

Pages Missing

The Best Cameras

Quality
Style
Value

Price, from \$1 up

Pocket,
Folding or
Fixed Focus

A complete line of
supplies always in
stock.

Mail orders promptly and carefully shipped.

Canadian Camera Company

Limited

40, 42 and 44 King Street East

TORONTO



Galt Classik Ceilings

Send the Classik Kids a rough plan and measurements of office, public building or dwelling and they will furnish you free estimate of cost of Classik Ceilings, Panels and Cornices for same, together with working details.

These metal decorations give a charming and harmonizing effect to any room or building to which they are applied.

Fire proof, sanitary, best acoustic properties and practically indestructible.

GALT ART METAL CO. Ltd.
GALT, ONT.

The "Safety" Fruit Picker

does away with ladders and climbing, and ensures safety to the operator and avoids bruising of the fruit

The "Safety" Fruit Picker will save money in clearing up your trees, and is the "proper thing" for picking "Exhibition" fruit.

DESCRIPTION

The "Safety" Fruit Picker consists of a rubber covered wire hood, attached to a 12 foot pole, which grasps the fruit the same as the human hand, lifts it up and a single twist releases the fruit and drops it down the chute into a canvas bag at the waist of the operator without bruising or coming in contact with other fruit. It can be operated by a woman or child as easily as by a man.

The pole is bamboo, which insures lightness and stability, and is divided into 8 and 11 foot lengths, which are adjustable and can be used for large or small trees at the pleasure of the operator. The wire spring which holds the mouth of the chute in position, allows for the interference of the branches. The whole outfit weighs only 2 1/2 lbs.

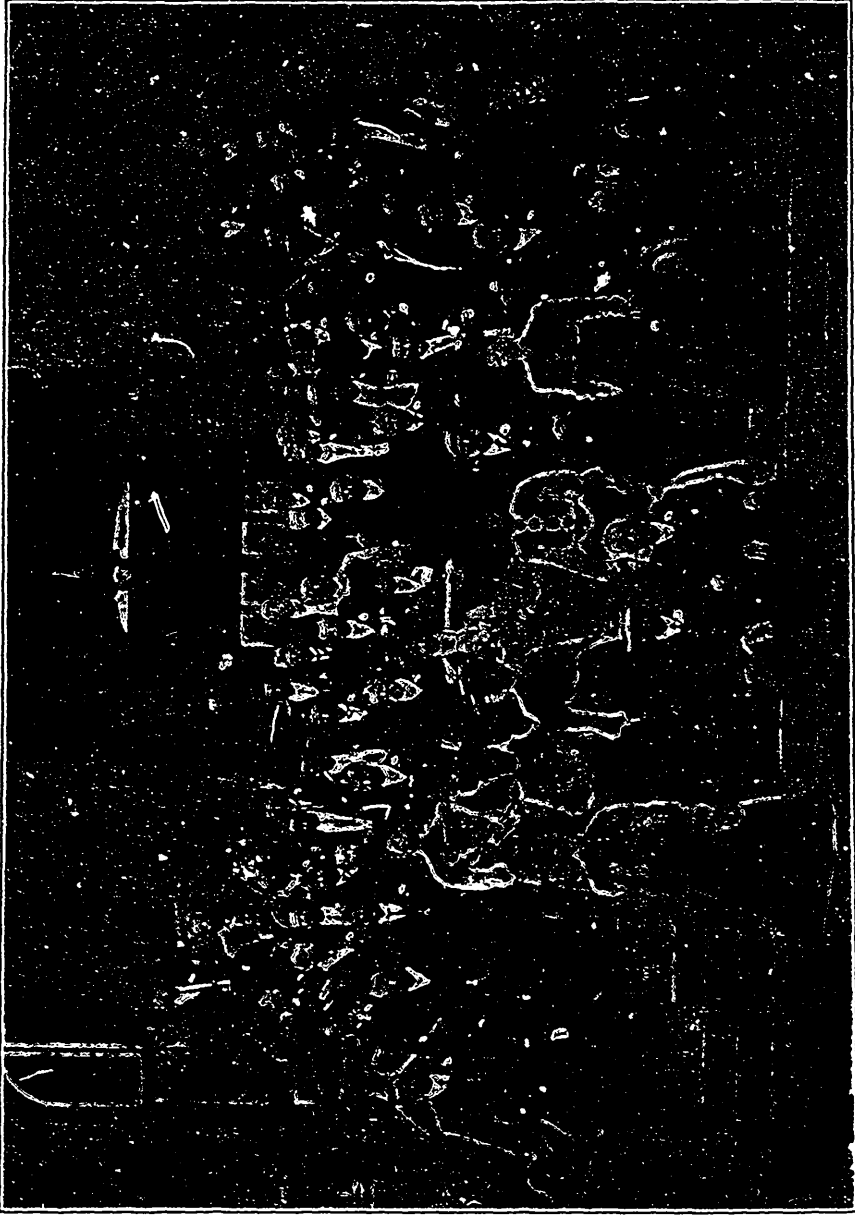
The bag is made of canvas duck, and is attached to a steel wire frame, which conforms to contour of the body, and is strong and durable and holds half bushel of fruit, is held in position by a wide canvas strap, which goes over the shoulder with an adjustable snap to secure it and which is easily detached to facilitate the emptying of the bag when full.

Price, complete, \$2.00

The Safety Fruit Picker Co. of Ontario,
Ridgeville, Ont. Limited.



A Handsome Premium will be Given Free to all Readers who buy goods from Advertisers.



Members of The Canadian Horticultural Association Out For a Good Time.

One of the most important organizations in Canada for the advancement of the horticultural interests of the Dominion is the Canadian Horticultural Association, whose members represent the professional florists and gardeners. The annual convention of the association was held in Montreal during August and lasted four days. The illustration shows a group of the delegates gathered on a trip around the city as the guests of the city. The newly elected president, Mr. W. H. Dudley, is in the front holding his hat in his hand. At his right sits the past president, Mr. G. H. Robinson, of Montreal.

The Canadian Horticulturist

SEPTEMBER, 1905

VOLUME XXVIII



NUMBER 9

HOW TO FORECAST FROSTS

J. B. REYNOLDS, O. A. C., GUELPH, ONT.

IN districts where the cultivation of fruit, flowers, or vegetables, is highly specialized, it becomes important to possess means of forecasting frost at critical times during the growing season and of preventing injury from low temperatures. This article is written with the object of giving some practical suggestions on these matters.

TOPOGRAPHIC.

Land, bordering on the water front is less liable to extremes and to low dips of temperature during the growing season than inland districts. This is one of the reasons that the best fruit sections are found by the water. Apart from the steadying influence of the water in lessening the chance of damage, frost is essentially a question in air drainage.

In a given district, the spot where night frosts are most likely to occur is the one with the lowest elevation. There is a case in point along Lake Ontario east of Stony Creek. From the lake back to the mountain there is a belt of land with a topogra-

fully grown. From the foot of the mountain the ground slopes gradually as at B. There grapes and peaches are grown. At C is a depression, from which the ground rises both toward the lake and toward the mountain. Experience has shown that fruit growing is much more precarious at C than at A or B. The reason is found in the topography in spite of the greater nearness of C to the water. At night, the cold, heavy air drains away from the mountain side toward C. If there were no rise of ground as at D, the air would drain to the lake, and C would be as immune from frost as A or B. But on account of the peculiar slope of the ground the cold air from the mountain side lodges at C, and here the lowest night temperatures are likely to be found.

ATMOSPHERIC.

It is frequently possible to forecast frost from the appearance and condition of the atmosphere toward the afternoon. After a north wind has been blowing, with a clear or clearing sky, there is likely to be a considerable fall of temperature. Specifically, a clear sky, and a still, dry air, are favorable to frost. Conversely, if the sky is cloudy, or the wind high, there is less chance of a fall of temperature.

Given a still air and a clear sky, the humidity of the air, the amount of moisture in it, is the chief factor in controlling the night temperature. The temperature will

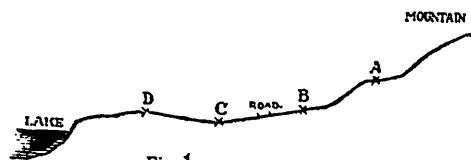


Fig 1

phy similar to the illustration, Fig. 1. On the side of the mountain there is a terrace, at A, where plums and pears are success-

fall rapidly until dew begins to gather, at which point a further drop in temperature is prevented or retarded by the condensation of moisture. The dew point, therefore, that is, the temperature at which dew begins to gather, is a good indication of the probability of frost. If the dew-point is 40 degrees F. or above at sunset, there is not likely to be frost that night. If, however, the dew-point is below 40 degrees, precautions should be taken to prevent the injury of tender flowers, vegetables, or fruit buds.

FINDING THE DEW POINT.

Following is a method for determining the dew point by means of the wet and dry bulb thermometers or sling psychrometer: Two ordinary all-glass thermometers, with cylindrical bulbs, are strapped securely to the edges of a thin board about 12 inches long and two and a half inches wide, so that the bulbs project below the board. About the bulb of one of the thermometers one fold of a fine piece of cotton or muslin is wrapped closely and tied tightly at the top. To use the psychrometer the covered bulb

should be moistened with water, and by means of a cord fastened to the top of the board. The psychrometer is swung to and fro for a minute or so in the shade in the outside air, until the reading of the wet bulb is stationary. The two thermometers should be read quickly after the swinging ceases and the readings recorded. The depression of the wet bulb reading below that of the dry is the amount of cooling produced by evaporation and indicates the humidity of the air. From these readings the dew point can be determined from the table given below.

To illustrate the use of the table: Suppose that the air temperature, the dry bulb, reads 55 degrees, while the wet bulb reads 47 degrees, a depression of 8 degrees, the table gives a dew point of 39 degrees. If this condition exists at sunset, with a clear sky and little or no wind, there is likely to be frost.

THE ELECTRIC ALARM.

Fig. 2 illustrates a simple and inexpensive arrangement for giving warning when a certain temperature, say 32 degrees, has

DEPRESSION OF THE WET BULB THERMOMETER.

Thermometer Dry-Bulb	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'
65 deg.....	40
64 deg.....	39
63 deg.....	42	38
62 deg.....	41	37
61 deg.....	42	40	38	35
60 deg.....	41	39	36	33
59 deg.....	42	40	38	35	32
58 deg.....	41	39	36	33	30
57 deg.....	41	40	37	35	31	28
56 deg.....	40	39	36	33	30	26
55 deg.....	41	39	37	34	31	28	25
54 deg.....	40	38	36	33	30	27	23
53 deg.....	41	39	37	34	31	28	25	20
52 deg.....	40	38	36	33	30	27	23	18
51 deg.....	41	39	37	34	31	28	25	21	16
50 deg.....	40	39	37	33	30	27	23	19	14
49 deg.....	41	39	37	34	31	28	25	21	17	11
48 deg.....	40	38	36	33	30	27	23	19	14	9
47 deg.....	41	39	37	32	29	25	22	19	17	12	6
46 deg.....	40	38	36	33	30	27	24	20	15	10	2
45 deg.....	..	41	39	37	35	32	29	26	22	18	13	7	-1
44 deg.....	..	40	38	36	33	30	27	24	20	16	11	4	-5
43 deg.....	41	39	37	35	32	29	26	23	19	14	8	1	-9
42 deg.....	40	38	36	34	31	28	25	21	17	12	6	-2	-15
41 deg.....	39	37	35	33	29	26	23	19	15	9	3	-6	-22
40 deg.....	38	36	33	29	26	23	19	15	9	3	-6	-22	..

been reached. It consists of a thermostat, an electric battery, and an electric bell. The thermostat is provided with a metallic strip clamped at one end. A change of tem-

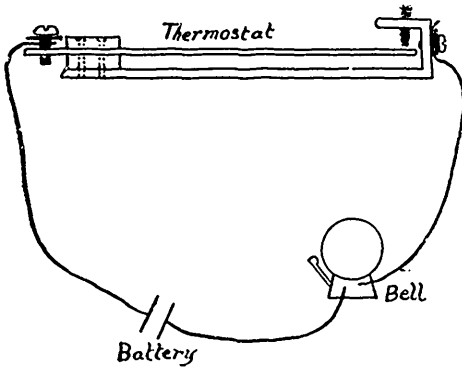


Fig. 2.

perature causes a bending of the strip so that it touches the point of an adjustable screw and makes electric contact. The thermostat should be placed outside, while the battery and the bell may be placed in the bedroom. As soon as the temperature outside falls to 32 degrees the thermostat makes the circuit and rings the bell. The rest depends upon the man who is rung up.

There are several practical methods of preventing frost, or if frost has occurred, of preventing fatal injury to plants. Among these methods a few of the more important may be mentioned:

I. WARMING THE AIR.

A large number of small fires, properly placed, will raise the temperature of an orchard or garden several degrees. Under this head various methods have been tested in California, and the best has been that of suspending wire baskets a few feet from the ground, each holding several pounds of charcoal or other suitable fuel. The bas-

kets may cost 10 cents each, and if 40 baskets were used per acre, the fuel would cost \$2.50 or \$3.00.

2. PREVENTING RADIATION.

A cloudy sky at night is often effective as a prevention of frost. Adopting this idea, the fruit grower may create clouds of smoke in the orchard by setting fire to previously prepared smudge piles, consisting of damp straw or strawy manure. The effect of both of the above methods will depend upon the existence of air currents. For best effect the air should be still.

3. WATERING TREES AND PLANTS.

Injury from frost may often be prevented by sprinkling. This, of course, is practicable only where there are waterworks, and then only on a small scale, but may be used for gardens and flower beds. This should be done in the evening before frost is expected. If, however, no precautions have been taken and plants have been frozen, fatal injury may often be prevented by sprinkling very early in the morning before the temperature begins to rise—before sunrise. It is believed to be the rapid rise of temperature before the injured cells have time to readjust their functions, that causes injury. The blanket of water prevents the rapid heating.

It may be said in conclusion, going back to the question of forecasting, that the daily forecasts published by the weather bureau at Toronto should be followed closely. Besides being published in the daily papers, these forecasts may be secured by telephone from the nearest telegraph office. With the extension of rural telephones the important service rendered by the weather bureau may be brought within reach of every rural district in Ontario.

Power Spraying.—With the advent of the power sprayer in the course of a year or two we will have these power machines working in sections where a few thousand

trees can be found within a square of six to eight miles, just as we have threshing machines working to-day.—(Frank J. Baker, Georgetown, Ont.)

THE SHIPMENT OF FRUIT IN COLD STORAGE

J. F. SCRIVER, FRUIT INSPECTOR, MONTREAL, QUE.

ONE would hardly believe the amount of loss sustained by shippers through their fruit landing in poor condition. There has been a great deal of nonsense written about cold storage on vessels by people who never took the pains to enquire or examine into the subject for themselves. It was once thought, and some shippers will still argue, that the bulk of the damage to the fruit in shipping is the result of poor storage on the vessels. I contend and can prove that if fruit, apples especially, are picked and packed properly and placed on the steamer in good condition that over 90 per cent. will land in good condition.

BEGIN RIGHT.

In considering a system of cold storage for fruit we must begin at the right end where the fruit starts on its long journey to market. If apples are picked and allowed to remain in piles, exposed to the sun and rain for days before packing, or if packed immediately and then barreled and left in the orchard exposed to the weather, the most perfect system of cold storage in the world is not going to make those apples land in good condition in the Old Country.

Inspectors at Montreal take the temperature of the fruit in barrels or boxes before loading, and have often found the thermometer 10 degrees, yes, sometimes 15 degrees, higher in the package than the outside temperature. On opening some bar-

rels we could feel the heat rising two feet above the barrels. Now, is it reasonable to suppose that, even with the best of cold storage, these apples are going to reach the British markets in good condition. It is a common fault with all of us to blame somebody else for our misfortunes, when they are really caused by our carelessness. If fruit shippers, instead of blaming the cold storage in cars or steamers for their losses, would change their method of handling fruit, pick and pack properly and load the fruit in cool condition they would find their losses greatly reduced. If we had large cold storage warehouses at central shipping points where fruit could be placed and thoroughly cooled before loading on cars the loss would be reduced to a minimum.

