

The Canadian Horticulturist

FEBRUARY, 1908

Volume 31, No. 2

60 Cents a Year

TORONTO

2 Years for \$1.00



Where Spring ran riot in the dell,
And fields' full strength in Autumn fell,

What mighty dormant quickness lies
Unknown of Winter winds the

THE ONLY HORTICULTURAL PUBLICATION IN CANADA.

Issued Each Month

Bethune Rev CJSOAC

Okanagan Valley

FRUIT LANDS

VERNON, B.C.

WE HAVE for sale 2,000 acres of the choicest irrigated fruit lands in this district, all within three miles of the City of Vernon, subdivided into blocks of ten acres, and for sale in quantities to suit purchasers on easy terms. INVESTIGATE the profits being made by our fruit growers from their orchards and gardens. From \$200 to \$500 per acre are quite common returns for the season's labor. OUR MARKETS include the coast cities, the large mining and lumbering districts of the Province and the large Prairie Provinces immediately to the east of us, comprising a territory 1000 miles long and 400 miles wide, in which practically no fruit is grown, and in which thousands are settling every year. THERE IS ONLY ONE OKANAGAN VALLEY and its climate is admittedly the best in Canada, if not in America.

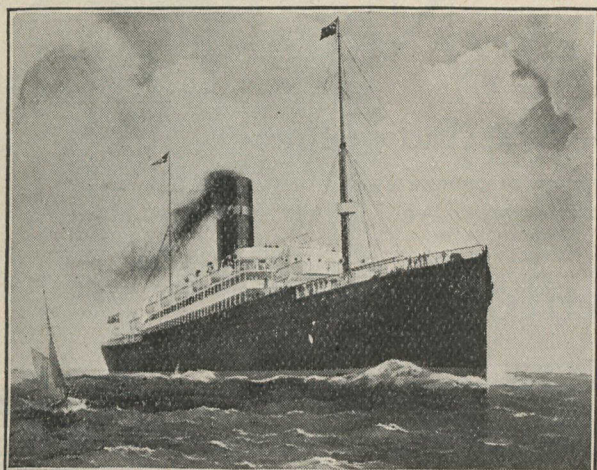


For full Information and Maps of Lands for Sale, address

MUTRIE & MUTRIE

REAL ESTATE

VERNON, B.C.



DOMINION LINE

ROYAL MAIL STEAMSHIPS

S.S. "Alberta," 14,000 tons (building)

S.S. "Albany," 14,000 tons (building)

PORTLAND TO LIVERPOOL

S.S. Canada, - Feb. 8th S.S. Dominion, Feb. 22nd

S.S. Cornishman, Feb. 15th S.S. Vancouver, Feb. 29th

S.S. Kensington, Mar. 7th

(Above Steamers all carry passengers)

PORTLAND TO BRISTOL

S.S. Manxman, Feb. 13th S.S. Turcoman, Feb. 27th

S.S. Englishman, Mar. 12th

Favorite steamers for all kinds of perishable cargo, having fan ventilation, cold storage and cool air chambers.

DOMINION LINE

M. A. OVEREND }
J. W. WILKINSON } Travelling Freight Agents

Montreal and Portland, Me.

GEORGE W. TORRANCE, Freight Agent
28 Wellington St. E., TORONTO

Mention The Canadian Horticulturist when writing

CANADA'S LEADING NURSERIES

GRAPES 2 year No. 1, and 1 Year No. 1, of all the leading kinds. We have a very large stock of extra fine vines of both grades. Our soil produces the greatest masses of roots that any soil can possibly produce.

PEACH TREES A large fruit grower from the Niagara district was delegated to visit our nurseries recently and inspect our *Blocks of Peach Trees*. The result was, he left behind him orders for a good many hundred trees—seeing is believing. He pronounced them "all right."

CURRANTS 2 year No. 1, and 1 year No. 1. Currants paid well this year and in fact do most every year. Our prices are as low as is possible to quote for No. 1 stock, and the stock is "The Best That Can Be Grown."

RHUBARB ROOTS FOR FORCING Have you not a place where you could plant 500 or 1,000 Rhubarb roots for forcing this winter? *Big money in it.* Write for prices.

We require two extra good apple tree salesmen. Write for terms

Brown Brothers Company, Nurserymen

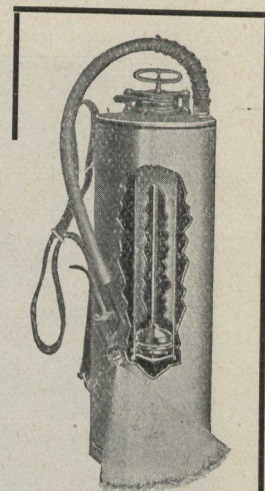
BROWN'S NURSERIES P.O., ONT.

Limited

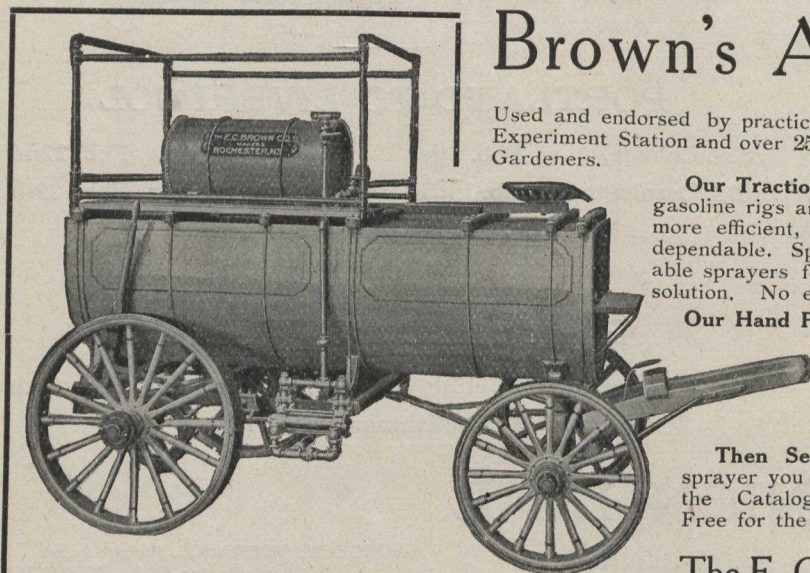
Mention The Canadian Horticulturist when writing

A Sprayer For Every Need

We Manufacture 40 Styles and Sizes and Sell Direct at Factory Prices
Come to headquarters and save money and get our unqualified guarantee of complete satisfaction or your money back. You make no experiment, you take no chances when you get one of



Auto-Spray No. 1.



Traction Power Sprayer No. 28

Brown's Auto-Sprays

Used and endorsed by practically every Government and State Experiment Station and over 250,000 Fruit Growers, Farmers and Gardeners.

Our Traction Outfits are taking the place of gasoline rigs and other traction sprayers because more efficient, more simple, more economical and dependable. Special outfits for special work, adjustable sprayers for all kinds of work. Capacities from 65 to 250 gallons of solution. No expense for power, no experienced help needed.

Our Hand Power Sprayers are equal to heavier work than any others on the market, and with less effort on your part and at a saving of solution. Big claims, yes, but when our every statement is backed up by our **Money Back Guarantee**, isn't it worth your while to investigate? The right spraying outfit at a saving of money is what you are looking for.

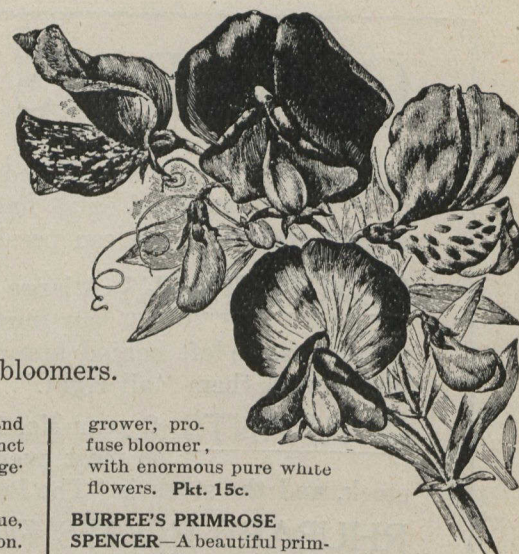
Then Send for Free Catalog To-day. You will find in it the sprayer you want and you will find that we can save you money. Get the Catalog anyway and our **Valuable Spraying Calendar**. Free for the asking.

The E. C. Brown Co., 57 Jay St., Rochester, N.Y.

Mention The Canadian Horticulturist when writing.

ESTABLISHED 1850

The Cream of New Sweet Peas



THE following are all the new Giant Flowered type of Sweet Peas. They are of most distinct and striking character, the colors embracing the most exquisite shades and the mammoth size and waved or fluted appearance of the flowers marks the most important development in Sweet Peas; the blossoms frequently measure 2 inches across and are borne on long stiff stems, generally 4 to a stem, free bloomers.

COUNTESS SPENCER—Bright clear pink, showing a little deeper at the edges. Pkt. 10c., oz. 20c.

GLADYS UNWIN—Flowers a pale rosy pink, not hooded, but a striking upright crinkled standard and broad wings. Pkt. 10c., oz. 20c.

PHYLLIS UNWIN—Very large flower, a deep rosy carmine self. Pkt. 10c., oz. 30c.

NORA UNWIN—A grand white, far out-distancing Dorothy Eckford. Pkt. 10c., oz. 40c.

JOHN INGMAN—The beautiful fluted flowers are a rich carmine rose standard, with wings of a deep rosy pink. Pkt. 10c., oz. 20c.

HELEN LEWIS—The orange rose wings roll and fold, the standard is reflexed, showing the distinct fluted effect and is of a rich crimson orange. Pkt. 10c., oz. 30c.

FRANK DOLBY—The largest and finest pale blue, the same lovely shade as Lady G. Hamilton. Pkt. 10c., oz. 40c.

FLORENCE MORSE SPENCER—A beautiful variety, color delicate blush with pink margin. Pkt. 10c.

BURPEE'S WHITE SPENCER—Grand vigorous

grower, profuse bloomer, with enormous pure white flowers. Pkt. 15c.

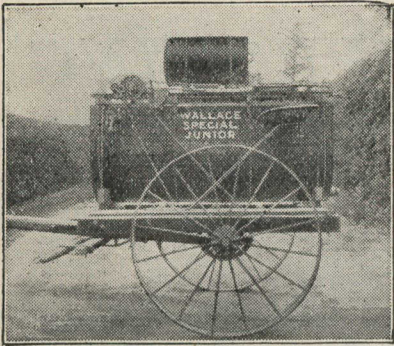
BURPEE'S PRIMROSE SPENCER—A beautiful primrose or creamy yellow, same shade as Hon. Mrs. E. Kenyon. Pkt. 15c.

1 pkt. each above 10 varieties for \$1.00. 1 oz. each first 7 and 1 pkt. each last 3 varieties for \$2.00 postpaid.

NOW READY—Our beautifully illustrated 100 page Catalogue of Vegetable, Farm and Flower Seeds, Plants, Bulbs, Garden and Farm Tools and Implements, Poultry Supplies, etc., for 1908. FREE. SEND FOR IT.

John A. Bruce & Company, Seed Merchants, Hamilton, Ontario

Mention The Canadian Horticulturist when writing



A general utility machine for small plantations; or grapes, potatoes, mustard, etc.

"I am delighted with my Wallace Power Sprayer. Have never been short of power, even when using it on my apple trees, which are large as need be. I have a comparatively small team, and they have never had any trouble in handling it even in soft ground. Before buying this machine, I was inclined to purchase a gasoline engine outfit; am glad, however, that I did not, as there is lots of power with my machine without cost or loss of time."

Harry F. Burkholder,
Jan. 1908 Bartonville, Ont.

"During 1907 I bought and used a Wallace Power Sprayer, and think that nearly all my orchard would otherwise have been killed by the bark lice. I think it the best outfit I have seen, being easy on team, easy to handle and works to perfection when properly handled. Would recommend it to any one wanting a power sprayer."

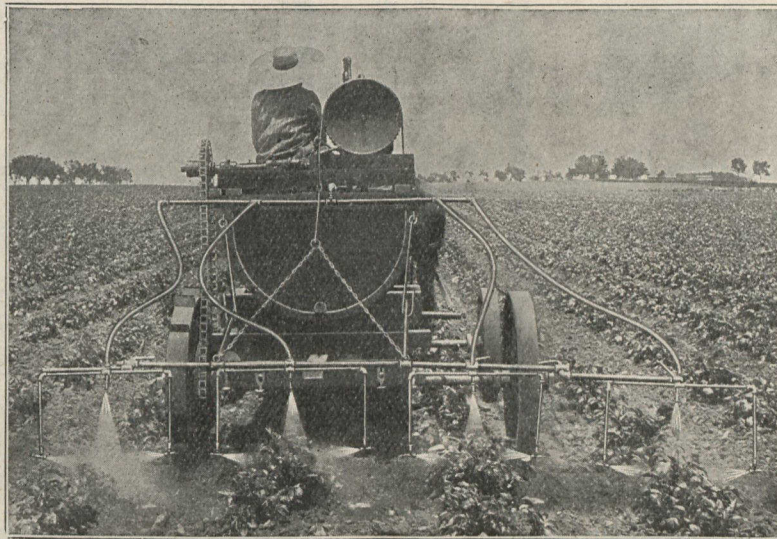
Wilbert Eddy,
Jan. 1908 Colborne, Ont.

"I do not know of any improvements I could suggest."

W. H. Gibson,
Dec. 1907 Newcastle, Ont

"The defects in my Wallace Power Sprayer are as scarce as frogs' teeth—after two seasons operating, and using something over 5,000 gallons of mixture."

Fred. A. Foster,
Jan. 1908 Bowmanville, Ont.

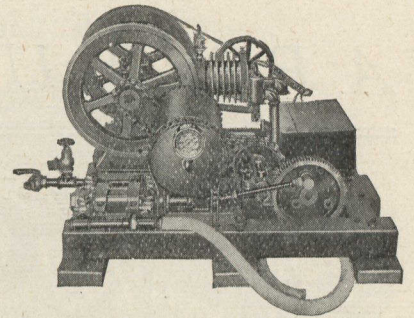


"Standard," with extension axles, working on potatoes. This machine commonly used on general orchards, apple trees included, but it is mounted in different forms.

SECURE A \$50.00 GOVERNMENT BONUS
BY PURCHASING A

WALLACE POWER SPRAYER

¶ They have No Superiors nor Equals. We have never yet had a machine sent back on account of being incapable. Do you appreciate the amount of meaning there is to you in that? ¶ Has it ever struck your mind that every pattern of machine we turn out is entirely original? Almost anyone can copy an idea; but this means at least one season behind to purchasers thereof, and a probable loss of more cash than the total cost of a Wallace machine. If you find any features in Wallace Sprayers that are similar to other, makes you may rest assured that the idea originated with the "Wallace" Co.



"Invincible," air-cooled. A popular type.

"The Wallace Power Sprayer which we purchased from you last season has more than "filled the bill," and has done its work without a hitch. To those who wish to know to what extent we spray, and so work machines sufficient to know their ability, we beg to state that we make up over 6,000 pounds of Sulphur alone when making Lime-Sulphur, and this turns out over 14,000 gallons of spray mixture, the whole of it being applied by Wallace Power Sprayers of the wheel power type. Besides this we have our Bordeaux spraying to do."

J. W. Smith & Sons
Jan. 1908 Winona, Ont.

(Messrs. Smith have and still use the first Wallace machine sold in Canada—a "Standard"—besides a "Special Junior" and a "New Model" referred to above. Their order for 70,000 baskets for their 1908 crop of peaches, pears, plums, cherries and grapes alone, should give you some idea of the extent of their plantations, to which is yet to add their apples. The machines referred to by Messrs. Burkholder and Eddy are of the "New Model" type.)

We can give you still others, or names to whom you can write, or on whom you may call and interview them personally if you so desire. What are here given should convince you that we are offering to you the very best for your own interests; you have nothing which is beyond their ability to thoroughly spray. We have them for all known needs. Get one and make money out of what you now waste.

¶ If you want the very best machine with the very latest improvements, BUY A WALLACE and you will surely get it. On this page are shown 5 of the 20 styles we make. Tell us what you have to spray, and we will tell you which machine will do it best, and quote you on it. Do yourself the justice of securing this information before committing yourself on a purchase of any kind of spraying outfit. Read every word on this page, and "Worth Ten Times Its Cost"—found on page 128, Canadian Horticulturist for May, 1907.

¶ The pumps we supply are the most compact, close-set, have no spaces wherein sediment can collect and clog, are positive in delivery, are air-compressors and very powerful. They are also very easy of access to interior, and the plungers can be removed, re-packed and replaced in 5 minutes, only a cap to remove to get at them.

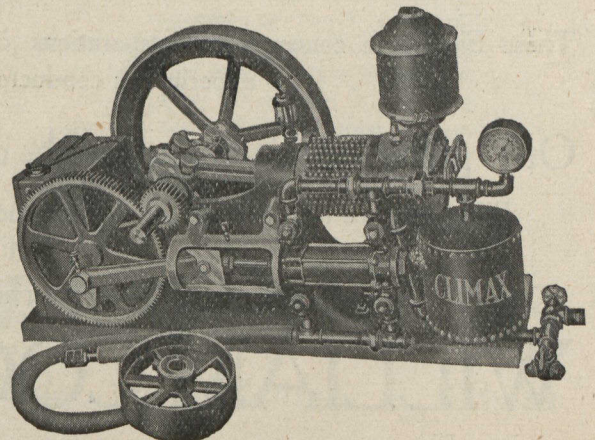
They are all brass, and, we fit the machines with either ordinary or brass piping, as wanted. Any of them will put up from 80 to 175 pounds pressure and maintain more than is needed. Every machine is guaranteed absolutely. You run no risk whatever when you buy a

Wallace Power
Sprayer.

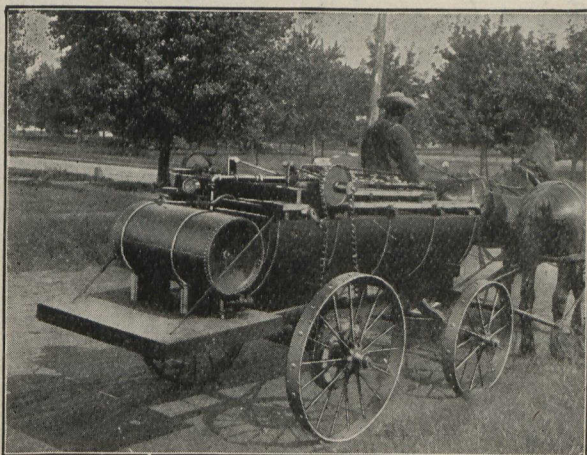
W. H. BRAND

Canadian
Representative
and
Salesman

Jordan Station
ONTARIO



"Climax," the king of air-cooled engines. Is positively unequalled in America. This engine will run when all others fail, and will pull one-fifth more than rated.



1907 "Duplex." This machine furnishes its own power without a cent of cost, and has more than the requisite amount to enable operators to thoroughly drench the very largest apple trees while standing a each one.

