

# The Canadian Horticulturist

JULY, 1908

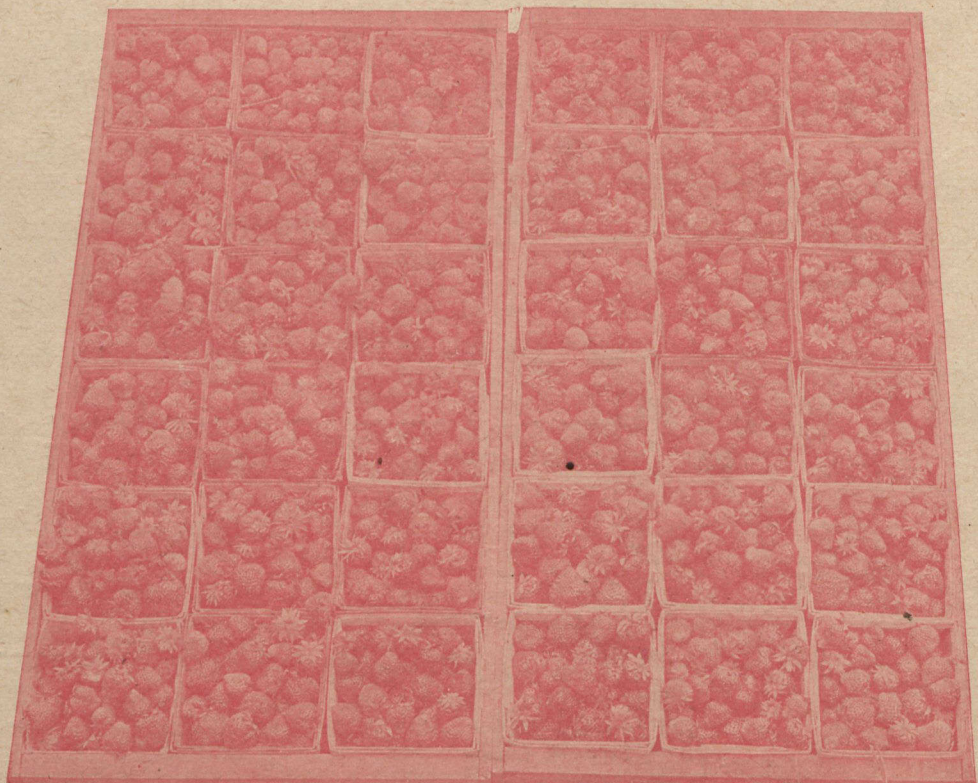
Volume 31, No. 7

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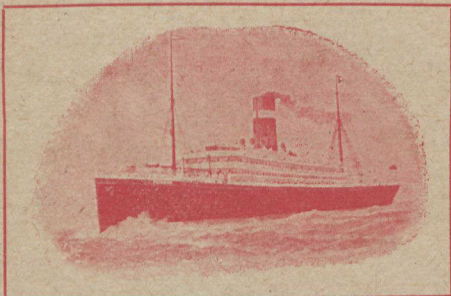
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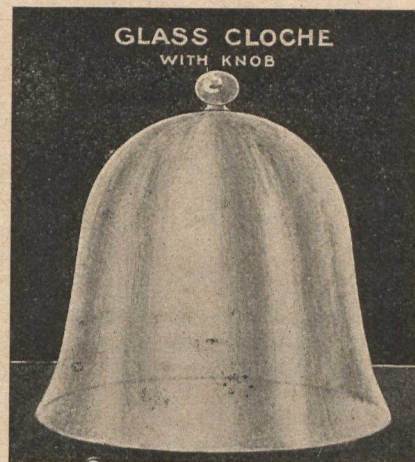
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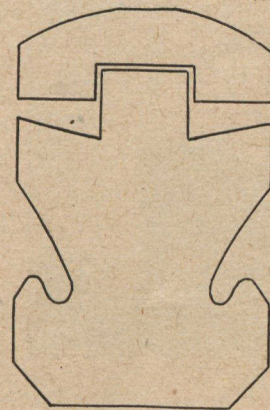
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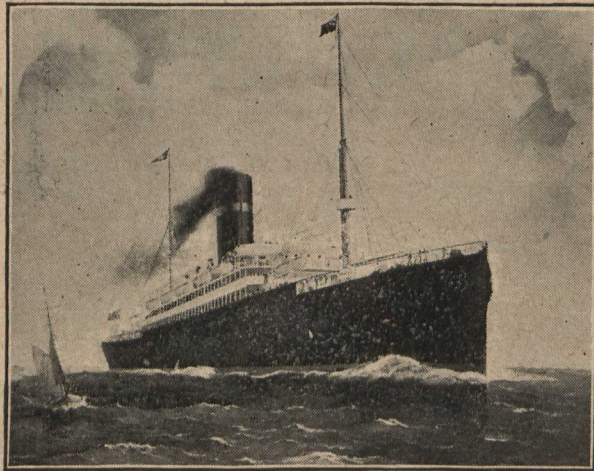
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# The Canadian Horticulturist

Vol. XXXI

JULY, 1908

No. 7

## Peach Culture, Thinning and Marketing\*

Prof. W. S. Thornber, Pullman, Washington

**A**FTER the land is given over entirely to the peach trees, regular cultivation should commence as soon as possible in the spring, either by thorough plowing or by disking and cross disking until the soil is well pulverized. The cultivation that follows this will be of the nature of surface work to kill the small weeds, maintain the dust mulch, and conserve moisture. Nothing can take the place of clean fillage in the orchard during the early part of the season.

### COVER CROPS

Practically all soils may be materially improved by the judicious use of cover crops. The crops, whether of rye, vetch, Canada peas or even corn, should be sown about the middle of August and permitted to grow or at least remain on the surface until early in May when it can be plowed under to add food and humus to the soil. By sowing as late as the middle of August no injury is done to the growing fruit crop, while the growth of the trees is checked and the wood is hardened off before the winter comes.

### THINNING THE FRUIT

One of the hardest tasks for the amateur to perform is to thin sufficiently. It seems like a great waste of energy to grow a crop of young peaches to the size of small prunes and to then deliberately pull off from one-half to three-fourths of them. However, he soon learns that peaches, four to six inches apart, are close enough for the best results.

We must realize that a tree can produce a certain amount of first class fruit and, if more be permitted to grow, the size of the fruit must be reduced. It does not cost any more to pick the fruit at one time than it does at another. It is much easier to handle, pack and market a few large nice peaches than it is to deal with an equal weight of poor, small, hard, un-saleable fruits.

Western horticulture is frequently called the new horticulture and truly is

this the case it for no other reason than the way we harvest and market our crops. The barrel, the sack and the basket are fairly things of the past and now our crop goes to the market in neat attractive, beautifully labelled boxes and crates of the most convenient size possible for the grower, commission man and consumer to handle.

### HARVESTING AND MARKETING

Probably no crop grown requires more care than the harvesting and marketing of peaches. The least scratch or bruise soon shows up to the disadvantage of the crop. Means should be provided to eliminate as far as possible all these defects. The picking should be done under a competent orchard boss whose duty

### Wonderful Progress

I am much pleased with the appearance of THE CANADIAN HORTICULTURIST and with the character of its articles. It has made wonderful progress during the past two years both in matter and arrangement. Although well acquainted with the publication from its inception, I have never seen it so satisfactory as now.—B. Gott, Strathroy, Ont.

it is not only to direct the work but also to see that the fruit is not allowed to drop into the picking receptacles, but rather is gently placed in as one would handle eggs.

The picking receptacles may be buckets or baskets; however, most of our growers prefer a burlap lined basket that will hold from twenty to twenty-five pounds. The fruit is picked in these baskets, loaded on flat-topped heavy spring wagons and hauled directly to the packing house where it is carefully graded, wrapped in paper, placed in boxes which hold about twenty pounds, and at once nailed up ready for shipment. After the fruit leaves the tree the sooner it is packed for market the better condition it will be in. A few growers

grade their peaches into three grades known as "Fancy," "A" and "B." The boxes of "Fancy" contain from 44 to 64 fruits, while "A's" run from 64 to 80, and "B's" from 80 to 90 fruits. Of course this requires time and skill but this is the system that is making our western fruit sell.

One of the most important factors for the selling of fruit is the local union or association. Every community that raises fruit of any kind should organize and procure these benefits.

The cannery is another important adjunct. It is the only reasonable way to economically handle the over-ripe and poor fruit, and while it may be apart from the association, yet it need not be and usually it is best not, providing that perfect harmony exists between the management of the two concerns.

### INSECT PESTS AND PLANT DISEASES

The insect pests and plant diseases that are bothering our peaches are not numerous. They should be carefully guarded against, however, in order to avoid serious injury from their attacks before curative means are used upon them.

Up to the present time, I have never seen or heard of a case of the much dreaded "peach yellows" in the west; however, it may exist in an unnoticeable condition in some of our large districts, simply waiting for proper conditions to develop it. The greatest possible care should be exercised to keep this, as well as other injurious pests, from once securing a foothold in our orchards. Two of our chief pests are as follows:

### PEACH LEAF CURL

The peach leaf curl is practically our only well distributed, serious plant disease of the peach and while its attacks are more or less serious on some varieties than others, yet it works severe injury to all sorts. This disease is too common to need description and may be readily kept under control by a thorough spraying in March with a standard solution of Bordeaux or sulphur-lime wash.

The peach tree borer is another troublesome insect that we must be constant-

\*Extracts from a paper read at the last convention of the Northwest Fruit Growers' Association held at Vancouver.

ly watching for in order to prevent it from gaining a foothold in our orchards. The best remedy that we can apply to them is to dig out the worms both fall and spring and either keep the trunk banked with earth during the growing season or whitewashed with a thin coat of cement, which prevents the young from gaining access to the tree.

### Notes on Cherries

T. S. Cornell, St. George, Ont.

Cherries will thrive in almost any part of Canada by having the land well drained. They will not stand wet feet. The sour cherries are more profitable than the sweet, and of the many kinds we prefer the Early Richmond and large Montmorency.

Cherries like other fruits have enemies. The black knot is one; it has to be checked in its green state. I also find the plum curculio attacking them of late. Spray the same as for plum.

We begin picking before they are very ripe, in order to have them all marketed in a firm state, leaving all the stems possible on the fruit. We find it better to pick in small pails, and to empty into the baskets ready for market. We handle all our cherries on the local market getting the middlemen's commission also. There is no more profitable fruit to grow at the present time than the sour cherry.

### Root Pruning for Fruit

Edward Lane, Galt, Ont.

If a tree is making too much wood growth, and is not bearing what might be considered a fair crop, it should be deprived of a few of its roots. In order to illustrate the value of this, I will give one of my experiences along that line. A few years ago, I received, as a premium with THE CANADIAN HORTICULTURIST, a Wealthy apple tree and, if my memory serves me right, it was of one year's growth and about twelve or fifteen inches high, branched out as a dwarf and so I let it remain. It grew to be eight feet high and six feet in width and with no sign of fruit. I said to it one day, "You have got to stop this. I don't want so much wood; I want fruit." I dug a hole about thirty inches from the trunk and then tunneled in under it and there I found four large roots. I cut these off and put the soil back again. The next year, I had to prop up every branch, but one on the opposite side to where I dug the hole and in the fall, I had about three bushels of splendid apples.

My boys found they were good to eat and as a consequence the branch nearest the wall was stripped of its load quite a while before the rest. The next

year, the branch which did not require to be propped and the one which the boys stripped, had to be propped. Altogether, the tree bore about one and one-half bushels and the third year it bore two bushels. They were as good a sample as one could wish to pick up. This instance is not a solitary one but one of scores, and always with about the same results. To my knowledge, it has been practised through three generations, I myself having been taught it over 40 years ago by my grandfather, who was a nurseryman and knew whereof he spoke.

### Fertilizers for Orchards

S. C. Parker, Berwick, N.S.

For our sixty acres of orchard, young and old, we use commercial fertilizers entirely. We use ground bone, acid phosphate and muriate of potash. The accepted method with us is to apply fertilizers in early spring, cultivate thoroughly until July, then sow a cover crop. Five hundred pounds of acid phosphate and two hundred of potash per acre is about the average amount used, with fifteen pounds clover, either Mammoth or Crimson.

We use considerable mixed fertilizers on small fruit and garden truck, finding them more readily available. For these we buy a high grade potato fertilizer about four per cent. nitrogen, eight per cent. phosphoric acid and ten per cent. potash. Probably it would be cheaper to compound our own, but time is often worth more than money. As our stock comprises only one cow and teams necessary to work the orchard, stable manure does not cut much figure in our business.

### Fameuse vs. McIntosh

R. W. Shepherd, Montreal

McIntosh Red can never replace Fameuse, as to quality, for a dessert apple. In the best houses in England, where the two kinds have been tried, the verdict has always been in favor of Fameuse, and I speak from experience, because I have a large *clientele* of that class of customers.

In England, apples are more generally used at dinner for the dessert course than they are here, where we get oranges, bananas, grapes, and so forth, very cheap. The medium size and beautiful appearance of the Fameuse, apart from its peculiarly delicate high flavor, and delightful perfume, brings it into great demand. The McIntosh is rather too large, and often irregular in shape, to be as popular a dessert apple for the table.

To get size among fruit trees cultivate often and thoroughly.

### Canadian Pears

W. T. Macoun, Ottawa

The number of good pears which have originated in Canada is not very great, mainly for the reason that the pear districts are more limited in extent than the apple, and that chance pear seedlings do not stand as good a chance of surviving as apple seedlings. Two varieties only need be mentioned, namely, Dempsey and Ritson. The following descriptions of these pears are taken from "The Fruits of Ontario":

#### DEMPSEY

The Dempsey was originated near Trenton, in Prince Edward County, Ont., by Mr. P. C. Dempsey. It was produced from a seed of a Bartlett, fertilized with Duchess d'Angouleme. The fruit is firm, and consequently would ship well. Tree, vigorous and productive; fruit, large, oblong, obovate, pyriform; skin, smooth yellowish-green, with a brownish-red cheek in sun; stem, about one inch long, set in a fleshy base, and with almost no cavity; calyx, nearly closed in a moderately deep uneven basin; core, small; flesh, white, fine grained, tender, almost melting, with sweet, delicious flavor; season, late October to November.

#### RITSON

The Ritson is a delicious dessert pear, which is worthy of a place in every fruit garden. It is not surpassed for canning or for pickling, having an aroma and peculiarly agreeable flavor. It originated in Oshawa, Ont., with Mr. W. E. Wellington. In response to our enquiry, Mr. Wellington writes: "It was my grandmother, Mrs. John Ritson, who planted the seeds from a pear which had been sent to her from Boston. The tree has always stood on my grandmother's homestead as long as I can remember." The tree is a strong, healthy, upright grower. The original tree is now of immense size, probably over thirty feet high, and about 100 years old, an annual bearer of nice, evenly formed fruit. The fruit is medium in size, obovate pyriform, usually one-sided; color of skin, yellow, heavily shaded with golden russet, and numerous minute white dots of a darker russet; stem, one inch long, often inserted in a fleshy protuberance, and at a slight inclination; calyx, open wide in a very shallow, regular basin; flesh, creamy white; texture, fine, tender, buttery, juicy; flavor, sweet, delicately perfumed; quality for dessert, very good to best, and for cooking, very good; value, market, promising for a special trade; season, October.

Do not forget to remove the blossoms from newly-set strawberry plants.

## Irrigation in British Columbia\*

A. E. Meighen, Irrigation Engineer, Kamloops, B.C.

**A**BOUT fifteen years ago, men became alive to the possibilities of the valleys and benches for fruit growing. In several localities, tracts of range land were bought up by companies, subdivided into five, ten and twenty-acre lots and irrigation systems were constructed. These tracts have been put on the market and have been rapidly settled, adding greatly to the development of wealth of the interior. The rapid development and marvellous results obtained on these tracts are incredible to persons not familiar with the benefits of irrigation.

Land which was a howling waste of sage brush and bench grass, and supporting a few head of stock, has been converted, in a few short years, into a community of happy and contented homes, where the most extensive farming is practised, every foot of land being highly cultivated, with the result that a family is maintained in comfort and almost affluence on ten acres of land.