Here are a few rules to observe when exporting fruit, especially apples: Do not allow your fruit to become ripe before picking. Do not allow apples to remain in piles in the orchards. Do not allow apples to remain in barrels exposed to the weather. Do not put windfalls in even No. 2 apples. Have the fruit cool before loading.

I do not think it is possible for any shipper to observe all these rules, the way business is conducted at present, and the only remedy I see is cooperative packing and shipping of fruit. I hope to see the bulk of the fruit handled in this way within a few years.

FRUIT GROWING IN GREAT BRITAIN

W. T. MACOUN, HORTICULTURIST, C. E. F., OTTAWA, ONT.

DURING my recent visit to the old country many interesting observations regarding fruit and fruit culture were made.

Strawberries had been in season but a few days when we reached Ireland on June 24, and after being nine days on a steamer

we were very ready to test this luscious fruit. The first strawberries tried appeared to confirm an impression obtained at the close of the strawberry season in a previous year, namely, that the old country strawberries, though high in flavor, were lacking in sprightliness and character. We were

disabused of this impression, however, after eating the Royal Sovereign, which, undoubtedly, is one of the most delicious berries in existence. We should like to have had some Wm. Belt or Marshall for comparison.

On looking into the matter and visiting the plantations where the fruit was grown, it was found, as in Canada, that the varieties of poor or medium quality are often the most productive, and to the average grower the most profitable, hence one has to test Royal Sovereign or some other good variety to get a right idea of what can be produced. The best berries are also very large, no doubt principally due to the fact that the plants are grown on the hill system, the plants being from 22 to 24 inches apart each way. From three to five crops are usually taken from a plantation. The price of strawberries was, on the whole, lower than in Canada, varying from 2d. to 6d. per box.

Everybody eats gooseberries out of hand when the season is on, and it does not take long for a Canadian to get to like this refreshing pastime. A morning visit to the garden in gooseberry time is a very popular kind of entertainment. It is a fine sight to see these immense gooseberries grown on large areas after being accustomed to a plantation of Downing in Canada. Raspberries and currants were also abundant.

Two visits were made to the principal fruit districts of Ireland, in Armagh county. Apple orchards of 20 acres are not uncommon here, and many young trees are being set yearly. The fruit growers of this district are confident that it will not be long before Canadian or American apples will not be needed in Ireland, and certainly if the quality and appearance of the fruit were as good as our own, and the crop as certain, we should have this fear, because of the large number of trees which are being set. It is certain, however, that Canadian fruit, of the best quality only, will in the near

future command a good price, as the people prefer their home-grown fruit for culinary purposes, owing to its greater acidity, and it is naturally in better condition when bought. We were told that last year when apples were so plentiful in Ireland they were shipped to Glasgow and the returns were very fair. The Bramley Seedling is the most popular variety in the north of Ireland, as it succeeds well.

A visit was also paid to Kent, one of the best fruit districts of England, where large areas are devoted to both large and small fruits. The impression obtained on seeing the apple orchards both in England and Ireland is that the trees in general are planted too close; that fine fruit is produced while the trees are young and the soil kept cultivated, or while other crops, demanding cultivation, can be grown between the trees; but that as soon as the trees become older and it becomes unprofitable to grow other crops on account of the shade from the apple trees, the fruit does not get sufficient sunshine and, we should think, would not produce good fruit. In Canada trees of the same age would be producing the most profitable crops, although, unfortunately, trees are often too close with us. The bad effects of too close planting could be avoided by timely thinning out the trees, but this, if done at all, is usually left too long.

Many trees in the old country are, however, grown on Paradise stock and become profitable early. There are many orchards which are judiciously planted or thinned where the large trees have plenty of room and clean cultivation is adopted, and where good fruit is produced.

The Schools of Horticulture at Swanley, Kent, and at Reading were visited for the purpose of seeing the character of the work done and the methods employed. Both of these colleges are in a very flourishing condition. A visit was also paid to the estab-

lishment of Messrs. Sutton & Sons, Reading, Eng., where many interesting things were seen. At the Woburn Fruit Experiment Station, Ridgmount, which was also visited, there is a series of experiments in fruit culture which is quite unique. The experiments appear to be very carefully conducted, and the results are striking.

In Ireland the Department of Agriculture

is doing splendid work, and through the courtesy of Sir Horace Plunkett every facility was given me to gain an insight into the methods employed by the Department and the work being done. The apple crop in Great Britain and Ireland is light this year owing principally to severe frosts during the blossoming season, hence good Canadian fruit should sell at profitable prices.

THE HANDLING OF THE APPLE CROP *

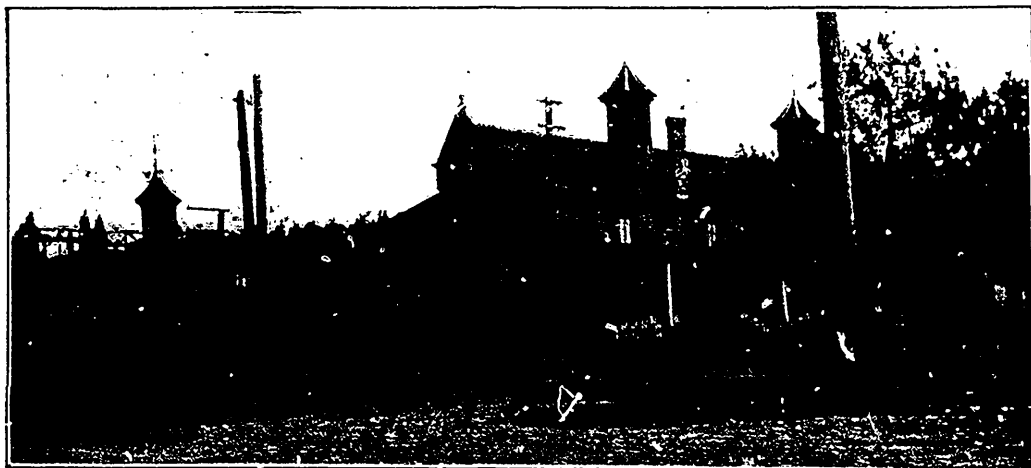
G. HAROLD POWELL, U. S. DEPT. OF AGRI., WASHINGTON.

A FARM storage or local warehouse would overcome some of the practical difficulties now experienced in handling the fruit crop. The average fruit grower cannot store the fruit quickly after picking in a distant warehouse. He does not employ enough labor, nor does he grow sufficient fruit that ripens at one time to make a carload quickly. A common practice, especially among apple growers, is to hold the fruit in the orchard until a carload is ready for shipment, or the entire crop of fall and winter fruit may be picked before the packing is begun. Under these conditions the delayed fruit ripens rapidly and the apples enter the warehouse in all stages of maturity. These naturally break down at various times in the storage season. On the other hand, if the grower sells at the harvesting time he is obliged to accept the price fixed by the temporary condition of the fruit trade. From the business standpoint, it may not be advisable for the average farmer to attempt to store his own fruit and sell it later in the season, but for the specialist in fruit growing, the local warehouse provides a means of holding the fruit in prime condition during the warm fall weather and places him in the most favorable position to sell it later in the season either to a buyer or on the general market.

The farm or local storage house is of still greater importance to the grower and shipper of perishable fruits, such as the small fruits, the peach, and the pear, in providing a means of properly preparing the fruit for long distance shipment. Many of the losses which occur while fruit is in transit are due to the ripening and to the development of diseases that take place before the temperature of the car is sufficiently lowered, either by ventilation or by the melting of the ice. It is not uncommon for peaches to reach the market with a loss of five to 30 per cent. in the top layers of the car. This is due to the unequal distribution of the temperature in the average refrigerator car and to the small order of ice.

From extended experiments in shipping peaches from southern to northern markets in 1904, the United States Department of Agriculture found that the fruit could be landed in perfect condition and that it could be held in the car a much longer period on arrival at destination when it had been cooled to about 40 degrees F. quickly after picking and before loading in the refrigerator cars. The same principle will apply to the export shipment of peaches, pears and early apples, and to the distant shipment of small fruits.

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



Shipping Fruit in the Niagara District

The shipping station of Mr. E. D. Smith, of Winona, is here shown with ventilated cars being loaded. This station is equipped with a cold storage plant and annually handles immense quantities of all kinds of fruit. On the left may be seen Mr. Smith's new jam factory in course of erection. This building has been completed since the photograph was taken.

The principle that we wish to emphasize by this phase of the discussion is that fruits of all kinds, whether they are intended for storage in warehouses or, like the perishable fruits, are shipped to distant markets, need to have their ripening processes checked as soon as they are picked, as the ripening that takes place in the orchard or in transit is at the expense of the keeping quality and value on the market or in the warehouse.

A phase of the question that should logically precede all others is the care in handling and preparation of the fruit. The most serious rots in northern apples and pears in transit and in storage are often the direct result of bad handling and packing on the part of the fruit grower or dealer, coupled with a delay in storing the fruit, during which time the rots enter the bruised parts and develop.

The common soft storage rots of apples and pears, which are caused by moulds, do not affect unbruised fruit. They gain entrance only when the skin has been broken by rough picking, or sorting, or by the movement of the fruit in loosely packed

packages during shipment, and kill the fruit prematurely. On the other hand, an unbruised fruit lives until it has spent its vital forces through natural chemical and physiological changes; when it dies from old age.

Not in the history of commercial fruit growing has the influence of the careful preparation and handling of fruit on its keeping quality been emphasized as it was at the horticultural exhibit of the World's Fair at St. Louis. Several of the states kept the tables well supplied with magnificent apples of the previous year's crop throughout the exposition. The principal part of the fruit exhibit to September 15 was made up of fruit of the crop of 1903. There was a wide variation in the keeping quality in the fruit from different states, and, in my judgment, this variation was due more to the preparation of the fruit for storage than to the conditions in the particular section in which the fruit was grown.

We do not underestimate the influence of geographic and climatic conditions on the keeping of varieties, and we do believe that the success that was achieved by the various localities in showing their fruit pro-

ducts at the exposition was due not only to the natural resources of the locality, but even more to the skill and care of the men who handled the fruit from the tree to the show tables. A similar exhibit of storage fruit could not have been made at the Columbian Exposition in 1893. The progress since then has been due not so much to the methods of cold storage as to the fact that we have learned that fruit should de-

velop full size and high color before picking, that in the handling it should be treated like a delicate living body, that heavy wrapping protects it from bruising, that it should be packed in small packages, shipped immediately to a warehouse and stored in a temperature of 29 to 31 degrees F. We need to apply the lessons of this great exposition to the handling of fruit for commercial purposes.

COOPERATION

MAXWELL SMITH, FRUIT INSPECTOR, VANCOUVER, B. C.

COOPERATION is a uniting of efforts for mutual profit and improvement without injury to anyone, and not a combining of forces to crush competitors for the purpose of building a temple of fortune on the ruin of a weaker rival. True cooperation cannot fail to produce the most salutary effects upon those who profit by its practical operations and to raise its votaries to a much higher plane than can possibly be obtained under the ordinary competitive system. It is not a means to an easy living without the toil of hand or brain, but provides a just remuneration for both, and gives men a clearer conception of the innate dignity of honest labor. Cooperation does not require the subversion of law or existing institutions, the annihilation of the capitalist or the overthrow of labor unions and other organizations. It encourages individual efforts by rewarding according to merit and pays capital its reasonable hire, but the profits go to the producer and to the consumer.

A cooperative organization cannot be made proof against wrong doing on the part of its members. It is subject to all the dangers of mismanagement the same as any other business concern. Cooperation is of paramount importance to the horticulturist. As we travel about the country many worthless orchards arrest our attention. The

owners are often discouraged and disappointed men, who have practically lost faith in the fruit business. These conditions may be the result of planting varieties that are not suited to the locality, want of proper cultivation of the soil, the lack of proper attention to spraying, or the absence of good judgment in pruning and training the trees.

PROFIT BY OTHER'S MISTAKES.

But, whatever the cause may have been, the ugly fact stares us in the face, of time, money and toil wasted and only a miserable failure as the result. How often have we seen this in the case of pioneers, while those who come later, plant and raise beautiful orchards that pay the owners handsome profits; and people wag their heads and sneer at the pioneer in his misfortunes, forgetting that by his mistakes and failures he may have saved his new neighbor from a like fate and made the latter's success possible.

Strive to profit by the experience and research of those who have been successful in their particular undertakings. Seek to emulate the example of those who walk the highways of success in your chosen calling. But while our eyes are fixed upon the few who have been pre-eminently successful, we must profit also by the experience of those who have failed. Let us be honest enough to acknowledge the debt which we owe to them.

Have patience with the man who has made mistakes and despise not the counsels of your neighbor who has failed—he may have paid the price of your successes—but seek to avoid the errors which resulted in that failure, and if he still remains, cooperate with him for your mutual advantage and the world will be better for your both having lived in it.

Fruit growers should come together and

mutually profit by past experiences, observations, successes and failures; cooperate in determining what is best to plant; cooperate in methods of planting, pruning, spraying and cultivating; cooperate in picking, sorting and packing; cooperate in shipping and marketing; cooperate in maintaining uniformity of prices according to grade, so that every man may receive the just reward of his labor.

TRIAL SHIPMENTS TO THE WEST

GOOD work is being done by the St. Catharines Cold Storage and Forwarding Co. in the matter of experimental shipments of small fruit and tomatoes to Winnipeg. An attempt is being made to have two cars go each week. "This year the work is being done to supplement that done last season by Prof. Reynolds, of the O. A. C., Guelph," said Mr. W. H. Bunting, of St. Catharines, honorary president of the Ontario Fruit Growers' Association.

Different types of cars fitted with different cooling systems are being tested. Mr. W. W. Moore, of the Markets Division, Department of Agriculture, Ottawa, has promised to furnish thermographs for the cars. "The Provincial Fruit Growers' Association," said Mr. Bunting, "purposes sending along practical men to superintend the shipments, watch conditions en route, and sales in Winnipeg.

"A new package is being tested for peaches and the finer fruits. The dimensions are 20 x 14 x 4½ inches, and four small baskets can be placed in each of these. When full of peaches the total weight is

about 18 pounds. At present it is being used for western shipments, but we intend to introduce it on the Ontario markets also for the extra fine fruits."

The first shipment was made August 18, but owing to the light tomato crop and to the fact that some factories are paying 30 cents per bushel it was difficult to obtain sufficient tomatoes to make up the load.

"The packing," remarked Mr. Robert Thompson, "is being done in boxes chiefly after the California style. This is strictly a business deal of our own. Express charges are \$2.40 per 100 pounds, whereas by sending a carload we get the 66 cent rate. In addition to this we have to pay for the icing. Past experience has shown that the heavy express charges run away with the profit.

"We are trying the fancy packages to find out whether it will pay to put them on the western market. In Toronto and Montreal it pays early in the season when fruit is scarce, but later on the cheaper package is necessary. As soon as the consumers are educated to pay the price, the growers will put the fruit in the proper packages."

I have observed that the bark of your trees in Canada is much rougher than with us in the Eastern States. It must be due to the colder climate.—(A. N. Brown Wyoming, Delaware.

Bandages on Trees are a good means of fighting the canker worm, provided they are properly looked after. Where they are left on pear trees blight sometimes starts under the hand.—(M. Pettit, Winona, Ont.

Picking and Handling Apples

W. H. DEMPSEY, TRENTON, ONT.

The picking should be done only by very careful hands. No apple, no matter how firm, has been found that will not show marks of rough handling, revealing brown spots and giving it the appearance of a windfall. The baskets should be lined with heavy burlap to keep the fruit from bruising against the sides, and if the fruit is to be kept by the grower until shipped to market I find it better to place them in barrels in a cool place the same day they are picked. They should not be touched until ready to pack for shipping.