Mention The Canadian
Horticulturist when
writing

A REVOLUTION IN FRUIT SPRAYING

Cooper's Tree Spray Fluids

V1 FLUID

IS FOR

Winter or Spring Use

IT KILLS

SAN JOSE SCALE
OYSTER SHELL SCALE, EGGS
OF INSECTS and SPORES OF
FUNGI, MOSSES and LICHENS

BY
APPOINTMENT



TO H.M. THE
KING

V2 FLUID

IS FOR

Summer Use

IT KILLS

**CODLING WORM, OYSTER
SHELL SCALE INSECT, WOOLLY
AND ALL FORMS OF APHIS,
PEAR AND APPLE PSYLLA**
WITHOUT INJURY TO LEAF OR BLOSSOM

NO SEDIMENT TO CLOG NOZZLES

MIXES INSTANTLY WITH COLD WATER

One application of each fluid is usually sufficient for a whole year.

These Fluids are concentrated preparations of the highest efficiency, the result of exhaustive and costly experiments conducted by biological and chemical experts.

One gallon fluid mixed with cold water makes 100 gallons of mixture

Write at once for 36 page descriptive and illustrated booklet "A," "The Spraying of Fruit Trees."
Free for the asking.

SOLE PROPRIETORS AND MANUFACTURERS

WILLIAM COOPER & NEPHEWS

306 MANNING CHAMBERS, TORONTO, ONTARIO

Mention The Canadian Horticulturist when writing

The Canadian Horticulturist

Contents for February

View in High Park, Toronto Cover
 Photograph by Pringle and Booth, Toronto.

Fruits and Fruit Growing

Misapprehensions Regarding Spraying	<i>H. A. Surface</i>	25
Location and Soil for Orchards	<i>G. Reynaud</i>	26
Enemies of the Plum	<i>V. R. Gardner</i>	26
Fruits for Quebec	<i>Auguste Dupuis</i>	27
Fruits Originated in Canada	<i>W. T. Macoun</i>	28
Canadian Peaches	<i>W. T. Macoun</i>	35

Flower Garden and Lawn

Sweet Pea Culture	<i>Max Moineau</i>	29
Manuring Flowers and Plants	<i>Otto Herold</i>	31
Varieties of Euonymus	<i>R. Cameron</i>	31
Hints for Amateurs		32
Horticultural Society Work	<i>Rev. A. H. Scott</i>	33
Hydrangeas	<i>J. H. Thomson</i>	35
Growing Asparagus Ferns		36

Vegetables and Market Gardening

Greenhouse Construction	<i>R. W. King</i>	36
Sowing Tomato Seed	<i>A. McInnis</i>	36
Growing Celery	<i>R. J. Bushell</i>	37

General

Fruit Lands of the Okanagan		37
Editorial		40
Notes from the Provinces		41
The Incubator and Its Use	<i>S. Short</i>	43
Bordeaux Injury		45
Nova Scotia Fruit Growers		46

INDEX TO ADVERTISEMENTS

Banks		x
Baskets and Boxes		xiii
Commission Merchants		x, xi
Fencing		xii
Fertilizers		48, xiv
Flower Pots		xii
Greenhouse Material		ix
Incubators		43, 44
Insecticides		vi, 44, 45, 48, xi
Land Companies		ii, 47
Nursery Stock	iii, viii, 42, 43, 45, 46, 47, x, xi, xii, xiii	
Orchard and Garden Implements		42, x
Pianos and Organs		42, xiii
Roofing		xii
Rubber Stamps and Engravers		xi, xiii
Salt		xi
Seeds, Bulbs and Plants	iv, vii, viii, 47, ix, xi	
Spraying Machines	iv, v, 48, ix, xi, xv	
Steamship Companies	iii, xiv, xvi	
Typewriters		xiv

Established 1856



If you wish an up-to-date Vegetable or Flower Garden the coming season, you must have

Simmers' Seed Catalogue For the Year 1908

Because it contains the most complete list of Vegetables and Flowers, together with many striking novelties. Simmers' Field, Vegetable and Flower Seeds have for over fifty years been staple with the best farmers, market gardeners and critical private planters. When you buy seeds, you naturally expect them to germinate. This is an absolute necessity, but the most important point is the quality of the vegetable or flower produced. Simmers' quality seeds cover this, because we buy from acknowledged specialists, and we spare no expense in procuring the best Seeds for germination and productiveness. It tells you about it in our Seed Catalogue for 1908, which is mailed FREE for the asking. Write at once.

J. A. SIMMERS

Seeds .. Plants .. Bulbs

TORONTO, ONTARIO

1908

The

1908

RENNIE SEED ANNUAL

☞ A finely illustrated publication, brimful of useful information, garnered from 38 years' active experience in scientific Agriculture, Horticulture and Floriculture.

SEND FOR A COPY TO-DAY



WM. RENNIE CO.

LIMITED

TORONTO, MONTREAL, WINNIPEG
VANCOUVER

Mention The Canadian Horticulturist when writing

Catalog of Reliable Seeds

FREE FOR
THE ASKING

Send for one now.
It illustrates and
describes all the
newest and best in

Vegetable
and Flower
Seeds

Bulbs, Plants
Shrubs, Etc.



Mushrooms

Mushroom Spawn Although the Mushroom is one of the most delicious and at the same time most nutritious of all known esculents, its cultivation is not generally understood. We have had so many enquiries regarding cultivation of Mushrooms that we have prepared and published an 8-page pamphlet written by a practical grower, which gives in a concise form all necessary information for the successful raising of the best Mushrooms. This pamphlet will be sent free to anyone interested. We make a specialty of supplying the genuine English "Milltrack" Mushroom Spawn.

Mushroom Spawn, Best English, per brick, each, 15c.; 5 for 70c.; by mail, postpaid, each, 25c.; 5 for \$1.15. Special quotations on large quantities.

THE STEELE, BRIGGS SEED CO., LIMITED

TORONTO

HAMILTON

WINNIPEG

Mention The Canadian Horticulturist when writing.

Canada's National Nurseries

OFFER FOR SPRING PLANTING

APPLE TREES—Over 100 leading varieties, including new sorts such as La Salle, Peerless, Black Ben Davis, Milwaukee, La Victoire, Opalescent, Scarlet Pippin, Windsor Chief, etc.

PLUMS—Over 40 varieties of European and Japan, and a select list of Native Plums for Northern Districts.

STANDARD PEARS—30 leading varieties, including the Bartlett, Anjou, Clapp's, Dempsey, Flemish Beauty, Kieffer, etc.

DWARF PEARS—15 of the best varieties, with an especially big stock of the Bartlett, Anjou, Clapp's, Duchess and Flemish Beauty.

CHERRIES—Over 20 of the best varieties, including the Black Tartarian, Besarabian, Early Richmond, Montmorency, Napoleon, Schmitz, Vladimir and Yellow Spanish.

SMALL FRUITS—A complete stock of two-year-old, No. 1 plants, in **Raspberries, Blackberries, Currants and Gooseberries**, including the Herbert and King Raspberries, the Mercereau and Rathbun Blackberries, Perfection and Pomona Currants, the Victoria Gooseberry, etc.

SEED POTATOES—The best of the new sorts, including the Eureka Extra Early, Quick Lunch, etc.

ROSES, SHRUBS, ORNAMENTALS AND EVERGREENS—Splendid assortment of leading varieties in each, including in Roses, the Baby, Crimson and Philadelphia Ramblers, Frau Karl Druschki and Dorothy Perkins; in shrubs new named improved Lilacs, Sweet Scented Pæonies, Caragana and Russian Olive, etc.; in Ornamentals, Birch Cut Leaved, Elms and Maples of all kinds, Mountain Ash, Poplars, etc.

ALL OUR STOCK IS SOLD AND DELIVERED UNDER OUR RED TAG BRAND—A GUARANTEE OF ITS QUALITY AND PURITY. Send US a list of your wants; ask for catalog, or take an agency.

Capital Nursery Company, Ottawa, Ontario

Mention The Canadian Horticulturist when writing

The Canadian Horticulturist

Vol. XXXI

FEBRUARY, 1908

No. 2

Some Misapprehensions in Regard to Spraying*

H. A. Surface, M.Sc., Harrisburg, Pennsylvania

THERE are many popular misapprehensions in regard to spraying. The following are some of them:

We spray to prevent the coming of insects. This idea is erroneous, except in the case of the codling moth.

Bordeaux mixture is an insecticide. This is not so, as its insecticidal properties are of little or no value. It is a fungicide. Only when it is combined with Paris green or some other poison does it become an insecticide.

It is thought by some orchardists that Bordeaux mixture will cure plant diseases. It does not cure. It prevents. For insects, we spray to cure; for fungous diseases, we spray to prevent.

There is an impression that beneficial results may be had by spraying fruit trees when in bloom. This is wrong. The practice is bad. Nothing is gained and much is lost. Spraying at that time kills the bees that are required in the fertilization of the bloom, and also injures the essential organs of the flowers and thus harms the fruit crop.

Some persons have an idea that spraying will poison fruit and vegetables. There is no danger from this source except a theoretical possibility if the poison is applied just before gathering, with no rain afterwards. Applied at the usual strength, one would have to eat 200 cabbages to consume enough Paris green to kill. There is no danger to live stock from spray mixtures on grass.

Many persons think that if a little is good, more is better. They are inclined to increase the strength of the mixture. The truth is that too much is worse than too little. It is liable to injure the trees, and it will not perform the desired result.

Mixing spraying materials by guess is a common practice. For accurate and economical results, the mixing must be done by definite proportions. The exact strength should be known and accurately measured each time materials are to be mixed.

A few growers hold the opinion that spraying can be done when the wind is blowing and get good results. It is useless to spray against the wind.

It is thought by some that the harder the liquid is blown or thrown against the tree, the better. Such is not necessary for good results, and has even been known to prove damaging by

only by the use of proper apparatus. It should be thoroughly adapted to the work, simple and strong in construction and easy to operate. For economical spraying, the best of apparatus is none too good. However, this does not mean the most expensive.

It is sometimes advocated that one spraying is enough. The best orchard practice demands more than one application. With the spraying mixtures that are in common use, and for the purpose of combatting all classes of orchard troubles, at least four applications should be given during the season.

Some growers imagine that they can spray only a few trees in the orchard and not the others, and at the same time control the pests. If only a few trees in the orchard are infested with insects, especially scale insects, or infected by disease, the entire orchard should be sprayed. Only by this means can the trouble be successfully combated.

There is a feeling among certain orchardists that the formulas for spraying mixtures can be changed at will. This is a mistake. The wiser plan is to leave the formulas alone and to mix the ingredients in the proportions and manner recommended by experts. There is chance of danger in meddling with the standard formulas, especially by persons unacquainted with the chemistry and effects of insecticides and fungicides.

Spraying is sometimes practised with no definite purpose in view. The operation should be definite and for some one thing, or purpose. The orchardist should know what he wants to accomplish. Usually, a good reason is not difficult to find. Spraying should be performed at the proper time for the most effective results in combatting the various insects and diseases.

Thorough spraying is the keynote to success in fruit growing. Spraying in itself is not sufficient. It should be practised in conjunction with the proper methods of cultivation, pruning, thinning, and other modern orchard practice.

Satisfactory Results

Our advertisements in the December and January issues of THE CANADIAN HORTICULTURIST have brought a large number of enquiries from distant points, as well as from all parts of Ontario. England, India, South Africa, Australia, United States and British Columbia are all represented by letters that we have received from readers of THE CANADIAN HORTICULTURIST. These enquiries show the large field that THE CANADIAN HORTICULTURIST covers, and its high standing among those interested in horticulture. The enquiry from India was for stock to be supplied to a Canadian estate owned by the person replying to our advertisement in THE CANADIAN HORTICULTURIST.—Stone & Wellington, Toronto.

driving the spray liquid into the stomata of the leaves.

That sprinkling is spraying is the opinion of the inexperienced. They are not the same. A nozzle that throws a coarse spray should not be used. The spray should be fine as mist.

An idea is prevalent that the height to which a spray can be thrown depends only upon the power of the apparatus. It depends more on the height of the apparatus, the length of the hose and the extension rod.

It would seem that some growers consider that any kind of apparatus, no matter how poor, is good enough for the work. Good results are secured

* A portion of an extemporaneous address delivered at last convention of the Ontario Fruit Growers' Association.

What Kind of Location and Soil for an Orchard?

Prof. G. Reynaud, La Trappe, Quebec

IT is the general opinion that apple trees should thrive anywhere and in any kind of soil. They are planted in any kind of soil and with any exposures and, not until after costly experience, does the planter realize the fact that it should have been otherwise, and that for the trees to thrive they should have been planted under special conditions.

A remarkable fact has been noticed in the Province of Quebec, namely, the influence of open water on our fruit trees during winter. The county of L'Islet, and the neighboring counties, owe their celebrity as fruit districts greatly, it is true, to the intelligence of their inhabitants, but also in a measure to the presence of open water during winter. Not that the normal temperature has been modified nor the trees better from a change of temperature, but the air is more saturated with moisture, the cold is drier and the evaporation is less from the trees, which is better for them. This fact is not peculiar to the Gulf of St. Lawrence, but has been noticed wherever large rivers form rapids of any size.

From a different aspect the proximity of great expanses of water, even when covered with ice, has another marked influence on the vegetation of fruit trees. Cooling later, they help to temper the first frosts and diminish the havoc wrought at a time when the wood is not fully ripened. In the spring time the ice moderates the first heat of the sun, preventing premature growth and exposure. The conclusion follows, that situations near large bodies of water are preferable.

One of the greatest obstacles to be overcome, before success follows, is the dominating winds. An orchard which has no protection will never bear anything; the trees take on impossible shapes, and live without giving any profit. This can be remedied to a certain extent by placing stakes to the trunks and arranging the rows so that the trees protect one another, but this is not always sufficient. It is necessary, then, as often as possible to choose situations which are naturally protected either by a hill or by woods. Trees of rapid growth, of dense foliage, and with powers for resisting wind, form excellent windbreaks. For this purpose I know of nothing better than the poplar. Having once seen this tree, one is convinced of its efficiency and its superiority over other kinds. Above all things, it is necessary to observe, when surrounding an orchard on all sides, that the branches of the windbreak do not

extend to the ground; for though it is necessary to stop the heavy winds, it is also needful to have currents of air passing through.

What sort of land should the planter choose for his orchard? The best, no matter what it cost him. The best land, generally speaking, is that on which one can grow all kind of crops with equal results. It should be remembered that an orchard in full bearing, well looked after, and composed of the best varieties of apples, yields more to the acre than any other crop. Therefore, one need not fear to devote the best piece of land for this purpose. If one only wishes to grow apples for domestic use, having a small orchard, a poorer piece of ground might be taken. The work of improving, manuring, breaking, seems at times long and costly, but what returns!

An important point in the preparation of the land is the drainage, without which it is impossible, at least for the majority of land, to establish a paying orchard. It is with this object in view that we should start all our work, and stop at nothing to give perfect drainage,

not only in the work done, but also in the materials employed.

Apart from the best land which the orchardist can and should choose for the planting of his orchard, there are other lands which might be advantageously employed in fruit growing; lands difficult of cultivation, easily drained and which are well suited for apple trees. I know certain rocky hillsides which are covered with flourishing orchards. In any case, do not neglect the trees. Good attention, pruning, manuring and spraying, also, are necessary. It would be a grave error to reason otherwise, and let the trees shift for themselves, under the pretext that one did not wish it to be the principal, but only a make-shift crop. One cannot imagine a more pitiable sight than a hillside covered with stunted, wind-battered trees, the remains of an orchard planted several years ago and never given any care. The import of this is that one should look closely into the word culture and then one would not pretend to follow fruit growing without caring for his apple trees in the same manner he would any other plant or crop on the farm.

Enemies of the Plum

V. R. Gardner, Macdonald College

BLACK KNOT affects the branches and twigs of the plum and cherry.

Large, wart-like, knottyswellings are produced. They usually occur mainly on one side of the branch, often causing the branch to bend more or less abruptly. They usually appear in spring or in early summer, at which time they are yellowish green in color. Later they become a dark green, and finally coal black. During the fall and winter they are studded with minute pimples, or "pustules," which are filled with spores for the spread of the disease. The swellings may be all the way from a quarter of an inch to several inches long. They not only rob the tree of considerable food but interrupt the flow of sap and nutrients, check growth and finally cause the death of the part of the branch above the swelling. Some varieties are much more susceptible to black knot than others. The European varieties as a whole are more subject to it than those of any other class, the Damsons being especially liable to attack.

TREATMENT FOR BLACK KNOT

Spraying is only a partial remedy. The same treatment that will control brown rot and shot hole fungus will also

serve to hold black knot in check, but it will not completely succeed. The cheapest and best means of control is to cut out and burn the knots as soon as they appear. The affected branches should be cut at least three or four inches below the swellings to make sure of the removal of all traces of the fungus.

GENERAL RECOMMENDATIONS

As before stated, there are many other plum pests besides those that have been mentioned. There are a large number of insects and nearly an equal number of parasitic fungi occasionally met with. Special treatments could be, and often are, recommended for each one. For the ordinary person to keep them all in mind, however, is next to impossible. As a rule the treatment which will control the two or three chief pests will also hold in check the others, and for the most part they are the only ones that the grower need keep in mind.

To summarize, there is one very important plum insect and three very important plum diseases. Any one or all of these pests may appear any season and in sufficient numbers or sufficient virulence to practically ruin the plum crop. For them, the fruit grower should

always be prepared. The general spraying treatment recommended for the plum is an application of Bordeaux mixture just before the buds open in the spring; a second application shortly after the fruit sets; a third about two weeks later; and if brown rot is serious, a fourth spray of the copper carbonate of ammonia shortly before ripening. Paris green or some other arsenite should be mixed with the Bordeaux at the rate of one pound to 150 gallons of the

Bordeaux, to destroy any leaf-eating insects, such as slugs, canker worms, and so forth, which are likely to appear.

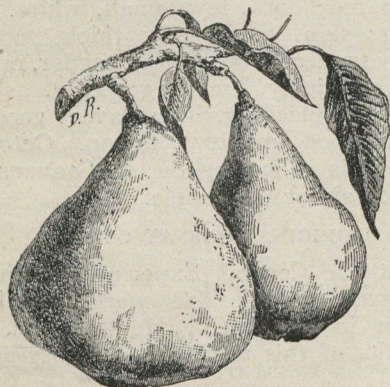
The plum grower should be equipped with a good spraying outfit (a good outfit that will last for years can be obtained for \$20.00 to \$25.00), and the materials needed in the preparation of the leading insecticides and fungicides. In addition to this, he will need the apparatus described before to use in catching the curculio. The writer is aware that

many fruit growers are unwilling to go to the bother of spraying. They prefer to run the risk of having a good crop ruined by the outbreak of some pest. If such a risk is run, they must expect to meet with frequent loss. On the other hand, spraying is not expensive; it is not a difficult operation; and if properly done, it is the grower's best insurance for a good crop. It means dollars and cents in his pocket.

Fruits Worth Growing in Quebec

Auguste Dupuis, Village des Aulnaies, Quebec

IN the western part of the province of Quebec, from Huntingdon county to Montreal, the varieties giving remunerative crops, and which are most popular at the Montreal and Quebec markets are: Alexander, Red



Beurre Baltet pere

Astrachan, Duchess, Fameuse, St. Lawrence, Montreal Strawberry, Ben Davis, Canada Baldwin, McIntosh Red, Canada Red, Golden and Roxbury Russets, Northern Spy, R. I. Greening, and King. The three last named are cultivated with profit only in Huntingdon county and vicinity, for exportation to Great Britain.