### THE FRUITLAND ESTATE

A notable example of the results obtained by a practical policy is the "Fruitland" estate of the Canadian Real Properties Co., at Kamloops. This estate comprises 6,000 acres lying along the North and South Thompson rivers. This land is characteristic of the dry belt, of a gently undulating surface, lending itself admirably to irrigation, free from rock, stone or timber—ready for the plow. The soil, being an alluvial deposit, is remarkably rich, and produces immense crops upon the application of water.

The tract was purchased by the company about four years ago, and the company immediately set to work to subdivide the land into small lots of about ten acres, and to construct their irrigation system. A main canal was built seventeen miles in length along the foothills bordering the North Thompson as far as Jamieson Creek, the main source of water supply. Besides their water rights in Jamieson Creek the company controls all the water in Noble, Gordon and McQueen Creeks, whose waters are diverted into the main canal as required. To make assurance doubly sure this company, during the last two years, has been raising dams on the lakes in the mountains and thus storing water to provide against a possible shortage in an exceptional dry season.

After the construction of the main canal the distributing laterals were built. They were planned in such a way that

the water is delivered to each lot by a separate gate, each man's allowance being measured accurately by means of a weir.

Two years ago the system was ready for operation and the property was put on the market. The land has sold rapidly and steadily, mostly to people who settled on their land, with the result that what was yesterday an unproductive waste, is now a thriving community where those who were fortunate enough to settle are already realizing handsome returns from small crops.

### SOME FRUIT RETURNS

It is the custom of the settlers on this tract, while waiting for the trees to come into bearing, to plant between the tree rows small crops, such as potatoes, tomatoes and berries. The profits from these small crops have been very satisfactory as the following figures show.

ties for investment which will give returns unsurpassed anywhere in the old or new world.

### Chickens in an Orchard

Is there any danger in keeping chickens in an orchard that has been sprayed? Would fowls keep down the pests without need of spraying?—A. T., Hants County, N. S.

The chickens can be kept in a sprayed orchard without injury, and they will help to keep down certain pests, such as curculio. They will not keep down all the insect pests, and of course can have no effect whatever upon fungous diseases, such as apple scab, bitter rot, and so forth. Keep the fowls in the orchard, and it will help both the chickens and the trees—but you will still need to spray

### Marketing Currants

Wm. Fleming, Owen Sound, Ont.

Currants for shipment should not be so ripe when picked as for home market. Every step in the operation of harvesting and marketing should be



Some British Columbia Peaches from a Three-Year-Old Tree  
Grown in Orchard of Mr. R. H. Agur, Sumnerland

Last year potatoes netted at the rate of \$75 an acre; strawberries \$600; and tomatoes, \$1,000.

### ROOM FOR GOOD SETTLERS

These small irrigated fruit farms will in the near future be a big factor in the development and wealth-production of this province. All that is required is settlers of the right kind. British Columbia has been specially favored with the conditions that draw the very best people. A climate unequalled in Canada, magnificent scenery, splendid hunting and fishing—these are the considerations which will draw people of culture and people of wealth to the province, who, at the same time, will find opportuni-

intelligently made. The fruit should be perfectly dry and not too ripe.

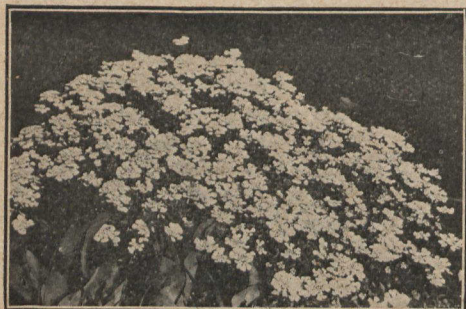
When picking black currants, the clusters should be stripped. Those of red and white currants should be pinched off the bush carefully, so as to prevent all possible bruising. The picker should gather the fruit in small baskets and deposit it in the shipping basket, which should always be kept in the shade and disturbed as little as possible.

Ship the fruit soon after picking, as a day's delay may ruin a shipment if the weather is unfavorable. The fruit should be shipped in eleven-quart baskets, which should be clean and new. Fill them according to the golden rule.

\* A continuation of the article on Irrigation that appeared in the June issue.

# Lawn and Garden Hints for July

**D**URING the hot days of July the vegetable garden will require constant cultivation, so as to keep the surface soil loose. This loose earth mulch on top of the soil around all growing crops; is a necessity in hot weather.



**Perennial Candytuft—*Iberis Sempervirens***

Every garden requires a certain amount of water. There are various ways of applying same. Give plenty when applying, as simply sprinkling does more harm than good, in that it is apt to form a crust. Water at night and stir the soil in the morning.

## VEGETABLES AND FRUIT

Lettuce seed does not germinate well in hot weather. It can be grown by sowing the seed in a moist, shady place. If no shade is available, a cover can be made of boards or cheese cloth. Moisture in plenty must be supplied, as lettuce is easily affected by dry weather.

In a fairly cool spot, sow early varieties of peas for use in September. Sow Eclipse beet for fall use. Cucumbers for pickles may be sown. Kale may be sown now for setting out later. Parsley has



**A Well-grown Clump of Peonies**

At residence of Mr. E. C. Morris, Brown's Nurseries

time to make a top if sown this month. The first week in July is not too late for planting corn. Plant some bush beans. Now is the time for sowing winter radishes. Plant celery.

If your new strawberry plants are still blooming, remove the blossoms at once.

You will be glad when fruiting time comes next season.

As soon as the old strawberry patch is done fruiting, plow or dig the plants under. Best results are obtained by taking only one crop and having a new one coming on. Sow some red clover or vetches where the strawberries were. These plants make nitrogen cheaper than you can buy it.

If your peach or plum trees are overloaded, thin the fruit. Better fruits will be the result.

Remove the suckers from fruit trees as fast as they appear. Wash the trunks of apple trees for borers. Use one pint of crude carbolic acid, one quart of soft soap, two gallons of hot water, and mix thoroughly. Apply with a cloth or soft broom.

For higher quality in raspberries and

Send photographs of your flower garden and lawn for publication in *THE CANADIAN HORTICULTURIST*.

## Anemones from Seed

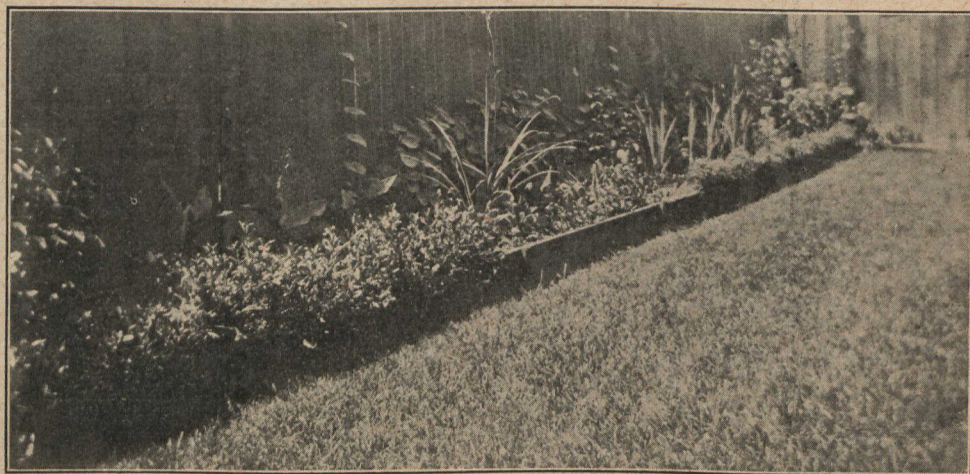
How soon will anemones bloom from seed?—Mrs. McL., Kootenay Co., B.C.

It will take two seasons' growth at least for anemones raised from seed to flower.

## Worms at Rose Roots

Kindly tell me how to keep worms away from the roots of rose trees. I have tried so hard to grow them. I find that there is a lot of worms in the ground and around the roots.—Mrs. J. H., York Co., Ont.

I presume it is the common garden worm mentioned, although these seldom injure rose bushes materially. The best



**A Home-made Border of Annuals and other Things in a Back-yard**

At residence of Mrs. John McKay, Toronto

blackberries, allow the fruits to remain on the canes until well matured. Continue cultivating around newly-planted bush fruits.

## THE FLOWER GARDEN

Keep the surface soil in the flower garden constantly stirred. A light scuffle hoe will do the work easily.

Stake and tie all plants that require support. Use neat stakes, and soft twine.

Remove all decayed flowers regularly. They exhaust vitality, and are unsightly.

For sunny locations, use portulacas and nasturtiums.

Water the pansy beds frequently. Keep the bloom well cut, so that no seed can form.

Pinch back dahlias, cosmos and chrysanthemums. This will make them compact and full of flowers.

Shade the soil around aster plants by mulching with lawn grass clippings.

It requires more than one season in which to attain success in the cultivation of flowers.

remedy is an application or two of lime water. The lime water is made by slaking and mixing about one pound of fresh lime in two gallons of water. When the solution is mixed allow it to stand and settle. Two applications are usually sufficient, at a week's interval between each application, to have the desired effect.—Wm. Hunt, O.A.C., Guelph.

Get out of a plant all there is in it. Study its habits and needs and treat it accordingly.

In the June issue, the address of Mr. W. A. Wood, the owner of the rockery illustrated on page 126, was erroneously published as Toronto, instead of Hamilton.

One cannot have a fine lawn if there are many shrubs on it. The lawn proper should be lawn and nothing but lawn. Place the shrubs where they will not be at war with the sward.



# Flowering Shrubs and Their Care\*

J. McPherson Ross, Toronto

FLOWERING shrubs are a class of plants that give permanent and satisfying results to the grower after once being planted. There are so many varieties that it would be impossible to describe them all in a single paper as they would fill a catalogue besides the list already known, many new species and many varieties of old species are being continually introduced by nurserymen. As a rule the majority of them are of the hardiest nature. The cultivator need not be afraid of any which I shall mention being killed by the severest winter weather, a fact that we can appreciate here in Canada, also that they thrive equally well in the same situations and in the same soil.

## PREPARATION OF SOIL

Like everything else that we grow, we must go to some trouble in preparing the soil thoroughly where shrubs are to grow, in order to have the best results as usually after once being planted they are not disturbed for many years and then only perhaps to thin them out or to move one not planted in the position best suited. So much is continually dinned into our ears about preparing the soil well for planting anything, that it seems unnecessary now to repeat it; but to have good healthy shrubs with plenty of fine flowers, it pays to drain it and to apply plenty of good strong manure thoroughly and deeply dug in.

## SHRUB PLANTING AND COMBINATIONS

As a general rule shrubs are usually planted too thickly and afterwards become an indefinite hedge when the individuality of each shrub is lost in the mass. Unless, intended to make a hedge or close border of one variety, a mixed collection should not be planted closer than six feet. This may seem a great distance when planting the small shrubs but a few years growth will show the necessity, besides allowing the plant to develop its characteristics evenly all around. The proper rule is to avoid violent contrasts and to place each where the color of the flowers and foliage will be most effective and the height of the shrub at maturity can be seen to the best advantage.

In a mixed border the planter is advised to place the tall growing kinds, such as the large-flowered syringa and lilacs at the back, wiegelias, hydrangeas, and so forth, in the middle and the dwarf sorts, such as *Deutzia gracilis* and *Spiraea Fortunei* in the front. In a border of this character, it is a good plan to mix in herbaceous plants, bulbs, and so

forth, which if properly assorted as to flowering period, will give, an endless show from early spring till late fall.

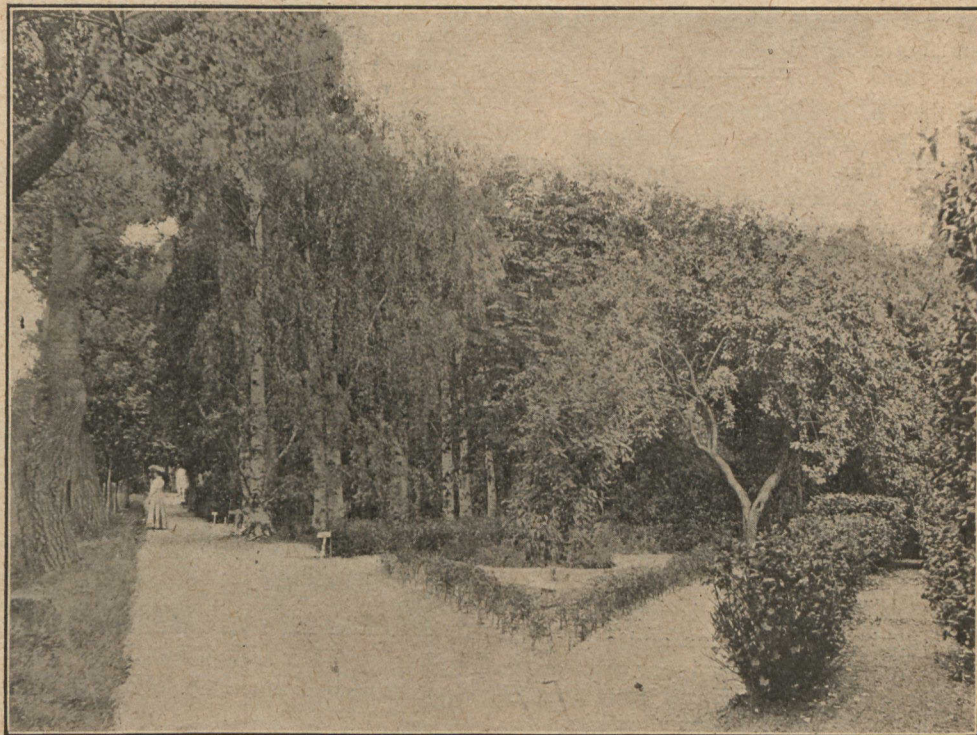
Where there is plenty of garden room a fine effect is produced by massing three or more of one kind together, thus presenting a show of bloom that is satisfying, to say the least of it. For example, imagine a half dozen *Spiraea Reevesiana* or *Spiraea Van Houttei* alongside a clump of the diameter of the scarlet quince, *Pyrus Japonica*, both in flower together, or a group of white lilacs, five to eight feet high, in full flower in the back ground with a clump of scarlet quince in bloom in front; the effect is magnificent.

In this way, a group of *Prunus cerasifera*, var., *Pissardi* or *Berberis vulgaris*, var., *atropurpurea* against a mass

ly necessary to restrain some growth, never do it till after the flowering season is over. Above all never indulge in this senseless shearing in round forms, as we see too often practised in many places; the custom is positively hideous and destroys all the grace. The hydrangea is the only shrub that is benefitted by cutting well back and this should be done in early spring.

## Care of Azaleas

Last fall the Lindsay Horticultural Society distributed to its members a number of azaleas, imported from Germany. Many of these plants flowered very well during the winter. The owners are now wondering how best to preserve their plants to again secure a good bloom. An answer will be appreciated.—F. R., Victoria Co., Ont.



Corner of Forest and Ornamental Tree Plantation at Quebec Experiment Station

of golden elder, is quite striking in color effect and makes a picture not easily forgotten and in the fall of the year, a hedge of *Hydrangea paniculata*, in plumed masses of creamy white, flanked in front by a bed of scarlet gladiolus, makes a lasting show of color that is worth all the trouble to produce.

## WHEN AND HOW TO PRUNE

Flowering shrubs require little if any of what may be termed "pruning." The plants naturally grow in such graceful forms that much pruning is not necessary. Besides topping back an occasional extraordinary shoot or cutting out some dead branch or superfluous suckers, nothing much else is needed. If actual-

Azalea plants should be stood out-of-doors in the pots about the middle of June in a partially shaded position, north side of a house or fence preferred. Stand pots on coal ashes to keep out earth worms. Spray the foliage, especially on the under side of the leaves, every day with clear water or soapy water to keep down red spider. The red spider is a small insect mite that attacks the under side of the leaves causing them to drop. A dusting with powdered sulphur when foliage is damp also helps to keep down this pest. Take plants indoors early in September. Syringe frequently as before mentioned. Azaleas like a peaty soil free from lime.