A great deal of choice fruit is destroyed by too much handling, placing them on the packing table, putting in baskets, then into the barrel where they are allowed to remain in the orchard until cold weather, then placed in the storage building, emptied on the packing table, sorted and packed for shipping. They are more or less damaged by so much handling.

Wood Ashes in the Orchard

PROF. R. HARCOURT, O. A. C., GUELPH.

How heavily should wood ashes be sown in orchards?—(R. Robinson, St. Catharines.

It is estimated that 20 crops of apples will remove more than twice as much nitrogen, one and a half times as much phosphoric acid, and nearly three times as much potash as 20 crops of wheat. A crop of wheat will remove about 40 pounds of potash per acre, therefore a crop of apples will take 100 to 120 pounds of potash per acre from the soil. As ashes contain five per cent. of potash, it would require one ton of ashes to supply that amount of potash removed from the soil by one crop of apples. This may be looked on as the minimum amount of ashes for an orchard in bearing. The best time for the ashes to be applied is in the early spring or summer. The potash

in them is immediately available and may be taken up by the plants at once.

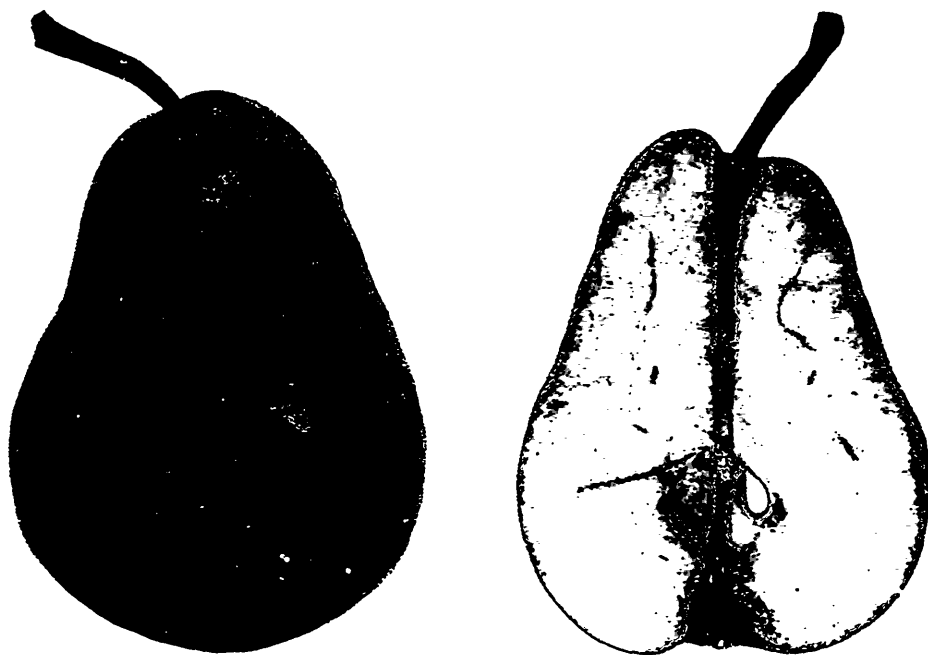
As to whether they will hurt a growing crop, such as vetches or crimson clover, if applied when the leaves of these crops are dry, ashes might sift through to the ground readily and no harm might be done. If they are applied while the leaves are wet they would seriously burn and destroy the leaves. If the cover crop is plowed down in the spring the wood ashes might very conveniently be plowed down with them. A good plan is to cultivate the ashes into the soil and not plow them under. Although the potash of wood ashes is soluble and immediately available to the plant, there is not much fear of serious leaching of this constituent from the soil. Nature has provided means by which it is held in the soil, and, therefore, not subject to loss by leaching, as is nitrogen.

Planting Peach Trees

“HOW far apart do you plant your peach trees?” was asked Mr. Adolphus Pettit, of Grimsby, recently by an editorial representative of *The Horticulturist*. “In the past,” replied Mr. Pettit, “I have planted them 18 to 20 feet apart, but I find that rather close on my soil which tends to luxuriant growth.

“Were I setting out an orchard now I would set the trees 25 feet apart to allow a free circulation of air and plenty of sunlight. This would also allow lower headed trees. Where trees are planted too close together they grow high and the lower branches die. When planted 25 feet apart berry bushes can be grown in between, which I have found is advantageous.”

In this part of the township apples are the main fruit crop, and the price has been so low that some are cutting down their orchards.—(N. B. Hagar, Allanburg, Ont.



The Wilder Pear

LINUS WOOLVERTON, POMOLOGIST, ONTARIO DEPARTMENT OF AGRICULTURE.

The Wilder is a valuable pear for either home use or near market, ripening about the middle of August. It takes its name after the late venerable Marshall P. Wilder, the honored president of the Massachusetts Horticultural Society. It was not originated by him, but was a chance seedling found growing on the north shore of Lake Erie, and was named in his honor. When ripe the coloring of this pear is a deep red on yellow ground, and shows up very attractively when placed on sale. Many of the early pears, notably the Summer Doyen *et c.*, ripening in July, the Manning's Elizabeth and the Dearborn's Seedling, ripening in August, are too small to bring much money, but the Wilder is of fairly good size, often measuring three inches in length by two and a half in breadth. The quality is excellent, the flesh tender and fine grained, and the flavor sweet, aromatic and very pleasant. I would advise growing this pear on the quince, judging by my own experience at Maplehurst, where the dwarf trees are doing well.

IMPORTANT BULLETINS

AN interesting bulletin has been issued recently by the New York Agricultural Experiment Station treating on the plant-food constituents used by bearing fruit trees. Investigations were made to ascertain the amounts of nitrogen, phosphoric acid, potash, lime and magnesia used in one growing season by growing fruit trees. One to three typical representatives of standard varieties of apple, peach, pear, plum and quince were selected. The fruit, leaves and new growth were carefully gathered and analysed.

It was found that peach trees used the most plant food per acre. Apple and quince trees were about the same and came second, while plums gave much the same results

and used less plant food than the other trees.

The proportions used by the different trees were approximately as follows: Nitrogen, 1 lb.; phosphoric acid, .27 lb.; potash, 1.14 lbs.; lime, 1.35 lbs.; magnesia, .45 lbs. In the fruit, quinces used the most nitrogen, with apples, peaches, plums and pears following in order. Potash was present in the fruit in larger quantities than any other food constituent. Nitrogen was found to be about half as much as potash.

Plant food was more abundant in the leaves of the peach than in those of the other trees, after which came the apple, quince, pear and plum trees in the order given. Lime was present in the leaves, and in the new wood in greater quantities than any

other food. In new wood the amount required per acre was greatest in the case of peach trees. Write to Geneva, N. Y., for Bulletin 265.

APPLE CULTURE DISCUSSED.

In Bulletin 144, of the Ontario Agricultural College, Guelph, "Apple Culture" in its more important phases is dealt with rather exhaustively. After referring to the demand for nursery stock, Professor Hutt gives some valuable advice regarding the selection of varieties suitable for different sections and classifies them into those suitable for market and those for home use, giving a list of summer, fall and winter varieties recommended by the Ontario Fruit Experiment Stations.

The location, exposure, windbreaks, preparation of soil, arrangement of trees, distance apart, cultivation, cover crops, grafting, pruning, harvesting, grading, marketing, storing and practically every operation connected with apple growing are fully dealt with. Professor Hutt concludes his part of the bulletin by a calendar of operations which the orchardist should pay attention to each month of the year.

A few pages are devoted to the injurious insects which trouble the apple orchard. Professor Lochhead classifies these into insects affecting the roots, insects affecting the trunk, twigs, or branches, insects attacking the buds and leaves, and insects attacking the fruit. The pests commonly found in Ontario orchards and the most approved methods of combatting each are fully dealt with.

Fungous diseases are discussed and classified. The preparation of the best insecticides and fungicides, a few hints on orchard spraying, and a complete spray calen-

dar for an apple orchard completes this very excellent bulletin. Every orchardist should write to the Ontario Department of Agriculture, Toronto, for a copy.

A CORNELL BULLETIN.

Another bulletin of special interest to orchardists is No. 226, entitled "An Apple Orchard Survey." The purposes of the survey were to correlate soil characters with orchard conditions, to compare successes and failures and ascertain underlying causes, to investigate methods of orchard management and determine the influence of each, and to collect data on practical apple-growing which would furnish indisputable evidence to assist horticultural instructors.

These purposes were well carried out in a thorough examination of numerous orchards in Wayne county. Every branch of work connected with the production of the apple crop receives due attention and increased value is given to the work by the use of numerous illustrations. After careful investigation it was concluded that tillage, fertilization, pruning and spraying are the chief factors that enter into good care of an orchard, but that one or more of these may be omitted for a time without serious results. To some extent tillage may replace fertilizers; a thrifty orchard may resist the attacks of disease; or some seasons may find few insects and spraying can be discarded. However, the most successful apple grower is the one who keeps a proper balance between all four agencies. He must also study and learn something about the life processes, about insect and fungous diseases, and about drainage and other soil problems. This bulletin is issued by Cornell University, Ithaca, N. Y.

Spraying is more generally practised now than a few years ago. Growers are beginning to see the need of better spraying, cultivation and general care of their orchards.—(A. E. Sherrington, Walkerton, Ont.

My peach trees have been badly troubled with the borer. I find the only way to keep them in check is to go around with a good stiff knife with a sharp turned up point and dig them out.—(C. S. Nelles, Grimsby, Ont.

NEW METHODS WITH STRAWBERRIES

ALTHOUGH the ordinary methods adopted in strawberry growing are according to the inatted-row system and the planting of a new patch each season, there are growers who practice novel methods and who are not afraid to recommend them.

"Strawberries grown in hills," said Mr. W. A. Best, of Picton, "give good returns. The runners are kept cut off continually, and as a result only one strong healthy plant is left. This method, of course, requires more labor than is entailed by the ordinary culture, but the quality of fruit amply repays the gardener. An extra crop of only number one fruit results and a better price is obtained. Besides, the patch need not be renewed every season. Cultivation can be done both ways.

"In the matted row the runners take away the strength from the fruit, and as a consequence fruit of poor quality is harvested. Cultivation can be done only one way, and that only for the first season. The weeds are sure to come and compel plowing down after one crop is taken."

ANOTHER METHOD.

Some growers take several harvests from

one planting with the matted row system. "I have taken six fruitings in eight years off the same ground," said Mr. J. M. Metcalf, of Grimsby, to *The Horticulturist*. "The ground was put into good condition and as free from weeds as it was possible to have it before setting out the plants. When the crop was harvested the second year the whole patch was gone over with a mower. Then the plow was used, leaving about 10 inches of the old row bottom. After the plowing a good harrowing was given to tear it up well and destroy most of the weeds. The hoes were then used to complete the cleaning and the patch was treated as if newly set out in the spring.

"By this method it appeared as if the plants were all destroyed, but it seemed to set the young suckers to more vigorous growth. The quality of fruit on the sixth harvest was just as good as on the first. This process would not be thoroughly successful with all varieties. I have, however, had success with Jessie and Michael's Early. The plants must be strong growers, which will soon smother their own row and make good growth before winter sets in."

Small Fruit in the Orchard

ORCHARDISTS cannot afford to devote their land wholly to orchard purposes for the first few years after the young trees are set out. Different methods of using the ground are adopted in different sections. Some grow hoed crops, others grain and others some of the small fruits. The growing of grain is not to be commended, but the choice sometimes depends on the nature and condition of the soil.

"Where my trees are small," said Mr. J. M. Metcalf, of Grimsby, to *The Horticulturist*, "I always double crop. I like to have some of the small fruits, such as raspberries or blackberries there because the bushes prevent the snow from blowing

away in the winter and so serve as a protection to the fruit trees. Besides the berries get the benefit of partial shade, and that suits them best. Too much shade would tend to make them soft and mushy, but the shade afforded by an ordinary orchard improves the quality.

"I sometimes use, potatoes, sugar beets, carrots, cabbage, etc. Corn is unsatisfactory, as it requires too much moisture late in the season when the trees need all they can get."

If I were going to plant a vineyard I would set out Concords. They are hardier than any other variety, seldom missing a crop, while the quality is of the best.—(Adolphus Pettit, Grimsby, Ont.)

SMALL FRUITS FOR THE CANNERIES

FRUIT growers well know the difference in quality of different varieties of the same fruit. In berries this is especially noticeable. The tendency, however, with most growers is to buy the plants which they believe will produce the largest berry in the greatest quantity. This may seem plausible, but although size and quality are desirable features in a fruit the quality should be the special characteristic sought.

"The man who is likely to buy the fruit," said Mr. Wellington Boulter, of Picton, to a representative of The Canadian Horticulturist who visited his canning factory, "should be counselled every time by a grower before he purchases his fruit-bushes or trees. There are many varieties of the different fruits which all go to mush when canned. These varieties do not ship well. The tree agent sells to make money, but the

grower also buys to make money. Therefore, he should have only the desirable and saleable sorts. The Cuthbert raspberry is the best. We often pay six cents per box for them when Schaffer only brings four cents. In strawberries we have paid one cent per box more for the Wilson than for other varieties. It is not as large as many of the others, but it is firm and purple or bright red in the centre, and it is quality that counts.

"In every case," continued Mr. Boulter, "the demand is the first thing to be considered. The fine arguments of fruit-tree sellers who claim certain varieties are the best simply because they want to get rid of their stock should not influence the buyer. The man who buys the product should be consulted and the recommendations of the agent ought not to be given too much weight."

White Grubs in Strawberry Plants

PROF. F. C. SEARS, WOLFVILLE, N. S.

Last season I planted about 200 strawberry plants. They were not strong and many wilted. This season they have practically all died. On examination of the roots I found a large white grub, which no doubt accounts for the death of the plants. What can be done to exterminate the pests from the soil? Will it be safe to set out new plants in the same soil this season?—(W. R. Wingham, Richelieu Village, Que.

These large white grubs are the larvæ of some kind of "June bugs" (some species of *Lachnosterna*), which live in the ground and feed upon decaying vegetable matter, especially barnyard manure. So far as replanting this same ground with strawberries this season is concerned I should advise strongly against it if there is any other land available. The particular "grubs" which have caused the damage this year will probably have changed to adult insects, but there will in all likelihood be a new crop ready to attack new plants.

As to ridding the land of these pests I would suggest fall plowing late in the sea-

son so as to throw up the grubs and expose them to the action of the weather. The object of doing the plowing late is of course to allow the insects no opportunity to readjust themselves for the winter.

Next spring I would use salty fertilizers, either wood ashes or muriate of potash, and if the soil needs nitrogen use nitrate of soda to furnish that, and lastly bone meal or some phosphate. In applying such fertilizers it is better to put on the entire lot at one time, as this makes stronger solutions in the soil water, which is unfavorable to the insect life of the soil or sometimes even deadly. If the land were treated in this way it should be perfectly safe to set strawberry plants on it in the spring, but I should consider it a very risky thing to reset this season.

Bulbous plants become sickly after being over fed. Starvation is the only remedy. Put them away to rest and merely give sufficient water to prevent total drying.—(A. J. Frost, Preston avenue, Toronto.

THE MAKING OF A SUBURBAN HOME*

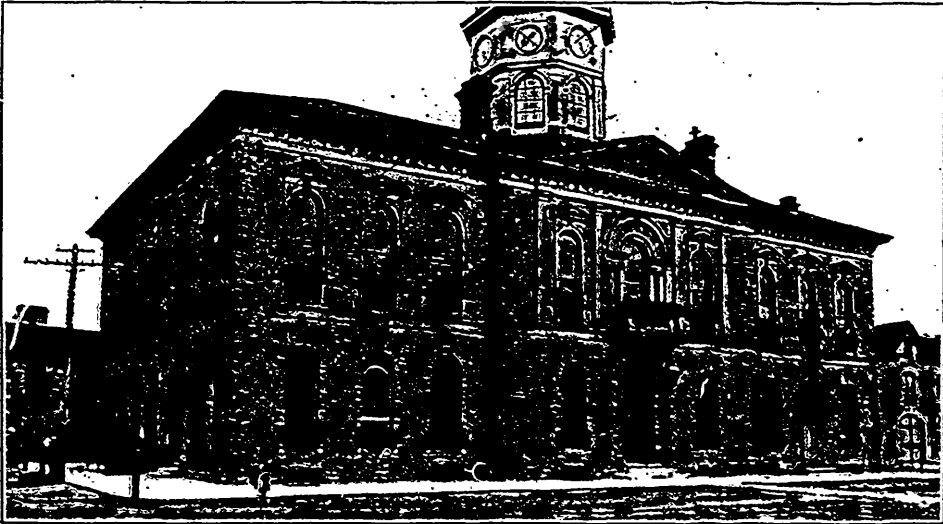
S. SHORT, OTTAWA, ONT.