Of all these, Fameuse is the best paying apple according to reports from the eastern townships and the adjoining counties of Chateauguay, Two Mountains, Hochelaga, Island of Montreal, of Vercheres, Rouville and Argenteuil counties. Some orchards of 4,000 to 8,000 trees near Montreal are nearly all Fameuse and seedlings of Fameuse. Mr. Robert Hamilton mentions an orchard of 4,000 Fameuse seedlings, none of which equal the Fameuse in flavor, but some of them are better shippers. The Blue Pearmain, Pomme Grise and Bourassa, once very common and much esteemed, have become so unproductive that they have ceased to be planted in commercial orchards.

The eastern and north-eastern part

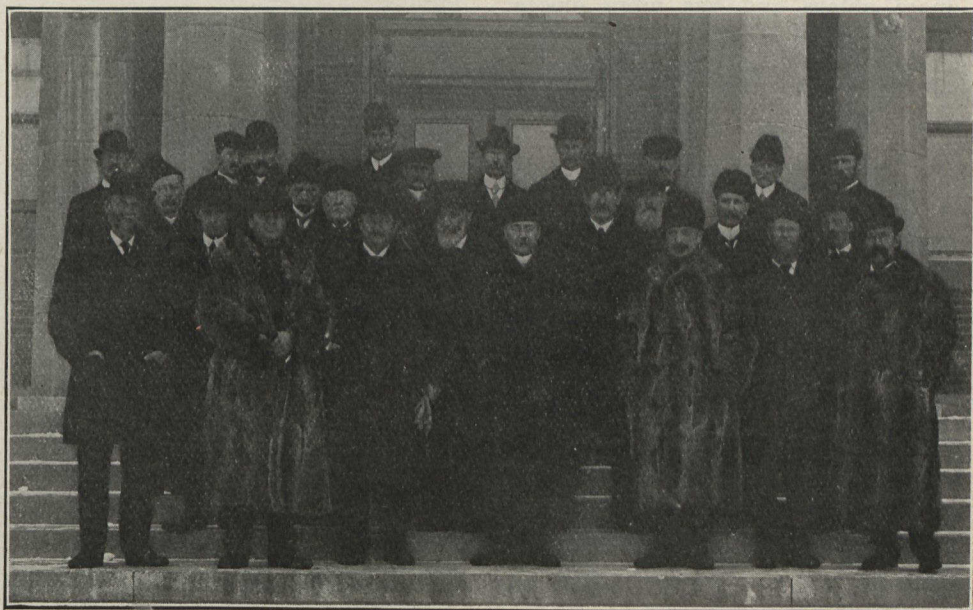
of the province, on account of its short summers, is not suitable for the culture of varieties that mature their wood late, such as R. I. Greening, Baldwin and King. Thousands of these desirable varieties have been planted, none have lived to produce an apple.

Amongst the most profitable varieties are Alexander, Red Astrachan, Duchess, St. Lawrence, Wealthy, Fameuse, Golden Russet, and Calville White, a seedling winter apple, very common in old orchards, a good apple of fair size. Duchess, Fameuse, and Wealthy for the last 20 years have given larger crops than all others, selling easily at \$2, \$2.50 and \$3 a barrel.

Of the cultivated area in Quebec province, only one per cent. was in orchard, garden, nursery and vineyard in 1900, and the yield from this was about three per cent. of the total agricultural products. There are nearly

Pear trees are cultivated with some degree of success. Only a few varieties, however, are sufficiently hardy to endure the severe winters. Flemish Beauty is the principal variety grown. There are about 8,000 trees in orchard; about one-half of these are in bearing and produce 4,000 bushels of fruit.

Several varieties imported from France by the Quebec Government since 1898 are very promising. They have proved hardy north-east of Quebec as far as Temiscouata county, and produce good and fine dessert fruit. Amongst these the "Baltet père" is the most vigorous and fertile. It is an annual bearer of a large and delicious fruit, maturing from November to December. Keeps in good condition in the cellar and does not rot at the core. It does well on the quince, but is preferable as a standard tree. The pyramidal form, with low branches, gives the



Some of the Delegates and Speakers at last Convention of Quebec Pomological Society

3,000,000 apple trees in orchard, 1,500,000 in bearing, producing about 1,500,000 barrels annually.

best result in this northern section. Fruit buds on branches above the snow level have not suffered in our coldest winters.

This variety of recent introduction was exhibited for the first time at Paris in 1900, and was highly commended by the Jury on Fruits. I was struck by the vigor and fertility of the original tree at Troyes and of the two-year trees, bearing in nursery.

Messrs. Baltet Frères, the originators, donated 12 of these, dwarf and standard, for trial at the fruit station here, in April, 1901. I have no trees for sale, but advise nurserymen to import and multiply this variety. It is well worth extensive tests.

small; above medium quality; season, December to February. A very large, handsome apple, but too coarse for dessert purposes and not juicy enough.

OTHER GOOD APPLES

Mention should be made here of the Banks' Gravenstein apple, a sport of Gravenstein which originated with Mr. Banks, Nova Scotia. This variety is much more highly colored than Gravenstein, but resembles it in other respects.

The late P. C. Dempsey, of Trenton, Ont., formerly of Albury, originated a number of good apples by cross-breeding, but two of the best of these only need be mentioned at this time. Both of these are from a cross of Golden Russet female with Northern Spy male. The Walter may be described as very large, roundish, rather irregular; cavity, deep, medium width; stem, short, moderately stout; basin, deep medium to open, almost smooth to moderately wrinkled; calyx, open; color, greenish-yellow, splashed and streaked with red; dots, few, small, white, distinct; skin, moderately thick, moderately tender; flesh, yellow, tender, rather coarse, juicy, melting; core, small subacid, pleasant, high flavor; good to very good quality; season, October. There is a suggestion of Gravenstein flavor about this apple.

ORIGINATIONS AT OTTAWA

At the Central Experimental Farm, Ottawa, considerable work has been done in originating apples, and the results of this work are now beginning

Fruits Originated in Canada

W. T. Macoun, Horticulturist, Central Experimental Farm, Ottawa

Continued from last issue.

THE Fameuse reproduces itself more nearly to type than some other kinds of apples, hence there are a number of other Fameuse seedlings not so well known as those mentioned, which have distinct points of merit. Among these are: Louise, Elzear, Germain St. Pierre, Victoria, St. Hilaire, Fameuse, Sucrée, Green Fameuse, Rufus, La Victoire, Canada Baldwin, Fameuse Noire, Brockville. All of these fruits have characteristics which make it easy to place them in the Fameuse group.

MOST IMPORTANT ORIGINATION

Perhaps the most important apple of Canadian origin is the Ontario, which was originated by the late Charles Arnold, Paris, Ont., by pollenizing the Northern Spy with Wagener. This variety is proving very profitable in those sections of country where it succeeds well. It shows plainly the blending of the Wagener and Spy, having the characteristics of both in about equal proportions. It is an early bearer and quite productive, and resembles Northern Spy very much in outward appearance, but usually is more oblate and has more bloom. In character of flesh it is much like both parents, and in flavor also. The following is a description of it:

THE ONTARIO

Originated by the late Charles Arnold, by crossing Wagener with Northern Spy. Fruit, large to very large, oblate, sometimes roundish, slightly angular; skin, yellow, usually well washed and splashed with bright red and carmine (there is also a pale pink bloom which adds to the appearance); dots, few, pale and a little larger and more distinct than on the Northern Spy; cavity, deep, open, slightly russeted; stem, short, moderately stout; basin, medium to rather deep, slightly wrinkled; calyx, small, open or closed; flesh, creamy white, crisp, tender, juicy, a brisk subacid (more acid than Northern Spy), sprightly, slightly aromatic; core, small; quality, very good; season, midwinter to late winter. Tree moderately vigorous, but an early and heavy bearer. One of the best apples, both for commercial purposes and for home use.

THE BAXTER

The Baxter is a large, handsome apple, which is growing in popularity every year. It does not bear much until the tree has been over ten years planted, but from that time on it bears medium crops almost annually. The Baxter has not been exported much yet, but it is such an attractive apple in the barrel that it is bound to be popular, and already high prices have been paid for it, in one instance it having been quoted higher than King, to which, however, it is much inferior in quality. It may be described thus:

Fruit, very large, roundish; cavity, deep, medium width to open; stem, short to medium, slender to moderately stout; basin, medium depth and width, smooth; calyx, open; color, yellow, well splashed and washed with orange-red with purplish splashes; dots, moderately numerous, large, yellow, prominent; skin, thick, moderately tough; flesh yellow tinged with pink, coarse, moderately juicy, tender; core,



Exhibit of Canadian Apples in Gloucester, England

See notice on another page.

to be apparent. Of about 5,000 trees which have been grown since 1890, there have been seventy-seven varieties named. A large proportion of these will not be of any commercial value in the best apple districts, but owing to their hardiness it is hoped



Apple Tree Before Pruning

that they will be useful in the colder parts of Canada where the apple is not successfully grown at present. In addition to these 5,000 trees there have been fruited over 200 trees of about 800 originated by Dr. Wm. Saunders, the result of work in crossing the Siberian crab, *Pyrus baccata*, with different varieties of the apple. Of these, many varieties have been named and distributed to several hundred points in the Canadian prairie provinces, and are proving hardy everywhere they have been tried.

Of the varieties of apples originated at Ottawa which were named, four are from a cross made by Prof. John Craig, Secretary of the American Pomological Society, when Horticulturist of the Central Experimental Farm, Ot-



Same Tree Correctly Pruned

tawa, between McMahan female and Scott Winter male. These varieties appear to have distinct points of superiority over their parents, but will have to be tested longer. From 3,000 seedlings of Russian apples, fifty-nine

have been named, only four of which seem to be superior to the varieties imported from Russia.

The remaining fourteen sorts are natural seedlings of Wealthy, Swayzie and Lawver, and it is expected that from the large number of seedlings of Wealthy, Swayzie, Fameuse, McIntosh, Northern Spy, Lawver, and others, yet to fruit, many fine apples will come, as about twenty-five per cent. of those which have fruited already are equal or better than named varieties

of their season now on the market. The trees of some very interesting crosses between McIntosh and Lawver began to fruit this year, and valuable results are expected.

When the list of apples is completed for the Annual Report of the American Pomological Society, probably 300 named varieties of Canadian origin will be recorded. This list will also probably be published in a report or bulletin of the Central Experimental Farm, Ottawa.

Sweet Pea Culture a Fine Art

Max Moineau, Toronto

IN the cultivation of sweet peas, a great deal of discouragement arises from a lack of knowledge. After their nature and requisites are thoroughly understood, it is very easy to develop these beautiful flowers to a high standard of perfection. Indifferent treatment, however, will never beget superior sweet peas. Like everything

originator of something new and to this purpose, watch for sports and let the best of them go to seed. Besides, he should study and practise hybridization and cross-fertilization, with a view to improving old favorites.

NOVELTIES WORTH GROWING

Among the novelties for this year, I would recommend Burpee's White

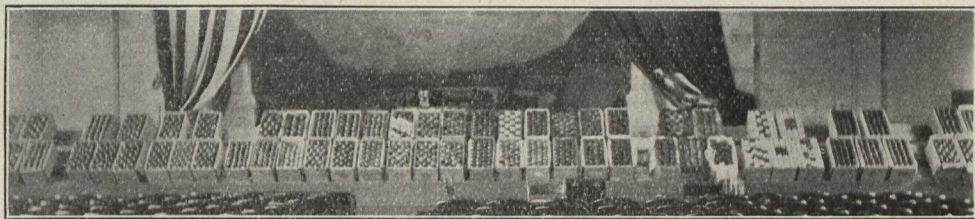


Exhibit at Last Convention of Northwest Fruit Growers' Association

See Page ix.

else that is worthy of cultivation, the best of attention will bring the greatest satisfaction. "I have no luck with sweet peas," is a common saying; but when the truth is known, "I have no knowledge of sweet peas" would have been nearer correct.

Taking it for granted, then, that we want quality rather than quantity, the methods of cultivation must be carefully studied. Conditions are so various that rules which might be advantageously applied in one locality may not prove effective in another. Nevertheless, certain principles govern the ideal culture of sweet peas everywhere, and the successful adaptation of these principles must be left entirely to the grower. The first essentials are seed, site and soil.

Seed should be obtained from specialists. A ten-cent package from your nearest grocer is not only disappointing, but decidedly absurd. Because a thing is cheap, it does not follow that it is first-class. I have bought seeds that averaged as high as three cents a piece, and I have yet to be disappointed with these high-priced varieties. One should add the very latest novelties to his collection if he wishes to keep up with the progress of sweet pea culture. Not only this, but he should strive to be an

Spencer, pure white; Burpee's Primrose Spencer, the deepest yellow yet produced; and Burpee's Apple Blossom Spencer, the most beautiful combination of pink and rose imaginable, all of the orchid-flowering class. George Herbert is a beautiful new red of the above class, and Mrs. Charles Mander is another of the class which might well be called "The Royal Purple Spencer." I have received from England, for my own garden, three new novelties of the orchid-flowering class, which promise to be very attractive. These are: "Enchantress, a delicate pink with a deep rose edge; Nell Gwynn, a lovely soft salmon, slightly suffused with deep cream, the base of standard having quite a gold blotch; and Olive Ruffle, a bright rosy salmon of very distinct shade.

Among the grandiflora reds there is no finer variety than King Edward VII. Then there are: Mrs. Walter Wright, a beautiful mauve; Othello, a good maroon; and Duke of Westminster, a very deep blue. There are many other fine varieties, but one should by all means have those I have named among their collection.

THE BEST LOCATION

Having secured the very best seed, select a sunny site, so that the rows may

run north and south. An objection has been offered to this position of the rows, on the ground that when gathering flowers in the morning, the eastern sunlight is directly in the eyes, and in the afternoon, the western sunlight will be just as troublesome. But when we consider that vines growing in rows running east and west are drawn more toward the sun, and the work of training and supporting them is consequently greater, we can look with favor upon the rows running north and south, even if we have to wear colored glasses when gathering the flowers.

If planting on a large scale, the rows should be at least four feet apart. But I am writing more particularly to those who have only small grounds and grow sweet peas for their own immediate pleasure. It may be that you have a small city garden and are compelled to grow sweet peas near the fence. If so, make the rows eighteen inches away from the fence, and construct a frame support, which will enable you to use string. I have always used string, and heartily disapprove of wire. With string, you can make a much neater support, and will have no trouble to reach through when gathering flowers. Painting your fence and woodwork green makes a very pleasing effect. Keeping the support eighteen inches from the fence from top to bottom will permit air to pass about the peas, and prevent them drying out or burning.

KIND AND TREATMENT OF SOIL

The soil most suitable for sweet peas is a clayey loam. My soil was originally heavy clay. I dug out a part of it and mixed sharp sand with what was left, until now it breaks up very easily. Last fall I added a large quantity of sandy loam and worked it in with well-rotted cow manure, digging it over perhaps a dozen times before the frost set in. I always turn my soil over many times during the fall. This allows it to come to the open air and sweeten. It is also a good plan to cover with good hardwood ashes just before the fall rains begin, so that potash may leach in. I have noticed that when I used ashes in this way, mixed with about equal quantities of air-slacked lime, the earth is freed from cut-worms. If your soil is light and sandy, add equal parts of clayey loam and plenty of well-rotted cow manure.

A very wet soil is not good for sweet peas. It has a tendency to sour, and nothing will grow in it. If you care to test your soil to discover if it is sour or not, take a handful of it and put it into a tin of water. Mix it up thoroughly, and let stand for about an hour. Then take a piece of blue litmus paper, which any druggist will supply you, and place it in the mixture. If it turns pink, your earth is sour and air-slacked lime should

be added to neutralize it. Sweet peas require an abundance of water, but they do not like "wet feet," that is to say, water must never be allowed to stand about the roots in little pools; this will cause them to rot, or "damp off."

Sweet peas should never be planted two successive years in the same soil. You can plant in the same locality, but to get the best results you should change the soil. I have tried several methods of planting, but have found a trench system the most satisfactory. I dig a trench ten inches deep, the width of a spade, removing the earth as I would for a drain. Then I cover the bottom of the trench with about four inches of well-rotted horse manure (purposely avoiding cow manure) and tramp it down well. On this, I place two inches of finely-pulverized earth, upon which I sow my seed in two rows, three inches apart, and the seeds placed alternately three inches apart, thus—

This method will give plenty of room for each root, and enable you to place your strings between the two rows. I always use a line stretched along the trench, as a guide to keep the seed rows straight when planting. Now cover the seeds with one inch of finely pulverized soil, and over this put one inch of pulverized sheep manure, if you can get it, or well-rotted horse manure, if nothing better can be obtained, or a thin covering of fine bone meal.

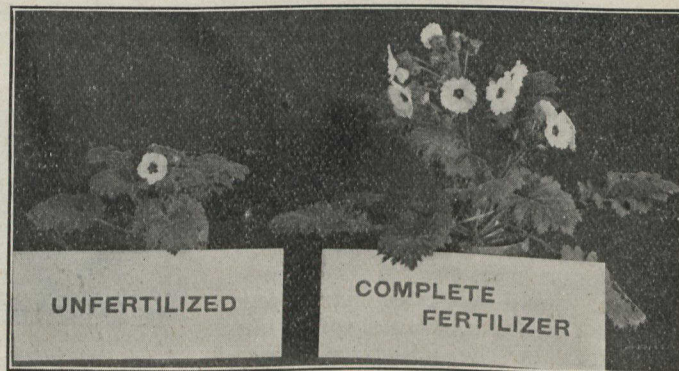
Fill in the trench until a little higher than the walls, so that during heavy showers, water will not stand upon it. The seeds will now be four inches deep, thus insuring coolness and plenty of moisture. Planting time should be as early as you can possibly work the soil. With seeds so deep, there will be no danger of frost blighting them. The roots strike down and provide for strong healthy growths. From this method, last year, I had King Edward VII nearly eleven feet high. They were planted on April 18, began blooming on July 15, and continued to throw fine, large flowers until October 23, when the frost killed them. I never raised more thrifty sweet peas, and I shall plant thus until I learn a better method.

I have made a practice of giving sweet peas a mulch of grass cuttings to keep the roots cool and moist. When this is done it is not necessary to water so often. But I usually spray my vines every evening for a few minutes, after they begin to bloom, to keep off the red spider. I also make a practice of treating them to a good soaking of liquid

manure once a week. I do not put this directly upon the vines, but make a small gutter at the side of the row and pour the liquid manure into it. This soaks in about the roots and is more effectual than if put directly upon the row. Always replace the grass mulch after each application of the liquid manure.

INSECTS AND DISEASES

The only insects that trouble sweet peas are the red spider and the green aphid or "pea louse." These can be kept off by spraying with a strong solution of salt, say a good handful in about a gallon of water. The sweet pea blight is a disease which causes the vines to turn yellow and die. This is due to dampness. Too much moisture in the soil should be carefully avoided. When vines turn yellow, stop watering, and remove the grass mulch for a while. A sprinkling of wood ashes is often a very good treatment in such cases.



Effect of Fertilizers on Primulas
See next page

Flowers should be gathered in the morning, and placed in water as soon as possible. Keep the vines clear of faded flowers and let none go to seed, except on a few vines that you have specially selected. Cutting vines back is also a good method of improving the bloom. A careful observation every morning will teach more lessons than articles of this kind, and will afford you greater pleasure and success.