\* Extracts from an address delivered at a recent meeting of the Toronto Horticultural Society.

## Fertilizing a Lawn

In the April issue of THE CANADIAN HORTICULTURIST appeared a short article on, "How to Have a Good Lawn." The writer advised a "liberal sprinkling of good commercial fertilizer." Please tell me what is a good commercial fertilizer for a lawn. The grass on my lawn is showing signs of wearing out. It tends to become red in spots and that early in the summer. How much of said fertilizer should I require for a lawn about eighty feet square?—T. H. R., Grey Co., Ont.

At intervals of two or three weeks, during the early part of the season, top-dress the lawn with nitrate of soda, at the rate of one-half pound per square rod. Two applications of this will be sufficient. Later, give an application of bone meal, two parts, superphosphate of lime, two parts, muriate of potash, one part, and apply at the rate of five pounds per square rod. Before applying these fertilizers, it is best to rake the surface of the lawn. The full benefit of the fertilizers is realized most when they are applied just before a rain.

## The Common Toad

Tennyson D. Jarvis, O.A.C., Guelph.

Very few realize the immense good done by the common toad in consuming insects and other destructive arthropods. He is a useful friend and his presence should be encouraged in every garden. In France, the gardeners are glad to buy toads in order to have them as insect destroyers.

Most of the old superstitions regarding the toad, such as the possession of a jewel in its head, and that warts are produced on one's hands from handling, and so forth, have been pretty much done away with. He has not a poisoned fang or gland in his mouth, but on his neck may be found a wart-like mound which secretes a very distasteful fluid to defend him against dogs and other enemies. The roughened excrescences on the surface of the toad are glands which secrete a fluid to moisten the skin.

A few words as to the life-history of the toad may not be out of place. In the spring of the year they go to pools and ponds for breeding and the air is filled at that time with the shrill purring which is so characteristic of the early spring. The eggs, unlike those of the frogs, are laid in strings of gelatinous matter wound about aquatic or submerged grass. These eggs hatch after a while into tadpoles or "polliwogs" much resembling the tadpoles of the frogs. These so-called polliwogs, after a while, lose their tails, acquiring first hind legs and then fore legs while their tails are disappearing. Losing their gills they finally breathe entirely by means of lungs. Then they emerge from the water in large numbers. They avoid the sun and both old and young are seen at night-

fall, or sometimes in large numbers after a rain, at which latter time their extreme abundance gives rise to the popular belief that "it is raining toads."

The number of insects consumed by an adult toad is almost incredible. At sunset he comes out from his resting place and starts on his regular tour over lawns and through gardens. He is always hungry and eats four meals a day or rather his stomach must be filled and emptied four times a day. He hunts and eats almost incessantly, therefore, in order to get as much as he needs. The tongue of the toad, with which he catches his food, is well adapted to its work. It has a sticky surface from which escape of prey is impossible, and it is fastened at the front instead of the back. The latter fact makes it possible for the toad to throw the tongue well out of the mouth. The toad eats almost all kinds of living things that are out at night. In a number of stomachs examined at Guelph the following kinds of insects were present: ants, spiders, crickets, mosquitoes, flies, moths, beetles and sowbugs.



A Home-made Rockery

The photograph was kindly furnished by Miss M. E. Bellerby, Craiglieth, Ont., who describes the rockery as follows: "It is filled with trailing plants, such as yellow myrtle, canary bird flower, verbena and California poppy and has a yucca in the centre, against a back-ground of large double sun flowers. It is built up of round stones to a height of about three feet and filled with good garden soil. I give it an abundance of water as the stones seem to draw the heat and it dries out quickly. The large flat stone in the front is a petrified mud turtle which I found in an old creek bed."

## Making a Lawn

I have a small piece of ground near my house that I want to make into a good lawn. Most of the soil was taken from the cellar when building. Kindly tell me how I can best handle the ground so as to produce a good, permanent turf.—E. A. F., Kings Co., N. S.

The soil from the cellar should not be left on the surface. It should be taken away or used for filling undulations. The best soil for a lawn is a rich, retentive, loam. A few loads of this spread evenly on the surface will produce much better results than if you tried to make a

lawn from the soil already at hand. Some kind of fertilizer, such as bone meal, wood ashes, and nitrate of soda, should be worked in. Have the surface soil well pulverized and level it smoothly.

Sow the seed when the soil is freshly distributed. Use plenty of seed and sow it evenly. It is best to sow one-half of the amount one way, and to cross the patch with the balance. After sowing, rake and roll.

Good lawn mixtures can be secured from any reliable seedsmen. A home-made mixture can be prepared from Kentucky blue grass, red top and red clover, equal parts by weight. Use at the rate of at least three bushels to the acre. The amount required can easily be determined by getting the area of the plot in square feet, and dividing same into the number of square feet in an acre, which is 43,560. Divide the result into the quantity required for an acre, and you have the amount necessary for the plot.

## Sweet Potatoes

Walter T. Ross, Picton, Ont.

In the spring of 1906, I sent to Maryland for some sweet potato sprouts. They came by mail in fine condition, well rooted, and healthy plants. I set out about seventy-five plants, on May 24th, giving as many more to farmers in different parts of the county, where I knew the soil and conditions were favorable to growing them. Mine proved very satisfactory. I must have had over a bushel, the largest one weighing one pound. I put a dozen on the scales and they weighed six and a half pounds. The farmers were well satisfied with their experience, which was successful.

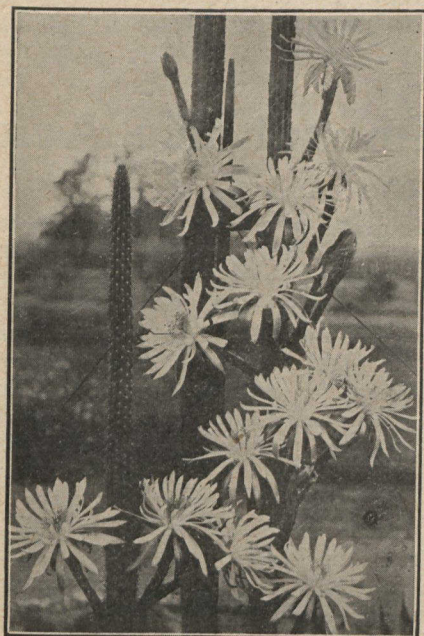
In the spring of 1907, I set out nearly 500 plants, but on account of the backward season and late frosts, I could not plant them until June 10th. The season was much shorter, and there was less hot weather than the previous year. While the vines grew vigorously, the yield of potatoes was unsatisfactory. The largest I had was one-half pound; but very few attained a satisfactory size. If the season had been three weeks longer, as the previous one in 1906, I see no reason why I should not have had ten bushels, for which the dealers here would have paid \$2.00 a bushel. This proves that with an early spring, a hot, dry summer, the yield will be satisfactory; otherwise the result will be a failure.

The plants should be set out in rows, three feet apart, and fifteen inches apart in the rows. The best fertilizer is one having a small amount of nitrogen, and a large amount of potash. I found the Yellow Nansmond the most satisfactory variety of the four or five different varieties that I grew.

# Cacti For Flower Lovers

J. H. Callander, Peterboro, Ontario

THE general idea of a cactus goes no farther than the common prickly pear, the crab or Christmas cactus, the king cactus, or case-knife cactus, or possibly a night blooming cereus. There is no special beauty



*Cereus Colubrinus*

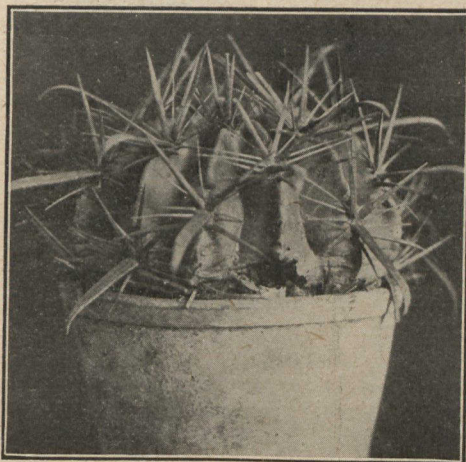
in the plant itself of any of those mentioned. If it were not for their fine blooming qualities they would not long be given a place in any conservatory or window garden. Flower growers, who have seen only such specimens, will be surprised to know that there are over 2,000 different varieties, more greatly varied in form than any other class of plants in the world.

The genus includes delicate-stemmed branching tree forms, with stems about the size of a goose quill, and making densely branched shrubs, as well as the immense giant cactus, which towers in the form of a branchless tree to a height of forty to sixty feet, with a massive trunk two feet in diameter. These are landmarks in Southern Arizona and Mexico, where they are not molested, being many tons in weight, and covered with very long, pearl-covered spines.

Still other forms are globular, with as great contrasts as in the tall growing sorts. The smallest is the dainty button cactus, from one-half to an inch in diameter, covered with spines so fine and silky as to appear like lace spun by an industrious spider, while in the same category are found enormous globes three feet in diameter, and bearing stout spines, which are really the most attractive part of the plant; some, as on the fishhook cactus, having perfectly formed hooks, three to six inches long, and cap-

able of lifting a great weight. Others wave and twist over the plant, and display brilliant colors of yellow, all shades of red, brown, purple, black and white, some plants having several colors intermixed in regular form, making the effect most pleasing.

Enamored of the grotesque as nature has produced it in this family, the fancier has conceived the idea of still further adding to their odd features by grafting one upon the other, and in this way many highly valued additions to a collection are made. Their fleshy structure makes the cactus the best of subjects for experiment in this line, and the operation is very simple. Slender growers are cut to a wedge-shape, and inserted in the split top of the stock to be used, held in place by running a couple of spines through, and tied up firmly. In a few days a union is formed and



*Echinocactus Cornigerus*

growth starts at once, and is much more rapid than when the scion is grown on its own roots. Globular sorts are cut off square near the bottom, set on the top of a columnar stem of a cereus, and bound by a string tied over the top.

By these means, curious and handsome specimens are made; drooping sorts are set on tall stems, and present a graceful appearance, also blooming more freely, while the effect of a round, heavy spined Echinocactus, supported on one or more straight stems of stout cerei is very curious. It is to this process that the success attained in growing fine plants of the crab, or Christmas cactus, is due, the stock used being an exceedingly rapid grower, the Pereskia.

Hybridizing has also been practised to a large extent in some branches, particularly the Phyllocactus, many European fanciers possessing several hundred distinct varieties, all tracing back to the two or three original sorts found in their natural state. Their home is in the al-

most perpetual dampness of the Amazon valley, Brazil, where they grow on trunks and branches of trees, their roots clinging to the moss. Thus, this family of cacti live in entirely different conditions from others, and require somewhat different treatment.

While the fancier who makes a collection of cacti, tries to secure the oddest in form, regardless of bloom, yet this is a feature that will well repay the little care necessary to produce them. The most gorgeous day bloomers are the Epiphyllums or crab cactus, in many shades of crimson and red with white shadings; the Phyllocacti, which bear handsome flowers, from two to ten inches across, ranging in color from pure white, pink, violet, scarlet to purple, a truly grand showing in early spring; some of the cerei, such as the "Rat-tail," "Rainbow," and others; and the Echinocerie, low growing clusters, which are resplendent in spring with exceedingly beautiful flowers of very large size, bright pinks, yellows, reds, purples, and so forth, often six inches across.

But it is the night bloomers that give us the really notable flowers, not only of immense size, but magnificent



*Opuntia Braziliensis*

in form and texture. The famous night-blooming cereus, itself a slender climber, less than an inch in diameter, first puts out its woolly buds, that gradually increase in size, until they reach out six

or eight inches from the stem, the outer end the shape of closed bud, until at length the final day for the completion of its wonderful development arrives, when a magical change is seen,—the bud grows and swells, so quickly, that it can almost be seen to expand, and in a few hours there is the promise of a mighty effort when darkness comes. Then is the time to watch the mammoth bud awaken to its short but gorgeous

life. The tip bursts open, the outer sepals of yellow and brown slowly uncurl, disclosing to view an immense cup-shaped form of purest white petals, within which nestle the hundreds of down-tipped stamens, with the prominent pistil standing well out. As it grows later the finishing touches are put on by the great flower, petals are shaken looser, the sepals curl further back, and there before us is the triumph of the

floral world—a night-blooming cereus in bloom, the flowers measuring twelve to fourteen inches across, and giving out a delicious fragrance that fills the conservatory or house. Is it to be wondered at, that when a cactus collector begins to discover the possibilities of his collection, he becomes an enthusiast on the subject, and by the unappreciative public is designated a "Cactus Crank."

## Commercial Fertilizers: Nitrogen and Phosphoric Acid

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

IN THE scope of this article, we cannot discuss the composition and merits of all the ingredients that may be employed in the compounding of fertilizers. We shall, therefore, select a few of the more important in each class.

### NITROGEN

This element is at once the most costly of forms of plant food supplied by fertilizers, the most important from the market-garden standpoint and the easiest lost from the soil. It is the element that above all produces leaf growth.

For our purpose nitrate of soda (Chili saltpetre) stands first. The commercial article as sold for fertilizer purposes contains between fifteen and sixteen per cent. of nitrogen. This material is soluble in water and presents its nitrogen in an immediately available form. Within a day or two after its application, its effect can be seen on the crop. Excess of nitrate, that is, the amount over and above that which is taken up by the growing crop within a short time, may be and probably will be lost by drainage into the sub-soil, below the reach of the roots. Hence, small and frequent applications made as a top dressing to the crop during the earlier weeks of growth are more economical than one large dose at the beginning of the season.

### SULPHATE OF AMMONIA

Sulphate of ammonia is another soluble nitrogen compound, though it does not yield its nitrogen to plant growth quite so readily as does nitrate of soda. It contains about twenty per cent. of nitrogen, and may be used as a source of nitrogen for market garden crops that have a somewhat long period of growth.

### DRIED BLOOD

Dried blood ranks next in importance in nitrogenous fertilizers. It contains from twelve to sixteen per cent. of nitrogen, according to quality. It decays rapidly in warm, moist soils and is probably the most effective of all the organic forms of nitrogen.

Fish waste, tankage, wool waste, and a number of other forms of organic ni-

trogen are used by fertilizer manufacturers. Many of them readily yield their nitrogen to crops, while others very slowly furnish their nitrogen as food and hence are more lasting. As these materials are not on the market here, we need not discuss their relative merits. The original guano, formed of dried and concentrated bird excrement, the accumulation of centuries on certain islands in the Pacific, is no longer available. It was a strong forcing manure.

### PHOSPHORIC ACID

Ground bone or bone meal has long been used and recognized as a valuable manure, particularly for mellow, moist soils. It will contain from twenty to twenty-four per cent. of phosphoric acid and two to four per cent. of nitrogen, so that with the addition of some potash compound, as wood ashes, or muriate of potash, a complete fertilizer can be prepared. The quality or value of a bone meal will depend largely on the method of its preparation; thus, steamed bone (that from which glue has been extracted) will be richer in phosphoric acid and poorer in nitrogen than raw bone.

Though bone meal does not contain its plant food in an immediately soluble, that is, available condition, its decay is fairly rapid in a warm, loose, moist soil. By the organic matter it contains, the soil is undoubtedly improved, and though not supplying food that can at once be absorbed by plants, bone meal may well find a place among the fertilizers used by market gardeners and fruit growers, especially for crops that have a long season of growth and do not require forcing.

### SUPERPHOSPHATE

Superphosphate is sometimes called acid phosphate. It results from the action of sulphuric acid (oil of vitriol) on bones and all kinds of mineral phosphates as found in various parts of the world. This treatment converts the greater part of the phosphoric acid of the insoluble phosphate into a form soluble in water and

hence available to crops. Space will not allow us now to discuss fully the chemistry involved in this treatment of phosphates by acid, but there are several important points therein that are well worthy of the attention of those using fertilizers. It must suffice to say that superphosphates will ordinarily contain about fifteen per cent of water-soluble phosphoric acid. There will be always present a certain small percentage of phosphoric acid, known as "reverted," which, while not immediately soluble in water, is a useful phosphatic manure. There may be also unattacked phosphate, owing to insufficiency of acid or other causes. All superphosphates necessarily contain gypsum or sulphate of lime as a result of the action on this mineral phosphate.