MOST city folk, at some period in their lives have a longing for country air and surroundings, a longing for freedom from city cares, for rest and quiet and a desire to dig in mother earth. This is a natural desire, and if gratified will, in many cases, result in indigestion cures, the up-building of shattered nerves and general good health. Visions of fresh eggs for breakfast, fresh vegetables gathered while wet with dew for dinner, and fresh berries for tea, all produced in the home, poultry yard and garden, furnish powerful arguments in favor of going to live in the suburbs, not to speak of the pleasure of sowing the seed and watching the growth of the plants and giving them such attention that when the time of the harvest comes the product will be the finest in the country side.

Having, therefore, decided to invest in a piece of land with a view to making a garden, the first question to decide is location. I presume, of course, that the owner in-

tends to garden during his spare hours and go to the city daily. In that case I would recommend that he locate near the street car line if possible. That is, I would prefer to pay more for land, or be content with a smaller lot near the car line than a more distant location. There may be in the family some members who would not take to the suburban life with the same zest as the head of the house, and they should be considered. Besides, a back ache sometimes forces its attention on the enthusiastic gardener and it is desirable to get to the car with as little exertion as possible.

The best time to inspect the different locations is just after the snow has melted in spring time. You can then see the state of the roads and how the land is drained. This is important for sanitary reasons. If the home is located outside the city limits the owner has to devise and carry out his own sewage system, so a slight slope is a help for that purpose as well as for good surface drainage. A slope to the north or



The Guelph City Hall as Improved

Excellent results would follow were more of our horticultural societies to follow the example of the Guelph Horticultural Society, which this year greatly improved the city hall and postoffice by placing handsome boxes in the windows. This work is appreciated by the thousands who pass these two prominent buildings.

* Extract from a paper read at the July meeting of the Ottawa Horticultural Society.

west is preferable, for then the snow in spring melts slowly and the plants seldom suffer by too early exposure or by making too rapid growth and injury from frosts.

If the owner intends to live all the year round in the suburbs it is absolutely necessary that the public highway to and from his home should be high, dry and well drained. There is nothing that will cause dissatisfaction with the location more quickly than to have to travel over wet, muddy roads.

The next point to be considered is how much land to buy. That depends on individual circumstances. Some have more leisure time and more money than others. If the purchaser can afford to keep a hired man and a horse an acre more or less will be of small concern, but if he intends to do the work himself one half to three quarters of an acre is ample and will give his muscular energies the fullest scope.

To the man with limited means who wishes to cultivate his own garden and attend to the numerous chores incidental to a country home there are good reasons for saying that half an acre is ample to occupy his spare time. Unless the lawn is kept nicely trimmed, the flower-beds kept free from weeds and the vegetable garden kept in thorough cultivation, the owner's reputation as a gardener will suffer, and instead of having a home and garden to be proud of and to be shown with pride to visitors, he very soon tires of gardening and his career in the suburbs soon ends. To keep half an acre in proper order and cultivation, to attend to the poultry, to do a little painting and fencing when necessary will take the average man three hours every working day from the time the spring work begins until the middle of August, when the weed season is practically over. During May, June and July the grass must be cut at least once weekly, the flower beds weeded and raked once a week; in fact, every inch of land un-

der cultivation, to be kept properly, must have weekly attention.

My object in stating these facts is that they may perhaps be a help, to an intending suburbanite, in deciding how much land to invest in for garden purposes, so that even though land be low in price in the outskirts of the city, he will not undertake to cultivate too much, and his garden, instead of being a pleasure become a burden. Having purchased the land, the next step is to lay out the grounds and garden to the best advantage. Before planting a tree or choosing the site for the house, by all means have a plan drawn to a scale. Then you have before you on paper the details in full of the work to be done. I would suggest dividing the half acre in two parts. On one half put the house, driveway, lawn, flower beds, outbuildings and poultry runs and reserve; on the other the fruit and vegetable garden. The driveway may be placed between the house and the fruit garden and the house between the driveway and lawn, which ensures you from having the owner of the next lot building close to your house even though he builds on the line between the properties. A border for flowers may be made around the lawn. It should end parallel with the rear of the house and be divided from the land in the rear by a trellis made with poultry netting, on which grape vines may be grown to screen the poultry houses and runs.

FRUITS THAT MAY BE GROWN.

In nearly all parts of this province the following fruits may be grown: Strawberries, raspberries, currants, gooseberries, apples, plums, cherries and grapes. Before planting, a list should be prepared and submitted to any local expert who will willingly advise the best varieties. At the start only plant varieties that have been successfully grown in your neighborhood. Avoid experimenting until thoroughly established. The number of fruit trees and plants to

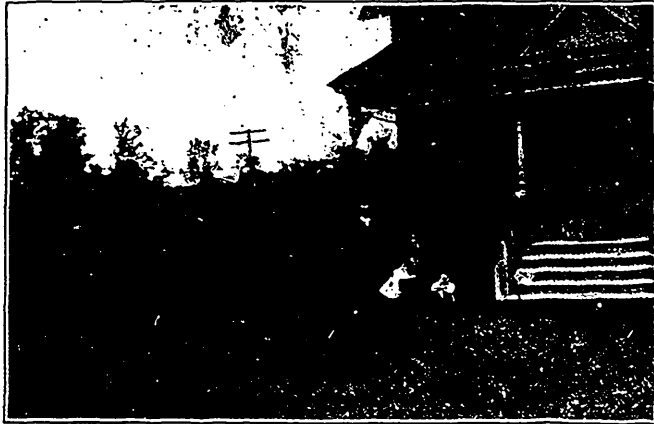
grow depends on the number of members in the family, the size of the garden, and individual preferences. One person likes strawberries, another prefers raspberries.

The small fruits and perennial vegetables should be grouped together. The fruit bushes may be planted next to the poultry

is a delightful task to gather three or four quarts of fresh strawberries or raspberries, it is most laborious and tiring to gather them by the dozen quarts. With gooseberries and currants there is a latitude of a week or 10 days in which to gather the fruit. The whole crop may be gathered at

once and they will keep for a week. Raspberries and strawberries must be marketed at once or they spoil. Besides, gooseberries and currants are more profitable. A raspberry bush takes nearly as much space as a gooseberry, and a Downing gooseberry bush will bear annually 12 to 15 quarts and a raspberry two to three.

Next to the ground occupied by the small fruits and perennial vegetables the annual vegetables may be grown in rows to permit the using of the hand cultivator. A well stocked vegetable garden should contain the



A Part of the Lawn and Hedge in Mr. S. Short's Garden, Ottawa.

This garden, only a small part of which can be seen, was one of the leading winners in the Lady Minto garden competition in Ottawa last year. The picture is interesting in that it shows what may be done in home-building from very rough beginnings. About 12 years ago Mr. Short purchased a block of ground at Rockcliffe, in the outskirts of Ottawa. This land was in very rough condition, full of boulders and very uneven. Within a few years its owner has made great improvements. A splendid Norway spruce hedge, 250 feet in length, which was planted by the owner and personally tended by him, may be seen. It is one of the finest hedges in or about Ottawa.

runs, for then the fowls may be allowed to range through them without damage and to the advantage of both after the fruit has been gathered in midsummer. I would plant for a family of six persons two 40 foot rows of strawberries, 40 raspberries, six red, two white and two black currants, four clumps of rhubarb and 50 roots of asparagus. These should be planted in rows five feet apart the whole length of the garden to render easy cultivation by a Planet Jr. Cultivator.

If I were growing small fruit for market I would grow first the gooseberry, then black and red currants, and lastly strawberries and raspberries. Strawberries and raspberries must be gathered every other day or the fruit is spoiled, being over ripe, and the plants give up bearing. While it

following: Cress, radishes, lettuce, green peas and beans, beets, onions, carrots, parsnips, tomatoes, turnips, cabbage, cauliflower, cucumbers, squash, celery, corn and potatoes. All these may be grown readily in most localities, and the owner should grow such quantities of each as will suit the size of his family.

Late cabbage and celery may be planted in the ground occupied early in the season by the green peas, which will be done bearing when the cabbage and celery are ready to be put out. The squash may be planted near the compost heap or manure pile and trained to grow over it and hide an unsightly spot. Some flowering plants should be grown in the vegetable garden for supplying the table with cut flowers. This saves cutting those grown near the house for or-

namentation. All flowers and vegetables that need an early start should be grown in a hot-bed at home.

The principle of the proper management can be seen at a glance by visiting any gardener in springtime. In this way you can grow tomato, cabbage, cauliflower and celery plants and annuals that need an early start, such as aster, phlox, petunias, carnations, etc. This keeps down expenses and desirable varieties are ensured. Nor must the poultry be forgotten. For a family of six, 15 or 20 hens are enough. A cheap house, free from draughts, will do for them.

Enclose the poorest ground for runs. They must be confined, but they should have at least 20 square feet for each fowl. Poultry netting is cheap and easily put up. Three runs are needed: one for the old fowl, one for the young, and a spare run.

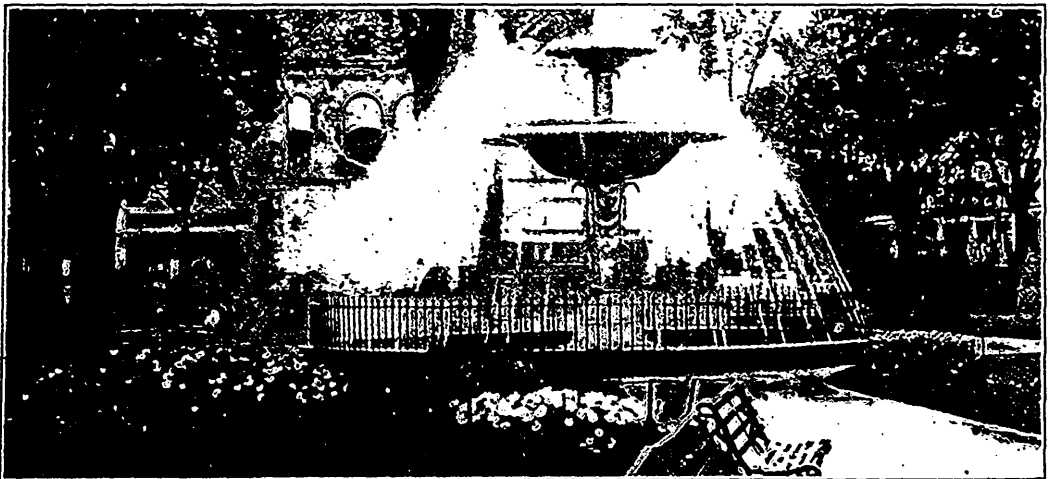
A diary should be kept and a record made of the date of the last spring frost; the first fall frost; the dates of sowing the different seeds; the dates of their coming above ground; the date of the first flower blooms; the first and last ripening of the different fruits. This furnishes data to work upon in succeeding seasons.

EARLY FLOWERING BULBS

FEW plants give more beauty for the labor and expense involved in their culture than do the early-flowering bulbs. They are grown chiefly in Holland, but are easily handled in beds or borders in almost any garden. For best success it is well to prepare a deep rich bed in September and plant the bulbs four to six inches deep in these as early in the fall as they can be obtained. Most flower-growers have a few, but for a collection of numerous species there are not many who can present as fine

a display as Mr. Thos. Bog, of Picton, Ont. "I get my bulbs direct from Holland," remarked Mr. Bog to a member of The Horticulturist staff, "and generally plant them in October. They must be planted when the ground is dry. If the ground is wet there will be no growth as the bulbs rot. It is essential that the beds be well under-drained. Sandy loam suits them best. They need frequent watering when growing and especially when in flower.

"I never let them go to seed, as that



Beds of Tulips in a Lovely Hamilton Park

takes too much plant food from the bulb. The leaves, also, are allowed to die down, thus sending the strength back into the bulbs. In this way good strong bulbs are formed.

"I always leave them in the ground over winter. A liberal coat of manure is put on after the ground freezes. If put on before the frost comes the ground heats and

growth is stimulated. Late spring frosts sometimes damage them. When left in the ground all the year round hyacinths last about three and tulips about seven years.

"The ground might be utilized for something else if the bulbs were removed, but that means a lot of work. I prefer to leave them there and set a few plants among them to add beauty after the bulb bloom is gone."

CHRYSANTHEMUMS IN SEPTEMBER

GEO. HOLLIS, BRACONDALE, ONT.

CHRYSANTHEMUMS should now be making great headway. The early varieties will be swelling their buds and should receive careful attention. Side growths, as well as large growths from the base of the plant, must be removed regularly. The stems must be kept well tied up, because no matter how good the flower a bent stem spoils its value in the market.

Some bone flour spread on the bench and covered with about one inch of rotten manure, helps the plants wonderfully. Good cow manure is the best.

The later varieties require much the same treatment, but if they are making a soft rank growth no manure should be added until the flower buds begin to swell. In case the plants are so soft that the sun causes wilting, less water should be added at the root, but syringing must be continued

just the same. Plenty of air, also, is needed.

A thorough syringing with tobacco water is required once or twice every week to have the plants perfectly clean when the flowers open. Fumigation is also good.

The warning of last month regarding the chrysanthemum fly on pot plants outside needs to be repeated now. In some of my seedlings this pest was busy taking the points out of the growths, and the result was the plants had to be removed. This fly is the main drawback in growing chrysanthemums outside.

The plants grown in pots need plenty of room. A supply of manure water twice a week helps them. Horticultural manure is first class for this purpose, as it is clean to handle. If the houses have been white-washed or the plants shaded in any way the shade should be removed during September.

Walks should be artistically laid out on each school lawn and be edged with blooming border plants. These would always receive the tender care of the pupils and thus by association they would learn to respect the flowers and shrubs of some one who is "almost discouraged" because of the vandalism practised by the youths of today while on their way to and from school.—(P. G. Keyes, Ottawa, Ont.)

If we who have plants find them a delight, let us not be stingy with them, but when we have one to spare give it to some one who has none. Give the children cuttings to grow for themselves and so teach them to love and care for flowers. The finest coleus plant I have, and the little geranium slip with the largest bunch of blossoms, were planted by my little girl.—(Mrs. W. J. McLenahan, Appleby.)

PLANTING PERENNIALS IN AUTUMN

ALTHOUGH perennials are so easily grown they are comparatively scarce in Canadian gardens. There are sufficient hardy varieties adapted to northern sections to brighten up the gardens in the coldest districts. The trouble is the people do not know the plants. In some cases success has been achieved with some common plants, such as the Sweet William, but the grower became tired of such commonplace specimens and began experimenting with new ones which are not so easily grown nor yet so beautiful.

The object should be to get those which add the most beauty and can be grown most easily. Although experiments should be carried on with new introductions, this should not cause the old stand-bys to be discarded. If the new plant is a success, get more of it, but also keep some of the kind which seems more common. What flowers give better effect than a bed of perennial phlox or some Rudbeckia or even a row of hollyhocks?

