are: A. G. Pettit, president; A. H. Pettit, vice-pres.; H. G. Roberts, sec.-treas.; and manager, J. D. Biggar. Among others in the company are Linus Woolverton and J. M. Metcalfe. These growers appreciate the value of co-operation and, having had long and practical experience, they may be expected to make the venture a success.

At a recent meeting of the Edmonton Board of Trade a resolution was presented asking for a revision of the regulations governing fruit shipments. It was pointed out that growers in the east did not know what western dealers wanted, and that the latter were not sufficiently protected against fraud. Some claimed that it was the small packers and not the producers who were to blame.

The Dept. of Agri. in Alberta intends to encourage fruit growing. Circulars requesting information regarding age of trees, varieties, etc., have been sent to those who have grown fruit. In future reliable information on these subjects will be supplied by the department.



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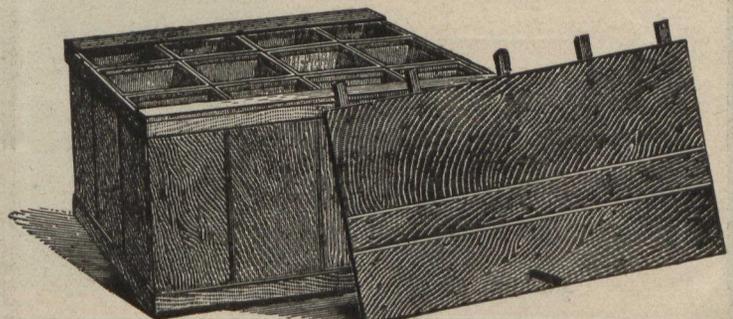
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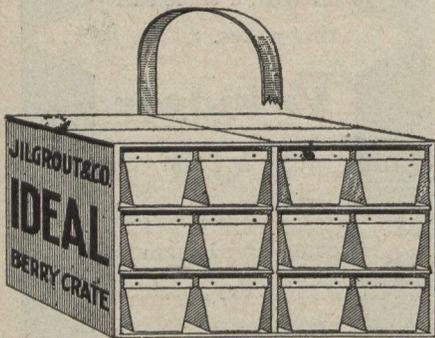
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### Niagara District Exhibition

The horticultural exhibition for the Niagara district, which last year was held in Hamilton, will be held this year in St. Catharines, Sept. 14-15. Although still early in the season, indications are that it will be a great success, as marked interest is being shown in the event. At an enthusiastic meeting held in St. Catharines, June 26, all the preliminary arrangements were made. It was announced that the gov't. had given a grant of \$500, the city council one of \$200, and the county council one of \$100, making \$800, all of which will be devoted to the prize list. It was decided to give \$400 in prizes for fruit, \$250 for flowers and \$150 for vegetables.

The following organizations will be invited to appoint 2 representatives each on the board of management: the Niagara District Peninsula Fruit Growers' Assn., Southern Ont. Fruit Growers' Assn., Jordan Station Fruit and Vegetable Growers' Assn., the Hamilton, Niagara Falls, Grimsby and Burlington horticultural societies, and the township of Grantham and the Hamilton Vegetable Growers' Assns. The Ont. Fruit and Vegetable Growers' Assns will be represented by P. W. Hodgetts and H. B. Cowan, of Toronto, who will also represent the Ont. Dept. of Agri. Several of the organizations mentioned have already appointed their representatives. The St. Catharines soc. will have 7 representatives.

It was decided to pay the expenses of one representative from each of the foregoing organizations when attending board meetings, it being understood that the expenses of the other representative would be paid by the soc. or organization interested. Committees were appointed to draft the fruit, flower and vegetable prize lists, which will be ready for distribution early in July. Committees were appointed as follows: For advertising, and printing, finances

and transportation. Mr. W. B. Burgoyne, ex-mayor of St. Catharines, was appointed pres.; Messrs. C. M. Honsberger, of Jordan Station; R. Cameron, of Niagara Falls South, and Jonathan Carpenter, of Winona, vice-presidents; C. A. Hesson, of St. Catharines, treas., and Miss M. M. Tasker, of St. Catharines, sec. All these parties, with the exception of Mr. Carpenter, were present.