Superphosphate is the phosphatic manure to use when we wish to hasten maturity as well as for crops with a short reason of growth and needing an immediate supply of soluble acid. From 300 to 400 pounds an acre is usually applied.

### BASIC SLAG

Basic slag is another phosphatic manure now largely used. Its phosphoric acid is not soluble in water (though becoming available gradually to the soil), and therefore the fertilizer is perhaps better adapted to farm than market-garden crops. Nevertheless, it has been found particularly valuable for muck soils and soils that are sour and naturally deficient in lime and it is quite possible that market gardeners may be able to use it to advantage on such of those crops having a comparatively long season of growth. Good brands contain about seventeen per cent. of phosphoric acid. The usual application per acre is in the neighborhood of 500 pounds.

In the next issue of THE CANADIAN HORTICULTURIST the value of potash in the preparation of fertilizers will be dealt with.

Sow seeds in freshly stirred ground, as the seed is more liable to get a good start. Better crops will result.

# Some Squashes and How to Grow Them

P. G. Keyes, Ottawa

NOT only is the squash one of the most nutritious and valuable of our garden vegetables, but, owing to the ease with which it can be grown, and the number of varieties in cultivation, it should prove of great interest to the amateur gardener. The summer varieties are ready for the table early in the season, while the winter sorts, if properly stored, and cared for, may be kept in perfect condition until May or June of the following year.

It seems strange that farmers and stock raisers do not better appreciate the value of winter squash as a food for stock. An acre of squash, costing not more to cultivate than an acre of corn, will produce quite as much food as the corn, and of a kind calculated to keep stock in the pink of condition during the winter months, when dry food is the rule rather than the exception. They are specially valuable for milch cows, adding greatly to the flow and quality of the milk. Even horses may be taught to eat them in a raw state. The writer has a Shetland pony that is as fond of a Hubbard squash as of an apple. As a winter food for poultry, it seems to supply a long felt want, and I would advise all fanciers to grow a "patch" of Hubbard or Delicious for their chickens, even if for no other purpose.

## SOIL AND CARE

Almost any soil, if well enriched, will grow good squashes, but warm sandy lands, or sandy loams, are to be preferred. If to be grown on heavy soil, it would be well to start the seed in pots or boxes, two or three weeks before planting out. Strawberry boxes answer the purpose very well, as the bottom of the box can be cut off, and the plants set in the ground without disturbing the roots. For ordinary planting, dig a hole in the soil about three feet in diameter, a foot in depth, and fill up with fine old manure to within a few inches of the level. Mix well with the soil, and cover with two or three inches of earth, then plant the seeds, eight or ten in each hill.

After all danger from frost or insects is past, pull out all but the two strongest plants. I have found air-slaked lime, sprinkled over the plant, whenever the striped cucumber beetle appears, to be an excellent remedy for this pest. It is not so easy, however to cope with the cut worm, whose presence is only discovered after it has finished its work.

Moisture must be supplied to the roots during the season of growth, and not more than two or three fruits should be allowed to each vine. If large specimens are desired, all but one should be removed as soon as the fruit appears.

As a rule, it is not desirable that the vines should be allowed to root at the

joints, as this prolongs growth, and has the effect of keeping the fruits from ripening as early as they otherwise might, which is a *desideratum* where the season is short. This tendency to form roots has its advantages, however, one of which is that it prevents the vines from being moved or blown about by the winds, after the fruit has set.

## VARIETIES

The varieties are so numerous that care must be taken to grow them separately, if they are to be kept pure. There is little danger, however, of the bush or summer varieties, mixing with vine or winter types, and even if varieties do mix, it is only in case the seeds of such mixtures are planted that the fact be-

Another excellent old variety is the Boston Marrow, light orange in color, with sweet-flavored yellow flesh—fine for pies. The Early Prolific Marrow is very attractive in appearance, and the flesh is thick, dry and sweet.

Essex Hybrid is of great value as a winter squash. The same remark applies to Fordhook, although I have never succeeded in keeping it as long as any of the varieties aforementioned.

Mammoth Chili is perhaps the largest of the winter squashes, and for exhibition purposes is one of the best. It is rather coarse for table use, but as a pie squash it is hard to beat.

I need not mention the summer or bush varieties, many of which are excellent,



There is Merit and Money in Vegetables Like These

Outfit ready for Market. Farm of Geo. Syme & Son, Carleton West, Ont.

comes apparent. Where new seed is purchased each year, there need be no hesitancy about planting all varieties in the same plot.

Mature squashes, that have been carefully gathered, may be kept until May, or even longer, if stored in a dry cellar, having an even temperature of about fifty degrees. At the head of the winter varieties, I would place Delicious, which in richness of flavor, is unsurpassed by any variety I have grown. In color, it is not unlike the Hubbard, and like that variety, is at its best during the winter season.

The Hubbard is a noble squash, and is probably more extensively grown than any other winter variety. It is large in size, bluish-green in color, and is unexcelled for keeping. It is dry, fine-grained, and of rich flavor, and may be had in good condition until May or June. The Golden Hubbard has all the admirable qualities of the Hubbard, differing only in color.

and are appreciated on account of their earliness. These can be grown in very limited quarters, and some of them are peculiar in form. There are also other good winter varieties, such as Bay City, Golden Bronze, and so forth. If only one variety can be grown, I would say let it be Delicious.

## Pear Blight

What can be used to cure blight on pear trees?—L. T. W., Kent Co., Ont.

There is no reliable remedy for pear blight. Nothing can be done except to cut out the affected parts several inches below where any trace of it is to be seen. Burn all affected branches. The blight sometimes can be prevented in resistant varieties, like Kieffer, by seeding the ground around the trees with grass, and never plowing it up. This should be done only after the trees have commenced to bear.

# The Canadian Horticulturist

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5. Advertising Rates quoted on application. Copy received up to the 18th. Address all advertising correspondence and copy to our Advertising Manager, 72 Queen Street West, Toronto.
6. Articles and Illustrations for publication will be thankfully received by the editor.

### CIRCULATION STATEMENT

Since the subscription price of The Canadian Horticulturist was reduced from \$1.00 to 60 cents a year, the circulation has grown rapidly. The following is a sworn statement of the net paid circulation of The Canadian Horticulturist for the year ending with Dec., 1907. The figures given are exclusive of sample and spoiled copies and of papers sent to advertisers. Some months, including the sample copies, from 10,000 to 12,000 copies of The Canadian Horticulturist are mailed to people known to be interested in the growing of fruit, flowers or vegetables.

### Circulation Statement

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

Total for the year, 79,525

Average each issue in 1907, 6,627

Sworn detailed statements will be mailed upon application.

### Our Protective Policy

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

Communications should be addressed:

THE CANADIAN HORTICULTURIST,

Toronto Office: PETERBORO, ONTARIO  
72 Queen Street West.

## EDITORIAL

### SOUTH AFRICAN TRADE

Canadian fruit growers should pay more attention to the development of the South African trade in apples. There are good opportunities for developing our export trade in that direction. South Africa wants mostly early apples. The trade there wants apples in August, September, October and a few in November. Among the varieties wanted are Gravenstein, Emperor, Baxter, Snow, Blenheim and a few King, Spy, Ben Davis, Baldwin and Russett.

A prominent fruit merchant in South Africa who visited Canada last year was much impressed with the Scarlet Pippin, or Crimson Beauty as it is called in some parts of Canada. He told THE CANADIAN HORTICULTURIST that such apples, if placed on his market in good condition, would sell readily at \$5.00 a barrel. For the South African trade, it is best to ship in Nova Scotia barrels. According to the gentleman referred to, a difference of from thirty-five to fifty cents is paid between the two sizes. While this trade probably would stand only a certain amount of pushing, our enterprising growers should consider well the opportunity that it offers.

### THE WORTH OF GARDENING

The people of our country should see to it that the grounds around and about their homes, their schools, their parks and all private and public places are made as beautiful as it is possible to make them within the bounds of good taste and economy. To a great extent, travellers and tourists estimate the prosperity and civilization of a country or community by the homes and public places of its people as these things betray our ideals of comfort and beauty. It is important, therefore, to make the appearance of our homes attractive and impressive. Compare a residence in the town or country that stands bleak and alone on a bare plain or stark and cold against the sky, with one backed by a grove and surrounded with well-chosen shrubbery and flowers, tastefully arranged. The contrast is obvious. The first is nothing more than a "house" the latter may be fittingly termed a "home."

The travelling public recognize the force of the contrast and are impressed by it. Such an impression is not temporary, especially when it is not a pleasant one. The critical tourist is more apt to retain and speak about the bad features of the country than he is to applaud the points of excellence. To obviate bad impressions, it is necessary to make the good features prominent and striking. All patriotic citizens should do their part in stimulating this means of national advertising.

### SEEDLESS APPLES

The failure of the Michigan Spencer Seedless Apple Company, last March, is another evidence of the fact that no scheme that is based upon the idea that up-to-date fruit growers can be fooled will last long. In various issues of THE CANADIAN HORTICULTURIST we have had something to say about the seedless frauds. It would be a useless waste of space to publish further comments just now as the fruit growers themselves already have judged and know the merits and demerits of all seedless apples that as yet have been placed on the market. The in-

cident of the failure referred to adds further interest to the following item that we received some time ago from Mr. C. C. James, Deputy Minister of Agriculture, Toronto, and which proves the truth of the aphorism that "there is nothing new under the sun."

"The Ontario Department of Agriculture has recently come into possession of Part 2 of an illustrated work on fruits published in England over 200 years ago. The title page is missing, but a frontispiece is entitled as follows: 'Flora, Flowers, Fruits, Beastes, Birds and Flies exactly drawne, with their true colors lively described. Printed and sould by Peter Stent at the White Horse in Guilt Spur Street, nere Newgate.' A pencil entry gives the author as John Rea, and the date 1665 or 1676. Under the list of many sorts of the best apples to be planted at large in orchards is given the following: 'Figg Apple is without Core or Kernel, and without Blossoms, the Fruit cometh out of the sides of the branch and as big as a Pippin.'"

### SPRAYING IN CITIES

Insect and fungus pests are becoming more and more numerous and troublesome on fruit and ornamental trees and plants in towns and cities. This is due chiefly to the fact that the majority of householders have not suitable facilities and equipment for fighting them. A spray pump is too expensive for most persons who have only a small lot and the proper methods of preparing spraying mixtures are not well enough known. As a result, the pests have the field to themselves.

It would be a good plan, therefore, as is now done in one or two places that we know of, for our horticultural societies to purchase one or more spraying pumps for the use of their members. If the societies cannot do this they should interest their local councils in the matter and have a machine purchased by the municipality. Such a machine, with suitable mixtures already prepared, could be rented to householders for use on their grounds at a small price per tree or hour.

Such a scheme would keep the town or city that adopted it comparatively free from the depredations of insects and fungus diseases. It would add greatly to the appearance of the municipalities and would pay for itself in the increased value of property that would result from the better fruits and the increased beauty of ornamental trees and plants that would be had.

### BUY YOUR BARRELS NOW

Apple growers should buy their barrels and boxes now, or a portion of them at least. If the apple crop next fall is a normal one or above, it is probable that barrels will cost more later in the season. As has happened in some past years, it may be practically impossible to secure barrels at any price at picking time.

As some growers may want to sell their fruit on the trees, they may hesitate to buy barrels. While this system of selling is not always the best, particularly where the sale is made by the lump, it is followed year after year by many who should know better. In such cases, it often happens that the best way to sell the fruit on the trees is to be able to furnish the packages. Buyers, as well as growers, have difficulty in securing barrels in seasons of scarcity. If you have a supply stored on the farm, you may be able to make a profit on the barrels as well as sell your apples at a good price. Every grower who expects to have

apples to sell, on the trees or in some other manner, should buy at least fifty per cent. of his barrels now.

**HEED THIS WARNING**

We desire to warn our fruit growers against purchasing nursery stock from firms whose standing and reputation they do not know. At present, certain nursery concerns of the United States have agents in Bruce County, Ontario, and probably elsewhere in Canada, working an old game that has been exposed more than once in these columns and by the agricultural press of the United States. These concerns sell nursery stock and give a contract to the effect that they will agree to trim the trees for the first five years, that they will replace stock free, or at half price, that dies, and that they will also take the first crop of fruit that the trees produce and pay fair market prices for same.

Payments for the trees are to be distributed over several years, but the first payment to be made is in itself a fair market price for the value of the trees. The customer accepts his trees on delivery, makes the first payment, and this is the last that he ever hears of the concern. Such fraudulent methods should not be tolerated. Our fruit owners will act in their own interests if they refuse to have anything to do with such concerns.

**About Manure Spreaders**

It seems incredible, but there are still a number of farmers who continue to spread manure by the old fork method—or are letting it rot in the barnyard—which means less farm profits.

The manure spreader has come to be a farm necessity. The farm can only be made to pay by keeping the soil in the highest state of fertility. That means making the most of the manure, the best of all fertilizers and the only one that is produced on the farm.

All agree that manure can be made to go further and produce better results by spreading with a machine than when spread by hand. The popular estimate is that the spreader doubles the value of the manure. If this be true, or approximately true, it will be easy to arrive at the conclusion that a spreader will pay for itself in increased crops and soil benefits in one or two years.

The old way of handling manure was wasteful in the extreme. First, it was allowed to wash away and ferment in the barnyard. Then, at a convenient season, it was hauled out and thrown in piles in the fields, and the same wasting process was continued. Finally, it was spread by throwing it in forkfuls and in hard lumps over the ground, leaving it in a condition in which the ground could not get the benefit of even the fertilizing contents still remaining.

With a view to preventing this great waste, the International Harvester Company of America is offering to the farmers of the country through their local dealers everywhere, three most excellent machines. These are: The Corn King, the Cloverleaf, and the Kemp 20th Century spreaders.

The manure is pulverized and spread evenly, so that it is immediately available for plant life. The first shower that comes along after the spreading, washes the whole into the soil. There is no waste. Write direct to the International Harvester Company of America for catalogs and complete information.

**A Score Card for Fruit Trees**

IN the fall of 1907, the subject of score cards for fruit trees came before the attention of Prof. John Craig and several members of the Lazy Club of Cornell University. By looking the field over to see what had been done in the matter of score cards for trees, and in particular nursery stock, it was readily apparent that nothing was tangible along these lines.

The Lazy Club with its usual spirit and enthusiasm appointed a committee to draw up a model score card for fruit trees which would be simple, effective, and aid in giving

satisfactory information and protection to both the nurseryman and the purchaser. Although this card has had no official recognition, it has been approved by the horticulturists at Cornell University. The Lazy Club recognizes the fact that this card is only the beginning of the establishment of a standard for quality of nursery stock. It is hoped that this card will be used as a means of education to those interested in such subjects. The Lazy Club members invite suggestions and criticisms on this card which is as follows:

**Score Card for Nursery Stock**

Kind . . . . .	Variety . . . . .
Stock received from . . . . .	Date . . . . .
Judged by . . . . .	
1. Trueness to type . . . . . 10	Neither overgrown or stunted and be of specified age and height.
2. Size . . . . . 15	Well balanced with an abundance of roots.
3. Root system . . . . . 30	Freedom from disease and pests. Moist condition of roots; of bark.
4. Condition . . . . . 25	As to the character of the variety.
5. Uniformity . . . . . 20	

Respectfully submitted by the committee.—W. H. Wicks, M. B. Cummings, L. D. Batchelor, W. J. Sowder and O. S. Morgan.

**NOTES FROM THE PROVINCES**

**The Fraser Valley, B.C.**

J. W. White.

As good crops of small fruit can be grown in the Fraser Valley, British Columbia, as anywhere else, but unless we can market them to the best advantage we are not going to profit to the extent that we should. As growers, we are beginning to see the advantage of working together in a co-operative way and a beginning has been made in this direction. I think Hammond was the first point in British Columbia to make long distance shipments of fruit. Of course, it was in a very small way at first, but the business is getting larger every year. We have, at Hammond, an organization known as "The Hammond Fruit Growers' Union," which is making a success of shipping fruit and there are similar organizations at other points. It is only a matter of a little time when all these shipping unions will be working under a controlling head so that there will not be any clashing of interests in the way of prices or over loading the market at certain points.