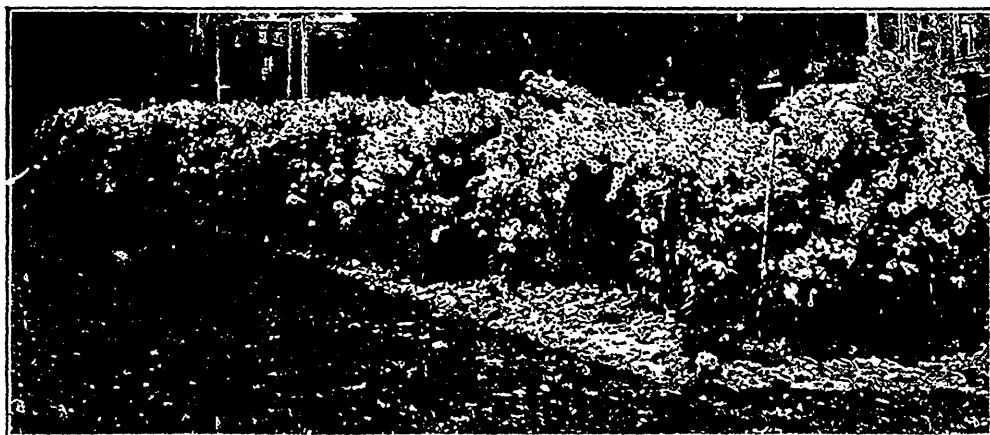
The border represented in the illustration is composed of coreopsis and perennial poppies, which gave good bloom during the early part of the season, and different

species of Boltonia, perennial phlox and pyrethrum for bloom later in the season. This border produced a very striking effect.

The different perennials capable of enduring the most severe winters of Ontario are too numerous to mention. The attention required by them does not vary much. The common method of propagation is by root division. In past years the usual practice has been to do the transplanting in the spring of the year. Recently, however, many growers have been adopting fall planting, and in most cases success has been the result.

"Such plants as phlox, peonies, golden glow, bleeding heart and the German iris," said Mr. Geo. Long, manager of Wm. Rennie's greenhouses, to *The Horticulturist* a few days ago, "do better when planted in the fall. All those plants which make an early start in the spring can be set out about the last of September or early in October. This usually results in earlier bloom and a larger truss of better flowers.

"There are, however, some perennials, such as the hollyhock, which are very unsatisfactory when fall planting is practiced. The frost kills a large percentage of them.



Beautiful Border of Hardy Perennials

Root action does not become established before frosts come and the result is rot sets in.

"Many think that because fall planting is best in Great Britain it should also be the best here, but it must be remembered that the winters are much more severe in Canada than they are across the water. ,

"With those plants which do become established in the fall it is not unusual to obtain good bloom two weeks or more earlier. Phlox set out in the fall makes an elegant show by the middle of August.

MULCHING IN THE FALL.

"It always pays to apply a mulch if there is only one small row of plants to be attended. Strawy manure or some such covering suits well. It is not the hard frosts which do the damage; it is the alternate freezing and thawing—a hot sun during day time, then a cold night, and then a warm sun.

"The mulch should be applied after the

frost comes to stay. The time depends on the season. If put on too soon growth is encouraged and the danger of the plants being injured is increased instead of lessened. In the spring it should be removed little by little as the spring opens up, having them stripped when danger of frost is past. This time, again, depends on the nature of the soil, the site, and other conditions.

"With very little extra work and small expense many an ugly corner might be made a place of beauty or an unsightly fence might be hidden by some of the taller species planted in a nice border in front of it. The ground must be well prepared. A good coat of manure should be dug in so as to have a rich soil.

"The ordinary barnyard manure, if well rotted, is better than commercial fertilizers. You can be sure of not overdoing the matter. With commercial fertilizers it is very easy to add too much and do more harm than good."

Garden Work in September

BEFORE heavy frost sets in procure a few evergreen branches and lay them over your pansies, then shake a covering of dry leaves over them. If you have a sash, place it on also, or a few old boards will answer the same purpose. The object is not to have your plants thaw out before spring, which they would do, if left uncovered, should there come a mild spell during the winter.—(E. F. Collins, Toronto, Ont.

Although chrysanthemums are almost hardy, they must not be exposed to frost, or even to continued cold, wet weather if good flowering results are to be obtained. Sprinkling the foliage early in the day on hot days will be very beneficial to the plants. As soon as buds are formed on the plants, liquid manure should be given them about

once a week, until flowers are fully developed.

By planting two or three Roman hyacinth bulbs in a four or five-inch pot early in September, and plunging the pot outside in ashes or sand for three or four weeks, when the bulbs will have made good root, flowers can be had before Christmas time. Plant the bulbs about half an inch under the soil, so their tops are well covered, water them well once, and if well rooted the blossoms will repay the little trouble experience in securing them.—(Wm. Hunt Guelph, Ont.

Some leave their house plants out too late. It is better to bring them in when the temperature of the house is about the same as outside. If left out too late, when brought in many leaves fall or turn yellow.—(Mrs. W. J. McLenahan, Appleby, Ont.

HARVESTING AND STORING ONIONS

“I USUALLY pull onions in September,” said Mr. J. W. Rush, of Humbler Bay, recently to a representative of the Canadian Horticulturist. “They should be harvested as soon as the tops begin to fall. When sown thickly and not thinned they ripen themselves and no rolling is necessary to cause the top to fall over. When thinned they often develop thick-necks. A thick crop and rich ground gives better returns and the onions always ripen better. After they are pulled they should be left on the ground to dry thoroughly. Two or three good rains do not hurt them; in fact, it makes the tops come off easily.

“Onions should be stored in a cool, dry place, with plenty of ventilation. They will stand five degrees of frost in the field, but after they have been stored frost causes the outer layer to rise and peel off. A temperature just above freezing is best. When put on shelves they can be piled six or eight inches deep. The onion house should be by itself, as the dampness due to the evaporation of other vegetables causes the onions to sprout.

“I once knew a field of onions to be left out until near the last of October. They were then taken in and piled about seven feet deep in a cellar. It so happened that these kept well and not very many were lost because they were cool and dry when put in. I would not, however, advise this method.

SMALLER ACREAGE.

“Several growers in this section,” remarked Mr. W. C. McCalla, of St. Catharines, to a Horticulturist representative, “have an acre or two of onions. Others planted some, but the rapid growth of weeds during the wet weather of early summer forced them to plow their patch up. The weeds were not fought in time, and as a consequence the young onions were smothered out.

“A few good crops remain, but in the

main they are below the average in size and quality. As soon as they are ripe they should be harvested. The time of year that the tops go down and shrivel depends on the weather. If they are sown early and the summer months are hot and dry they may be harvested in August.

“There are two ways in which onions may be stored. Some put them in a mow, and when they are frozen solid cover them with straw or hay and leave them thus frozen throughout the winter. This one freezing does not do any damage. It is alternate freezing and thawing which destroys them. The chief objection to this method is that they cannot be got at readily when wanted and they cannot be handled when frozen without damage.

THE BEST METHOD.

“The other and the most approved method is to pull and leave them in the field until thoroughly dry. Then, store them in a cool dry place. A cellar that will keep potatoes might not do for onions. The best plan is to put them on slatted shelves in thin layers about eight or ten inches deep. Some growers have obtained satisfactory results by storing their onions in slatted tomato crates. The main thing is to have plenty of ventilation and no moisture or frost.”

“Up to the last two seasons,” said Mr. Geo. Benner, of Burlington, “I have been able to pull my onion crop in August, but last year and the year before it was September before they were ripe.

“When they have thoroughly dried I take them into the storeroom. They must be stored where it is dry and free from frost. A temperature just above freezing suits them best. Warmth and dampness causes them to sprout. I place them about a foot deep on a network of fine mesh chicken wire on frames. They also keep well in slatted bushel boxes, but if in bulk they draw moisture and sprout.”

CELERY GROWING

THE fleshy leaf stock of the celery plant is much prized as a table delicacy. It is not before this edible part of the plant has been thoroughly bleached, however, that it is in fit condition for the table. Owing to its increasing popularity it is gradually becoming more widely cultivated, but even yet there are countless gardens where a supply of this crop is unknown.

Although a lover of soil rich in nitrogenous matter, it can be grown with fair success on most soils if sufficient manure is added and frequent watering given during the summer. A retentive well-drained rich black loam seems to suit it best. Too much moisture is just as harmful as too little.

By starting the seed in the house or in hot beds and growing both early and late varieties, this wholesome vegetable may be kept on hand from July until well on into the winter months. Large growers with special storage cellars always have a good supply in late winter.

"The best varieties," said Mr. J. E. Ferrill, of Picton, to *The Horticulturist* recently, "are Paris Golden for early and Evans' Triumph for late crop. I am growing those varieties exclusively this season. A low black well watered soil suits the celery crop best. I set the plants out in trenches. A plow is used to make a trench five or six inches deep. In this a few inches of well-rotted manure is put and dirt is put on top. The whole is well tramped and the plants set in this.

"I always bleach the early varieties with boards about 10 inches wide. With the Evans' Triumph some dirt is piled along to give the head shape, but as a rule bleaching early varieties by banking with earth results in rust, and that spoils the sale.

"Late celery is planted in trenches four feet apart. As the plants grow the banking up is done by a celery-hiller, and I find it does the work well. A man goes along

to pack the dirt tightly against the plants. This makes just as good a job as by using the hoe, and twice as much can be done in the same time. The Evans' Triumph is a good keeper and will bleach in the cellar by about February 1.

"The crop is put into a large frost-proof storeroom 100 x 30 feet. For winter use it is well to leave the crop in the field as late as possible until the temperature of the cellar is lowered. The best temperature is about three or four degrees above freezing. There is a driveway up the middle and the plants are set in sand. They are packed closely, only the roots being covered. No water is added, and we never lose any because of wilting."

ANOTHER GROWER'S METHODS.

"For summer celery," said Mr. Wm. Walker, of Bartonville, "I grow the Paris Golden because there is a better demand for it on the local market. It is tender and easily bleached. I grow between 30,000 and 40,000 per season. Planting is done in trenches three feet apart, and the plants are put six inches apart in the row. Too much time and labor are required to dig manure into the trenches. As fine a crop can be secured by adding plenty of manure and plowing it in well in the spring shortly before planting. This supplies sufficient nourishment.

"Bleaching is best done by means of boards. They should be used when the plants are about one foot high.

"For winter use the plants are stored in a cellar with a sand floor. If they are to be kept for a long time it is best not to pack too closely, and they should be repacked once every three or four weeks and all leaves which show signs of rot or rust removed. Water should not be added. Plenty of ventilation is desirable, but frost should be prevented. Celery will stand slight frost when growing in the field, but not when in the cellar."

THREE VARIETIES.

"There are three varieties of celery," said Mr. W. A. Best, of Picton, "which I know to be all right: the Dwarf Silver for summer, the Golden Self-bleacher for fall, and the Golden Heart for winter. White plume is pretty but tasteless, and of very poor quality.

"Some growers recommend growing celery in beds, but I do not favor that method. More plants can be grown on the same ground space, but it requires more labor and more watering. Besides, the soil must be very rich and the plants are liable to rust.

"I do not, however, favor planting in trenches. I make a small furrow with a Planet Jr. wheel hoe and put commercial fertilizer in the bottom of this and mix it up well. No work should be done among celery plants while they are wet after they are six inches high, as it is liable to cause rust or rot.

"Best results are obtained by bleaching with boards. Very frequently hilling up the summer varieties with earth causes rot. Late celery may be banked up in September so as to have it partly bleached when it goes into the storehouse in October. The plants should be perfectly dry when stored."

MUSHROOM CULTURE

TO be a successful grower of mushrooms the work should not be restricted by any set of rules, as there are few people who uniformly succeed. The work must be regulated by conditions and the location of the beds. The same rules would not apply to all conditions. By practice and experimenting a method may be developed which, with a little persistence on the part of the grower, may result in success with mushrooms.

The method which has proved successful with one of the largest growers in Toronto is here described. This grower believes that in mushroom growing there are three prime requisites: decaying vegetable matter, a uniform and rather low temperature, and a steady supply of moisture. The decaying matter is supplied by horse manure, which should be obtained as fresh as possible. It is necessary to produce the required heat. This applies more especially to the fall of the year, as in the summer there is too much heat, which has to be reduced by mixing soil with the manure. The manure should be piled in some sheltered place and there allowed to ferment and heat. The pile should be turned at

least once a day, perhaps more frequently, depending on how high a temperature is attained. The heating itself is, perhaps, of no advantage except for the fact that it contributes to the decay of the material.

Manure should stand about three weeks, and when it ceases to supply an increasing amount of heat it should be put in the beds. The temperature at this time should not go beyond 120 degrees. The beds may be on raised benches or on the ground, but they should have a dry and warm bottom. Raised benches have proved to be the best, as there is less draft and the temperature can be kept more even. They should be at least 10 inches deep when raised from the ground, or if ground beds are used it is well to have them 12 to 15 inches deep.

The manure should be packed close and in a uniform manner, but not too hard. The bed should feel somewhat springy. Leave the bed until it is found how high the temperature goes. After a temperature of 60 degrees has been obtained the mushroom spawn should be planted.

Great care should be taken in selecting only the best spawn. One of the methods of telling good spawn is by its appearance.

It should be of a bluish white color, and not inclined to yellowing, which invariably indicates that it is exhausted. The greater the number of white threads the more certain it is that the spawn has run too far. Fresh spawn should be obtained each year, and in planting it should be broken into pieces about the size of a walnut and put about eight or 10 inches apart each way. The depth of planting is regulated by the moisture of the bed. The greater the moisture the shallower the planting, but in any case do not cover them more than one and a half inches.

AFTER GROWTH BEGINS.

After the spawn has been left about 10 days it should show signs of running, and if it does it should be covered with one and a half inches of clay loam. After spreading the soil over the bed evenly it should be packed firmly with a mallet or brick, and then given a slight watering.

Should the temperature of the bed go below 60 degrees a covering of straw about six inches deep should be added. Care should be taken when this is done to avoid overheating. If signs of overheating appear remove the straw at once; if not, leave the straw on until mushrooms appear. This may be in four weeks or not until four months.

The temperature of the beds should never go below 60 or above 70 degrees after the spawn is in place. If the bed becomes dry it should have a slight sprinkling of water about the same temperature as the bed. As the crop increases more water is required.

The changing weather conditions of the last few seasons have been rather discouraging to truck gardeners.—(J. W. Hyatt, West Lake, Ont.

The land must be in good shape and the work done scientifically to get returns from



The New President of the C. H. A.

Mr. Wm. Fendley, of Brampton, who was elected president of the Canadian Horticultural Association at its annual convention held in Montreal early in August, was initiated into the cut flower business, in the employ of the late H. Dale, of Brampton, 21 years ago. A few years later he began business for himself in a small greenhouse, 10 x 12 feet. He gradually increased his glass space, making a specialty of carnations and violets. At present he has 19 houses, averaging 180 feet in length, and is known far and wide as a successful violet and carnation grower. Mr. Fendley has been faithful in his attendance at the annual conventions of the association and, being well informed in regard to its work, should make a most efficient president.

In gathering the mushrooms they should be drawn out, not cut off, and the hole filled with soil. The best months for starting beds are September and October. About four months is the usual time a bed continues to yield a crop, and they should produce about one-half pound to the foot.

truck gardening.—(Earl Spencer, Pickton, Ont.

In growing onions one of the main things is to have the crop ripe and cured before rainy weather comes in the fall.—(George Renner, Burlington, Ont.

The Canadian Horticulturist

Published by The Horticultural Publishing Company, Limited.

The Only Horticultural Magazine in the Dominion.

Official Organ of British Columbia, Ontario, Quebec and Prince Edward Island Fruit Growers' Associations and of the Ontario Vegetable Growers' Association.

H. BRONSON COWAN, Editor and Business Manager.

J. ALBERT HAND, B.S.A., Associate Editor.

W. G. ROOK, Advertising Manager.

1. The Canadian Horticulturist is published the first of each month.

2. Subscription Price \$1.00 per year, strictly in advance. For all countries except Canada, United States and Great Britain add 50c. for postage.

3. Remittances should be made by Post Office or Money Express Order, or Registered Letter. Postage Stamps accepted for amounts less than \$1.00. Receipts will be acknowledged on the address label, which shows the date to which subscription is paid.