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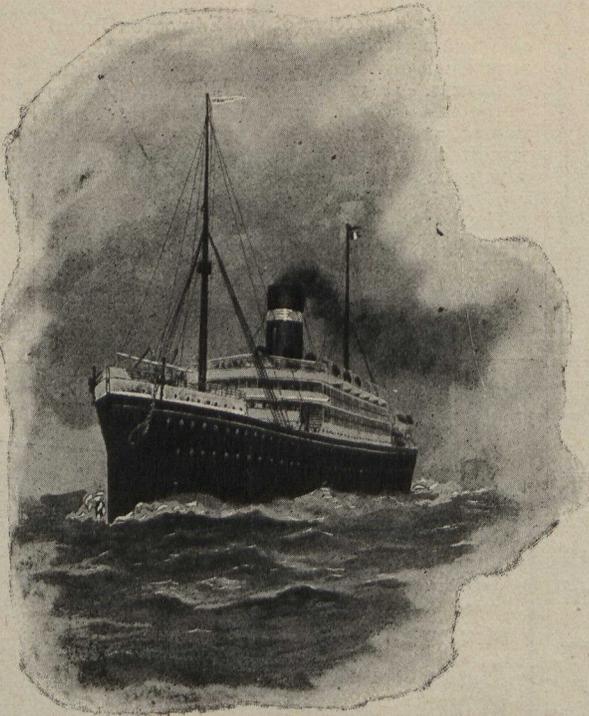
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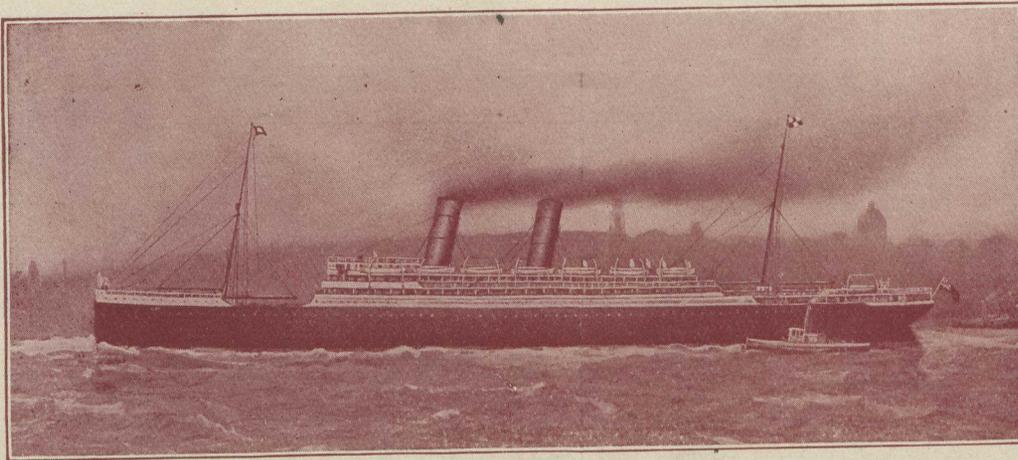
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Fri. " 13	Empress of Ireland	Fri. " 29	Fri. " 21	Empress of Britain	Fri. Sept. 7
Sat. " 21	Lake Manitoba	Wed. July 4	Sat. " 29	Lake Erie	Wed. " 12
Fri. " 27	Empress of Britain	Fri. " 13	Fri. Oct. 5	Empress of Ireland	Fri. " 21
Sat. Aug. 4	Lake Champlain	Wed. " 18	Sat. " 13	Lake Manitoba	Wed. " 26
Fri. " 10	Empress of Ireland	Fri. " 27	Fri. " 19	Empress of Britain	Fri. Oct. 5
Sat. " 18	Lake Erie	Wed. Aug. 1	Sat. " 27	Lake Champlain	Wed. " 10
Fri. " 24	Empress of Britain	Fri. " 10	Fri. Nov. 2	Empress of Ireland	Fri. " 19
Sat. Sept. 1	Lake Manitoba	Wed. " 15	Sat. " 10	Lake Erie	Wed. " 24
Fri. " 7	Empress of Ireland	Fri. " 24	Fri. " 16	Empress of Britain	Fri. Nov. 2



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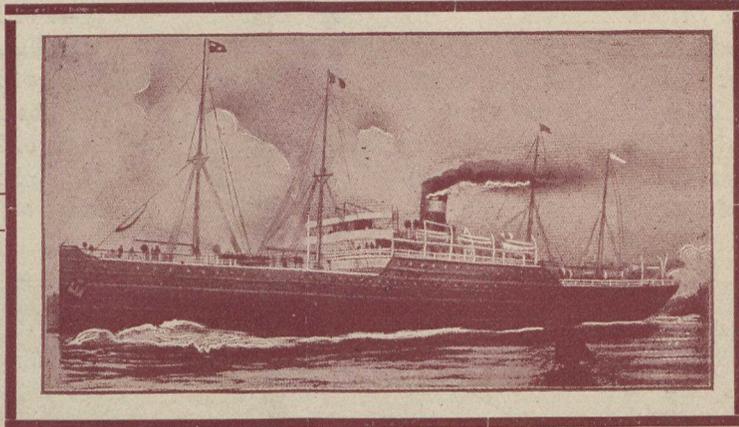
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