An easy bulb to handle is the Chinese sacred lily, either in water or in soil. It will bloom in six weeks.

Achillea Ptarmica.—The achilleas or yarrows are plants of easy culture. They are ornamental both in flower and foliage. Variety "The Pearl" is the best for a display in the garden and for cutting. This variety continues blooming all summer and fall if planted on a damp piece of ground. Flowers are pure white and double, and are produced in the greatest profusion, growing to about three feet high.—Roderick Cameron, Queen Victoria Park, Niagara Falls, Ont.

Manuring Flowers and Pot Plants

Otto Herold, Waterloo, Ontario

EVERYWHERE market gardeners are awakening to the fact that artificial fertilizers must be used in order to reap the largest possible harvest from their fields. By a judicious application of plant food to the potato or vegetable crop, it is a common occurrence to obtain twice and even four times the amount of money invested.

For a long time people thought that flowers and pot plants did not require any artificial fertilizer, but experiments have discredited this belief. As a rule, pot plants, shortly after being transplanted, are somewhat retarded in growth and lose their fresh and brilliant color. The reasons given for this are, first, because the nourishment contained in the small quantity of soil in the pot is soon exhausted and partially leached out by the frequent waterings; and, secondly, because the amateur gardener is unable often to procure first-class potting soil.

Most people have their flower garden on the same piece of land year after year; consequently it is no wonder that the soil is gradually exhausted of its fertility, and a deficiency of available plant food is the outcome. In many cases the required elements are not replaced when stable manure is applied, because the nitrogen is in excess in proportion to the amount of phosphoric acid and potash present, thus causing a rank, leafy growth with only a few flowers.

One will be surprised at the wonderful results accruing from a judicious and economical application of potash, phosphoric acid, and nitrogen to pot plants

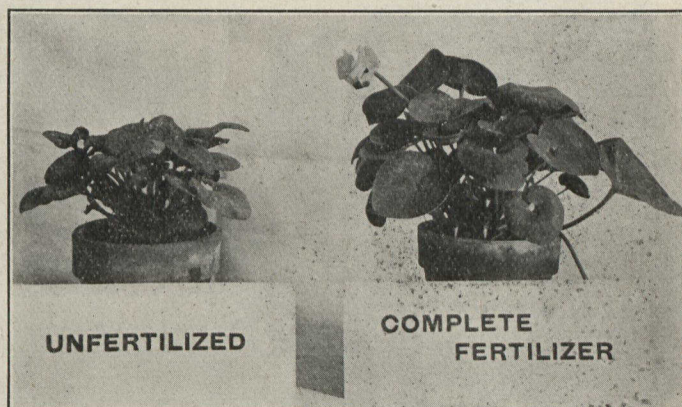
and flowers. Ordinary fertilizers, as used for field purposes, may be applied with a fair degree of success, but owing partially to their insolubility they should be mixed with a top soil before potting the plants. It is much better to purchase the separate ingredients and the following amounts have been found by carefully carried-out experiments to suit the requirements of most garden soils. Per perch: Superphosphate, three pounds; sulphate of potash, one and a half pounds; sulphate of ammonia, one and a half pounds, or nitrate of soda, two pounds.

As has been previously stated, these contain very small quantities of the necessary ingredients in an available form, and though good results may have followed their use, yet for pot plants it is much preferable to obtain the highly concentrated chemicals, as it is generally necessary to apply in a liquid form. The following mixtures are recommended: one part nitrate of potash (salt-petre); two parts superphosphate, eighteen to twenty per cent.; two parts sulphate of ammonia, or two parts nitrate of soda. Dissolve half an ounce of the mixture in one gallon of water and apply say once a week, being careful not to allow the liquid to come in direct contact with the foliage.

In the minds of many people a fertilizer is a term usually associated with an unpleasant and disagreeable smell, similar to guano or animal refuse; but this mixture is odorless, clean and very convenient to handle.

The accompanying photographs of flowers are representative experiments that we conducted last season. The results are so pronounced that no further comments are necessary. Suffice it is to say that the plants fertilized produced larger and finer flowers of a much healthier growth.

There is no surer way of one becoming convinced of the great value of artificial fertilizers in manuring than by making a small experiment with flowers in one's own garden and also with pot



The Result of Fertilizer Experiment with Cyclamen

plants. Knowledge gained in this manner will be of inestimable value.

Varieties of Euonymus Worth Growing*

Roderick Cameron, Niagara Falls, Ontario

EUONYMUS radicans and several other variegated forms of *Euonymus* are quite hardy here. I find, however, that they are the better of some protection from the sun in spring when frozen, otherwise the foliage will burn badly. The plants should be planted on the north side of the wall or fence. They will do grandly among large rocks, to cover stumps or climb up bare trunks of trees for three or four feet. *Euonymus linearis* may be used to good advantage for the same purpose. This one makes a very neat vine against a verandah pillar. It is quite hardy

and fruits early in the fall. *Euonymus Japonicus radicans* and the several variegated forms make grand borders if planted around beds of evergreens.

The above varieties, as well as the common bearberry, *Arctostaphylos uva-ursi*, periwinkle, *Vinca minor*, along with our native *Euonymus Americanus*, variety *obovatus*, make good subjects to plant in shaded places, under trees where grass will not grow. There are many such spots in our parks and private grounds. On the other hand, these plants will accommodate themselves just as well to be planted on dry, sloping banks. For either purpose, place some rocks among the plants. The rocks will catch and retain the leaves about the plants to

protect them until spring, when they can be taken away. It is at this time that the plants will show themselves to good advantage, making such spots green at once.

I have in my mind, at this moment, the front of the Government House grounds in Toronto, facing on King Street. I question if there is a worse-looking spot to-day on any private grounds in Canada, where they should be the best. I do not want to be misunderstood. I mean only the front facing King Street, a wide, bare stretch of ground and not a green leaf or blade of grass to be seen there.

There are a number of grand deciduous varieties of *Euonymus*, spindle tree,

*The creeping euonymus, *Euonymus radicans*, described in the January issue, is hardy in Canada only near Niagara Falls and in the favored districts of British Columbia.

strawberry tree or burning bush. I find the best to be *Euonymus latifolius*. The foliage of this one is the best of all. The fruit is the largest and the earliest; therefore, done before winter comes. The brightest during the winter and one that attracts the attention of all passers-by is our American variety, *Euonymus atropurpureus*. The best evergreen varieties for tubs are as follows: *E. Japonicus*, *E. argenteo varie-*

gatus, the leaves are edged and marked white, one of the best; *E. aurea variegatus*, leaves blotched yellow; *E. albo variegatus*, leaves with white margins; *E. medio-pictus*, leaves with a yellow blotch in the middle; *E. aureus*, golden leaves; *E. Duc d'Anjou*, leaves large and a bright green, variegated with yellow and green in the middle.

All the *Euonymus* are easily grown from cuttings. They are among the

very best ornamental plants. The evergreens are very showy and useful plants for tubs. I grow them in wire baskets. I plant them out of doors during the summer, basket and all. When the cold weather comes in the fall, I take the plants up and plant them again in a cold storage cellar for the purpose, where these and many other plants have stood seventeen degrees of frost without apparent injury.

February Hints for Amateurs

NOT much can be accomplished this month in the actual growing of plants, but much can be done in planning and preparing for the sea-

flower for bedding out by starting the seeds now in the window. If you do not start them yourself, you will have to buy from the florist. Seeds of

THE WINDOW GARDEN

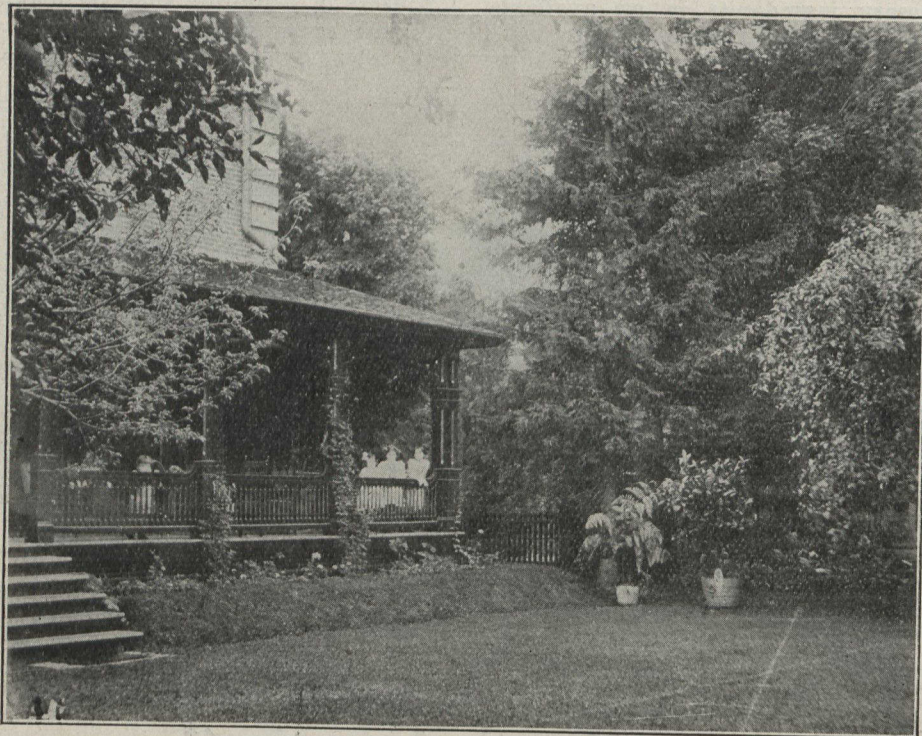
The successful winter culture of window plants depends, in a large measure, on the window itself. A very high temperature at mid-day and a low temperature at night is not beneficial to the growth of plants, and often induces the presence of insect pests and fungous diseases. An ordinary house temperature of about 50 to 55 degrees at night and 60 to 70 degrees during the day, will furnish the most desirable conditions for most window plants.

A moist atmosphere also is desirable but it is often difficult to obtain, as the surroundings are not adapted to using much water. The difficulty may be overcome somewhat, however, by spraying or sprinkling the foliage of the plants on fine, sunny days. If this is not practicable, sponging the leaves will answer the purpose. Once in two weeks is often enough for this sprinkling or sponging. Hairy-leaved plants, such as the Rex begonia, should not be sponged.

A close watch should be kept for insect pests. Prevent their appearance by sprinkling or sponging the foliage as already mentioned, and by keeping the plants healthy and growing well.

Towards the end of the month, fuchsias that have been resting all winter may be started into growth. If it is desired to start the old plants into bloom once more, bring them to the light and prune back slightly so as to make a shapely plant. Apply water gradually. When new shoots or leaves make their appearance, repot the plants into the same sized pots, but in new soil, composed of two parts of rich, light loam, and one part each of sand and leaf soil, mixed well together. Give plenty of drainage. Water well at the time of potting. New plants may be propagated by taking the young shoots that appear and using them as cuttings to be started in sand.

Fall propagated geraniums should be shifted into three and one-half



A Beautiful Garden Effect and Lawn Worth Working For

Residence of Mr. A. Alexander, Hamilton, Ont.

son that is to come. Seed and plant catalogs should be secured. Some of them are reviewed briefly in another column of this issue. These catalogs are of interest, not only for the lists of varieties that they contain, but also for much valuable cultural advice. Look them over carefully and make your selections early. Acquaint yourself with the novelties that are offered and select a few of them for trial. While novelties are worth trying, stand by the old reliable varieties until you discover a novelty that has proved its worth.

SOW SEEDS IN FEBRUARY

Early summer flowers may be had in the conservatory, and plants in

lobelias, cockscomb, verbenas, double petunias, sweet sultan and the Vernon begonia may be sown in pots or boxes towards the end of the month. These will produce nice plants for hanging baskets and window boxes. Sowings for bedding-out may be made about the first of March. Early sweet peas may be had in the garden by sowing a few seeds now in pots or boxes for planting outside when the time comes.

Late in the month and after the first of March, seeds of beets, cauliflower, lettuce, string beans, and so forth, may be started in the window. When large enough, they should be transplanted to a cold frame.

inch pots, and potted firmly in rather heavy soil. Cuttings may be taken from these plants in from three to five weeks.

A few tuberous-rooted begonias may be put in moss or sand to start them off before potting. They are easily handled and give great satisfaction.

FORCING TWIGS AND BRANCHES

Much pleasure and interest can be had by forcing into bloom a few twigs and branches in the window garden. Cut a few twigs of forsythia, Japanese quince, lilac, dogwood, maple, elm, willow, alder and the various fruits, such as pear, apple, peach, plum,

cherry or currants. Put them in vases of water in a sunny window. For the larger twigs and branches, large jars are better than vases. Change the water every three or four days, and keep it sweet by placing a small piece of charcoal in the jar. The twigs must be cut clean and slanting.

How a Horticultural Society May Succeed*

Rev. A. H. Scott, M.A., Perth, Ontario

HOW to expend to the best advantage the funds at the disposal of horticulture in Ontario, is a subject which, as it appears to me, no one person should assume to treat exhaustively. We know in part. Conditions vary. Some of our money is in the local treasuries. Some of it is in the hands of the Government. Some of it is in private hands, ready for use when friends of the garden and appreciators of the soil shall have influence sufficient to open the doors for a larger knowledge of nature's operations. But if we are disposed to listen to what others have done, and if others will think well of our well-meant endeavors; moreover, if with good judgment and high purpose a growing number of us will suggest, and follow up suggestions with patient endeavor, there is no reason why this favored province, in this western world, should not soon be a great deal more like a well-kept garden than it is to-day.

Let me proceed through a concrete instance. The horticultural society of Perth is desirous of being a helper in the horticultural cause of Canada. You know of that phase in our make-up which disposes us to think well of our own. Now, in my spot in Ontario, we have a pride in clean streets. We glory in overhanging trees. We advocate well-kept lawns and good gardens. About our premises in summer you may notice the product of intelligent cultivation, and if you visit us in winter we will show you something that is rewarding in the indoor culture. A part of our pleasure

is the result, I believe, of a certain expenditure for the bulbs and shrubs that reach us through the Perth Horticultural Society.

in some measure by attachment to Him through whose grace and power the dead are to rise again; in some measure, too, out of respect for the memory of the



The City Beautiful Demands the Adornment of Church Surroundings
The cut illustrates the garden of St. Sulpice, Montreal.

It soon became impressed upon our members that they were scarcely justifying their horticultural existence by confining that attention to the cultivation of those niceties which were largely for their own personal or household use. So they looked about and attention was fixed upon the places where many pioneers in the Perth district were sleeping. A new piece of land had been purchased for a general cemetery, and when the community began to bury its dead in the large place, the old grounds came to be neglected. Prompted, no doubt

departed, and in great measure by that sense of propriety which is shocked to see the stone wall of a sacred place broken down, and mounds that should be putting forth green grass grown over with nettles, our society contributed out of its own funds and added to those through personal solicitation among the townspeople, with the result that the old burial grounds belonging to the Presbyterians, Anglicans, Methodists and Roman Catholics, have been made new. Perhaps no expenditure has given more satisfaction to our members and to

* A portion of an address given at last convention of the Ontario Horticultural Association.

our citizens than this upon God's Acre.

Some of the funds belonging to our society have been expended in various ways along the line of civic improvement. Ornamentation of public buildings with blooming boxes and hanging baskets has been done. The society has helped to prepare the way for beautifying the grounds about the place, which is conspicuous when we are leaving our homes and returning to them again at the season of travel. Our most recent service was one in which we were associated and assisted by one of the departments of the Dominion Government. A waterway leads from our town to the Rideau, which again opens on the one side to the St. Lawrence River and on the other to the Ottawa. The basin at our end is the head of navigation. The banks were unkempt. But now the government of Canada and the Perth Horticultural Society, having joined hands in the enterprise, there is a new order of things since the banks of the Tay were subjected to the skill and culture of the landscape decorator.

These are sample instances of what has been done in a single place. Expenditures for kindred purposes in places where other conditions obtain would seem to be the advantage of the localities and in keeping with the right trend of horticultural society endeavor.

Taking a wider outlook it appears to me that open doors are presented to us in the three following directions:

1. We should be free to expend money to bring in men and women who are capable of making the public platform

calling is time-honored and respecting, but it is too bad, inasmuch as right gardening is intellectual employment, that so many fine acres should be locked up because so many operators on the soil are uninitiated and uninformed. There is a power in the living voice of an interested personality who will provoke enquiries from the platform and send audiences away with a new charm for the most beautiful, most useful and most noble employment of man.

2. There was never a time in the history of Canada when there was so significant a call to furnish our people with reliable and inspiring horticultural matter through the printed page as that which we have come to just now. The intelligence of the Canadian, I believe, forbids the success of any venture in publication that is characterized by what is scrappy or second-hand. There is a great deal that is hopeful in the tone and talent which we read through some of our Canadian journals that devote themselves wholly or partially to the agricultural or horticultural cause. May these broaden and prosper! I, for one, have great expectations of our CANADIAN HORTICULTURIST. All honor to those in the earlier days who brought it up to what it is to-day. But from this on everything should be done that lies in the power of our officials and membership to enlarge its constituency, to brighten its articles, to fortify its editors, and to furnish for our people in this part of the world the ripest and best in horticulture. We want this magazine to be first in its line, and I believe we have

opportunity to express my own concern, as well as the concern of other thinking men, if the present school books of the province are to be changed, that the new ones should have a conspicuous place for the first enterprise of the nation. Military training in the public schools in the Maritime Provinces is spoken of as part of a plan about to be executed. If in the Maritime Provinces, why not in all the provinces? If boys and girls in Nova Scotia are to have special instruction in the science of killing men, let Ontario, and the sister provinces on to the Pacific Ocean, be made proficient in it as well, the prayer going up all the while that we may never be called to put it into exercise.

Next to the work of saving men's souls in Canada, I can conceive of no more important work to be done during this generation than the training of our children into appreciation of the Creator's gift in the soil, and in the best use of that gift both for the development of a sturdy Canadian manhood, and for the enlightened projection of our country's chief resource. We receive from the government of the province a part of our wherewith for promoting the horticultural cause. We look for the utilization of some of the moneys contributed by the Province of Ontario exchequer in laying new and improved foundations with our sons and daughters by means of the very best procurable lessons in the new series. It may be too early to go into detail. But if a forecast would be pertinent, it may not be inopportune to write here the expectation that when the new series of readers for public schools of the province shall have taken the place of those which have served their day, there will be afforded scope for definite and rewarding considerations of such fundamentals in the soil as drainage and tillage, as clover and fertilizer; and that the right association will be set forth for the twentieth century citizenship in this Canadian realm between a bed of asparagus and health, between a perennial border and happiness, between the "chief end of man" and a "watered garden."

I find many useful and instructive articles in THE HORTICULTURIST.—H. F. Leonard, City Clerk, Brantford.

Cherry trees need but little pruning after the young tree has been properly formed.

Renovating measures may be said to assist in the judicious removal of feeble, decaying tops and branches and in encouraging fresh root action.

To have satisfactory results in the flower garden, make your plans now. Do not plan for more than you can easily do. Quality is of more importance than quantity.