4. Discontinuances—Responsible subscribers will continue to receive The Horticulturist until the publishers are notified by letter to discontinue, when all arrearages must be paid. Societies should send in their revised lists in January; otherwise it will be taken for granted all will continue members.

5. Change of Address—When a change of address is ordered, both the old and the new addresses must be given.

6. Advertising Rates quoted on application. Circulation 5,500. Copy received up to the 24th. Responsible representatives wanted in towns and cities.

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

8. All Communications should be addressed:

THE CANADIAN HORTICULTURIST,

507 and 508 Manning Chambers,

TORONTO, CANADA

THE HAMILTON SHOW.

In the fruit and flower show which will be held in Hamilton September 12, 13 and 14, the fruit growers of the Niagara district and the residents of Hamilton have a splendid opportunity of which they should take every advantage. Owing to the fact that the provincial horticultural exhibition, which is held in Toronto in November, is too late for many of the early fruits, it was decided this year to hold an earlier show in Hamilton. The show this month is intended to mainly benefit the fruit growers of the Niagara district and also many amateur flower growers. Whether or not it shall be made a permanent affair largely depends on the interest manifested in it by the growers and by the citizens of Hamilton.

The prize list is sufficiently liberal to offer strong inducement for the fruit growers of the Niagara district to show what their far famed section is capable of in the way of fruit production. With proper management and the requisite amount of enthusiasm this show can be made a splendid annual advertisement for the district it is principally designed to benefit.

As much will depend on the success of this first venture every person in any way interested should do his best to make it a success. In a matter of this kind a little work on the part of many will accomplish more than hard work on the part of a few.

A SPLENDID OPPORTUNITY.

Vegetable growers have long complained of the existing tariff arrangements which while shutting them out of the United States markets leaves them open to severe competition from the southern States. Carloads of vegetables are shipped from the south to Canadian cities, where they are often disposed of at prices below the cost of production in the centres where they are sold.

The fact that the tariff commission is to sit in leading centres, such as Toronto and Montreal, should be taken advantage of by the vegetable growers. While anything which will be likely to advance the price of vegetables will be certain to meet with strong opposition the vegetable growers have claims which deserve to be heard. By appointing a strong committee to prepare their case and, if necessary, by engaging a lawyer to present it, they should be able to impress both the commission and the public with the necessity for at least some change in existing conditions.

Every fruit grower in eastern Canada who can possibly do so should endeavor to attend some of the demonstrations in fruit packing that will be given during the next few weeks at different centres by the expert who is being brought from British Columbia. The great name California fruit has made for itself has been earned largely by the manner in which it has been packed. In this work, it has long been admitted, California has been able to give Canadian growers many pointers. If our growers lose this opportunity to gain suggestions for the improvement of their methods they are not the wide-awake men they are generally held to be.

The illustration in this issue showing the excellent work that has been accomplished this year by the Guelph Horticultural Society in improving the appearance of the hitherto almost ugly town hall draws attention to a line of work more horticultural societies could follow with advantage to themselves and the public. The improvement of neglected public places in this way will do much more for the cause of horticulture than a rather too free use, for instance, of society funds for the purchase of seeds and bulbs.

As soon as the Toronto exhibition is over the fruit, flower and vegetable growers of the province should set to work in earnest to get ready for the Ontario Horticultural Exhibition, which will be held in Toronto in November. The fact that the exhibition will this year be held in

Massey Hall will add greatly to its success. In Massey Hall it will be possible to show the flowers and fruit to every advantage, which, together with the central location, will result in a greatly increased attendance. The several conventions which will be held at the same time will be one of the best features of the exhibition.

That was a splendid idea, the holding of a joint picnic last month by the vegetable growers of the Toronto, Hamilton and Niagara districts. The more growers in any line can meet and fraternize the better for all concerned. The success of this first venture suggests that it may be possible to make a joint picnic of this kind an annual affair.

New Advertisers

Gould Cold Storage Co., Montreal.
W. Gammage, London.
J. A. Simmers, Toronto.
Renfrew Nurseries, Renfrew.
Perkins & Paine, Port Dover.
Eben James, Toronto.

Best Spraying Mixtures

J. FRED. SMITH, SCALE INSPECTOR,
GLANFORD, ONT.

During August I made an examination of the trees sprayed for San Jose scale in a part of the Niagara peninsula. Where the lime and sulphur had been prepared by the action of the lime alone the result is anything but satisfactory, but where the wash had been boiled by steam in the old way the results were the best that I have ever seen.

What the result may be in other localities I can not say, as I have not made any examination, but if they are anything like those I refer to the advice which the fruit growers received at a large number of meetings from a gentleman from the United States might better never have been given. If the lime and sulphur wash is properly prepared by boiling, and also properly applied, the scale cannot make headway.

A striking illustration of the value to Canadian shippers of the Fruit Marks Act is shown by the following incident, reported to the Extension of Markets Division, Department of Agriculture, Ottawa, respecting a shipment of apples by steamer Fremona, from Portland, Me.: "Besides the Canadian apples there were shipped by this steamer 992 barrels of United States apples, by different shippers, which on being landed over 50 were found to be without marks of any description. As a consequence the consignees wanted to pick and choose, thereby causing trouble and delay, during which the apples from the Canadian shippers had been placed on the market."

I am much pleased with The Horticulturist.—
(Rev. J. Gandler, Newburgh, Ont.)

**WE WANT
8,000 SUBSCRIBERS**

By January First Next

—AND—

We Need Your Help

United States fruit and floral publications are pushing their papers into Canada and are constantly asking their readers to help them get new subscribers.

Will not our readers help us in the same way?

Without saying anything about our United States competitors (they are hard ones to fight) we will state that **THE CANADIAN HORTICULTURIST** is the only paper published, which will keep you fully posted in regard to what Canadian Fruit, Flower and Vegetable Growers are doing. Our aim is to give our readers in each issue the information they are looking for, and therefore our articles are timely. Tell these facts to your friends.

Our Subscription Offers

If you will induce one friend to take The Horticulturist for one year, and send us a dollar for his subscription, we will extend your subscription for six months.

If you send us two new subscriptions, we will extend your subscription for one year.

Trial subscriptions, from October until the first of next year, will be accepted for 10 cents. For every three trial subscriptions you send us, we will extend your subscription for one month.

New subscriptions, from October until January, 1907, or a year and a quarter, will be accepted for \$1.

Those of our readers who are taking The Horticulturist through horticultural societies or fruit growers' associations will be allowed to retain a liberal commission on all new subscriptions or we will arrange with the secretary of their society to extend their next year's membership.

Free sample papers will be sent to any one who applies for them.

**WONT YOU HELP US TO REACH THE
8,000 MARK?**

**The Canadian Horticulturist
TORONTO, ONT.**

See new coffee

OUR SPECIAL FRUIT CROP REPORTS

Correspondents from the peach, pear, plum and grape districts give rather glowing reports of these fruit crops. The pear crop is light, but all three others are much ahead of the crop harvested in 1904. So far there are but slight signs of rot in the grapes, although it has started in a few sections, while very few plums have been affected. The peach crop is above the average. The total number of bearing trees is below what it was in former years, which will affect the total yield and tend to prevent any heavy surplus.

IN THE DIFFERENT SECTIONS.

In the Lake Erie district the peach crop is about equal to that of last year, although one or two growers state that it is better. In the Niagara peninsula the correspondents, with one exception, report a full crop and good quality, while reports from Burlington say that it is 50 per cent ahead of 1904.

PEARS A POOR CROP.

Reports regarding the pear crop show no change from those received last month. Along Lake Erie it is placed at a light to medium crop, scarcely half as large as last year's. Correspondents from the Niagara section report a light crop, while Burlington growers have only about one-quarter as many as in 1904. In some sections Keiffer pears are reported as a heavy crop. Several reports from Simcoe county state that there is a better crop than

was looked for early in the season, and that the harvest will be ahead of last year's. Ontario county growers are bothered with the pear scab.

THE PLUM CROP.

Early in the season reports from all sides placed the plum crop as extra large. The wet weather caused many to drop, however, and reports up to August 25th promise an ordinary yield. Some varieties have stood the unfavorable conditions better than others. Lake Erie growers state that last year they had none, or in some cases a few, whereas this year they have a full crop. Correspondents from St. Catharines give Japanese varieties full crop and American medium to light. The plum crop throughout central Ontario is medium to full except in Brant county, where several reports state that it is very light. In York and Ontario counties several districts are losing the crop owing to rot.

LITTLE ROT IN THE GRAPES.

Vineyards along Lake Erie promise about the same crop as last year. One grower in Essex says the crop is a failure. No mention is made of rot except in Welland county. In the Niagara district reports are all favorable and promise excellent quality of clean fruit or very little rot. As a rule the crop is more abundant than that of 1904. In the Burlington section the yield will be fully 50 per cent. above last year's.

THE APPLE SITUATION

High prices should rule this fall for apples. Reports received by The Canadian Horticulturist from all parts of Ontario show that the crop is not likely to total more than one-third to one-half as much as last year's, while the quality is little if any better. Should high winds prevail this month the total yield may fall short of even this estimate. This fact, taken in conjunction with the very small crop in Great Britain, and a considerable falling off in the yield in the leading producing sections of the United States and the Maritime provinces, indicates that there will be a marked scarcity of apples and that growers should realize high prices.

In Ontario, although buyers have been scouring the country, growers have been holding their crops. As a result not many sales have been reported to date, making it difficult to estimate what the final ruling price will likely be. In the St. Catharines district the crop is reported very light, with a heavy demand, and some sales being made at \$1 to \$1.25 per barrel on the tree. In the Grimsby district one-quarter to one-third of an average crop is expected. Prices have been ruling high, growers asking \$2 to \$2.50 per barrel, packed.

Between Hamilton and Toronto a half crop of good quality is looked for: fall and winter apples selling for \$1.25 to \$1.50 per bbl. Along the north shore of Lake Ontario and in the Georgian Bay district not many sales are reported, although a few orchards have been

bought. The crop is estimated at one-third to one-half last year's, and the prices being offered and paid range from \$1 to \$1.30 per bbl.

The following reports among many received by The Horticulturist will give a good idea of the situation:

THE ST. CATHARINES DISTRICT.

The apple crop is very light in this district, there not being one barrel where we had 10 last year. A few orchards are well loaded with clean, well grown fruit, while in other orchards the apples are crooked, uneven and wormy. In the majority of orchards there is little or no fruit. Buyers are offering one dollar per barrel on the trees for No. 1-2. In two instances, for good orchards, \$1.25 has been paid on the tree, the farmer to board the hands and draw the fruit to cars. Some growers are holding out for higher prices, but these are men who have small lots.—(Robt. Thompson, St. Catharines, Ont.)

NEAR GRIMSBY.

The apple crop in the Niagara district is an unusual failure. Not one tree in 10 has a full crop, and there is not one-quarter of an average crop. The Spy is the best; the fruit is clean, and about one-half the trees have an average crop. The fruit is going to be clean and well colored. Baldwins come next, with about half an average crop. Greenings are a failure. Kings and Russets light. Early apples are going at 20 cents a basket cash at point of ship-

ment, which means about \$2 a barrel. One orchard of winter stock near Grimsby has been bought for \$700, in which there will be about 350 barrels, so I expect we should have \$2 to \$2.50 per barrel packed. The quality is much better than last year.—(L. Woolverton.

AROUND WINONA.

The apple crop in this section will run one-fourth to one-third that of last year. The quality is fair, not much fungus, but codling moth is much worse than the two past seasons. Very few sales have been made. One orchard has been sold for \$1,000 and another for \$700. The man who packed the \$700 orchard last year says there is not over 350 barrels in it. In both cases the purchaser is to stand all expense picking, packing, etc. About \$1.50 per barrel for the fruit picked is looked for here.—(M. Pettit.

THE BURLINGTON DISTRICT.

The apple crop in the Burlington district is not more than one-half of last year's; quality probably 50 per cent. better. Some sales, I am told, have been made at 80 cents per barrel for fall apples, to \$1.25 and \$1.50 per barrel for No. 1's and 2's, fall and winter, the grower to pick the apples and deliver same when packed to wharf or railway station. Probably 50 per cent. of apples in this district are in buyers' hands.—(A. W. Peart.

ONTARIO COUNTY.

Our crop of apples is about one-third of the 1903 crop. There will be a lot of wormy apples, but practically no scab. Fruit large and fine. Trees are not heavily loaded, and a heavy wind during September will play havoc with the crop. Almost all orchards are sold, sales having been made in every way. A good part are sold lump, and in many cases the full price has been paid in cash. One dollar per barrel for fall and \$1.25 for winter apples seem to be regular prices. I think \$1.50 has been paid for one or two extra good orchards. No sales have been made by the barrel as far as I know.—(Elmer Lick.

PRINCE EDWARD COUNTY.

The apple crop is 50 per cent. short. Farmers are holding until market develops. Apple buyers are in evidence up and down the country side taking in the situation. The fruit is of fairly good quality. No sales have been reported.—(John W. Hyatt.

EASTERN ONTARIO.

In the counties of Leeds and Grenville apples are a fair medium crop, about double the crop of last year. Snows, or Fameuse, are the leading variety, not many winters being grown, Russets and Canada Red being the chief varieties. Fruit and trees have been particularly free of insect and fungi attacks, but indications point to serious trouble with "spot" on Fameuse before picking, for the disease is spreading rapidly over the whole surface of the fruit on trees that have not been sprayed. I am spraying with Burgundy mixture to check the spread of the disease, which has started again where spraying was done earlier in the season with Bordeaux. Most of the orchards here have

been sold at about \$1 per barrel on the tree for 1st and 2nd quality. There will be very few apples held for late markets, as the tendency is to sell early.—(Harold Jones.

THE GEORGIAN BAY DISTRICT.

In most of the best districts the apple crop will not be more than 20 per cent. of an average. As regards size, apples will average larger than last year, and quality on the whole will be better. There have been no sales made in our immediate vicinity, that is Thornbury, Clarksburg, and 15 to 20 miles around about. There have been a few sales about Creemore, Cookstown, Stayner and Duntroon. One buyer told me he thought he would have about 4,000 barrels, and the highest price paid was \$1.15. If this is so it will be about all the apples there are there. There will not be many sold here on contract. The growers are building one of the best fruit storage plants in Canada, which will be ready for the winter apples. The plum crop is also poor, except Lombards, which are very good.—(J. G. Mitchell, Clarksburg.

THE ESSEX DISTRICT.

The crop of apples is not as large as last year, either in size or quantity. The codling moth has got in its work more than usual. Not much spot or scab. I have not heard of any buyers looking after the crop. No price has been fixed.—(W. W. Hilborn, Leamington, Ont.

IN LAMBTON COUNTY.

The apple crop is not equal to last year's. In this district a good many growers have taken a great interest this year in spraying, consequently, although the apples are not thick, there is a fair quantity and unsurpassed quality. Other orchards that have not received proper attention produce only a light crop of poor fruit. The growers are holding on to their crops. I know of none having sold, and am not in a position to state what price they expect.—(Colin Johnson.

PROSPECTS IN THE MARITIME PROVINCES.

The apple crop in the Maritime provinces does not promise any better than in Ontario. Reporting from Kentville, N. S., Mr. Ralph S. Eaton, president of the Nova Scotia Fruit Growers Association, states that the general feeling throughout the Annapolis Valley is that the crop will be a very light one. The principal varieties, Gravenstein and Baldwins, with few exceptions, are not bearing this year. Reports from growers in other parts of Nova Scotia, New Brunswick and Prince Edward Island are to the same effect. Rev. Father A. E. Burke, president of the Prince Edward Island Fruit Growers' Association, states that fall and winter apples will be a light crop, not half of last year's.

IN THE UNITED STATES.