**PACKAGES**

The package question is a very important one to the grower. Our packages are uniform now and appear to be giving satisfaction, with the exception of the fourth strawberry box. A good many of the growers think that it is a little too large. By the time these boxes are nicely rounded up, it is certainly a large box of strawberries.

The cost of packages has become a serious matter to the grower. The price is away up. Perhaps this may have the effect of bringing out a new package for small fruits. One that would hold equal to three or four crates and could be returned to the grower would be all right. This might be an advantage in other ways. It would compel more careful handling.

It is part of the fruit grower's business to cultivate the public taste for fruit and

enlarge his markets. The only way we can hope to do this is by producing a good article. The grower may take all the care possible to have his fruit picked carefully and take it to the shipping point without unnecessary jar, then after all his care, the express people come along and, generally with the help of some of the train hands, pitch it into the car like so much cord-wood. Probably they would be more careful of cord-wood for fear of getting splinters in their hands. Once in a while a few careful men will come along and put the fruit on the car in a way that is very satisfactory and they do not delay the train any longer. Any man with the least bit of sense must know that taking a crate of berries and tilting it up on end will injure the contents. If these men could only be made to pay the damage that is done through their careless handling, the matter would soon be set right.

**Kettle Valley, B.C.**

Vernon News

From present appearances, the culture of grapes in the Kettle Valley surrounding Grand Forks will be very extensively prosecuted this spring. It is stated that at least 3,000 grape vines were planted there during the past few weeks and that that number will be more than doubled next fall, as that is the proper time for the planting of the vines.

A. D. Morrison, one of the local authorities on grape culture, says that at his private residence in West Grand Forks he has successfully grown grapes and that one vine he has, which was just four years of age last year, yielded 75 pounds of grapes. Mr. Morrison states that grape vines four years of age grown in this valley should yield at least 50 pounds of fruit to the vine. These vines, if planted 10 feet apart would make 175 vines to the acre, which at 50 pounds to the vine would be 8,750 pounds, which allowing eight cents a pound for the grapes, would make just

\$700 for the grapes produced on one acre of land after four years. Owing to the great amount of sunshine in this valley this section is especially adapted to the culture of this most prolific of fruits.

## New Brunswick

J. C. Gilman

First spraying was finished on May 12th and on the 26th, the fruit buds were far enough advanced for the second application of Bordeaux and Paris green. When this was nicely started, a cold, wet week set in, holding back spraying and most other field work. Myriads of tent caterpillars were on the trees. As it was too wet to spray and the blossoms were opening, hand work had to be resorted to to keep them in check. The blooming season is passed and the second spraying has been finished.

Light frosts occurred early in June but little damage was done except to wild strawberry blossoms. Cultivated berries were not much in bloom and were not harmed. Strawberry buds that were not well mulched, winter killed considerably, possibly 20 per cent. Cuthbert raspberry and Snyder blackberry canes were killed back one-quarter of last season's growth. Herbert and King raspberries are alive to the tips and promise a fine crop. Gooseberries and currants also promise well. In general, present prospects indicate a good fruit crop with the exception of some tender fruits and plants that were not well protected.

The executive committee of the New Brunswick Fruit Growers' Association is making arrangements for an orchard meeting. The time and place has not yet been announced.

## Prince Edward Island

Rev. Dr. Burke

We are very late with florescence this spring; indeed, at this writing (June 8th) exfoliation is not half perfect even in our fruit trees. The first information blank of the Fruit Division has been returned with the remark, "Too early to answer any questions"; but these days, things are assuming their normal shape. The grass is exceedingly forward, but the trees slow—something of a paradox, you will say. The early blossoms are swelling. I see the Transparents and Duchess covered with approaching bloom. The other trees look as if they would compete favorably in this line too. I presume that we are to have a full year; it is due here assuredly.

The wild strawberries make the vacant places white with their white blossoms. There will be plenty of them if nothing untoward occurs. The cultivated berries are not yet at a stage when one can presage abundance. The currants and gooseberries are in blossom and they are a picture of full and plenty. Small and big fruits, then, wild and cultivated, promise well.

There has been a good deal of white-washing for bark-louse which was never more in evidence than to-day. Some years develop a great increase in this pest over others. Thrifty trees as well as neglected ones are the victims. Last year its spread was amazing. I find it on many other trees than the apple. I find it on the currants, bush cranberries, rowans, etc. It will have to be handled carefully. Prof. Macoun's plan of white-washing in November is the best.

I saw the secretary of our fruit growers' association the other day and he said

to me that the circular sent out for offers of small fruits, apples and plums for preserving, by a Montreal firm, has not met with the reception it deserved. There is any quantity of this fruit about Charlottetown even; but the raisers would like to have the country folk supply the factory so that they could cater to the local market in fresh fruits themselves.

## Nova Scotia

Eunice Watts.

One of the chief fruits for exportation from Nova Scotia is the cranberry, and now the bogs promise an excellent crop. Cherries and currants show up fairly well. Although somewhat early, the general opinion is that the apple harvest will be a bounteous one. The early varieties look very promising.

For spraying, many orchardists are this year discarding Paris green from the Bordeaux mixture in favor of arsenate of lead or arsenite of soda. The latter stock solution is made by boiling together for 15 minutes one pound of white arsenic and four pounds of sal-soda in one gallon of water. It is claimed that this mixture is perfectly soluble in water and costs less than half that of Paris green. Arsenate of lead remains in suspension longer than Paris green and will neither wash off nor burn the foliage.

As one drives through the Annapolis Valley, it is a pleasure to note the increased interest taken in the beautifying of home surroundings which a few years ago was not very apparent. The laying out of the grounds and the formation of neat beds near the homestead gives an air of prosperity and refinement which few other improvements can give.

In spite of the low prices recently paid for apples, the demand for trees is brisk and growers purpose planting still more next year.

## Notes from Inspector Vroom

Fruit trees are looking fine in Nova Scotia, and bid fair to give a good crop of fruit this season. Taking into consideration the increase in acreage, and the growth of the trees already bearing, the output should be a record breaker. Fruit growers are spraying this spring very generally. Cultivating and pruning come in for their share of attention, and orchards are in good condition.

In many places, the Ben Davis is being grafted out. Blenheim seems to be the popular variety here now.

The campaign against the brown-tailed moth is still on. Every infested section is being reached.

The total export of apples from Nova Scotia for the past season was 490,000 barrels; adding to these figures 75,000 consumed in the local markets brings the crop up to 565,000 barrels.

Several new fruit houses are being built along the line of the Dominion Atlantic Railway, and preparations are already being made to handle this year's apple crop. Several co-operative associations are being talked of and probably some will materialize.

There is a feeling in the province that the apple industry must be carried on along different lines this year. Better packages, grading and packing seems to be the feeling. Growers intend to ship their own fruit, instead of selling to the dealers "tree run." Small fruits are looking well, and promise good crops.

## Montreal

E. H. Wartman, Dominion Fruit Inspector

Fruits have set well. Apples are quite a size, particularly those of Duchess and Astrachan type. Many trees will have to be thinned, if fruit is to be of saleable size.

A lesson in packing apples properly came under my observation recently. I saw a No. 1 barrel of Spy apples opened on June 13th, having been packed eight months. There was no sign of decay. The owner was offered in my presence \$6, but his answer was, "No, sir, \$6.50 is my best offer."

The first strawberries from Ontario to this market arrived on June 9th. This is a remarkably early date for home-grown berries.

The first car of California fruits—peaches, apricots and plums—was sold on June 11th. It was packed by Earl Fruit Company. This firm is noted for a good honest pack, and, as follows, good prices. The fruit was not exceptionally fine, but perhaps, a fair quality for first picking.

Strawberries are coming in from Delaware, about six cars per week, and selling June 15, from 10 to 13 cents by auction.

Many cars of tomatoes have arrived so far from various parts of the United States, in four basket and six basket crates, containing about 20 pounds for four basket crates, and 30 for six basket crates, and selling at rate of about \$3 per bushel. Of course each tomato is wrapped in a silky paper; the package complete and its contents are of best quality.

## Quebec

Auguste Dupuis.

The general conditions for fruit of all kinds grown in the north-eastern part of the Province of Quebec are excellent. The winter through cold did not cause any damage to trees and small fruit plants. We had plenty of snow and no thawing before the middle of April. Minor losses are reported by mutilation of trees where the snow drifted. Mice have girdled trees in some orchards, but the damage is of small consequence. The season is backward.

Reports are almost unanimous that the show of bloom of apple trees is good. The weather has been favorable for pollination and we hope it will be the same in the critical period of setting. It is too early to mention the work of insects. We have only noticed and destroyed the currant worm. I notice that Alexander, Astrachan Red, St. Lawrence and Golden Russet trees have bloomed very lightly.

The commercial plum sections (Montmagny, L'Island and Kamouraska Counties) report the outlook favorable. Richmond, Montmorency and Griottes Cherries are very promising.

The orchardists of Kamouraska County have established a fruit growers' association. The board of directors is composed of energetic men, who will succeed in promoting fruit growing in the county. They have distributed a large number of apple and plum trees which were planted by an expert sent by Honorable Mr. Allard, Minister of Agriculture. Several members of this new society probably will subscribe to THE CANADIAN HORTICULTURIST. The president is Mr. L. Lezotte, and the vice-president, Mr. Wm. Power, both of St. Pacome. I hope that the orchardists of Kamouraska will benefit as much by reading this first-class horticultural journal as their *confreres* of L'Islet County.



## Co-operative Fruit Growers Meet

THE annual meeting of the Cooperative Fruit Growers of Ontario, was held in Toronto, on June 9th. Among those present were President A. E. Sherrington, Walkerton; 3rd Vice-President Robert Thompson, St. Catharines; Messrs. Elmer Lick and W. H. Stainton, Oshawa; Jas. E. Johnson, Simcoe; J. A. Webster, Sparta; C. W. Gurney, Paris; Adam Brown, Owen Sound; H. Wilson, Oakville; R. L. Stephens, Orillia; P. W. Hodgetts, Toronto, and the secretary, A. B. Cutting, Peterboro.

The reports of the secretary and treasurer were read and adopted. They indicated progress; 24 associations were affiliated last year as compared with 13 the previous year. All the delegates at the meeting stated that their associations intended to continue in affiliation with the central organization.

Officers for the ensuing year were elected as follows: Hon. president, A. E. Sherrington, Walkerton; president, D. Johnson, Forest; 1st vice-president, Robt. Thompson, St. Catharines; 2nd vice-president, Jas. E. Johnson, Simcoe; 3rd vice-president, Elmer Lick, Oshawa; acting-secretary and treasurer, P. W. Hodgetts, Parliament Buildings, Toronto; auditor, C. W. Gurney, Paris.

The experience of the associations during the past two years has shown the value of such a central organization for the local associations. This was pointed out forcibly in a letter from Mr. D. Johnson, who, through illness, was not able to attend the meeting.

### MR. JOHNSON'S LETTER

To the Co-operative Fruit Growers of Ontario.—It is just possible that some of the representative fruit growers assembled may have met with unforeseen difficulties last season which may have caused them to grow somewhat discouraged in the co-operative marketing of fruit. The unforeseen financial crisis of last fall, has had much to do with the circumstances so disastrous to some, but the chief difficulty rests in the fact that two-thirds of the apples packed last season should never have left the orchards. I do not mean to insinuate that our co-operative associations have been much to blame in this way, but the fruit packed for general trade last season by dealers was astounding.

During the past winter, I visited many of the leading markets of the north west provinces, calling on most of the grocers in the towns visited, where I saw thousands of barrels of apples packed by Ontario shippers, branded No. 1, not one single barrel of which, to my recollection, would anything like reach that grade. The conditions were such that unless I saw it myself, I could not believe it possible that men of ordinary common sense would pack such fruit. I believe that most of our associations would refuse to brand most of it No. 3. The result is that the Ontario fruit has come into disgrace by reason of its packing.

The quality of our fruit is admitted by all dealers to be far ahead of that from the Pacific Coast. Even the rubbish shipped there, they prefer, on account of its flavor, to the products of the western orchards. Yet the westerners are going to capture the markets through their packing, if something is not done.

In British Columbia, Oregon and Washington, I saw large quantities of fruit, which, while, perhaps, a little larger than our own, was not a bit more carefully selected than that packed by many of our own associa-

tions, which I have visited. The result is that the honest packers of fruit in Ontario are brought into discredit to the extent, I believe, of *one-half the value of their apples*, by the dishonest ones.

Such being the evil and disastrous influences exercised against us, I would earnestly impress on the Co-operative Fruit Growers of Ontario assembled, to formulate some drastic method by which these dishonest dealers shall either be brought to justice or forced from business. It appears to me that the co-operative associations and the few individual packers, are the only ones who have the interests of the fruit industry at heart. In them alone, by constant perseverance, and steadfast determination to overcome these obstacles, can we expect to finally overcome these dishonest methods of packing, which have so seriously affected our prices.

While in the west I saw the pack of firms who in buying understood the quality of No. 1 and No. 2 apples as well as the best informed among us, whose personal pack was simply rubbish. The large dealers, however, are not the only ones to blame, as almost every small town in the west is flooded by the shipment of small dealers in Ontario, who ship a car or two to some friend or merchant known to them. The quality of most of these packs is so bad that most of us would not believe it unless we saw it.

In the United States the very same condition prevails, and the markets which I visited there during the past winter have convinced me that they have much yet to learn. If they had left two-thirds of their apples in the orchard, or sold to the canners, the result financially would have been different.

Our worthy chief of the fruit division and his staff are doing their best to try and stem this current of dishonesty. But the inspectors are so few that it is absolutely impossible for them to do so. *Three or four times as many inspectors* at least should be appointed *during the fruit season*, which would mete out justice to those who have ruined our reputation and prices. I am convinced that there is no finer fruit producing country in America than Ontario, if we would only grasp our opportunities.

I have only recently returned from California and other States in the west, where I spent considerable time in studying their methods of growing and marketing their fruit. I find that co-operation has proved the very salvation of their fruit industry. Previous to the initiation of this method, the fruit growers were struggling individually, one competing against the other, with most disastrous results. All were preyed upon by organized dealers, who walked off with the proceeds. Any attempt at co-operation, when first tried, was met with indifferent success, but finally triumphed, and attained for the growers the reputation and profits which they are drawing by an honest co-operative system. It is not to be supposed, however, that the co-operative system there met with immediate success, but far from it, the chief difficulty being of the inability of the fruit growers working together. Many local associations had been shattered and torn in its earlier days by suspicion and doubt. In fact, even at the present time, many of the local exchanges are troubled by dealers trying to buy off their members, and by baiting them away from the association.

Our method here in Ontario, is almost exactly the same as their most successful organization. First of all, local associations for the packing of fruit are established. These are affiliated into exchanges, and exchanges united into the Californian Fruit Growers Exchange, which is a huge commission house, controlled by the fruit growers for their own interests.

In conclusion, I would say to the fruit growers of Ontario: "Stand by co-operation as your only refuge." We have already attained a reputation which will stand us good service in the future. The situation is entirely in our own hands.—D. Johnson, Forest.

## Some Spraying Mixtures

R. J. Messenger, Bridgetown, N.S.

The gullibility of farmers has been catered to during the past year or two by several spraying mixtures. I will not say that they are frauds; that would be unfair until we have tried them, but from past experiments and from present knowledge of necessary conditions, we are led to question the efficiency of some of them even without trial. Again, almost all of them are more expensive than the old reliable preparations and their chief aim or benefit seems to be to save the lazy farmer the trouble of making the old ones.

Nico-Soap professes to kill all insects and their eggs by contact, insects, both leaf-eating and suctional. How a preparation could be strong enough to destroy the, in many cases, well-protected eggs of insects and be not only inexpensive but also non-injurious to the host plant, is more than my reasoning power can conceive. One worthy farmer said, in his testimonial, that he sprayed a bunch of large caterpillars with the preparation and in three minutes they were all dead.