Countless Effects May Be Produced in Landscape Art

a disseminating place for healthy horticultural information. Dr. L. H. Bailey tells of an owner of land who, not knowing reasons for anything, has no inspiration, and goes fishing. The fisherman's

the conditions in Canada for making it that.

3. At the risk of being less definite than I should like to be in this concluding reference, I take advantage of this

Planting and Managing Hydrangeas

J. H. Thomson, Toronto

THERE is probably no flowering shrub grown in Canada that gives such universal satisfaction, pleasure and delight, as the outdoor *Hydrangea paniculata grandiflora*. While lilacs, syringas, spiræas, and other shrubs

prepared and rich. Every spring the plants should be severely pruned back, as the new blossoms always come on the tips of that season's growth. For this reason, it should be spurred back, leaving only a couple of buds on last season's



A Nice Group of Hydrangeas—One Season's Growth.

In front of verandah last summer at residence of Mr. J. H. Thomson, Toronto

of this description are beautiful in their season, they last only a very short time. Hydrangeas, on the other hand, do not flower until midsummer, when no other shrubs are in bloom. It starts to form its blossom about the latter part of July, and gradually increases in size and beauty throughout August, and attaining its greatest perfection about the first or middle of September, and lasts right through until cut off by the frost in October. It commences a beautiful creamy white, which, as the season advances, deepens into a rosy pink.

The flowers are formed on the end of the season's growth, and come in immense panicles which, in well-trained and cultivated plants, sometimes run eight to ten inches in length, making it the most handsome and showy of all flowering shrubs. The blossoms, if cut before frost, can be used with great effect for interior decorations, and will last and hold their color for some time.

This shrub is planted to greatest effect in mass, being used for borders, beds or hedges. One of the most popular ways of planting is to plant in mass at the base of a verandah, as shown in the accompanying illustration, which shows one season's growth of shrubs planted twelve inches apart.

The hydrangea is perfectly hardy and easy to grow, but will attain a more luxuriant growth if the ground is well

wood, which would shorten them an inch or two in length. This will allow the whole strength of the root to go into only a few branches, which, having the whole strength of the plant, will attain a large size, and consequently form immense blossoms, which would be many times the size of the small flowers which would form if the plant were not pruned.

Care should be exercised in watering with hose or watering can, to see that the water is not allowed to go on the leaves as they are apt to rust. In the growing season, however, the hydrangea needs lots of water, but this should be sprinkled on below so that it will not come in contact with leaves in any way.

Plants can be secured from any reliable nurseryman for a reasonable sum. Two years old is the best age to plant. Before setting out, prune back with a sharp knife or pruning shears as mentioned above.

Canadian Peaches

W. T. Macoun, Ottawa

From the fact that peaches are propagated on peach stocks grown from stones of cultivated varieties of peaches more good seedlings have been noted than of pears and plums, as if the budded variety dies the stock will often grow up and produce fruit. Only three varieties, however, need be specially mentioned. These are the Banner,

Fitzgerald, and Tyhurst, the descriptions of which are taken from "The Fruits of Ontario":

BANNER

Banner is a popular late market peach among the Essex fruit growers. Origin, Essex County, Ont.; first fruited on a large scale in 1903. Tree, hardy and productive; fruit, medium to large, round; color, yellow with red cheek, attractive; flesh, yellow; texture, fine grained, moderately juicy; flavor, rich; quality, good; value, market first class; season, early October.

FITZGERALD

Since the Early Crawford has been such a popular peach both for home use and market, every new introduction of a variety which is of the same class has been welcomed by the public, especially where it may be used to extend the season. The Fitzgerald is not so large as the Early Crawford, but to many, the flavor is finer for dessert, and its season is a trifle later. Like the latter, it is too tender for very long shipments. Origin, in the garden of Mr. Fitzgerald, Oakville, Ont., about 1805; tree hardy, healthy, and productive; fruit, medium to large, roundish ovate; color, bright yellow, covered with deep red; down, moderate in quality; cavity, broad and deep; apex, a small point in a slightly depressed basin; suture, distinct; stone, free; flesh, yellow, with red at pit; texture, tender and juicy; flavor, excellent; quality, dessert good; value, home market first class; season, early to mid-September in Niagara district; adaptation, one of the hardiest varieties and successfully grown in Georgian Bay district.

TYHURST

Tyhurst is a very attractive golden yellow peach; considered a profitable variety for the commercial orchard. After fruiting it several years at our Maplehurst station, we think its value has been somewhat over-estimated. Origin, a seedling raised by Mr. Tyhurst, of Leamington, Essex County. This gentleman was so pleased with the peach that he planted nearly his whole farm with trees grown from its pits, and made considerable money out of his venture. Tree, moderately vigorous, quite productive, fruit is inclined to drop as soon as ripe; fruit, medium, ovate; suture, distinct on one side, terminating in a small black sharp point; color, deep yellow, with tinge of red in the sun; skin, separates easily from the flesh; flesh, free; color, pale yellow; texture, very tender, fine grained melting, juicy; flavor, excellent; quality, dessert very good to best, cooking very good; value, home market first class; distant market, second class because too tender; season, mid-September.

Growing Asparagus Ferns From Seed

AMONG the most charming and beautiful of foliage plants are the asparagus ferns. The most popular varieties are *Asparagus plumosus nanus* and *Asparagus sprengeri*. Plants of either species start readily from seed.

Use a light, spongy soil. Leaf mould is excellent but, if not obtainable, soil taken from around an old straw pile in the barnyard will do. The soil should spring back slightly when pressed.

Before planting the seed, soak them in warm water for twenty-four hours. Start them in pots or a box. As soon as the first fronds of the plants are two inches high, they should be transplanted to small pots. They will transplant more readily without injury if the soil is allowed to dry slightly before handling.

The pots should be well-drained, with charcoal if possible, or pieces of a broken flower pot, as it will keep the soil sweet. When transplanting, the soil should be pressed firmly about the roots and watered sufficient to moisten all the soil in the pots. Shade the pots for a day or two. Four-inch pots should be used when it is again necessary to shift the plants. When this is required, allow the soil to dry out a little, but not entirely, and it will be a comparatively

easy matter to perform the operation. Run a knife around the inside of the pot to loosen the soil. Turn the pot upside down, one hand covering the soil and the other hand grasping the bottom of the pot, and by firmly tapping against some hard surface, the soil is easily removed in a compact lump. After the drainage material has been placed in the bottom of the pot, add enough soil to bring the crown of the plant level with the top of the pot, add fresh soil around and press firmly, water as before, and keep the plants shaded for a few days.

While constant shade is unnecessary, neither of the varieties mentioned should be placed in a warm, sunny location. Extreme heat retards their growth and sometimes causes them to droop and die. Keep the plants fresh and healthy by spraying with cold water once a week. A whisk broom may be used for the purpose if a plant sprayer is not available.

A few of these plants will be welcomed in the home. They are dainty in the sitting-room. Cut fronds make an exquisite finish for a bouquet of flowers or for floral decorations on the table. The foliage is useful for all decorative purposes.

the leaves, they were better and there were no brown tints.

In summer, the beds close to the glass turned with the heat and in the winter, they get cold from the glass. He decided to raise the houses and the new range he is building will be kept high. He has not yet determined on the width of the houses, but he thinks that he will have them fifty feet, single span.

Something was said about hot water and steam heating. Hot water was employed all through this plant, but the new carnation houses the owner put up has a steam plant and separate power house. He now intends to have all his buildings heated by steam. He must have some very strong reason for that because he has a first-class hot water plant. He tried experiments with movable sash houses, and he says it did not pay him to do it.

The big point in connection with greenhouse work is labor. With the idea of building large houses comes the idea of cultivating the inside of the house with horsepower. In North Wales there is a greenhouse that covers two acres of ground, and I see no reason why it could not be cultivated the same as two acres of fields. It is simply necessary to have the door made large enough to drive a team in. A good many growers are doing this and cultivating just the same as they would in the field. There is only one thing in the road and that is the heating pipes in the roof overhead and on the side walls. It would not do to have these pipes too near the top. If placed about seven feet from the ground, the ground would be clear, and in a large house the heat would be practically on the lower strata.

Greenhouse Construction*

R. W. King, Toronto

IF you want to put in steam heat, don't go to a novice. Go to some one who understands steam heating if you want to ensure success. It is well enough to get up a design, and you may think you have the thing first rate, but it requires time and experience to find whether or not it is going to work.

We have had a considerable discussion on ridge and furrow houses. The ridge and furrow house is a serious problem in locations like Ottawa, Montreal and Edmonton, on account of the snow getting on the roof. It is only of late years that it has been thought practicable to put up ridge and furrow houses in the neighborhood of Montreal. It has been rendered practical by the adoption of iron gutters. The snow does not lie on the iron gutter, but will melt away. By placing a hot pipe each side of the gutter, you can bring the snow down very fast. If a man is near a city where land is valuable, he cannot afford to put up separate houses.

One of the largest vegetable growers in Canada, near Montreal, has a new range of connected houses and in spite of the fact that they have stood two

seasons, he is nervous. When they have a large snowfall, he is afraid his houses will not stand, and he has props ready in case of the failure of the roof. His present idea is to build a separate span, and he wants a house forty to fifty feet wide. He has sixty acres of ground and cultivates the ground between the houses. Thus he uses more land than the glass covers. He grows 500,000 heads of lettuce and gets about four crops a year. He has about 75,000 roots of rhubarb.

These new houses were put up for the purpose of raising carnations, but he now grows lettuce in them, and finds that the lettuce does much better in this house than when he had it in the old. His old houses were fifty feet wide and the glass started one or two feet from the ground, and there was a great deal of timber in the roof. He found that the lighter the houses were constructed, the better stock he grew. He is so much impressed with the improvement in the higher houses that he is going to use them. One fault he found was that, when the lettuce was close to the glass, the leaves turned brown on the edges, but in the centre of the house, where the glass was high and away up above

Sowing Tomato Seeds

Angus McInnis, London, Ontario

There are different ways in which tomato seeds may be started. Those for early use I plant in the greenhouse.

Take any box about three inches deep. To the depth of an inch place rich earth, then fill to within half an inch from the top with poorer earth. Pack very firmly with a brick or block of wood and it is ready for the seed, which must be sown as evenly as possible.

Sift clean sand over the seed such as is used for plastering or lake shore sand. My reason for this is that the plants come up better. When the seedlings are coming up they often push the earth up in great bunches and, should the weather change at this point, the young plants are liable to be chilled and die while under the earth. When coming up through sand, it falls down around the stem of the plant, especially when watered. I always use water which has had the chill taken off, as cold water keeps them back. In about four or five weeks I transplant the seedlings about three inches apart each way.

*A portion of the discussion on Mr. J. D. Fraser's paper that was read at the last convention of the Ontario Vegetable Growers' Association, and published in the January issue of THE CANADIAN HORTICULTURIST.

Growing Celery for Profit

R. J. Bushell, Williamsville, Ontario

A BRIEF account of my method of growing early celery may be of interest to the readers of THE CANADIAN HORTICULTURIST. Beginning about the first of March, a hotbed is prepared. Care should be taken that too much manure is not under the bed. Excessive heat is not required to germinate

put the earth on a week before sowing (to the depth of six inches) to allow weed seeds to germinate. After the celery seeds are sown, I shade the glass with some covering for about a week. Then I remove the covering and air the bed as much as possibly can be done at that season of the year.

two inches, I transplant into a fairly warm bed, allowing between 300 and 400 for each sash. By May 24 the plants are ready for the field.

My soil is a loamy one with a tendency to clay. To this I give a liberal dressing of cow manure the fall previous to planting. In the spring I find the manure is well incorporated with the soil. I do not trench my celery, but plant on the level in rows three feet apart, and plants six inches apart in the rows. Two hours before removing the plants from the hotbed, I water freely and remove the plants with a good ball of earth to each root. I press this firmly in my hand. By so doing, plants receive but very little set-back.

I start to set my plants out in the field about three o'clock in the afternoon and continue till dark, which gives the plants a chance to take hold during the night, and they are better able to resist the sun of the following day. If the weather is dry, I water before and after planting, and do so every three days till the plants are well under way.

When the plants are about a foot high, I give a light cultivating. After which, I remove all the weeds between them and continue cultivating every fortnight until the plants are high enough for bleaching (which should be about the latter part of July) for which I use boards from twelve to fifteen inches high. The crop should be ready for market about the middle of August.

My late crop for winter receives the same treatment as the preceding, but, of course, the seed is sown later and the plants set out in the field later. Give particular attention to seed selection.



First Prize Celery at Kingston Horticultural Exhibition

It was grown by Mr. Bushell. Note yard-stick at bottom.

celery seed. It is better to have the seed germinate slowly, as it gives a stouter plant and one less liable to dampen off.

About two weeks after the hotbed is first started, I sow the seed. I usually

I seldom water the bed. The earth is usually moist enough until the second leaf is formed. Too much water, excessive heat and insufficient ventilation are causes for damping off. After the plants have attained a growth of about

The Fruit Lands of the Okanagan

The third of a series of articles on fruit growing in British Columbia, written by a staff representative of The Canadian Horticulturist, who recently visited the leading fruit districts of that province.

THE name, the "Okanagan Valley," is applied usually to the land lying south of Sicamous Jet. (on the main line of the C.P.R.), bordering on the Spallumcheen River, and the land on both sides of Okanagan Lake as far south as Penticton. Such well-known fruit sections as Enderby, Armstrong, Vernon, Coldstream Ranch, Kelowna, Peachland, Summerland, and Penticton, are situated in this district.

It has been only during the past few years that land in this district has become extensively known. Fruit has been grown in some of these sections for the past fifteen years, but it is only

recently that proper attention has been given to its development. The nature of the soil varies from a light clay loam at the northern end of the valley to a sandy loam and silt at the southern end.

There is a marked difference in the rainfall in different parts of the valley. Irrigation is seldom required on the land lying between Sicamous and Vernon. The nature of the soil is such that it retains the moisture longer than the more sandy land at the lower end of the valley where irrigation is necessary.

TRANSPORTATION FACILITIES

The transportation of the fruit is by

the Canadian Pacific Railway. Two steamers, the *Okanagan* and the *Aberdeen* (the former built this year), owned by the C.P.R. Co., give a daily service during the summer from Penticton to Okanagan Landing and return, calling at Summerland, Peachland, Gellatley, Kelowna and other ports. The *Aberdeen* is used mostly for freight and makes irregular trips as business requires. At Okanagan Landing the fruit is transferred to C.P.R. fruit cars, that are placed on the wharf beside the steamers; from Okanagan Landing the fruit cars are taken on fast trains through Vernon and Armstrong up to the

main line, with which connections are made at Sicamous Jct. From that point the cars make quick time to either the coast or northwest points.

Several methods of improving the service are under consideration by the railway companies. One is the sending of the cars on barges as far as Kelowna, which would permit loading at that point and do away with breaking bulk until the cars' destination is reached. Another is the extension of the C.P.R. from Midway to the lower end of Okanagan Lake. Still another was mentioned to our representative when in Penticton. The Great Northern Railway is extending its lines in the Similkameen Valley through Keremeos. It is from this point that prominent land owners are endeavoring to have the G.N.R. build a branch to Penticton. If this latter plan is carried out, it will give a shorter route to the coast and to the northwest for fruit grown in southern Okanagan districts, as the G.N.R. will ultimately serve both of those sections.

KINDS OF FRUITS GROWN

The Okanagan district as far south as Kelowna is becoming well known for the high quality of its apples and small fruits. South of this point—in Peachland, Summerland, and Penticton, the land is more suited for the growing of peaches and strawberries. The climate is a few degrees warmer, and the rainfall less than in the northern part of the valley. Large crops of peaches, reported of excellent quality, were harvested at Peachland during the past season.

CABBAGES AT ARMSTRONG

Vegetables are grown in large quantities, as was shown our representative while at Armstrong. One of the largest vegetable farms in the valley is known as Irish's Cabbage Farm. Mr. O. J.

of cabbages were planted this year, which produced 160 tons.

These were not all marketed at one time. Early cabbages were ready for sale in July and from that time until late in October there was a continual harvest. Large quantities of the cabbages maturing late were stored for winter shipping, which will be continued until next May. The cabbages were



Pruning on Coldstream Estate

planted close, which prevented the growth of monster specimens, and gave a more marketable size. The crop was averaging twenty tons to the acre, and brought \$18 to \$35 a ton. This year Mr. Irish utilized part of his land to grow potatoes; one acre produced fourteen tons, 140 pounds, which were sold for \$20 a ton. Mr. Irish expects to plant forty acres next year, which will necessitate the erection of a cold storage plant.

VERNON AND VICINITY

Our representative drove from Arm-

of Armstrong is controlled by The Kirton Orchard Co., of Winnipeg. The land appears to be well suited for the growing of apples and small fruits. On a farm adjoining this property is an orchard that is producing large quantities of apples. Grapes and walnuts are also grown to maturity. Irrigation is unnecessary as the rainfall is ample to afford all the moisture necessary for the crops. The land is covered with a light growth of timber and it is easily cleared.

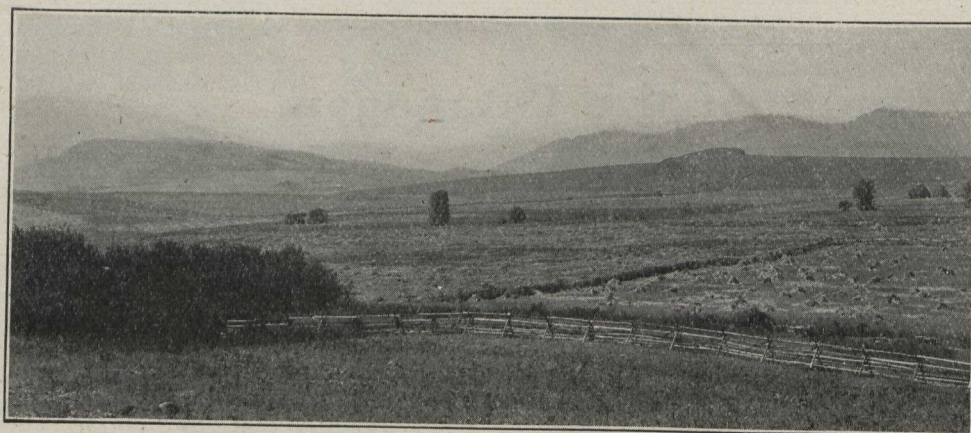
Lakeview is another property well adapted to fruit growing, to which another addition has recently been made by Judge Spink's orchard. Part of this land is planted with fruit trees which will be in bearing next year. Mutrie & Mutrie, of Vernon, are subdividing their property, and should find no difficulty in disposing of it owing to its excellent location.

Vernon is beautifully situated where the roads radiate leading to the northern towns, to White Valley and Kelowna and to Grand Prairie and Kamloops. rich fruit and farming lands on every side. The town is the largest in the Okanagan Valley and is one of the largest shipping points for fruit in British Columbia. Most of the fruit grown in the vicinity is sold through the Farmers' Exchange, an association operating on similar lines to the co-operative associations of Ontario. Mr. T. G. Wanless, the secretary, believes there is a bright future for fruit growing in the district around Vernon. Mr. Wanless has consented to act as the special representative of THE CANADIAN HORTICULTURIST in the Vernon part of the valley.

The Coldstream Ranch, which is the largest orchard in British Columbia and one of the largest in Canada, is located five miles south of Vernon. The great success of this ranch and the high class of fruit produced has made the land surrounding Vernon in great demand by settlers.