American Agriculturist, a United States publication, which makes a speciality of crop reports, announces that in many heavy apple producing sections of the United States there are slender prospects this year and that prices have opened on a high plane. In the Hudson River,

New York, section buyers are giving \$1.75 to \$2 per barrel for fruit on the trees. In Michigan fine Duchesse have sold for around \$2 per barrel. It states that it is apparent apples will be contracted in the United States this year for more money than last year.

THE BRITISH APPLE CROP.

A report from Woodall & Co., Liverpool, Eng-

land, says that the apple crop in the United Kingdom promises to be one of the poorest in many years. Out of 270 reports from the most important districts only three place the crop above the average, 44 placing it as average, and 223 under average. In many cases it is given as a total failure. Reports from Holland, Belgium and Germany also indicate small crops.

TOMATO SITUATION ENCOURAGING

The tomato situation, as far as the growers are concerned is, on the whole, encouraging. In the St. Catharines and Prince Edward county sections, two of the largest producing districts, while the crop of early tomatoes was somewhat larger than usual, there will be a marked shortage of the later varieties. In the Hamilton district, while there are possibilities that the crop of late varieties will be large, it is reported by leading growers that the canners will not be able to secure nearly as many tomatoes as they require. For this reason it is believed prices will be well maintained.

The following reports received by The Horticulturist, as late as August 25, from the leading growers in the main producing districts give a good idea of the situation:

PRINCE EDWARD COUNTY.

The crop of early tomatoes is somewhat larger than last year, and will be an average one, but the early varieties represent a small per cent. of the crop. The late varieties are still the leading crop for canning, and they are very poorly covered with fruit. I have not met a farmer who reports a full crop of the late varieties. If frost comes as early as last year the late varieties will be an entire failure, as we are later in ripening this year than last. Prices are 25 cents per bushel. The syndicate and independent factories appear to be willing to leave the situation alone. The crop here will be much less than an average one, both in acreage and yield.—(J. W. Hyatt, West Lake.

IN THE NIAGARA DISTRICT.

In this section the acreage planted to early tomatoes is at least double that of last year, and in general the crop has been good. The hot dry weather ripened them rapidly, and the price dropped sooner and lower than usual, so that the returns have not, on the whole, been satisfactory. Owing to the failure last spring of the Canadian canners and the growers here to come to an agreement as to contract price for late tomatoes the members of our association have greatly reduced their usual plantings. What are being grown are mostly for a new independent company, which, in May last, made contracts at 30 cents per bushel, and have now a new factory in operation. This, together with a probably shortage in the crop of late tomatoes, has stiffened the price, so that any one who has tomatoes not contracted for can readily obtain 30 cents per bushel—even for early ones. Outside of our association a number of new men were induced to contract for 25 cents. Many of these started late, and plants were often put

on unsuitable ground and will not yield much of a crop. However, good plants set on suitable ground and well cared for promise a fair crop, provided the weather is favorable for the next few weeks.—(W. C. McCalla.

SITUATION AROUND HAMILTON.

The following statement as to the situation around Hamilton has been made to The Horticulturist by Mr. E. J. Mahony, president of the Hamilton Tomato Growers' Association:

Last January a well known Hamilton capitalist decided to establish a canning factory and contracted for about 40,000 bushels of tomatoes at 30 cents per bushel. Shortly after making these contracts the gentleman was induced to transfer them to the companies already doing business in the city, and it is generally believed that he received a very liberal remuneration for making the transfer. In addition to these 40,000 bushels the canners induced a number of inexperienced growers and also a few members of our association to sign contracts at 25 cents and the "rise." Now, the whole situation here may be found in the answer to two questions—first, will the canners receive a sufficient amount of tomatoes to fill their orders on these contracts? and second, what is the position of those growers who have made no contracts and are still holding out for 30 cent contracts? The factories in this immediate vicinity require annually at least 200,000 bushels of tomatoes. Of this amount less than 60 per cent. are contracted for. Even in the most favorable years less than 70 per cent. of the amount contracted for are delivered. On this basis of calculation the factories here are face to face with a very substantial shortage. It should also be noted that a majority of those who made contracts this year know very little of tomato cultivation, and in many cases less than 25 per cent. of the amount contracted will be delivered. To make matters still worse for the canners there is every indication that the late tomatoes will be a light crop.

Those growers who have refused to make contracts at 25 cents have no cause for regret. They have the satisfaction of knowing that they played the part of men, and have proven their loyalty to the growers' association and to the principle maintained by the association that the producer, as well as the purchaser, should have a part in fixing the price of his produce. They have, also, the additional satisfaction of being able to dispose of their tomatoes at a price equal to and even considerably in excess of 30 cents per bushel.

Those growers who have shown their weakness by making contracts at the prices dictated by the canners are in a much less enviable position. They are forced to endure the humiliation of being looted on as deserters by their brother growers, and, moreover, they are up against a financial loss of 5 to 10 cents on every bushel of tomatoes they deliver to the factories on their "25c.-and-the-rise" contracts.

HOPE FOR FUTURE.

We feel that our Hamilton Association, which have conducted the fight in this district, has reason to feel satisfied with the results. At

the beginning of the year we entered the fight single handed without any provincial organization to support us, without any organ through which to explain our position, and with only a very limited knowledge of the situation in other parts of the province. To-day we possess all those advantages, and in addition to this our financial position is stronger than at any time since our organization three years ago. If, therefore, we find it necessary, we are in first-class shape to continue the fight for higher prices, not only for tomatoes, but also for other lines of produce as well.

THE HAMILTON FRUIT, FLOWER AND VEGETABLE SHOW

Great preparations have been made for the combined show of fruit, flowers and vegetable which will be held in Hamilton September 12-14. As the object of the show is to benefit the horticultural interests of the Niagara district, all the principal organizations in the district have been given representation on the board of management. The fruit prize list is worth about \$500, the flower prize list \$350, and vegetable \$70.

His Honor Lieut.-Gov. Mortimer Clarke has been invited to open the exhibition the afternoon of the first day. Demonstrations in the cooking and preserving of fruit will be given every afternoon and evening by members of the Ontario Women's Institutes. Demonstrations in the packing of all kinds of fruit will be given the afternoon and evening of the first day by an expert from British Columbia, and at the three sessions the second day. Samples of fruit will be given free to all who attend the second day, and of flowers the last day.

Among the special exhibits will be one by the Ontario Agricultural College and one by the three fruit experiment stations in the Niagara district, under the direction of the superintendent, Mr. Linus Woolverton, of Grimsby. In ad-

dition to this a large part of the fruit exhibit at the Toronto Industrial Exhibition will be shown at Hamilton. There will also be exhibits by the canning factories and of spraying machinery, fruit boxes, best decorated dining room, etc.

Those on the committee of management include the officers of the Hamilton Horticultural Society and Messrs. W. A. Emory, of Aldershot, president of the Ontario Vegetable Growers' Association; M. Pettit, of Winona, representing the Ontario Fruit Growers' Association; A. H. Pettit, of Winona, representing the Niagara District United Fruit Growers' Association; E. J. Mahony, of Hamilton, president of the Hamilton District Vegetable and Fruit Growers' Association; F. Foster and W. E. H. Peer, of the Burlington Fruit Growers' Association, and P. W. Hodgetts and H. B. Cowan, of the Ontario Department of Agriculture. Arrangements are being made for reduced rates over the radial lines, and if possible, for excursions over the railways. It is expected there will be a large attendance of the fruit and vegetable growers of the Niagara district. Mr. J. M. Dickson, of Hamilton, is the secretary.

Experimental Canning Station.—If the Ontario government establishes an experimental fruit farm in the Niagara district would it not be a good thing to establish an experimental canning station in conjunction with it to test the best

way of putting up fruits and vegetables, also approximating the cost of building and running? This would encourage co-operative canning among the growers.—(Thos. R. Stokes, Niagara Falls South, Ont.)

BULBS FOR FALL PLANTING

Our catalogue of Bulbs, House Plants, Shrubs, etc., is now in the hands of our printers. . . .

DROP A CARD FOR A COPY.

THE WEBSTER FLORAL COMPANY, LIMITED

FLORISTS, NURSERYMEN AND SEEDSMEN

HAMILTON, ONTARIO

A Handsome Premium will be Given Free to all Readers who buy goods from Advertisers.

The Apple Box

LINUS WOOLVERTON, GRIMSBY, ONT.

I was among the first apple growers in Canada to use the box instead of the barrel, having begun to use them for fancy graded apples wrapped in paper, 12 or 15 years ago. Every year I have been using them more and more freely, some seasons exporting from my own orchard several thousand boxes. At first I used a box measuring outside 12 x 12 x 24, sending it not only to the British market but also to Australia. Mr. J. S. Larke, Canadian commercial agent, took much interest in the experimental shipment, which went by way of Vancouver, at a through rate of \$1 per box. These apples suffered from the heat of the tropics en route, but those arriving in prime condition sold for \$3.75 a box. They were shipped early in November, and arrived at Sydney before the earliest Tasmania apples were ripe. Finding this size to be larger than most boxes used in the British markets, I adopted the smaller box, measuring inside 9 x 12 x 18, a fine little box for packing and for display, but this proved too small, taking four to the barrel.

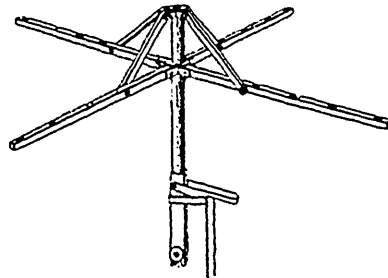
I was a member of the committee of the Ontario Fruit Growers' Association, appointed at Walkerton to consider the best sized box to be used throughout the Dominion. We concluded first that a capacity of about one bushel was most desirable, being a measure universally adopted already, and considering the average size of the apples to be packed as No. 1 grade, we concluded that an inside measurement of 10 x 11 x 20 inches would be the most convenient.

Last year I used several thousand boxes of this size for export to Glasgow market. I found that the apples packed well in it, each layer taking about four apples wide and seven apples long, and four deep, or about 112 apples in all. If the apples were larger, as the Kings for example, the box would only take three layers deep.

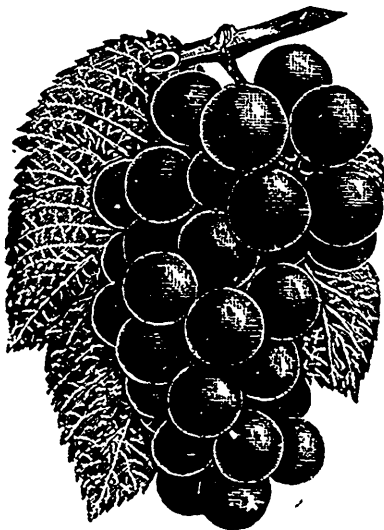
It is of the utmost importance that we should reach uniformity in the use of boxes, for so long

GEO. VIPOND & CO.
Fruit Commission Merchants
MONTREAL

Reliable..... Prompt..... Safe



**The Davis
Clothes
Line Reel**
16 ft. diameter
130 ft. of line
Write for our
free illustrated
circular.
**The
Waggoner
Ladder Co.
Limited**
London, Ont.



MOORE'S EARLY

GRAPES

are not yet ripe, but the time for placing an order for nursery stock should always be RIPE. We grow the

Best Trees, Shrubs and Vines

Excellent specimens of Maples, Elms, Lindens and Catalpas for street planting always in stock.

The Helderleigh Nurseries

E. D. SMITH, Winona, Ont.

Salesmen Wanted.
Write for Catalogue.

as a miscellaneous lot of sizes and shapes are used, growers can never expect to make sales f. o. b. by the box. This is the hope of our business, for with well defined grades, so that a distant buyer can know just what quality he is buying, and a uniform box and uniformity in style of packing, there is no reason why such sales should not be made, instead of the present ruinous method of consignment, leaving the distant buyer to put his own price on the fruit when it has, perhaps, crossed the sea.

A year ago I sold to a first-class house in Paris, France, a lot of my XXX boxed apples, Baldwins and Spys, at \$1.72 delivered in Montreal. I had an enquiry again last year from the same house, but the excessive foreign crop prevented the deal. However, this points out the proper method of sale, and every means to that end should be encouraged.

I am inclined to think the penalty, 25 cents a box, too high, for the box itself only costs about 10 or 12 cents, and the size is only one bushel, which often sells in our own markets for about 25 cents. According to this section, if a man

were by mistake to use a box varying ever so slightly from the measurements, and were shipping in thousand lots, his fine would amount to hundreds of dollars.

Dishonest Packing

The practice of topping or over-facing and dishonest packing of fruit generally is thus referred to in the Market Growers' Gazette, London, England.

"Honest packing is undoubtedly the keynote of the success obtained by the Canadian, Nova Scotian and French products. Salesmen have many classes of buyers to deal with, and if growers wish to reach the best buyers they must pack the best quality, for no buyers of first-class fruit will be deluded, at any rate twice, into buying a top layer of the finest fruit with nothing but inferior stuff below.

"If this secondary fruit had been carefully and fairly packed and sent separately, another class of buyer, the largest one, would have purchased it. This would mean much quicker sales, and for the whole consignment a better price. It does not follow that because a buyer should pack as though he had a conscience he should pack without using his intelligence.

LANDSCAPE GARDENING

Parks, Cemeteries, Public and Private
Pleasure Grounds made by

Chas. Ernest Woolverton, Landscape Gardener

GRIMSBY

Drawings made to a scale, so that any gardener may carry them out. Correspondence solicited.

**Windsor
SALT**

is all salt. Every grain is a pure, dry, clean crystal. That is why it never cakes—dissolves instantly—and goes farther than any other.

Insist on having
—WINDSOR
SALT.

GET OUR CATALOGUE OF
RUBBER STAMPS
AND STENCILS
THE SUPERIOR MFG. CO.
58 ADELAIDE ST. W. TORONTO.

WANTED — SUBSCRIPTION CANVASSERS
for The Canadian Horticulturist both in cities and in the fruit districts of Canada. Liberal commissions offered. Good men soon put on salary. Write The Canadian Horticulturist, Rooms 507-508, Manning Chambers, Toronto, Ont.

FOR SALE CHEAP—ONE OF THE CLEANEST
and best equipped greenhouses in Toronto. Everything in splendid condition, carnations planted, excellent stock of ferns and general stock of plants, 10,000 feet of glass. Apply at once to F. C., care of The Canadian Horticulturist.

FOR SALE—FLORIST BUSINESS, WELL
established in good residential part of Toronto; new brick store and dwelling; also greenhouses. These may be purchased separately or combined; owner has excellent reasons for retiring. A bargain if sold immediately. Apply to M. L., care of The Canadian Horticulturist, Toronto.

APPLE GRADER. A FIRST-CLASS PETTTT
Fruit Grader, in perfect working order, for sale at a bargain. Address L. Woolverton, Grimsby, Ont.

"Bulb Culture for the Amateur"

10¢

Address Secretary Horticultural Society,
195 Pretoria Ave., Ottawa, Ont.

Items of Interest

Practical lectures are to be delivered in the Dairy Building at the Canada National Exhibition, Toronto, at 2.30 p. m. during the fair. Those of special interest to readers of *The Horticulturist* are "Drainage of Farm Lands," by Prof. J. B. Reynolds, O. A. C., Guelph, September 1; "The Fruit Industries of the Dominion," by A. McNeill, Chief of the Fruit Division, Ottawa, September 2; and "Farm Forestry," by E. J. Zavitz, O. A. C., Guelph, September 6.

The extension of markets division, Department of Agriculture, has received information to the effect that the government of Cape Colony, South Africa, intends to enforce more strictly the existing regulations against the introduction of apples infected with the disease known as "black spot" (*fusicladium dendriticum*), or other fungous or insect diseases. Exporters of such fruit from Canada are warned that shipments found to be so infected will be liable to confiscation and destruction without compensation, under the provisions of the import regulations.