Prepared Bordeaux, when the lime and bluestone are ground and mixed dry, is another wonder working and labor saving mixture. Anyone who understands the principles of mixing Bordeaux will question the wisdom of mixing the ingredients thus.

Assenate of Lead, while effective, is more expensive than Paris Green.

V1 and V2 Fluids are the latest and most secret. Mystery, though, is what the farmer wants.

Now, I am not condemning these preparations, but I want to urge the farmer readers who have their legs pulled often enough, to wait until our experiment stations have thoroughly tried these new things before they spend money on them. Bordeaux Mixture and Paris Green are good old friends. Let us stick to them until we are sure of something better.

A copy of the first annual report of the Missouri State Board of Horticulture, including the 50th annual report of the Missouri State Horticultural Society for 1907, has been received. It contains much valuable information on fruit and flower growing.

Copies of the February and March, 1908, issues of THE CANADIAN HORTICULTURIST, have been requested by General-Lieutenant Schmit, St. Petersburg, Russia; Messrs. Eggers & Co., St. Petersburg, Russia; and Librairie Spineux & Co., Brussels, Belgium. We have no back numbers of these issues. Can any of our readers send either of these copies to us? Send to our address, Peterboro, Ont.

### An Excellent Service

As the question of quick and cheap transportation of perishable goods is always an interesting one to the readers of THE CANADIAN HORTICULTURIST, it may not be amiss at this particular time, to draw attention to the improved Allan Line services via the St. Lawrence route for the summer and fall of 1908.

This pioneer line between Canada and Great Britain, is again to the front with three new steamers for the Canadian trade, built, launched and put into commission during the last eighteen months, the "Corsican," 11,000 tons, "Grampian," and "Hesperian," each 10,000 tons, the first named for the Liverpool service, and the latter for Glasgow. These ships are equipped with all the latest devices for loading and discharging, as well as being fitted with the most modern system of refrigeration and ventilation. The advent of these ships has made it possible to perform the Glasgow service with four vessels, instead of five as heretofore, and, whereas, in former years, the Allan Line took ten days to land fruit and other perishables in Glasgow, the fleet for this season will make an average voyage of eight days between Montreal and Glasgow.

The particular attention of the apple exporters is drawn to this improvement. Experience has proved that apples, especially, must be stored in well ventilated compartments, and that the quicker they are transported the better for the fruit. The "Grampian," "Hesperian," "Ionian," and "Pretorian," of the Allan Line undoubtedly comprise the best Glasgow fleet ever put in the St. Lawrence trade.

The Liverpool service is the same as last year, being comprised of the well-known fast turbine steamers "Victorian" and "Virginian," 12,000 tons each, and the favorite 10,000-ton twin screw "Tunisian," as well as the new 11,000-ton twin screw "Corsican," already referred to.

The improvements on the Glasgow and Liverpool routes, have enabled the Allan Line to very materially strengthen the London fleet, and the following well-known vessels will give a weekly service to this port, viz., "Corinthian," "Sicilian," "Parisian," "Sardinian," "Pomeranian," and "Hibernian."

These ships discharge at Surrey Commercial Docks, where, it is said, the finest cold storages in Europe have been erected and shippers of all kinds of dairy products and fruit are assured of the very best safeguards for the protection of perishable products. The Surrey Docks are the most conveniently located in London for the delivery of apples to Covent Garden, Spitalfields, the Monument and Borough markets.

The agents of the Allan Line are always prepared to supply information to the inquiring public, and any applications for space, rates, and so forth, will receive immediate attention. When writing, kindly mention THE CANADIAN HORTICULTURIST.

The official report of the 15th annual international convention of the North West Fruit Growers' Association, which was held at Vancouver last December, has been issued. It contains a score or more of interesting articles on all phases of fruit culture. Its compilation is a credit to the energetic secretary of the association, Mr. Maxwell Smith, of Vancouver.

### Fruit Convictions

The Fruit Division of the Dominion Department of Agriculture, has been very aggressive during the past few months in pressing prosecutions against apple shippers and packers detected in shipping improperly crated fruit. During the past few months, almost 170 convictions against the Fruit Marks Act have been secured, including 21 in the Maritime Provinces. The prosecutions in Ontario have been in the hands largely of Mr. M. R. Baker, of the department, who has done exceptionally good work, having scarcely lost a case. Between the first of last September, and the end of November, five inspectors of the department, with four assistants, inspected 15,000 barrels of apples.

It is believed that this year, the price paid for apples in Canada is likely to be considerably less than that paid last year, owing to the fact that the packers lost so heavily on last year's crop. One well-known Ontario packer is said to have lost over \$80,000 on his shipment of fruit. These losses are going to make the packers more cautious this year in their purchase of apples.

Please send photographs of orchard and garden scenes for publication.

A little booklet, entitled "Fertilizing Root Crops and Vegetables," by Walter Shipley, has been published by the Dominion Agricultural Offices, of the Potash Syndicate, Toronto. It gives the results of experiments with these crops, and points out the respective value of the different kinds of common and commercial fertilizers. Write to this firm for a copy.

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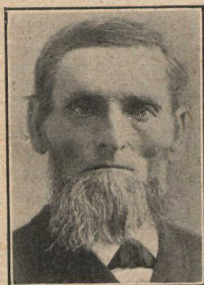
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**A Friend for Thirty Years**

A gentleman who has been a subscriber to THE CANADIAN HORTICULTURIST ever since it was started and who has been a member of the Ontario Fruit Growers' Association since 1870, is Mr. Robert Govenlock of Seaforth, Ont. Recently Mr. Govenlock was asked to tell of his experience in horticulture and he wrote as follows:



Mr. Robt. Govenlock

"The first time that I really took an interest in fruit-growing was in 1873, when I went to Ottawa to a summer meeting of the Ontario Fruit Growers' Association. I went with Dr. Arnold, of Paris, Dr. Beadle, and Mr. A. M. Smith of St. Catharines, Mr. Leslie of Toronto, Col. McGill, of Oshawa, Mr. Dempsey of Prince Edward County, and some others. We all took some fruit with us as there was very little grown around Ottawa at that time. One day Hon. R. W. Scott entertained us all to luncheon. I am glad to see that he is still alive but I think that Mr. A. M. Smith and I are the only ones on that trip still living.

"We talked over the matter of a publication on the way home and when some years after Dr. Beadle got out his first issue, he wrote me and I got him about twenty subscribers. THE CANADIAN HORTICULTURIST was a small affair then to what it is now. I would not like to be without it as it contains the experiences of the best men in the Dominion. I learn something in every copy. Our lives are too short to test everything for ourselves.

"About the time of the first issue I planted a hedge around three acres of land leaving the south side open. Then I planted a few hundred grape-vines, mostly Rogers varieties. They all did well and escaped the spring frosts. I never was caught by the frosts in the fall as good cultivation will ripen them two or three weeks earlier. The two serious drawbacks I had were the spring frosts and thieves. As mine was the only vineyard around, I often had my grapes stolen. Sometimes I escaped the frost but never the thieves; like the poor, they are always with us. I gave up grape-raising some years ago. One year I had my grapes ripe on the 12th of August and sold them for 12 cents a pound. This shows what good cultivation and feeding will do. I still take a great interest in fruit and flowers."

**Insects on Vegetables**

For all persons who grow vegetables, for profit or for pleasure and who require a practical treatise on the various pests that attack such crops, an excellent book entitled "Insects Injurious to Vegetables," has been prepared by F. H. Chittenden of the United States Department of Agriculture. It is published by the Orange Judd Company of New York City.

In this work, the chapters on the prevention and destruction of insects by mechanical and farming methods as well as by insecticides are particularly interesting and valuable. All injurious insects on the various kinds of vegetables are dealt with individually in respect to their habits, life histories and methods of control.

**Too Many Handling Seeds**

Editor, THE CANADIAN HORTICULTURIST: It has long appeared to me that too many people handle seeds before the grower gets them. I have always got satisfaction when ordering direct from some large dealer, but when buying from others, the case is too often disappointing. I once ordered a certain variety of mangel seeds. When the crop matured, I was surprised and disappointed to find numerous varieties of mangels, garden, field and sugar beets. All varieties of this class of seeds look alike and possibly at the end of the season, small quantities of each variety that are left unsold will be mixed together carelessly and given a name and sold. This results in injury to the farmer.

I ordered asparagus beans and obtained something that was apparently of no value

in this district. I disapproved of the seed sent but was assured that it was the variety ordered. I knew better but sowed it for curiosity. One day Prof. H.W. Smith and some students from the Nova Scotia Agricultural College, who visited our gardens when the plants were thrifty, pronounced it to be the southern cow pea. It did not mature.

I often have ordered seeds and found that the name of them was not given on the parcel. This ought not to be. It is fraught with mischief.—Peter Barrett, Home for the Poor, Truro, N. S.

Have you a horticultural library? In our neat little 36 page book catalog, we have listed many practical horticultural works. A free copy will be sent to any reader on request.—Address, Book Department, THE CANADIAN HORTICULTURIST, Toronto.

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## Toronto Horticulture

The month of June was a busy one for the members of the Toronto Horticultural Society. Four important gatherings took place, each of which was largely attended. On June 2nd, Mr. J. McPherson Ross gave a splendid address on shrubs. The address was a very instructive one. Extracts from it are published in this issue.

The second meeting was held on Saturday

afternoon, June 13, at the home of Miss Blacklock, 504 Dovercourt Road. It proved to be one of the most delightful and instructive outings ever participated in by the members. Miss Blacklock's garden is so full of perennials and shrubs that it seems almost impossible to find room for another plant. Many plants were seen there that are comparatively scarce and a visit to this garden is well worth the time spent.

The third meeting was on June 16. It was in the form of a reception to Mr. Jas. Wilson, the new Parks' Commissioner for Toronto. About 250 members of the society and their friends spent an enjoyable evening, listening to addresses given by prominent members of the City Council on horticultural interests in Toronto. Mr. Wilson appears to be the right man in the right place and has been promised the co-operation of the citizens in general to carry out his plans for making Toronto a "City Beautiful." One of the most popular moves Mr. Wilson has made was the removal of the "Please-keep-off-the-grass" signs in the parks. Mr. Wilson's contention is that as the citizens pay for the grass they are entitled to walk on it and when it is worn out they will have to pay for more.

The society's annual excursion was held on Friday, June 19, to St. Catharines. A very enjoyable time was spent, visiting the St. Catharines' Horticultural Society's Rose Show. Many fine roses and peonies were shown, which were greatly admired by the visitors.

The membership of the society is now well over the 200 mark. With the enthusiasm that is now being shown at the meetings, it should not take long to have a membership of over 500. The genial president, Mr. H. R. Frankland, is proving very popular and is having the co-operation of the members in making the society more useful than it has been in the past.

I have just seen a copy of THE CANADIAN HORTICULTURIST and find it most interesting. I enclose \$1.00 and shall feel obliged if you will send it to me regularly.—W. Staley Spark, Berkhamsted, England.

## POULTRY DEPT.

Conducted by S. Short, Ottawa

### Summer Tragedies

After more or less expense and more or less anticipation, and after experiencing the pleasure of a successful hatch, great is the disappointment to find that one or more of our chickens has disappeared during night-time. Good fortune it is if the body of the deceased is found in the coop—a victim of a clumsy mother—or to the diseases of chickenhood, for then one has a certain knowledge of the causes of death. But altogether different are the circumstances, or causes of death, when the body is not in evidence. What became of the chick is in most cases a matter of conjecture. The most likely theory is that it has been devoured by some animal or bird. If so, precautions should be taken at once to protect the rest of the brood, for, if any bird or beast takes one chicken without being caught or frightened off, they will nine times out of ten, return the following night and kill and take away another.

In country and suburban districts in summer time, the poultry have many enemies and breeders sometimes suffer heavily by their depredations. Years ago the hawks worked havoc amongst the young fowl. They still do in unsettled districts but near large towns and cities they are now rarely known to be troublesome. The crow seems to have taken the place of the hawk in destructiveness only much more so. The hawk is a bold fellow, coming down at midday with a swift rush, a pounce, and up and off with a chick right before your face. One chick every other day would satisfy him, but not so with Mr. Crow. He sneaks down at daylight, walks quietly amongst the coops, seizes and cuts the throat of the young chick to prevent it crying out and then flies off with it. He takes one the first morning, two or three the next and then if not shot or frightened will bring his friends with him and speedily destroy every chicken in the place. Fortunately the crow is very cowardly, and if fired at, will be so frightened that neither he nor any other will come near the neighborhood for some time. Whenever a crow perches on the fence near the poultry run or near the garden it is safe to suppose he means no good to either and should be promptly shot at and frightened off.

In the next issue in this column will be given a description of the animals that prey upon the poultry and their methods of attack. By way of a word of warning, the writer believes that these creatures are attracted in many cases by the smell from unclean runs that must be noticeable in the moist evening and nights of midsummer to animals of keen scent for a great distance.

Millions of feet of lumber are purchased annually and kept in stock for 12 months to enable the Consumers' Box Co. of Toronto to handle their enormous box trade. This firm makes a specialty of boxes for fruit and vegetable growers and their prices are as low as good quality will permit. Co-operative associations would do well to obtain their special prices for large quantities.

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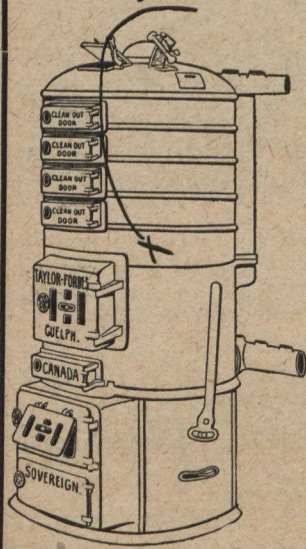
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### Naming Gladioli

At the last annual convention of the Horticultural Societies of Ontario, Mr. John Cavers of Oakville, said: "A few years ago Mr. Groff published the statement that in his judgment the interests of the gladiolus would be best served by its being propagated and disseminated in collections rather than in named varieties." This was published in the second annual report of the association and recently was brought to the attention of Mr. Groff who replied as follows:

Editor, THE CANADIAN HORTICULTURIST: My attention has been called to page 54 of the Annual Report of the Horticultural Societies of Ontario, where Mr. Cavers refers to my opinion as to the naming of gladioli. As I made this statement some years ago, before half of my hybrids had been originated, it is a satisfaction to know now that my then expressed view was correct, taking the situation and interest in it's broadest sense. Had I at that time followed the commercial practice of naming every variety carrying sufficient difference to warrant the distinction, the absurdity of a named list of over 10,000 would be inflicted on the public today.

My contention was and still is, that only those varieties of distinct marking, quality and valuable characteristics, should be selected for this purpose, while the thousands of varieties showing little special distinctiveness, should be graded into color sections, and thus produce the best value possible at a nominal cost to the amateur, who is the final and highest court of appeal.

What has been the result? The Continent

of America has given my hybrids the palm on all important public and private occasions, and my United States representative grows today 100 acres, the largest acreage of high quality in the world. Great Britain and Ireland, Europe and Africa, also Australasia, are steady buyers of "Groff's Hybrids" by thousands.

Had I waited for the unseemly wrangle with several commercial growers trying to "get on board," the gladiolus would not have been the popular flower it is today, and the variety named "America," although claimed to be the best variety of the introducer under this name, could not have achieved a fraction of the result indicated above.

As an originator it is possible to accomplish a fraction of the possibilities of improvement by hybridization, and to hamper activity by a mass of commercial detail, which is the work of the grower, would mean a material and serious limitation in the results of that work, and results are the standard by which man's work is judged.

While it is my intention to select many varieties of special quality and value for use in massing, the color sections referred to will be further improved yearly by the addition of thousands of newer types than even before.—H. H. Groff, Simcoe, Ont.

I got a sample copy of THE CANADIAN HORTICULTURIST, and like it very much. Enclosed find \$1.00 for a two years' subscription.—J. S. Foulds, Martintown, Ont.