At Okanagan Landing, connections are made for Kelowna. This town has been well termed the "Orchard City" of the Okanagan Valley. As the steamer approaches the wharf a fine view of the town and surrounding county is seen. Kelowna lies on bottom lands and is almost surrounded by orchards. One of the best known orchards is owned by W. R. Stirling; it is now in good bearing. Another orchard well worth mentioning is that owned by Mr. S. Sproule.

The opinion was expressed to our representative while in Kelowna that a large amount of the land in this district, which is mostly light loam, would grow good crops without irrigation under normal conditions. During an excessively dry summer would be the only time irrigation would be necessary. System-



Land for Fruit Growing at Vernon, B.C.—Typical of the District.

Irish, late of Sloan, Iowa, believes there is money to be made in the growing of cabbages and potatoes, and while visiting in the Okanagan last year, he decided to locate at Armstrong. Ten acres

strong to Vernon, and inspected many of the fruit farms and properties on the way. There are large tracts of good land which as yet are not under cultivation. One of the largest in the vicinity

atic cultivation would assist in conserving the moisture in the soil.

All of the land at Kelowna being sold by the land companies has facilities for irrigation, if such is required. The rainfall is not as heavy as at the northern end of the valley, nor can Kelowna be said to be in the dry belt. The temperature is never cold such as is experienced in Ontario and the summers are not excessively hot. Plowing starts about the first of March and our representative was able to pick sweet peas and dahlias when there on Oct. 22.

Fruit growing is not in an experimental stage in this district. Kelowna's export of fruit last year was over 1,114,000 pounds. As the value of land is best judged by results it should be mentioned that tomatoes grown on one acre of land (5,000 plants) sold for \$1,700; one-half an acre of strawberries were sold for \$626. Several growers gave ample proof to our representative that the returns from their land had been

valley have learned the lesson that good fruit properly packed is what the markets demand, and they are endeavoring to meet this demand. Splendid crops of tobacco also are grown in this district which is bringing high prices on account of its good qualities. On every side evidence can be seen where the early settler has come and cleared the land and in most instances they are now comparatively wealthy men. Hard work is necessary, but the reward is large.

The steamer stopped next at Peachland. This part of the valley, as its name implies, is a suitable location for the culture of peaches. During last summer the first large shipments of peaches were made from this place. Within the past four years thousands of peach trees have been planted here and at Summerland, a few miles farther down the lake. The excellent climate and soil, in addition to the splendid system of irrigation, makes Peachland

spected a large part of the land and system of irrigation in company with L. W. Shatford, M.P.P., a well-known authority on fruit growing in that section. Land was seen that, previous to the practice of irrigation, had never grown a crop. Since the moisture has been supplied the land has grown some of the largest peach trees ever seen by our representative. Nature has supplied the right kind of soil.

The Southern Okanagan Land Co. have a system of selling their land whereby a purchaser may contract with them to plow, plant, fence, prune and cultivate the orchard until it is in bearing, at which time the owner can build his home and live on the property. Several orchards that are cared for in this manner were visited by our representative in company with Mr. W. F. Kydd, of Simcoe, Ont. Mr. Kydd, who is a well-known fruit grower in Ontario, said that for sturdy growth of trees, cultivation of the soil, absence of weeds, and general thrifty appearance, he had never seen the equal of the land that has been planted and is being cared for by this company.

Eastern fruit growers must not forget that in buying unimproved land in British Columbia they must be prepared to do pioneer work as many of their fathers did when eastern Canada was settled. They can look for quicker and greater returns, however, owing to the facilities afforded by advanced civilization, and the larger markets for the fruits produced.—W.G.R.



Young Fruit Orchards at Penticton, B.C.

equally as good. Fruit from this section has won prizes repeatedly at the large British Columbia and British fruit shows.

The product of the district is looked after by four large fruit packing establishments. The largest of these is operated by Messrs. Stirling & Pitcairn, who buy and pack fruit independent of the local fruit growers' exchange. This firm has such a good reputation as packers of good fruit that Prof. F. E. Sears, of the Massachusetts Agricultural College, recently ordered a box of apples to be sent to the college at Amherst for the purpose of demonstrating the most perfect plan in the packing of apples for export as practised at Kelowna. During last summer this firm shipped cherries as far east as Montreal, where they arrived in excellent condition. The Kelowna Farmers' Exchange also ships large quantities of fruit. The growers in the Okanagan

and Summerland splendid locations for peach orchards.

At the southern end of Okanagan Lake is Penticton, a town that is rapidly coming to the front through its bright prospects as a fruit centre. The property that is attracting the most attention is the old Ellis Ranch. This estate comprises some 30,000 acres of land, extending from twelve miles north of Penticton to the international boundary line, a distance of fifty-six miles. Nearly 25,000 acres of this land can be brought under cultivation by irrigation. The 2,000 acres of bottom lands have been under irrigation for some time, and have been producing some excellent mixed crops. A large reservoir has been constructed that supplies water to the upper benches (as the higher lands are known), on which have been planted thousands of peach and apple trees. Our representative spent several days in the vicinity of Penticton, and in-

Onion sets is a term applied to small onions that are planted out in the spring.

Mushrooms should show in from five to eight weeks, and the bed continue to yield for two or three months.

Closely allied to the onion is the common garlic. It can be grown in the north, but is not so largely used here as in southern countries.

Swiss chard or leaf-beet is grown in the same manner as the common table beet. The fresh leaf stalks are cooked and served like asparagus.

If onions for an early market are required, I start them in a hotbed some time between February 15 and March 1, and transplant them to the outside about April 15. I plant them three inches apart in rows 30 inches apart. Plenty of cultivation is required to secure best results. Onions like a sandy loam better than a black loam, but a good crop can be grown on either soil. They should be ready for market some time from July 1 to 15, depending on the season.—J. MacNamara, Bracondale, Ont.

The Canadian Horticulturist

Published by The Horticultural
Publishing Company, Limited

The Only Horticultural Magazine in the Dominion

OFFICIAL ORGAN OF BRITISH COLUMBIA, ONTARIO, QUE-
BEC AND PRINCE EDWARD ISLAND FRUIT GROWERS'
ASSOCIATIONS AND OF THE ONTARIO VEGETABLE
GROWERS' ASSOCIATION

H. BRONSON COWAN,
Managing Editor and Business Manager
A. B. CUTTING, B.S.A., Horticultural Editor
W. G. ROOK, Advertising Manager

1. THE CANADIAN HORTICULTURIST is published on the 25th day of the month preceding date of issue.
2. Subscription Price in Canada and Great Britain 60 cents a year, two years \$1.00. For United States and local subscriptions in Toronto, 25c. extra a year is charged for postage. Foreign subscriptions, \$1.00 a year, including postage.
3. Remittances should be made by Post Office or Money Express Order, or Registered Letter. Postage stamps accepted for amounts less than \$1.00.
4. Change of Address—When a change of address is ordered, both the old and the new addresses must be given.
5. Advertising Rates quoted on application. Copy received up to the 18th. Responsible representatives wanted in towns and cities.
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 8,000 to 10,000 copies of THE CANADIAN HORTICULTURIST are mailed to people known to be interested in the growing of fruit, flowers or vegetable.

January 1907.....	4,947
February 1907.....	5,520
March 1907.....	6,380
April 1907.....	6,460
May 1907.....	6,620
June 1907.....	6,780
July 1907.....	6,920
August 1907.....	6,880
September 1907.....	7,078
October 1907.....	7,210
November 1907.....	7,250
December 1907.....	7,500
Total for the year.....	79,525
Average each issue.....	6,627
January 1908.....	7,650

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 to believe that any of our advertisers are unreliable, 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,
506-7-8 Manning Chambers,
TORONTO, CANADA

EDITORIAL

A WARNING TO PLANTERS

We think that it is our duty to sound a warning to farmers and fruit growers who are placing orders for nursery stock, fruit trees in particular, for next spring's planting. There will be a large planting of fruit trees the coming spring. Certain varieties that have been in large demand are at the present time very scarce with the nurserymen in both Canada and the United States. This scarcity is due in a great measure to the fact that certain varieties are in large demand, and also that the drought of last season curtailed, more or less, the growth of young trees, so that not as large a quantity graded up to standard as was usual, therefore the amount of saleable stock is short.

Responsible and reliable nursery concerns who guarantee their trees true to name are frank enough to tell their customers that they cannot supply the varieties required, and will not accept orders for those varieties they are short of, but this gives a chance for jobbers and dealers who have no responsible standing, have no reputation to keep up, and who simply want to do a catch trade, to book orders for these varieties (for these people always can fill whatever variety is asked for no matter how scarce the stock may be or how large the demand), but the chances are, that not many of the trees furnished by these jobbers and dealers will turn out true to name. If our large and responsible nursery concerns cannot furnish these varieties which are scarce, what chance has a jobber and dealer who expects to pick up cheap stock, of filling his order with trees that will be first-class and true to name?

We would advise and caution all farmers and fruit growers to find out where their trees are coming from. Find out whether the nursery concern is well rated and of a responsible standing before their order is placed. A man should be just as careful in this matter of buying trees as if he were investing money in stocks or bonds. After going to the expense of buying trees, preparing ground, cultivating and properly caring for them, it is naturally expected that when the trees come into bearing they will bear varieties that will be a source of income and profit for years to come. Often the reverse is the case, when sufficient care has not been taken in ordering stock from reliable concerns whose trees generally can be depended on.

THE SAN JOSE SCALE

Fruit growers soon will be preparing for the annual warfare against the San Jose scale. Many kinds of spraying mixtures will be used. Probably the most effective and cheapest remedy that has been in general use is the lime and sulphur wash. Its objectionable features in the matter of disagreeableness in application have caused many growers to neglect spraying in orchards that should be treated. For this reason, some of the experiment stations on the continent have been endeavoring to discover a remedy that can be more easily and more pleasantly applied. In the December issue of THE CANADIAN HORTICULTURIST mention was made of certain experiments that have been conducted with this end in view by the Storrs Agricultural Experiment Station. The formulas therein recommended are a step in the right direction. It is to be hoped that their application will prove satisfactory to the fruit growers of Canada.

From present indications and from the trend of opinion among fruit growers on the subject, it would seem that oil spraying is going to be the thing in the future. If not the formula recommended by the Storrs Station, some other will be used. All the ingredients necessary for the preparation of the mixture ought to be obtained in Canada as cheap as they can

be in that state. The important point is to secure the proper materials unadulterated. Local dealers are likely to substitute materials utterly unsuited for the purpose. Buyers should allow no substitution. All fruit growers in San Jose scale infected districts should give home-prepared miscible oils a trial.

PROGRESS IN NEW BRUNSWICK

The article in our December issue that told of horticultural progress in Nova Scotia, leads us to ask, "What have the fruit growers of New Brunswick done and what are they doing to get their share of the benefits of our growing fruit trade?" While it must be admitted that the horticultural progress of that province has been slow, it is encouraging to know that there has been, and still continues to be, a steady advance in fruit growing.

The increase in the production and use of small fruits, especially strawberries, has been marked. Many farmers in the St. John Valley are finding that apple growing is much more profitable than mixed farming, and they are giving more attention to their orchards. The result is seen plainly in better fruit, that is handled with more care and that sells readily for prices that give a good profit.

The outlook for fruit growing in New Brunswick is good for those who will apply to the work the intelligence and energy that is necessary for success in this as in other lines of business. With suitable cold storage available at St. John, with frequent regular sailings of steamers for the principal ports on the other side, with regular transportation by water or rail to United States points, and with a good home market, it will be their own fault if the fruit growers of New Brunswick do not get a share of the profits that are being derived from fruit growing in Canada.

The stand taken by Prof. M. Cumming, Secretary for Agriculture for Nova Scotia, against the brown-tailed moth in that province, is to be commended. His efforts to suppress and to exterminate the pest have been fruitful of good results. To assist in the extermination of this pest, the fruit growers and citizens of Nova Scotia can do much. Any person who knows of a locality where the pest is present, in nests or in some other stage of its life cycle, should communicate at the earliest opportunity with the Agricultural College at Truro. If all persons who are suspicious of the presence of this insect would do this, they would greatly facilitate future movements in connection with the suppression of this dangerous pest.

On all sides is heard the story that money is tight, and some persons even go so far as to say that times are hard. While this may be so in a few lines of business, it is far from true when the general prosperity of the country is considered. The condition of the money market has little effect on the fruit grower and farmer. While some growers may feel some pressure from the present condition of the money market, they should not be discouraged. Indications point to a successful and profitable season next year, and the growers should prepare for it.

We will deem it a favor if secretaries of horticultural societies will send, as soon as possible, a list of their members who are to receive THE CANADIAN HORTICULTURIST for 1908. We have over 3,000 horticultural society members' names on our mailing list, and a large number of these expired with the January issue. The secretaries will help us greatly, therefore, by sending in their renewal subscriptions at an early date.

Readers of THE CANADIAN HORTICULTURIST who desire a copy of the Index to Volume XXX, can have same by applying to this office.

Nova Scotia

The most successful short courses yet given at the Nova Scotia Agricultural College were held in January. Over 140 students were enrolled. Lectures were given on live stock, dairying, poultry, field crops, horticulture, insects, and so forth.

The work in horticulture began on Jan. 2 with a talk on the farm orchard by P. J. Shaw, of the college staff. In the evening, an address was given by Mr. R. S. Eaton, of Hilcrest orchard, on "Intensive and Extensive Orchardling." Mr. Eaton, who is one of the most successful orchardists in Canada, gave an account of an interesting experiment being carried on in his orchard, where apple trees used as fillers were set 8½ feet apart, and as they begin to crowd are dug up and reset at a greater distance apart. Allowing for driveways, 500 trees may thus be set to the acre. Mr. Eaton claimed that these fillers would more than pay for themselves before it is necessary to move them.

On Jan. 3, Mr. S. C. Parker, secretary of the Nova Scotia Fruit Growers' Association, gave a talk on spraying, showing why we spray, when to spray, and explaining the important points of a good spray pump. An interesting discussion followed.

Mr. W. T. Macoun, Ottawa, gave an address on some causes of failure in apple orchards, and the remedies. He dwelt especially on the care the trees should receive when they arrive from the nursery, and on the importance of choosing varieties suited to the soil and climate. He recommended the Duchess, Transparent, Alexander, Wealthy, McIntosh, Milwaukee, and Baxter for severe climates. Mr. Macoun spoke, also, on small fruits, dealing with the care they should receive and the best varieties to plant.

On Jan. 4, Mr. G. H. Vroom, Dominion Fruit Inspector for Nova Scotia, gave a demonstration on grading and packing apples. The afternoon was devoted to a discussion of the vegetable garden led by Mr. Shaw and Mr. Macoun.

On Jan. 6, Mr. Shaw gave a lesson on root grafting. Instruction in the other subjects of the course was continued until Jan. 14, and was thoroughly appreciated by the students in attendance.

Prince Edward Island

The Prince Edward Island Fruit Growers' Association met at Charlottetown last month, and with the assistance and encouragement of Mr. A. McNeill, Dominion Fruit Division, did very good work for horticulture in this province. The meetings were more of a family consultation than usual, not so many papers and addresses being on the program; but the temper of island growers in the present circumstances brooked it best, for just now there are many things to be consulted relative to the practical side of apple production here. It is true that there were excellent papers, one by Dr. Johnstone, one by Registrar White, and one by John Annear, but these, too, were altogether expressive of the season's difficulties and experiences, and dovetailed nicely into the discussions.

Chief McNeill gave two addresses, "The Duty of the Hour" and "The Island's Need of Co-operation," which were very much appreciated. Hon. S. E. Reid, Minister of Agriculture, spoke of the possibilities of successful fruit growing and urged hopefulness even in adverse years. The department over which he presided would do its best for the association and what it represented.

It was resolved to adopt Chief McNeill's plan of cooperative planting. The best paying varieties were declared to be Duchess, Alexander and Pewaukee. North Star promised especially well. Ben Davis, too, had brought good money and Baxter also, where grown, but its growth had so far been restricted. The society will take orders for stock, buying it judiciously and distributing it properly.

Another resolution approved the last Dominion Conference and asked for its reconvening

next year at furthest. The bulletins and fruit reports of the division were commended. A number of local motions were carried and placed on the record.

When the election of officers came round, the president asked the association to fulfil its promise of last and preceding years and relieve him. He had been long enough in the chair and would support director Johnstone heartily for president. The association, through Dr. Johnstone and others, refused to accept the refusal to serve, and in the circumstances the re-election was accepted for another year by the old officiality: Pres., Rev. Dr. Burke; vice-pres., Mr. D. J. Stewart; directors, Messrs. A. J. McFadyen, C. R. Dickey, Chas. Black, J. Newson, J. Johnstone, O. K. Henry, J. Robertson, Fred. Bovyer, and J. A. Dewar.

Quebec

W. Logan, Macdonald College

The Pomological and Fruit Growing Society of Quebec held its winter meeting at Macdonald College, Ste. Anne de Bellevue, on Dec. 18 and 19. The whole proceedings were characterized by a deep appreciation of the kindness of Sir W. C. Macdonald, and of Dr. Robertson for inviting the society to hold its winter meeting at the college. A paper on "Tree Surgery" was read by Mr. J. C. Chapais, St. Denis. In it he dealt with the method of setting up trees after they had been broken down by wind, snow or overmuch fruit. An interesting discussion on this paper was initiated by Professor Craig, of Cornell, in which Professors Macoun and Stuart took part.

"The Cultivation of an Apple Orchard" was the subject of an address by Prof. W. Stuart, Burlington, Vt. He gave some advice on the choice of a site for an orchard, the best varieties to grow, and how to seed. He urged a proper consideration of the advisability of an orchard crop, quoting the various depths of frost with different cover crops. He stated that a properly cared for orchard would be good for 60 or 70 years.

"Pruning with Demonstration" was the title of Professor Blair's address, in which he showed the way to prune and dress trees in a practical manner, so that the cuts made would heal properly. A paper on "Fameuse Apples" was read by Mr. R. W. Shepherd, Como. He claimed that this variety of apple was by far the best, though several consecutive severe winters had done a lot of harm to the trees.

Principal Robertson gave an address on "Education for Horticulture." Mrs. Torrance, of Chateaugay Basin, read a paper on "Our Summer Fruits: Their Value in our Diet." Professor Craig, of Cornell, and others also gave addresses which will be reported later.

The appointment of officers resulted as follows: Patrons, Hon. S. A. Fisher and Hon. Jules Allard; hon. president, Mr. Auguste Dupuis; hon. vice-president, Mr. R. W. Shepherd; president, Mr. Robt. Brodie; vice-president, Mr. G. Reynaud; secretary, Mr. Peter Reid, Chatauguay Basin. Principal Robertson, Dr. Fletcher and Professor Macoun were appointed honorary life members. It was recommended that members of local horticultural societies throughout the province be invited to join the Pomological Society.

Enclosed please find renewal subscription. We can hardly get along without THE CANADIAN HORTICULTURIST.—Biggs Fruit & Produce Co., Ltd., Burlington, Ont.

The Popular Piano-Player.—The player-piano has stirred up any amount of enthusiasm musical circles, if the many sales being made by Heintzman & Co., Limited, 115-117 King Street West, Toronto, are to be taken as a criterion. This firm have a very wide selection of player-pianos at terms of payment to suit almost any purchaser.