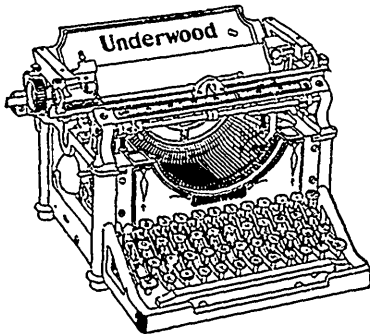
A close watch is being kept by the fruit inspectors of British Columbia for diseased fruit

that Vancouver fruit dealers unite to boycott the Yankee dealers unless the fruit is guaranteed. Mr. Lyne knows California conditions and says that there is plenty of healthy fruit to supply the needs without dealers trying to make a few cents more by selling such culls as have been sent.

The beautiful hydrangea which is pictured on the front cover of this issue is owned by Mr. S. E. Arnold, of Smith's Falls. This is a variety suited to indoor culture, known as *Hydrangea Hortensis*, the special name of this specimen being *Otaksa Monstrosa*. At the time the photo was taken there were 95 clusters. Mr. Arnold started this plant about 17 years ago from a small slip, and has given away many slips from it since then. It is kept outside during summer and allowed to become dry and lie dormant in the cellar over winter. Once every two or three years it is repotted.

An interesting case was settled at Lorne Park recently. Mr. W. C. Peer had contracted with the distributing company for all his berries at seven and a half cents, but was offered more elsewhere and decided to break the contract. An injunction was laid to prevent him selling to any other party, and he ultimately consented to abide by the contract for the remainder of the season.

Last autumn Messrs. R. B. Whyte and W. T. Macoun published a bulletin on "Bulb Culture for the Amateur," under the auspices of the Ottawa Horticultural Society. As it will soon be bulb planting time again, the authors would



THE UNDERWOOD

"Tried and True". Don't take our word for it. We are prejudiced. We can show you the Underwood, how it works and what it will do, but for the **Most Convincing Argument**, you will have to ask any of the 5500 users in **Canada**.

More **Underwood Typewriters** are in use in **Canada** than all other makes **Combined**.

We carry a large stock of rebuilt typewriters at very low prices. Send for Catalogue and List.

Headquarters for Supplies.

UNITED TYPEWRITER CO., Limited
TORONTO, ONT.

COLD STORAGE

—FOR—

APPLES



Linde Cold Air System, Perfect Ventilation, Right Temperatures, Centrally Situated, close to the principal Dealers.

COR. GREY NUN & WILLIAM STS. **O. M. GOULD,**
MONTREAL Manager

be pleased to learn through the columns of The Canadian Horticulturist from any persons who procured copies of this bulletin whether the advice given has proved satisfactory in practice, and if not, what changes are suggested in either the lists of varieties or in the methods of culture recommended. There was a large demand for this bulletin, but copies can still be obtained at 10c. each from Mr. J. F. Watson, Secretary Ottawa Horticultural Society, Ottawa.

The first Ontario apples reached Winnipeg on August 11th, on precisely the same day as they arrived last year. They were mostly Red Astrachans and of exceedingly poor quality. They were probably windfalls of neglected trees falling in grass, and did not show up well alongside of the carefully put up fruit from the United States and British Columbia.

The joint picnic of the Toronto, Hamilton and St. Catharines branches of the Ontario Vegetable Growers' Association at Hotel Brant Park on August 16 was a huge success. For one afternoon, growers with their wives and families to the number of over 2,000, forgot the hoes and the hoed crops and let enjoyment reign supreme. Handsome prizes were given for each of several events, which made up a fine programme of races, jumping, etc. Special interest was taken in the race for members of the association only, between 40 and 50 years of age, and in the one for members' wives only. Among the leading members present were Messrs. J. W. Rush, Humber Bay; Robt. Thompson, W. C. McCalla, G. B. McCalla, W. H. Bunt-

THE
Herbert Raspberry

From all quarters, where under trial, come good, enthusiastic reports of the Herbert Raspberry this season. It is justifying all the claims made for it, of being the Hardest, Earliest, Most Delicious and Most Profitable Red Raspberry grown to-day. From 4 rows, 300 ft. long, were picked some 800 quarts.

Prices for fall delivery; plants, each 40c; dozen, \$4; one hundred, \$25. Cash with order.

To protect from unscrupulous persons, all packages will bear the Herbert Seal of this Nursery, which purchased the rights from the originator, Mr. R. B. Whyte, one of the foremost horticulturists of Canada.

WRITE FOR CIRCULAR

The Renfrew Nurseries Co.

LIMITED

J. C. ROCHESTER, Pres. W. E. SMALLFIELD, Vice-Pres. and Sec.-Treas.

NOW IS THE TIME

to order your Fall Supply of

FLOWER POTS, ETC.

Our stock is large and we can make prompt shipments.

THE FOSTER POTTERY CO.

LIMITED

HAMILTON, ONTARIO

MARCHMENT'S
Sure Growth Compost

Supplied to all the largest nurserymen and fruit growers in Ontario. Shipments made by car or boat. Prices reasonable.

S. W. MARCHMENT,

Tel. Main 2841. 105 Victoria Street,
Residence Park 951. TORONTO.

ESTABLISHED 1872.

PEACHES
—AND—
GRAPES

There are hundreds of first-class substantial grocers throughout Canada who would be glad to buy peaches and grapes, and other fall fruits direct from the grower.

An advertisement in **The Canadian Grocer** will put you in touch with these buyers and will cost you very little money.

We make no charge for preparing your copy.

WRITE US FOR PARTICULARS

The Canadian Grocer
10 Front St., TORONTO

ing, St. Catharines; W. A. Emory, president of the Provincial Association; E. J. Mahoney, president of the Hamilton Association; E. D. Smith, Winona, and A. W. Peart, of Freeman.

Mr. McNeill, of the Fruit Division, Ottawa, has been interviewing the fruit dealers of the west. One dealer in Medicine Hat commented as follows: "Our trade is going almost exclusively to British Columbia. The western men grow better stuff, grade it more uniformly, use better packages, settle claims more promptly, and are in every way better business men than eastern fruit growers."

A report from Dominion Fruit Inspector Wartman, Montreal, states that the keeping quality of California Tragedy plums is something wonderful. Three specimens taken from different boxes of a car lot consigned to Glasgow via Montreal, were put in a drawer in his desk where a thermometer ranged from 70 to 80 degrees. After 10 days the plums were unwrapped from the soft paper and found to be in sound condition. These plums could easily be placed on the Glasgow market in perfect condition when the temperature during the ocean voyage is kept at 35 degrees.

Where Damage Occurs.—I believe sending unripe, uncolored, immature fruit to the old country markets does more damage to the fruit growers of this country than almost any other infraction of the act to prevent frauds in packing fruit.—(H. J. Scripture, Brighton, Ont.)

Quebec Fruit Growers Meet

The summer meeting of the Pomological and Fruit Growers' Society of Quebec was held at Village de Mont St. Hilaire, August 23 and 24.

The meetings were ably presided over by Mr. Fisk, and Mr. Chapais did excellent work as interpreter. On Thursday noon Mr. A. McNeill, Chief of the Fruit Division, Ottawa, arrived, and the afternoon was given over to a general discussion and to a visit to a neighboring orchard. The various sessions were fairly well attended, especially that of Wednesday evening, when Prof. F. A. Waugh gave an interesting address on Flower Culture. The discussions were well sustained and to the point.

The programme included addresses on the following subjects: "Planting of fruit trees, care necessary to be taken. Fruit cultivation along the Gulf of St. Lawrence"—G. Reyneaud, Horticulteur, La Trappe, Que.; "Plums"—R. Brodie, Westmount, Que.; "Results following severe winter of 1903-4, and last winter upon tender varieties of fruit trees"—R. W. Shepherd, Como, Que.; "The Strawberry Leaf Rust"—J. C. Chapais, St. Denis, Que.; paper (subject not named)—N. E. Jack, Chateaugay Basin, Que.; "Notes on fruit meeting in western New York and Vergennes, Vt."—Wm. Craig, Abbotsford, Que., and "Some mistakes made in the past in the planting and after treatment of apple orchards in the province of Quebec"—Volunteers.

ATLANTIC REFRIGERATOR SERVICE

THOMSON LINE

Montreal and London Service

S. S. Hurona, cold storage and cool air, Sept. 2nd
 S. S. Fremona, fan ventilation only, " 9th
 S. S. Cervona, cold storage and cool air, " 16th
 S. S. Kildona, cold storage and cool air, " 23rd
 S. S. Iona, cold storage and cool air, " 30th

Direct service to Newcastle, Leith and Aberdeen. Sailing cards will be furnished on application.

DONALDSON LINE

Montreal and Glasgow Service

S. S. Kastalia, cold storage and fan ventilation, Sept. 7th
 S. S. Tritonia, cold storage and fan ventilation, " 14th
 S. S. Marina, cold storage and fan ventilation, " 21st
 S. S. Athenia, cold storage and fan ventilation, " 28th
 S. S. Lakonia, cold storage and fan ventilation, Oct. 5th

LORD LINE TO CARDIFF, fortnightly sailings.

FOR SPACE APPLY TO

THE ROBERT REFORD CO., LIMITED

STEAMSHIP AGENTS

Montreal, Toronto, Portland, Me., St. John, N. B.

TORONTO OFFICE: Room 110, Union Station

D. O. WOOD, Western Agent

Money Given Free to People who buy Goods from Advertisers in this Issue.
 See Notice in Advertising Columns.

What the Florists Did

A pleasant and profitable time was spent by the members of the Canadian Horticultural Association at their eighth annual convention, held in Montreal August 8, 9, 10 and 11. The business of the convention was transacted during the first two days, the last two being devoted to visiting leading gardens and points of interest in and around Montreal. In his annual address the president, Mr. Geo. Robinson, of Montreal, reported that the past year had been an encouraging one for professional florists as the demand for flowers had shown an increase.

The principal papers and addresses presented included an illustrated lecture on "Park Design" by Mr. Frederick D. Todd, landscape architect, of Montreal; an essay on "How to keep a greenhouse attractive in winter," by Mr. Thos. McHugh, of Dorval; essay, "How to keep grounds attractive in summer," by Mr. R. Burrows, of St. Anne de Bellevue, Que., published in this issue; a review of roses and carnations, by Mr. Wm. Gammage, of London, and an essay on violets by Mr. F. L. Girdwood, of Montreal.


Guelph was selected as the place for holding the next convention. The following officers were elected for 1906: President, Mr. Wm. Fendley, Brampton; 1st vice-president, Mr. Wm. Hunt, O. A. C., Guelph; 2nd vice-president, Mr. John Walsh, Montreal; treasurer, Mr. Herman Simmers, Toronto; secretary, Mr. A. H. Ewing, Woodstock; executive committee, Messrs. J. Suckling, Truro, N. S.; J. Eddy, Montreal; J. Campbell, Simcoe. It has been decided since

the convention to start a new florist paper, the first copy of which will appear the first of this month.


Guelph Society Pushing Matters

This year 900 packets of aster seed were distributed by the Guelph Horticultural Society and a revised bulletin given with each packet. The children are greatly interested in the growing of these, and a love of flower culture that might have lain dormant is being brought into active life. Last spring several of our interested citizens donated shade trees, over 50 elms, oaks, maples, catalpas, etc. The society looked after the planting of them around the schools and churches and in the parks and streets. In order to prevent the havoc to the trees so often perpetrated, the society is endeavoring to look after those on public property. Our society also provided window boxes for the postoffice and city hall. The sight of large well filled boxes of green and bloom on the gray substantial stone buildings is most effective.

Monthly meetings have been very practical, usually taking the form of an informal discussion led by some member of the society. A deputation from the horticultural society waited on the members of the city council and the board of trade and asked their assistance in a campaign of civic improvement. To set the ball rolling a joint meeting under the auspices of the council, board of trade and horticultural society was held, when Mr. A. K. Goodman, Cayuga, gave an instructive address on civic

HYACINTHS  TULIPS

NARCISSUS

CROCUS  SNOWDROPS

OUR BULB CATALOGUE

describes the above and many other other kinds. It tells how to plant, when to plant, where to plant, and what to plant.

PAEONIES, HARDY PHLOX, CRIMSON RAMBLER AND HARDY HYBRID
ROSES, ORNAMENTAL AND FLOWERING SHRUBS.

CATALOGUE ON APPLICATION.

J. GAMMAGE & SONS, = London, Ont.

A Handsome Premium will be Given Free to all Readers who buy goods from Advertisers.

improvement, and our president, Rev. P. C. L. Harris, exhibited about 70 stereopticon views of unimproved and improved grounds, streets, school gardens, etc. We are indebted to members of the staff of the O. A. C. for much valuable assistance and information. It is our ambition to make Guelph the prettiest and best city of them all. (Annie Rose, Sec'y Guelph Horticultural Society.)

A bigger flower show than ever is being planned for this fall by the Kingston Horticultural Society. Plans are under way for the show on a larger and more complete basis than last year. Tickets have been printed and the prize list has been revised. A number of new classes have been added to the prize list, and prizes in open classes have been made more uniform.

A Splendid Spraying Machine

The Little Giant Sprayer is a machine which has grown rapidly in public favor since its merits have become known. After giving it a fair trial many leading growers have purchased one of these machines, among them being Mr. E. D. Smith, of Winona.

Mr. Smith has sprayed over 200 acres of nursery stock this spring and summer with a Little Giant Sprayer without a break or a dollar of expense, which cannot be said of any other sprayer on the market. Ninety gallons of Bordeaux mixture will spray two and a half acres, with over 15,000 trees per acre, and he has sprayed

12 acres per day with one horse. For power, cheapness and easy running it has no equal. It is the only machine on the market that was invented with a number of nozzles on either side of the machine that will spray two rows of grapes or raspberries at a time. This can be done by driving between the rows.

For peaches, pears, plums, cherries and apple trees two lines of hose with four or six clusters of nozzles on each line will spray any tree after the machine stops. For potatoes it is possible to spray four rows at a time, and for killing mustard all the user has to do is to sit and drive. A fair trial will readily convince growers that there is nothing like it on the market. It is rapidly taking the lead of all others, due to its intrinsic merits. Some of these machines will be on exhibition at the Toronto exhibition.

New Variety of Asparagus

A new French asparagus of great merit has been introduced by Stone & Wellington, nurserymen, Toronto. A good crop was harvested up to July. Bunches have been made of 20 stalks measuring eight to nine inches in length which weighed two pounds.

Although the stalks are so large they are perfectly crisp and tender, so that it is a great acquisition in every way. A Yonge street, Toronto, dealer on seeing a bunch which was shown in his store window remarked that if he had had asparagus like it early in the season he could have sold it for \$1.50 per bunch.

THE MAYNARD PLUM

The greatest plum ever introduced by that "Wizard of Horticulture,"

LUTHER BURBANK

Offered for the first time in Canada, in Canadian grown stock, by

THE FONTHILL NURSERIES

THE MAYNARD PLUM is sent out by Mr. Burbank with the assurance that it surpasses in quality and beauty of fruit any plum heretofore introduced. We bespeak for the **MAYNARD**, through the hearty co-operation of fruit growers everywhere, such a sale as Mr. Burbank's best efforts so richly deserve and merit.

We have bought the sole right to sell the **MAYNARD PLUM** in Canada, under a contract that gives Mr. Burbank a royalty on each tree sold, and will concede that he has well earned, by his long years of toil in the origination of new fruits and flowers, all that will come to him in honor and money from the sale of this new plum.

DESCRIPTION Size, very large, often measuring 7½ inches in circumference. Form, nearly round, slightly flattened at the ends. Color, richest crimson purple. Quality, unsurpassed in flavor and as a shipper, fruit perfectly solid when dead ripe. Tree, hardy and vigorous, bearing immense crops while very young.

Write for descriptive circular and prices. See reading notice on page 285. Agents wanted for the **MAYNARD PLUM** and other **SPECIALTIES**. Write for terms and catalogue, and send 25c for our **HANDY ALUMINUM POCKET MICROSCOPE**, just the thing for Farmers, Fruit Growers, Florists and Botanists, Teachers, Etc.

STONE & WELLINGTON, - TORONTO

Money Given Free to People who buy Goods from Advertisers in this Issue.

See Notice in Advertising Columns.