I appreciate THE CANADIAN HORTICULTURIST very much, and wish you continued success. Enclosed is my renewal subscription.—A. J. George, London, Ont.

### Buying Apples by Lump

W. J. Baker, Warkworth, Ont.

In the apple business of the past season, I went slowly, packed carefully and did fairly well. Most buyers sowed the wind, and reaped the whirlwind. This going out in the country, when the apples are the size of cherries, and buying by the lump, is the purest unalloyed gamble that one can go up against.

If the Dominion Government prohibits buying by the lump, there would be no need for the Fruit Marks Act. On account of lump buying, thousands of apples are packed each year that should not be placed in the package.

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### Book of Vegetables

No matter how skilful the gardener or farmer may become in the practice of growing vegetables, he can learn much from the experience of others. An excellent book that comprises the culture and management of all kinds of vegetable crops is "The Book of Vegetables and Garden Herbs," by Allan French, a copy of which we have received. The work is a publication of the McMillan Company of Canada, Limited, Toronto. It is exceedingly creditable, both to the author and to the publishers. It is a practical hand book and planting table for all who have to do with vegetable seeds, whether as buyers or as sellers. The price is \$1.75 net.

The advice given regarding seed sowing, transplanting, cultivation, fertilizing, treatment for insects and diseases, harvesting, storing and marketing all kinds of vegetable plants that are grown for market or home use is valuable. It contains much information that cannot be found in other books of a like nature. A copy of the work should be in the hands of all progressive gardeners.

### Screening Young Cabbage

The Agricultural Experiment Station, at Geneva, N. Y., has issued a bulletin, (No. 301) on "Screening for the Protection of Cabbage Seed Beds." The following are extracts from same:

The experiments that have been made show that by the use of tight frames, covered with cheese cloth, cabbage sets can be grown free from injuries by root-maggots. The plants raised under cloth grow faster, and in average years will probably reach the desired size for transplanting earlier than the seedlings in the open beds. The screened sets are also quite liable to be more tender, and if not well hardened, are generally more subject to wilting on replanting. Present experience indicates that the seedlings may be made more resistant to the usual injuries upon transplanting by the removal of the screening for at least one week before the time of planting, and that this seasoning may be done without much risk of injuries by maggots.

Screening of cabbage seed-beds is practised by comparatively few growers, and usually only small percentages of the number of plants required for their purpose are at present raised under cloth. The methods that are employed in growing seedlings under screened frames often vary in minor particulars in individual farmers, and there is a diversity of opinions on such details as the grade of cloth and size of mesh to use, and the amount of seed to sow in beds to be screened, to produce the maximum number of plants, etc. More exact methods in growing sets in this manner can only be

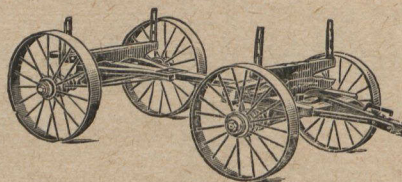
determined after more time for proof and verification. There is no question but that with screened frames, cabbage seedlings can be raised absolutely free from losses by maggots, but the practicability of the attempt, by the average grower, to raise all or a large portion of his plants under cloth, remains to be demonstrated. For this reason we would not advise, at least for the present, the extensive use of screening; but it is hoped that cabbage growers who are subject to annual losses in their seed-beds by maggots will make at least a small test to determine the value of screened frames under their own conditions. Precise instructions cannot be given in some of the details in raising seedlings by this method as would be desirable, but observations of the practices of a number of co-operating farmers are the basis of the following suggestions to the grower who desires to test the practicability of screening seed-beds as a means of protection against root maggots.

Locate the seed-bed on a fertile and well-drained piece of land, where there can be no accumulation of water, or washing by rains under the frame. The ground should be free of weeds and should not have grown, the year before, cabbages or other cruciferous plants. For seed-beds it is customary to apply to the land a liberal quantity of a high grade chemical fertilizer. The seed should be drilled in rather thickly in rows six inches apart. The planting of the seeds may be done at the usual season, but to avoid injuries by the flea-beetles it would be well to delay the seeding till the appearance of the beetles, which will largely have satisfied their ravenous appetites by the time the young plants appear. As the seedlings begin to show above ground, screen the bed immediately.

For the frames, 12-inch boards are generally employed, which are held in place by upright stakes. To prevent the covering from sagging in the middle, a heavy wire, running the length of the bed, and a little above the height of the boards, and supported by stakes, is used. The screening, consisting of three or more widths of cheesecloth sewn together to make one sheet, should be fastened to the frame by laths, through which small nails are driven. All openings into the bed, due to the unevenness of the ground, should be filled up by banking the boards with earth.

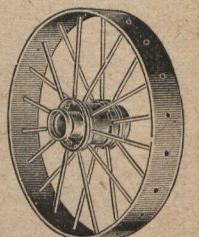
To season the plants before transplanting, the screening should be removed one week or ten days before the time of setting. In this interval of time examinations should be made occasionally about the stems of the young plants near the surface of the ground for eggs, deposited by flies coming to the bed from the outside. When any are discovered, transplanting in the field should commence.

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### British Columbia Inspection

Editor, THE CANADIAN HORTICULTURIST: In reference to "Okanagan" in your May issue, I may say it is immaterial to me whether the government has one inspection station or a dozen. It is for the government officials to say, not me. Possibly it would be better for the fruit grower to have one in every little town, and again it might be better for the fruit consumer to have neither duty nor inspection on fruit as they could then buy it for half the present prices—30 cents a basket for strawberries, which are selling at retail, in Los Angeles, Cal., for 3 boxes for 10 cents, other fruits in proportion. Personally, I cannot, nor do I intend to try and compete with cheap nursery stock grown by negro help in Alabama and Tennessee, nor the Mexican and Italian help in California, nor even cheap eastern labor.—M. J. Henry, Vancouver, B. C.

### Similkameen Valley, B.C.

Except that it is about two weeks later than usual, the present has been an ideal season for fruit in the Similkameen. The spring was long and cool, thus preventing danger from frost to early blossoms—though as a matter of fact, there was no frost.

No damage was done during the winter either, and with the most favorable conditions ever since, and no signs of pests, the yield of every kind of fruit will be up to the standard both in quantity and quality. Strawberries and cherries came on the market in quantities about the middle of June, and other fruits are coming on rapidly.

### Kootenay Valley, B.C.

H. W. Power.

The directors of the Nelson Agricultural and Industrial Association are preparing for their annual fall fair, September next.

Local strawberries were on the market by the middle of June and a few days later were being exported. The bulk of Kootenay berries are as yet grown at Creston, Crawford Bay, along the west arm of Kootenay Lake and at Kaslo. Other sections are going in for strawberry growing as with care and businesslike methods, a few acres of Kootenay land planted thus produce a tidy income. Reports of from \$500 to \$1,000 net to the acre are not uncommon. The Kootenay berry finds a ready market in the Northwest and Manitoba, the closest market outside of the local one.

The cherry crop this year will be an unusually heavy one. Cherry trees around Kootenay Lake thrive wonderfully and bear exceedingly heavy year after year. The fruit grows to a marvellous size and has a delicious flavor, finding a ready market

at top notch prices wherever offered for sale. An unusually large number of cherry trees were set out throughout the district this spring and more will be planted in the fall. Royal Anne appears to be the favourite for local growers.

In May, the Kaslo District Horticultural and Fruit Growers' Association received from Victoria a silver Banksian medal, awarded that body at the Royal Horticultural Societies' Exhibition last winter in London, being for an exhibit of apples, principally Gravensteins, in the production of which the Kaslo section excels. Nelson Agricultural and Industrial Association also received a silver medal for an exhibit of Grimes Golden and Cox's Orange Pippin. These were among the highest awards, a number of other medals going to British Columbia.

The Dominion Express Company has materially reduced rates on British Columbia fruit as far east as Winnipeg and are placing an iced car service on the Crows' Nest branch for the benefit of Kootenay fruit men.

The directors of the Kaslo District Horticultural and Fruit Growers' Association are negotiating with the Great Northern Railway, owners of Block 12, an extremely desirable piece of ground, centrally located in the city of Kaslo, with a view of acquiring it for exhibition purposes. This has hitherto been used exclusively as a recreation ground and it is proposed to erect buildings for the annual fall fair and put a race track thereon.

Nelson sent an exhibit of early fruits and other Kootenay products to the Dominion Exhibition at Calgary, held on July 1st and succeeding dates.

### Annapolis Valley News

R. J. Messenger

For the early fruit, the weather during pollination was not favorable if, as some authorities claim, fertilization takes place during the first part of the bloom, for cold rains and east winds marked the first few days of early bloom. For the later varieties, however, the weather was ideal. The general impression now is that apples have set well and as we are getting lots of moist weather there is every indication of a good crop.

In insect pests we have quite a development of the canker worm. Some orchards have been neglected till they are almost stripped of foliage. Very few brown-tails have been seen, but it is very probable that these have been the cause in part of a more general spraying than ever before. It is unfortunate, however, that many of those who do spray do it in a half hearted manner and when other farm work permits.

As an insecticide the arsenite of soda

## CUTWORMS

Corn, Grain, Potatoes, Roots, Cotton, Vegetables and flowers suffer enormous damage from Cutworms, Eelworms, Ants, Slugs and all kinds of Bugs in the soil. Maybe you don't see them, but you pay for them—quit doing so, and use VAPORITE.

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VAPORITE is revolutionizing many branches of Agriculture.

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100 lbs., \$4; 2,000 lbs., \$65.

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Any way drop us a postcard (2c stamp) and we will send you our illustrated book No. 4. It is a finely gotten up factful little booklet.

It tells you briefly and simply all about VAPORITE, and shows the remarkable extra profits made by practical growers who use VAPORITE. It gives reports from all over the world.

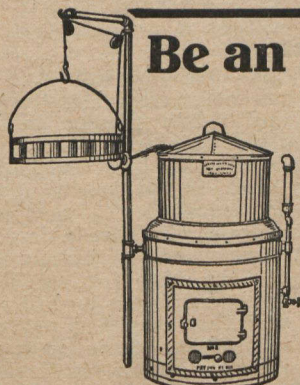
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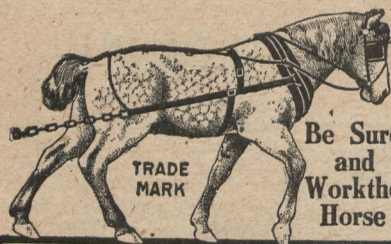


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Canadian Branch, St. Jacob's, Ont.



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If you use Bickmore's Gall Cure your teams can work right along and be cured of Saddle and Harness Galls, Chafes, Rope Burns, Cuts, Scratches, Grease Heel, etc. while in harness. The more work the quicker the cure.

**BICKMORE'S GALL CURE**

is the standard Remedy for all these and similar troubles. Is excellent for Mange and Sore Teats in cows. Above trade mark is on every box. For sale by dealers. Money refunded if it fails. Sample and Horse Book every farmer should read 10c.

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Capital Authorized, \$10,000,000.00

Capital Paid-up. . \$4,835,000.00

Rest, . . . \$4,835,000.00

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Every year each one of us consumes 15 lbs. of salt—Science says.

— More than a pound a month.

Just as well to have it pure.

Your grocer will tell you there's nothing purer than

**Windsor Table Salt**

is becoming more popular than Paris green. The writer has used it now for three years and considers that it has several advantages over Paris green, since the latter seems to be adulterated more and more each year. In the arsenite you buy your own ingredients and know what you are using. The latter also becomes incorporated with the Bordeaux better than the green.

It would seem as if the orchards, as a result of good literature and institute work, were being as a rule very well cared for and now what we want is more cooperative work among the growers.

This feeling is growing among the farmers and has already resulted in the formation of two or three cooperative packing and shipping countries. If these prove successful, it is probable the idea will become general.

**Co-operation in Nova Scotia**

Co-operation is making its way slowly but surely in Nova Scotia. The Berwick Co-operative Association has now a splendid warehouse with concrete walls and galvanized iron roof making a practically fire proof and frost proof building. They have already purchased their barrels and are prepared to do business on a strictly co-operative basis. It will be safe to predict that the movement will spread rapidly now that they have an example of the benefits of co-operation.

**Forest Tree Planting**

There is at present a wide-spread interest in forestry. In Canada, there are wide areas in the west where forests are few and far between, and in the east where once were forests are now cultivated or barren lands. The question of reforestation is one of great economic importance. To regenerate a forest successfully and to plant where no forest has been necessitates considerable knowledge of local conditions and of trees. Regeneration may be performed by natural seeding, by artificial seeding, by sprouts and suckers, by planting seedlings or by a combination of one or more of these.

Probably the quickest and, in the long run, the most economical method of reforestation is by planting seedlings. Particularly, is it best for the west and other sections where timber and fuel is high in price. Seedlings should be purchased that are well grown and true to name. Stock of this nature—seedlings specially suitable for reforestation purposes—are now being offered for sale by Stone and Wellington, Toronto. Read their advertisement on another page of this issue and mention THE CANADIAN HORTICULTURIST when writing.

**Farms Free From Insects.**—There are fruit farms in Canada this year that will sustain no loss from insect pests. They are the farms where the "Spramotor" is called upon to exterminate the fruit growers' insect enemies. It is indeed a pity that all farmers and fruit growers would not awake to the exceptional merits of this truly wonderful sprayer. A great host of owners has been added to the Spramotor list this season—and more fruit and vegetable growers will be counting out larger profits at the end of the season. The Spramotor Co. publish a book entitled "A Gold Mine on Your Farm," which they will be glad to send to all readers of this magazine. Their address will be found in their advertisement on page 157.

**Items of Interest**

The Niagara District Horticultural Exhibition will be held at St. Catharines on Sept. 17 and 18.

British Columbia has sent a provincial exhibit of fruit to the Dominion Exhibition at Calgary, June 29 to July 10.

An article on greenhouse construction will be published in the August issue of THE CANADIAN HORTICULTURIST. Look for it.

Early in June, Dr. Jas. Fletcher of Ottawa gave a very instructive lecture on wild flowers and their care before the members of the Hamilton Horticultural Society.

Readers of THE CANADIAN HORTICULTURIST will be pleased to learn that Prof. John Craig of Cornell is improving rapidly in health and is now thoroughly enjoying his travels in Europe.

Mr. Wm. Heikel, pomologist for the government of Finland and director of the experiment station at Helsingfors arrived at Quebec recently. He intends visiting the fruit stations and agricultural colleges of Canada.

Everything is moving along enthusiastically for the horticultural exhibition to be held at Kentville, N. S., in October. This promises to be the largest exhibition of its kind ever held in Nova Scotia. The secretary is Mr. F. C. Rand, Kentville.

The Lindsay Horticultural Society distributed 175 tuberous-rooted begonias to its members last month. They intend to hold an aster show early in September. The children of the public schools will be the competitors.—F. J. Frampton, secretary.

The Hamilton Horticultural Society has sustained a great loss, and a personal one to its members, in the death last month of its president, Mr. John Cape. For many years, Mr. Cape was an enthusiastic horticultural worker. His contributions to the columns of THE CANADIAN HORTICULTURIST were always instructive and interesting. At a recent meeting of the society, Mr. F. H. Lamb was appointed president to succeed Mr. Cape.

**Coopers' Fluids**

The following is an extract from a letter received from Mr. R. Davis, Hespeler, Ont., by Wm. Cooper & Nephews, Toronto: "Re-VI Fluid that I got from you on April 19th. I sprayed my trees with it on Good Friday and am pleased to say it has answered the purpose for which I got it, viz.: to kill the oyster-shell bark-louse on apple trees, also the aphids and moths. I consider V1 the best on the market. It does the work you say it will do if properly applied. I have over 100 fruit trees, pears, plums and cherries. I sprayed the whole with V1."

Extract from letter from Horatio Webb, Chilliwack, B.C.; "At present the trees sprayed with your mixture V1 are as clean as those sprayed with lime, sulphur and salt mixture, and, as the expense is much less, if the V2 is as effective as the Bordeaux mixture you will have a large sale in this country. I saw Prior's manager from Vancouver the other day, and he was well pleased with the reports he had of this spray. He said that they had not nearly enough V1 to supply the trade, so you may look for good business next year in British Columbia."