Montreal

E. H. Wartman, Dominion Fruit Inspector

Since Jan. 7, I have been inspecting fruit in Whitby, Oshawa, Bowmanville, Cobourg and Colborne. I find apples keeping remarkably well all along the line. The wise apple exporter tells me that the place for No. 3 quality apples is to leave them in the hands of the producers, and I heartily agree with him. This grade has utilized thousands of barrels and caused many first-class ones to be frozen. The general outlook in fall seemed good and prices were well maintained up to Dec. 15, but, to-day, prices are low and stocks large. The future outlook is not so bright. As shippers are now leaving number three quality at home, and as France is wanting some of her favorites, Ben Davis and Golden Russets, let us hope she will take large quantities so that prices may take an upward advance.

The young orchards coming in yearly, 20,000 to 50,000 trees, bearing from half-barrel to one barrel, are helping to make the aggregate large. I think that American buyers coming in to buy a few thousand barrels had a tendency to set the average apple man a little wild in his calculations. It is said opposition is the life of trade, but sometimes too much causes great disaster, especially among apple exporters. Those packing apples to-day in the face of loss, who say, "I will keep up my grade," are the packers who will another year get back their loss and do credit to the trade in general.

Our Fruit in England

The following extracts were taken from a letter from Mr. Robert A. Lister, of Dursley, England, to Mr. J. A. Ruddick, regarding the Canadian exhibit of apples at the Gloucester Root, Fruit and Grain Exhibition, as illustrated on page 28:

"Hundreds of people came from a considerable distance to see this fruit, and were all greatly surprised at the beautiful colors on some of the fruit, many remarking that you must have had a great deal more sun in Canada this summer than we had in this country.

"I was enabled to allude to Canada, and its great possibilities as a fruit-growing country at the annual dinner, of which I was the chairman, and I am quite certain that from an advertisement point of view this cannot be otherwise than helpful.

"Next year I should like very much to make an exhibit of Canadian preserved fruit, about which I will write you in 9 or 10 months' time, as the exhibition takes place annually on the same day, Nov. 9. Next year Mr. Morgan Phillip Price, a gentleman who paid a visit to the Minister of Agriculture, with his mother and brother, 12 months ago, will be the President, and he is very much interested in the preservation of fruit."

The board of control of the fruit experiment stations of Ontario has given place to a new advisory board, appointed by the Minister of Agriculture. This advisory board will supervise the work of all the stations in the province, including the one at Jordan Harbor, and will consist of E. D. Smith, M.P., Winona; J. L. Hilborn, Leamington; Harold Jones, Maitland; G. C. Creelman, O.A.C., Guelph; P. W. Hodgetts, Toronto; and H. S. Peart, Superintendent of the Jordan Experimental Station.

High-Class Upright Piano for \$225.00.—There has been taken into the warerooms of Heintzman & Company, Limited, 115-117 King Street West, Toronto, within the past few days two upright pianos, very little used, and bearing the names of well-known manufacturers. One of these may be bought for \$225, and the other for \$250. It is an opportunity to get what is practically a new piano at nearly half the manufacturer's regular price.

Items of Interest

The question of developing the fruit-growing industry of Essex and Kent was discussed recently at a meeting of the Board of Trade in Chatham. A report will be published in our next issue.

At a meeting of the directors of the Ontario Fruit Growers' Association held in January, the following officers were elected for the ensuing year: Pres., A. W. Peart; Burlington, vice-pres., E. D. Smith, M.P., Winona; sec.-treas., P. W. Hodgetts, Parliament Buildings, Toronto. The executive committee will consist of these officers and Messrs, Elmer Lick, Oshawa, and J. E. Johnson, Simcoe.

A Piano for \$25.00.—In every sense of the word the sale of somewhat used, but not badly used, square pianos at Heintzman & Co.'s, Limited, 115-117 King Street West, Toronto, is sensational. The announcement has brought this firm orders from almost every corner of the Dominion. The determination is to clear out every square piano in the place between now and stock-taking, and surely prices like \$25, \$30, \$35, and \$40 will do it—in payments of \$5 down and 50c. a week.

GLADIOLI

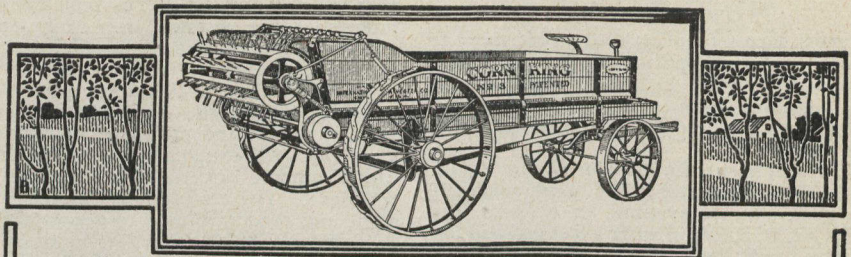
Groff's New Hybrid Seedlings. Groff's Pan-American Collection. Groff's World's Fair Collection. Groff's New Named Varieties.

Cannas, best varieties. Dahlias, many varieties. Paeonies, choice new varieties.

Write for Catalogue.

Campbell Bros., Simcoe, Ont.

Mention The Canadian Horticulturist when writing



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

Thousands of Successful Farmers Are Doing It

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

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

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

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

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

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

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

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

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

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

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

CANADIAN BRANCHES: Calgary, London, Montreal, Ottawa, Regina, St. John, Hamilton, Winnipeg

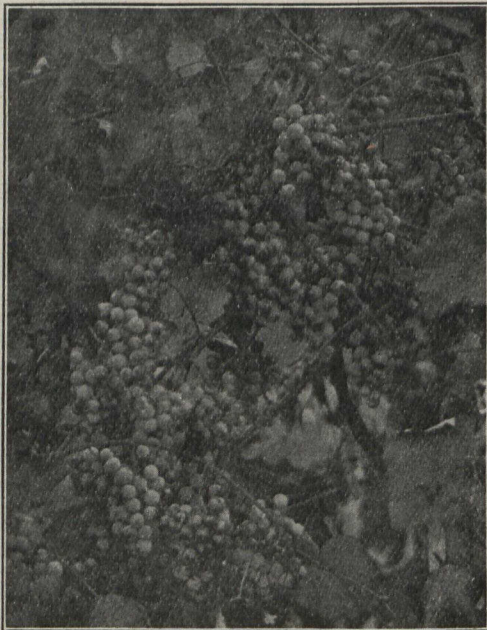
INTERNATIONAL HARVESTER COMPANY OF AMERICA

(Incorporated)

Chicago, U. S. A.

Canada's Most Reliable Nurseries

FRUIT TREES, SMALL FRUITS AND GOOSEBERRIES IN THOUSANDS



CONCORDS—Helderleigh Stock

☞ **APPLE TREES**—A general line of the best commercial varieties in the most select grades.

☞ **PEARS, PEACHES, PLUMS and CHERRIES**—A choice selection of the best kinds, well rooted, thrifty stock, true to name.

☞ **SMALL FRUITS**—Grown on the choicest spots in the Niagara Peninsula.

☞ **GRAPE VINES**—My vines are grown by a specialist with a lifelong experience. I have thousands of one-year-old Concord and Niagaras at rock-bottom prices.

WRITE FOR TERMS AND CATALOGUE. A FEW VACANCIES FOR AGENTS.

ESTABLISHED ¼ CENTURY. 800 ACRES.

E. D. Smith, Winona, Ontario

Mention The Canadian Horticulturist when writing

The Incubator and Its Use

S. Short, Ottawa

THE possibilities and pleasures of the interesting machine, the incubator, are not, as yet, as generally known as they ought to be. Many still there are who doubt its ability to hatch as well as hens will hatch. To those who have never tried hatching by machine, the statement is made, backed up by the experience of the majority of poultry-keepers, that the incubator is a success and is a necessity to any breeder who annually hatches 50 eggs or over.

As made at the present time, the incubator is both useful and ornamental. It can be kept in a spare room or attic or in the basement with perfect safety. The basement is preferable if the atmosphere is even, say anywhere near 50 degrees or over, and not given to sudden changes in temperature. With a properly run machine, with the lamp clean and in order, there is no smell worth mentioning at any time when in operation if a good oil is used, and the unfertile or lifeless eggs are removed when testing. With all machines extant, a tester and thermometer are sent, but if they are not included they should be specially ordered, for they cannot be done without.

Start the machine and be sure the thermometer registers at least 103 degrees before putting in the eggs. It is imperative that an even temperature should be kept up throughout the 21 days of incubation. Experiments have shown that while eggs will hatch that have been subjected to 101 and 102 degrees the first day or two, yet the chicks were never as vigorous and even after maturity never laid as well as those which hatched from eggs started at 103 and that temperature maintained during the whole period of incubation. Of course, every hatch may not be a success; probably if the same eggs had been put under hens they would not have hatched either.

The chief factors in being successful are, first, healthy hens, mated properly, and cared for by some one who knows his business as a poultry-keeper, to lay fertile eggs; second, have the machine in good running order before putting in the eggs; and lastly, if without previous experience, follow carefully and explicitly the directions sent with each machine by the manufacturer.

While many incubators are used by fanciers residing in the cities and towns it is safe to say that the majority of the machines are sold to suburbanites and fruit growers living outside

the city limits but near enough to benefit by having a good market for disposing of whatever fruit or vegetables they may be engaged in producing. The incubator provides the suburbanite and all the members of his family with many hours of pleasurable anticipation. The preparation of the machine whiles away one evening; then at least twice daily, the lamp is inspected and the thermometer is noted, and if all goes well for two or three days, the chickens are counted. One cannot help it, perhaps—the gambling instinct is stronger in chicken fiends than others, but the fad remains that despite the proverb "not to count the chickens before they are hatched," they have been and always will be counted as long as there are eggs to hatch.

After the seventh day the first test is made, and if new to the work, it is advisable to call in an expert fiend if one is available. If a thorough culling out is made, then another test a week later should be sufficient. If all has gone well there is considerable excitement the twenty-first day. Early in the morning there is a rush to see the results, and if successful, chickens and incubator furnish the subjects for most of the day's conversation.

With the development of fruit and vegetable growing, poultry keeping has been keeping pace. The two industries make a good combination. In winter time the gardener and orchardist has time which can profitably be given to the production of winter eggs. The garden and orchard in early spring and late autumn make splendid foraging grounds for the fowl. The incubators can be started at about the time for making the hotbeds so that hatching will be over by the time the heavy work of spring plowing and planted begins. During the summer waste fruit and vegetables fed to the poultry will help considerably in lightening the feed bills.

Just a word further—There are a great many different makes of incubators, both Canadian and American, on the market now. It is decidedly to the advantage of a Canadian to buy a Canadian machine. The shipping expenses are less, no customs charges to be paid, and the delivery is much more prompt. Patronize home industry.

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

A MILLION STRAWBERRY PLANTS for sale, not bought from dealers, but grown on my own farm last year. Fifty-five varieties. New Highland, Three W, Victor, Wonder, Thompson's No. 2, President, Morningstar, Abington, Almo, Governor Rollins, and others, and all the leading old varieties. If you want plants this year that will please you when they arrive, and please you better still when they fruit, order Downham's. They have pleased others and will please you. It will pay you to get my free catalog before you buy, ready to mail now. Raspberry and Blackberry plants, and Seed Potatoes. John Downham, Strathroy, Ont.

FRUIT GROWERS! Drain your land and double your income. This may seem exaggerated but it's a fact. Use Doyle's tile. Estimates given. R. J. Doyle, Owen Sound.

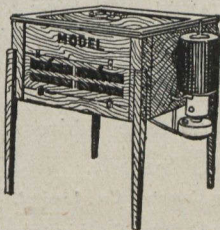
SEND YOUR ADDRESS for list of strawberry plants, also red and black raspberry plants and seed potatoes. R. C. Crysler, St. George, Ont.

FOR SALE, Six No. 8 Gurney Hot Water Boilers in good condition, suitable for private house or greenhouse work. Apply Stevenson & Malcolm Co., Guelph, Ont.

GARDENER seeks situation. Has had nine years' good experience in all important branches. Can show good English references. E. Campin, West Essa P.O., Ont.

CHAS. A. CYPHERS' Model Incubators and Brooders

On my Model Poultry Farm I now have poultry numbering 80,000 hatched and brooded in my famous Model Incubators and Brooders. Buying your incubators and brooders of a man who knows nothing (or next to nothing) about hatching and raising poultry is running a useless risk. Don't do it.



I not only sell you a Model Incubator or Brooder, but I add to them the valuable experience of years as shown in their construction. Model Incubators show excellent hatches, hatch every hatchable egg. The Model Brooder grow sturdy chicks.

Send your order in to-day, and get in line with the profit getters.

Free catalogue for everyone.

THE MODEL INCUBATOR CO.
196-200 River Street TORONTO, ONT.

PLANT PELHAM'S Peerless Apple Trees

A big red winter apple that sells at sight.
Also a full line of fruit and ornamental trees.
Write for the Catalogue that tells the truth.

PELHAM NURSERY CO.
TORONTO, ONTARIO

Mention The Canadian Horticulturist when writing



Sure Death to San Jose Scale

Add 16 gallons water to 1 Scalecide and it's ready to use. Absolutely permanent percentage maintained, saves time enough to pay for the material. Guaranteed. It's cheap effective, easy to use, non-corrosive, non-clogging, and contains more oil and less water than any other commercial spray. In 1-5-10 gallon cans, 25 and 50 gallon barrels. Free booklet.

B. G. PRATT CO., Mfrs. New York,
SPRAMOTOR CO., Sole Can. Agents, 1069 KING St., London, Can.

ORDER
A
BARREL
NOW

Let me tell you how
to make money
out of poultry.



I have started others
earning good profits.
I can start you.

JUST a very little more time than you spend now caring for a few hens can be turned into a good profit with a Chatham Incubator.

That is the best of it. It requires no experience. Just follow my simple, clear directions. Your wife or daughter can do all that is required in a few minutes each day while the hatch is on.

And the profits are sure and certain. I know this is true because I am receiving letters every day from those who are using my incubator and making good money out of it. Many of these people never used an incubator before, others have tried other makes but are making bigger profits with a Chatham Incubator.

The Experimental Farm at Guelph, Ont., use my Chatham Incubator in their special poultry course. In a recent letter the Professor of that course stated that they out-hatched any incubator they have had on the farm.

Don't you think that the incubator that the Ontario Government has found best should prove best for you?

So you see it not only is a case of making more money with an incubator than by the old setting-hen way, but it also means you can make more money with my Chatham Incubator than any other on the market.

I guarantee the Chatham Incubator for five years. This is not a mere promise, it is an actual guarantee, backed by my Company, who have been doing business in the United States and Canada for over 50 years. If our guarantee wasn't an actual bona fide one and our dealings honest and fair, we couldn't have continued in business so long. Don't you think so?

I want to send
you my special
price, on time,
for a
Chatham Incubator

Now I want you to write me a postcard to-day asking me to send you my 1908 Poultry Booklet—it tells all about the profits you can make out of chickens, how the Chatham Incubator is made by careful workmen from sound lumber, and why it will hatch more chickens than any other incubator on the market.

Remember that every day you delay means just so much profit lost. I know when you get all my facts you'll want to start making money now.

Write this post card now, while you think of it and I will also send you my special price on easy terms.

To save time address my nearest office.

The Manson Campbell Co., Limited,
Brandon, Man.
The Manson Campbell Co., Limited,
Calgary, Alta.
D. Hammond, Box 194, Victoria, B.C.
Cote & Co., 6 St. Peter St., Montreal, Que.

MANSON CAMPBELL
President

The Manson Campbell Co., Ltd.
Dept. 81 Chatham, Ontario.
I also have a shipping warehouse at Halifax,
N.S.



Guaranteed
Five Years
Direct from
the Factory

101

Bulletin on Bordeaux Injury

Reviewed by Prof. W. Lochhead, Macdonald College

BORDEAUX Injury.—Agricultural Experiment Station, Geneva, N.Y., Bull. 287, by U. P. Hedrick.—In ordinary years one hears occasionally of injury to fruit trees as a result of spraying with Bordeaux. In 1905 in Ontario and elsewhere, many such cases were reported. On account of these repeated reports, an investigation was undertaken by the Geneva station to determine, if possible, the causes of the alleged injuries. Affected apples show a specking at first, followed by a "russetting," so that the keeping qualities of the fruit are disturbed, and its market value is lowered. Affected leaves show a brown spotting, followed by their death and fall. The experiments carried on in connection with the investigation convinced the experimenters that the Bordeaux mixture caused the injuries to the fruit and the leaves that have been so frequently reported of late years. The Bordeaux, they believe, acted as a poison to the tissues lying beneath the skin, entering through the breathing pores and the basal cells of the plant hairs. The specks that formed as the first symptoms of injury leading to russetting, were usually formed about the breathing pores. Not only were different species of fruit trees, such as peaches, plums, and so on, injured to different degrees by Bordeaux, but different varieties of the apple, for example, varied in the extent of injury under similar treatment. Wet weather and early spraying favored the development of russetting, and the greater the quantity of copper sulphate used in making the Bordeaux the greater the injury. The bulletin recommends that the amount of spray liquid should be just sufficient to wet the tree, and only in dry weather, and that the Bordeaux be prepared by using equal parts of lime and copper sulphate.

The reviewer has already had occasion to treat of "Injurious Action of Bordeaux in Apple Orchards" (O.A.C. Report, 1905, pp. 54-58). His studies at that time forced him to the conclusion that the injury was not due entirely to Bordeaux, for these reasons: russetting was not confined to sprayed orchards, and it was quite prevalent in unsprayed orchards treated by the same man, at the same time, and with the same pump.

Fruit Institutes

The farmers' institute branch of the Ontario Department of Agriculture has taken a marked step in advance in the line of agricultural education. A three days' meeting was held at Grimsby, Dec. 16, 17, 18, with an attendance of over 80 men from Grimsby and the surrounding district. An interesting program was followed, and the discussions by local men took up every minute of the time allotted.

Never before in the history of farmers institute work have the fruit growers taken so active

an interest as that manifested at this meeting. Mr. Putman, Supt. of Farmers' Institutes, was present and gave a short talk on the scheme attempted for the first time in Ontario. He encouraged the farmers to form farmers' clubs and hold monthly, or even twice a month, meetings for the discussion of local subjects and increase the knowledge and, as a consequence, the wealth of each community. The department is willing to do all within reason to assist farmers' clubs, and short courses of instruction by furnishing lecturers on special subjects. Any local institute desiring a course similar to the one put on at Grimsby, and followed by the one on Dec. 18, 19 and 20, at Trenton, should correspond with Mr. Putman for particulars. The following resolution passed by the Trenton meeting shows the attitude of those who attended the meeting:

"We, the fruit growers of Trenton and the surrounding vicinity, desire to express our appreciation of the action taken by the farmers' institute branch of the Department of Agriculture in putting on this three days' course of instruction; we consider it has been of very great value to those in attendance, and we trust the said department may see fit to favor the counties of Prince Edward, Hastings and Northumberland with a series of such meetings."