## THE FRUIT CROP PROSPECTS

THE crop correspondents of THE CANADIAN HORTICULTURIST report the fruit situation and conditions in all parts of Canada at this date to be as follows:

### KINGS COUNTY, P. E. I.

New Perth.—Fruit prospects are excellent. The bloom was heavy on apple trees. Small fruits promise well.—John Robertson,

### QUEENS COUNTY, P. E. I.

Long River.—All varieties promise well. Plum trees have been damaged in some places. There is quite a bit of dead wood to be noticed. All wild fruit promises an abundant crop.—John Johnston.

### PRINCE COUNTY, P. E. I.

Muddy Creek.—Present prospects could not be better. All the early varieties are blossoming profusely and the later ones are doing as well as can be expected. If there are no wind storms, crop should be good.—C. R. Dickie, June 11.

### SUNBURY COUNTY, N. B.

Upper Sheffield.—Apple crop promises well. English cherries and plums will be a heavy crop. Small fruits look well.—Isaac W. Stephenson.

Oromocto.—Apple trees blossomed abundantly and seem free from insect pests. Small fruits promise well.—Henry Wilmot.

### YORK COUNTY, N. B.

Fredericton.—“Every apple tree covered with bloom” is summing up the apple outlook at present. Tent caterpillars are swarming over everything. Our association is planning a series of orchard meetings this month to demonstrate spraying, pruning, and so forth.—S. B. Hatheway.

Murches.—The apple trees were full of blossoms and the weather being fine and warm at the time, they are now well filled with small apples and the prospects are bright for a heavy crop next fall. Raspberry bushes winter-killed badly.—John Ferguson.

### QUEENS COUNTY, N. B.

Lower Gagetown.—According to the apple bloom, the conditions are very favorable for a big crop but it is rather early to determine whether the fruit has set properly or not. Cherries were very full of bloom but plums rather shy. Strawberries were very much winter-killed.—Geo. MacAlpine.

### KINGS COUNTY, N. S.

Kentville.—During the past month, the weather has been almost ideal for fruit. Japan and European plums appear to have set well. Canker worms are quite plentiful. The bloom on apple trees probably was the best we have ever had.—R. S. Eaton.

Paradise.—Prospects for apples are good; the bloom was abundant. Gravensteins particularly promise well. Spys and Baldwins are a little off in some localities. Foliage is healthy. The trees wintered well.—B. Starratt.

### DIGBY COUNTY, N. S.

Digby.—Indications point to an abundant crop of cherries and apples. The bloom in all cases was prolific and the conditions now are good for a big crop.—F. W. Nichol.

### ANNAPOLIS COUNTY, N. S.

Nixtaux West.—Fruit trees came through the winter in good condition. The weather

conditions during blossoming season were excellent. Prospects for big crop are good.—F. M. Chipman.

### L'ISLET COUNTY, QUE.

Village des Aulnaies.—Trees and plants wintered well. Prospects for small fruits are very good. Early varieties of apples and Duke and Morelle cherries bloomed abundantly. European plums promise another good crop this year but the Blue Damsion and Reine Claude varieties that bore heavily last year will give but a medium crop.—A. D. Vernault.

### JACQUES CARTIER COUNTY, QUE.

Lachine Locks.—The apple bloom was not as heavy this year as last. Setting season has been good. The present dry weather will hinder spot fungous development and there does not appear to be many insects. Cherry and plum trees bloomed heavily and set well. Raspberries wintered well and promise a heavy crop. Strawberries are not very good.—C. P. Newman.

### GASPE COUNTY, QUE.

Mal Bay.—Fruit trees suffered very much during the past winter and some of them are dead. Apple trees bloomed well. Currants and gooseberries promise a good crop.—Maurice LeMoine.

### ROUVILLE COUNTY, QUE.

Abbotsford.—Apple trees blossomed profusely. Summer varieties set well, but not so autumn and winter kinds. Pears showed little or no blossoms and no fruit. Plums set fairly well.—C. A. Fisk.

### TWO MOUNTAINS COUNTY, QUE.

La Trappe.—Fruit is abundant, especially pears, cherries and small fruits. Fameuse and McIntosh Red promise a good crop. As a matter of fact, an excellent year is forecasted for fruit growers in our district.—G. Reynaud.

### STANSTEAD COUNTY, QUE.

Massawippi.—All small fruits give promise of an abundant harvest. Plums and cherries are above the average. About two-thirds of the apple trees were killed by the blight of two winters ago. Those trees that are uninjured are loaded.—G. P. Hitchcock.

### CHATEAUGUAY COUNTY, QUE.

Chateauguay Basin.—On the whole, indications point to a good crop. Apples, plums and cherries have set well; also all small fruits, but if we do not have rain soon, it will go hard with some of them, particularly strawberries. Plum curculio is doing considerable damage in this locality. Outside of this pest, prospects could not be better.—N. E. Jack.

### HASTINGS COUNTY, ONT.

Trenton.—In general, the prospects for apples are poor. Duchess, Astrachan and some of the early fall varieties are fair but all the later ones are exceedingly light. Even the seedlings along the road have failed to set. The bloom was out only for a short time before it dropped. The crop of plums and pears will be light. Cherries are not more than half a crop. There will be no peaches. Strawberries have been affected with the dry weather. Not much fungus has been noticed except what came early on the foliage. There are very few caterpillars but more canker worms and bud moths.—W. H. Dempsey.

## FOR SALE AND WANT ADVERTISEMENTS

Advertisements under this heading inserted at rate of two cents a word for each insertion, each figure, sign or single letter to count as one word, minimum cost, 25 cents, strictly cash in advance.

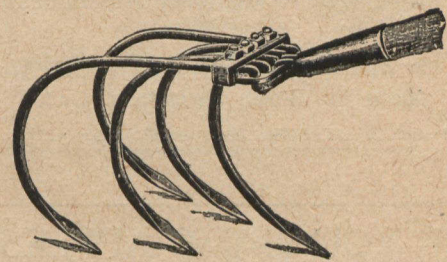
MR. CHARLES ERNEST WOOLVERTON, Grimsby, Ontario, landscape architect, parks, cemeteries, pleasure, school and home grounds laid out, surveys made. Working drawings to a scale so that any gardener can work them out. Terms very reasonable.

GREENHOUSE FOR SALE—Length, 42 ft.; width, 18 ft.; hinged double glass windows on each side, 5 top ventilators with floor stand and gear, equipped with a No. 3 Daisy boiler, and 6 run of 4-inch pipe on each side. Apply Box G, Canadian Horticulturist.

\$4,300 WORTH OF STRAWBERRIES were sold off four acres in Kootenay last year. What others can do, you can do. For bargain list of fruit lands on easy terms write.—V. Dynes & Son, Ward St., Nelson, B. C.

## “BUCO” HAND CULTIVATOR

Handle 4½ ft. long



Why slave with a hoe when a “Buco” does twice the work in half the time. Loosens the soil, leaves no weed roots, and gives things a chance to grow.

One man using it writes:—“My Strawberry Garden is a picture.” Great, too, around shrubs and trees.

Sold by hardware and seedsmen. If your dealer cannot supply you, send us \$1.50 and we will forward one promptly. Return after trial at our expense, if you like, and money back.

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NEW GLASGOW, N.S.

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BULBS  
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Extra choice lot of  
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TORONTO, ONT.

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

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TORONTO ONTARIO

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MIXES EASILY WITH COLD  
WATER.**

All the best Fruit Growers are trying it.  
It will kill the living insects in your orchard and give  
you Clean Fruit. **ORDER AT ONCE**

**\$3.50** Per gallon which makes **100** Gallons mixed with  
**COLD WATER**

**Wm. COOPER & NEPHEWS,**  
506 & 507, Manning Chambers, TORONTO

#### PEEL COUNTY, ONT.

Lorne Park.—Present prospects are for an abundant fruit crop. The showing for winter apples, Spys, Baldwins, and so forth, is very poor. The indications are for a fine crop of bush fruits. Insects injurious to fruit, with the exception of the rose beetle, are more numerous than ever, but owing to the widened interest in spraying and the increased number of outfits, fruit ought to grade freer of blemishes. Strawberries were 10 days ahead of last year in ripening.—F. A. Hamilton.

#### HALTON COUNTY, ONT.

Burlington.—Apples promise light to fair; pears, fair; plums, light; peaches, light; cherries, light to fair; grapes, fair to good; strawberries, fair to good; raspberries, fair; blackberries, fair to good; currants, fair.—A. W. Peart.

#### WENTWORTH COUNTY, ONT.

Fruitland.—Prospects for a large crop of peaches are bright. Plums and cherries have depreciated 20 per cent. on account of too much moisture in May, followed by 16 days of drought, with a few days of extreme heat. Apples, pears and grapes were not affected.—W. M. Orr.

#### LINCOLN COUNTY, ONT.

Grimsby.—Strawberry plants show the effects of the drought. Raspberries are looking well. Cherries are light. Late varieties of peaches are good but Crawford's are light. Curl leaf is bad in places. Lombard plums are light. Curculio is doing a lot of harm. Pears promise well; also grapes. In apples, Baldwins were very shy in blossom.—H. L. Roberts.

St. Catharines.—The season came in rather late but hot weather has advanced vegetation rapidly. Rain is now badly needed. Small fruits promise a good crop; also early peaches and apples. Pear trees set well. Yellow peaches of Crawford type are only moderately set on the trees. Winter apples, such as Greening and Baldwin are good; Spy, light; other varieties, light to full crop. A large acreage has been sown to tomatoes and plants look well. Grapes are likely to be a good average crop.—W. H. Bunting.

#### GREY COUNTY, ONT.

Meaford.—Everything is loaded with blossoms and the cherry showing surpasses anything ever seen around here.—J. D. Hamill.

#### WELLAND COUNTY, ONT.

Niagara Falls South.—Small fruits are good but beginning to show signs of dry weather. Apple prospects are splendid, excepting Spys. Grapes are looking good. Pears will be a very heavy crop. Peaches with the exception of several varieties, are a good crop. Plums are good; also quinces.—Thos. Stokes.

#### YALE AND CARIBOU COUNTY, B. C.

Spence's Bridge.—The present showing for a fruit crop is good; the best for years.—A. Clemes.

Kamloops.—The cold spring and early summer have retarded the growth of all crops but present indications point to heavy yields of fruits of all kinds.—A. E. Meighen.

Peachland.—In this dry climate, the fruit generally sets heavily. We are now thinning our peach crop, which is likely to be a good one. Late varieties, however, are not so good. Apples, pears, plums, grapes and all small fruits will be a good crop.—C. Aitkens.

Vernon.—The fruit prospects in the Okanagan Valley are good, especially the

apple crop. Plums and prunes promise to be of superior quality, being already a fair size. Pears will be an average crop. Strawberries now are in good quantity. Other fruits will be plentiful.—H. D. Riggs.

#### KOOTENAY COUNTY, B. C.

Crawford Bay.—All fruits promise heavy crops, especially early apples. Small fruits will be a heavy crop and owing to an abundant rainfall during May, they are not likely to suffer for want of moisture.—J. E. Houghton.

#### NEW WESTMINSTER COUNTY, B. C.

Ladner.—The early pears and Italian prunes in the Lower Fraser are very light. Cherries are above the average. Large fruits will probably be an average. Small fruits of all kinds are promising better than for some years.—W. J. Brandrith.

## Remarkable Growth

The growth of THE CANADIAN HORTICULTURIST during the past year and a half has been remarkable. Since the beginning of 1907, the circulation has just about doubled and indications seem to point to the fact that we have just commenced growing. This growth has not been confined simply to Ontario, but has spread throughout all Canada. During the past 12 months the circulation in Nova Scotia and New Brunswick has more than doubled. In British Columbia, the circulation has nearly trebled during the same time, and there has been a rapid increase in all the other provinces.

THE CANADIAN HORTICULTURIST has subscribers in all parts of the world. Copies are mailed regularly to Newfoundland, Mexico, Jamaica, The British Isles, Switzerland, Norway, Finland, Russia, China, Japan, Australia, South Africa, New Zealand, and other countries. The circulation is growing in range as well as in size.

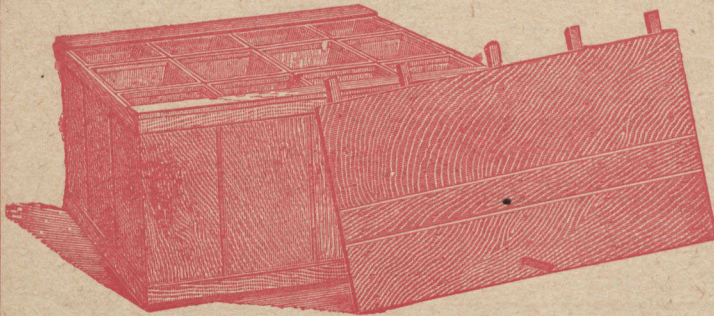
With the support of its friends, THE CANADIAN HORTICULTURIST will continue to increase its circulation. If you know of a friend who is interested in horticulture, send us his name, and we will send him a sample copy free.

All horticulturists, who desire to keep keep abreast with the latest discoveries and the most up-to-date information respecting the lines of horticulture in which they are interested, should have their names placed on the mailing list of the Central Experimental Farm, at Ottawa. The reports of Mr. W. T. Macoun, the Horticulturist, always contain a wealth of information. The latest one issued contains the results of experiments with fruits and vegetables, and descriptive notes on the value of leading species and varieties of shade and forest trees and ornamental shrubs and plants.

The second annual report of The Horticultural Societies of Ontario, has just been issued. Mr. J. Lockie Wilson, the editor, has spared no pains in its preparation, and deserves much credit. The report is attractive and neat in appearance. A large number of excellent illustrations add interest and tone to the publication. The illustrations have been well selected, and are object lessons in themselves. The statistical information given at the back of the book, should be of much value to our horticultural societies. The report is something above the ordinary in departmental publications.

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Veneer supplied for the protection of trees from mice  
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Smith-Premiers, Nos. 2 and 4,		35
Empires	- - -	40
Monarchs,	- - -	40
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Out-of-town orders receive our special care. The machines are in first-class condition. If the one you get is not exactly as represented, send it back at our expense.

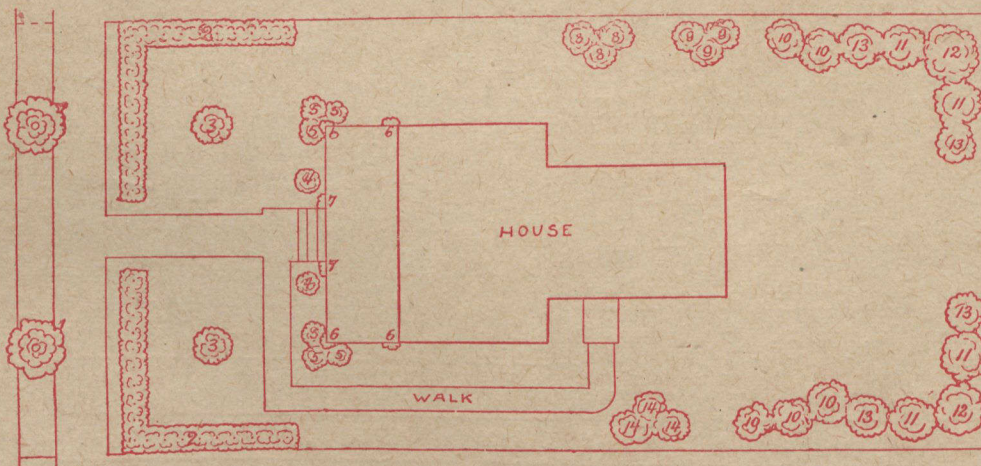
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It is Not Necessary to make any large outlay in order to beautify

your home. We can do this at minimum cost and can select the varieties of trees and shrubs best suited to your locality.

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Fares, \$42.50 to \$60.00; Steerage \$26.50 to \$30.00. Other Steamers, Cabin only, \$42.50.



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