"SCALECIDE"



SAVE YOUR TREES THIS FALL

ORDER
A
BARREL
NOW

Or they'll be killed commercially by San Jose Scale. Spray with **Scalecide**, it kills every insect it touches. Cheaper than lime sulphur or any home-made mixture. Easier to apply, non-corrosive, non-clogging, 92% oil—the largest amount with less water than is found in any spray discovered. Order a 50 gallon barrel at \$30. Duty paid, makes 800 gallons mixture. Works well in any machine there's nothing cheaper. Free special booklet.

**DON'T WAIT
TILL SPRING**

B. G. PRATT, CO., Mfrs., N.Y.

**SPRAMOTOR CO., Sole Can. Agents,
1090 King Street, London, Canada.**



ESTABLISHED 1837

OVER 850 ACRES

THE FONTHILL NURSERIES

Oldest and Largest in Canada

CUMBERLAND BLACKCAP

The "Business Blackcap," under equal conditions has produced 2,000 qts. per acre more than Gregg. Fruit large and of superior quality. Plants entirely hardy, most vigorous grower of all Blackcaps, stands drouth when other varieties fail. We offer for Spring Planting, strong 2 year transplanted plants, extra large and well rooted, which will fruit in half the time of ordinary "tip" plants.

BABY RAMBLER ROSE

The Everblooming Dwarf Crimson Rambler. The best rose for the amateur to plant, blooms constantly from June to frost. Furnished in strong, thrifty plants that will bloom first season planted.

CRAB APPLES

HYSLOP and **TRANSCENDENT**—the hardiest of best crabs, for sauce, jelly, jams and cider. Fruit of largest size. Fine stocky trees 3 and 4 years old, well branched and rooted at Special Prices.

NEW JAPAN LILACS

All shades and colors, single and double, grown in tree form, which prevents succoring. Finest assortment of varieties.

Write for Prices and Catalogue of New Specialties. AGENTS WANTED.



Spray of One of the New Japan Lilacs

STONE & WELLINGTON, TORONTO, ONTARIO

Mention The Canadian Horticulturist when writing

Nova Scotia Fruit Growers

At the annual convention of the Nova Scotia Fruit Growers' Association, which was held in Berwick in December, an interesting discussion took place on "Orchard Management." Prof. F. C. Sears of the State Agricultural College, Amherst, Mass., took the fertilizer question for his theme. He gave the results of an experiment carried on for nine years at the college farm, showing the value of stable manure and other fertilizers as applied to the orchard. A. McNeill, Chief, Fruit Division, spoke on pruning and said that a little pruning at the right time was enough. A saw was unnecessary in an orchard; hand pruners if used when they should be would do the work. Trees should be headed low, 18 to 24 inches. In these days of insects, scale and fungus, low-headed trees were more easily cared for than the old style of high spreading tops. G. W. McLean, of Woodville, said he had not pruned his orchard for 15 years, and was satisfied that too much pruning was done by many orchardists. "Spraying" was discussed by W. H. Woodworth and others.

Professor Cumming stated that the efforts to check the incursion of brown-tail moth reported in Annapolis county had met with marked success. A recent inspection of the infested territory resulted in the discovery of comparatively few nests. He announced that efforts would be continued with the hope of completing the extermination of this new pest, and said that a bounty of 10 cents for each nest collected would be paid by his department. Professor Cumming also said that work at the college was progressing most favorably. The attendance was larger than ever before, and great interest was manifested.

"Fruit Growing in New England" was the

subject of an illustrated address by Prof. Sears. The professor, who has spent six months on the staff of the Mass. College, succeeding ten years in the Annapolis Valley, evidently was not favorably impressed with the importance of orcharding in the state.

Professor F. A. Waugh, also of the Mass. College staff, gave an interesting talk on "Smaller Fruit Trees." This address was illustrated with lantern slides, and urged the importance of smaller orchard trees for convenience in pruning, spraying and picking fruit.

The well-worn question of ocean transportation was again thrashed out, and a series of resolutions passed again urging upon the Department of Trade and Commerce the necessity in the interests of fruit growers of compelling the Furness-Withy Steamship Co. to live up to the terms of their contract, or withhold the subsidy. It was pointed out that in spite of the fact that the contract called for a 12-knot service or 10 days' passage, the steamers were seldom getting under a 12-day passage, and sometimes 14.

Cooperation in marketing was introduced by Frank A. Bolson, of Middleton. Mr. Bolson referred to the advantages to be gained by a combination of effort. Expenses could be reduced, a more uniform pack of fruit secured, and wider advantages gained in other ways. Mr. McNeill went into the question on a broader scale, referring to the cooperative organizations of the Pacific slope, and instanced a number of such cooperations successful in Ontario. Secretary Parker said one company had been organized in Berwick, and was doing business this year. The company had to organize under the Nova Scotia Joint Stock Companies Act. They had a nominal capital of \$10,000. The company had 12 members subscribing five

shares each, or \$6,000. They were operating in a rented warehouse, and were packing about 10,000 barrels this season. The company had sold a good proportion of their output, including about 2,000 barrels of Gravensteins at \$2.75 for No. 1 stock, including 25% of No. 2. They had also sold 2,000 barrels hard stock at \$3 with usual proportion of two's. As was to be expected they had met some difficulties and found obstacles, but all interested were well pleased with the progress made.

The following officers were elected: Pres., R. W. Starr, Wolfville; senior vice-pres., G. C. Miller, Middleton; sec., S. C. Parker, Berwick; assistant sec., J. H. Cox, Cambridge; treas., G. W. Munro, Wolfville. Each county also is represented by a vice-president.

New Spraying Machine.—A spraying machine that is being introduced into Canada for the first time is the Protumna Gas Sprayer. Not only is it claimed to have all the points of other sprayers as regards simplicity, effectiveness and lightness, but also it has a patent device for spreading the gas when it enters the spraying tank in such a way that it saves a large percentage of gas; in other words, one drum of gas will throw much more spraying material than with any other gas machine. The American Horticultural Distributing Company, of Martinsburg, W. Va., are introducing it, and are making a very liberal introductory offer. This firm maintains an experimental orchard of 20,000 trees, where every kind of spraying pump and apparatus, as well as insecticides and fungicides, are thoroughly tested before being offered for sale. The Protumna Gas Sprayer is the outcome of experience, not theory. Read the advertisement on another page and write direct to the makers for further information.

Strawberry Plants



THREE W'S

Reported on by Mr. E. B. Stevenson, of Guelph, in 1906, as follows: "This new one was one of the best for market. At one of the pickings I picked 3 boxes without moving; at another later picking I picked one box for every 2 feet of row.

My Ninth Annual Catalogue
Mailed on Application.

Fifty leading varieties listed and fully described. Many illustrations and full cultural instructions.

Some of My Leaders

EXTRA EARLY—Virginia, Early Hathaway, Excelsior.

EARLY—Bederwood, Climax, Haverland.

MEDIUMS—Buster, Cardinal, Parson's Beauty, Tennessee, Prolific, Wonder, Dorman.

LATE—Fountain, Irene, Marshall, Stevens' Late Champion, Gaudy.

NEW—Arnout, Abington, Chesapeake, Commonwealth, Mead, Miller, Minuteman, President, Pride of Michigan, Three W's, Ruby.

OLD STANDARDS—Bubach, Clyde, Glenn Mary, Sample, Senator Dunlap, Warfield, Williams, Wm. Belt.

Varieties guaranteed true to name.

W. H. VANDERBURG, POPLAR HILL, ONT.

Mention The Canadian Horticulturist when writing.

Henry's Nurseries

PACIFIC COAST GROWN SEEDS

for the farm, garden, lawn or conservatory. Reliable approved varieties at reasonable prices. Each variety tested as to vitality before sending out. Finest collection of Japanese Lilies and Dahlias in Canada for spring planting.

Thousands of Fruit and Ornamental Trees, English Hollies, Greenhouse Plants. Home grown.

No Borers. No Scale. No fumigation to damage stock. No windy agents to annoy you. Buy direct and get trees and seeds that grow. Bee Supplies, Spray Pumps and Spraying Material, Cut Flowers, etc. Oldest established nursery on the mainland of British Columbia. Catalogue Free.

M. J. HENRY

3010 Westminster Road - Vancouver, B.C., Canada

Mention The Canadian Horticulturist when writing

New Spray Fluids

During the past 15 or 20 years rapid progress has been made in combatting insects and fungi that attack cultivated trees and plants. The advance in this department of economic horticulture is difficult to realize. As the season for spraying approaches each year, new discoveries in insecticides and fungicides are brought to the attention of growers. Most of them prove of little worth; a few are of value. The latest discovery and one that, according to reports from England, gives promise of revolutionizing the practice of fruit tree spraying has been originated in England, and is now being brought to the attention of the fruit growers of Canada. It is a product from the laboratories of Wm. Cooper & Nephews, Berkhamsted, England. This firm is well known all over the world for a score of scientific preparations that have proven of incalculable value in practice, particularly the famous Cooper's Sheep Dip.

The spraying mixtures introduced by this firm are known as V1 Fluid and V2 Fluid. The former makes a winter spray mixture, and the latter is prepared for summer use. These fluids have been tested extensively in the orchards of Old Country growers, and it is claimed have proven efficient in all respects. Both of them are easy to use. They have only to be diluted with cold water and they are ready for the trees. They are highly concentrated. One gallon of either fluid must be diluted with 100 gallons of water before using. These fluids are harmless to the trees if applied as directed. They are easy to use and do not corrode and clog the nozzle. Unlike some other mixtures in common use in this country, they may be applied without risk or discomfort to the user. They are uniform in composition and are reported to be reliable in action. An immense amount of labor is saved by their use,

as one application of each fluid usually is sufficient for a whole year.

In the opinion of Mr. Walter E. Collinge, M.Sc., the foremost authority on insecticides and fungicides in Great Britain, "the fruit growers will have in the V1 and V2 Fluids a winter and summer spray fluid almost impossible to improve upon. Most important results have been obtained from their use. In one orchard where V1, the winter spray, was tried on about 100 acres of apple, pear and plum trees and 34 acres of other fruits, pear psylla, apple and plum aphid, and oyster-shell scale were exceedingly bad last year. A careful inspection was made in the following March of some 30 to 40 of the worst attacked trees, and not a single egg of any of these pests could be found alive." Another report states: "I consider the winter wash with V1 Fluid very effectual, and I think a most wonderful stride in the art of spraying fruit trees has been made."

As spraying is one of the great problems in successful fruit culture in Canada, it is with pleasure that we bring these fluids to the notice of orchardists. Every fruit grower should give these fluids a trial. Wm. Cooper & Nephews have established a general office for Canada in Toronto. It is probable that distributing points will be established in all the provinces. Mr. W. Staley Spark is manager for the Dominion. Write at once for booklet "A" to Wm. Cooper & Nephews, Room 306 Manning Chambers, Toronto.

Giving Organs Away.—This heading is misleading if you like, only to the extent that when Heintzman & Co., Limited, 115-117 King Street West, Toronto, announce that they are selling organs at \$10, \$15, and \$20 each, in payments of 50c. a week, it is next door to giving the organs away. One can hardly expect that such bargains will last very long. Wise ones will see about the matter at once.

Kelowna Fruit Lands

READY TO PLANT

10 and 20 acre lots within 4 miles of the City of Kelowna (pop. 1,200) in the famous Okanagan Valley. Our Fruit Lands are free from timber, rock and scrub—already plowed. A beautiful valley—a prosperous settlement. Main roads run round the property. The land will easily pay for itself the first year. Some results for 1907:

½ acre Strawberries..... \$ 626
 1 acre Tomatoes..... 1,000
 4 acres Onions, 75 tons... 2,550
 ½ acre Crabapples yielded 10 tons.

Prices, \$150 and \$200 per acre.
Terms, 1-4 Cash.

Balance in three annual instalments. If interested, write for our Illustrated Booklet.

**Central Okanagan
 Land and Orchard Company
 Limited**
KELOWNA, B. C.

Mention The Canadian Horticulturist when writing

SEEDS

Producing the most satisfactory results in the harvest
ARE WHAT WE SELL

Our Vegetable Seeds are grown from selected stocks and are used by the most critical Gardeners and Truckers in this Country.

Our Flower Seeds are noted for their striking colors and large bloom.

Sutton's Specialties always on hand.

Descriptive Illustrated Catalogue Mailed Free on Application

DUPUY & FERGUSON

38 Jacques Cartier Sq., Montreal

Mention The Canadian Horticulturist when writing

CANADA'S OLDEST NURSERIES

**Blackberries
 Currants
 Grapes
 Raspberries**

The small fruits are what are earning the most money for the fruit grower and we are making them our specialties. We have the largest blocks of this class of stock to be found in the Dominion, as well as a complete

assortment of all classes of **FRUIT AND ORNAMENTAL TREES AND SHRUBS.**

WRITE US BEFORE PLACING AN ORDER

Agents wanted to introduce the great **HERBERT RASPBERRY.** Large stock of first-class 2-year-old plants.

THE THOMAS W. BOWMAN & SON CO.

RIDGEVILLE, ONT. LIMITED

Mention The Canadian Horticulturist when writing



The
**Protumna
Gas
Sprayer**

The Acme of Simplicity
in Spraying Machines.

☐ A tube of Carbonic Gas is connected by a few turns of a coupling and the opening of a valve transfers the pressure

to the spray tank—that's all there is of it.

☐ Its Effectiveness—Its Economy—Its Lightness—Its Durability—place it in a class by itself.

WRITE FOR SPECIAL INTRODUCTORY OFFER

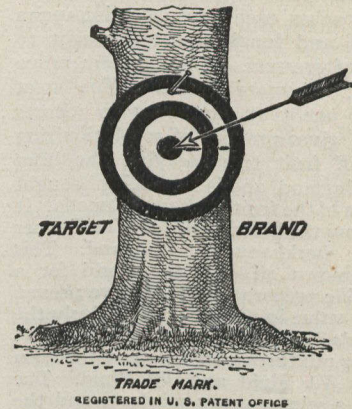
American Horticultural Distributing Co.

Box 705

Martinsburg, West Va., U.S.A.

Mention The Canadian Horticulturist when writing

"Target Brand"



Scale Destroyer

is guaranteed to contain not less than 94 per cent. non-volatile oil.

More effective than Lime-Sulphur, and cheaper, by test.

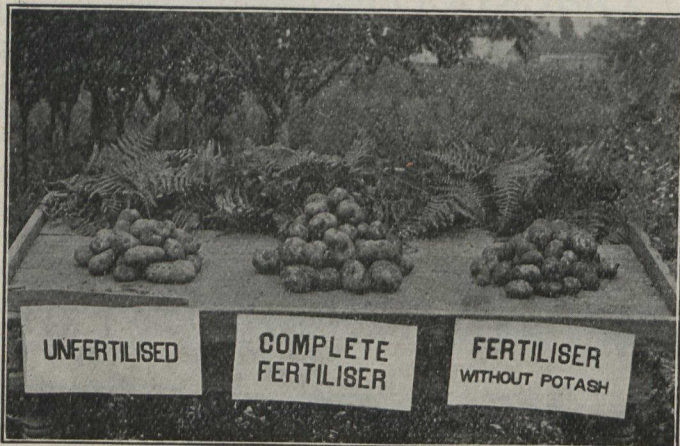
W. H. Brand

Canadian Representative

Jordan Station, Ont.

POTASH

Experiment on Potatoes, 1907, conducted by H. Kipp, Chilliwack, B.C.



Fertilizers applied in lbs. per acre	160	400	400	Sulphate of Potash
	160	160	160	Acid Phosphate.
				Nitrate of Soda
Yield per acre in bushels	160	433	192½	

Potash in the highly concentrated forms of Muriate of Potash and Sulphate of Potash may now be obtained from all leading fertilizer dealers.

For FREE Copies of Publications treating of the results of Fertilizer Experiments in Canada apply to

**THE DOMINION AGRICULTURAL OFFICES
OF THE POTASH SYNDICATE**

1102-1105 Temple Bldg.

TORONTO, ONT.

Mention The Canadian Horticulturist when writing



The number of orders we are receiving from those who have tried the sample is absolute proof that "Watch-em-grow" is all that we have claimed for it, viz.: "That no other Plant Food gives such results." Good for plants in house, garden and conservatory, also a superior dressing for lawns.

PRICE LIST

- Sample (sufficient for 15 to 20 plants), postage prepaid, 10c.
- Half Pound Can, postage prepaid 20c.
- Pound Can, postage prepaid 35c.
- Five Pounds, F.O.B. Smith's Falls, Ont. 75c.
- Ten Pounds, F.O.B. Smith's Falls, Ont. \$1.25

Prices for larger quantities quoted on application. Full directions with every package.

The Standard Fertilizer and Chemical Co.

SMITH'S FALLS, ONT.

Limited

Established 1879

Incorporated 1885

Mention The Canadian Horticulturist when writing.

Emulsion for Scale

Since the publication of Storrs Experiment Station Bulletin 49, in the December issue, it has been found that in making up the complete "soluble oil," better results may be obtained by bringing the various ingredients together in the following order:

- Emulsifier..... 8 parts
- Crude Petroleum.....18 "
- Rosin Oil..... 4 "
- Water 1 part

The water is necessary to start the emulsion and occasionally a little more water may be required to bring about a complete emulsion.

The proportion of crude petroleum may sometimes be increased without danger of subsequent separation. A "soluble oil" containing 25 parts crude petroleum has frequently been made. Inasmuch as an increase in the proportion of crude petroleum reduces the cost of the complete mixture, it is well, before mixing up large quantities, to ascertain, by experiment, how much may be used.

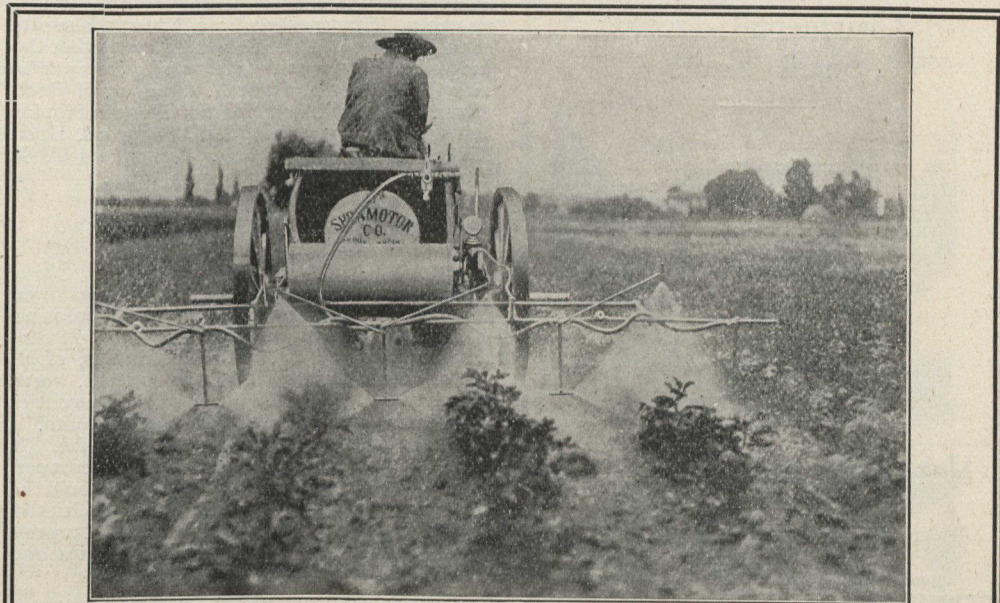
Northwest Fruit Growers

The 15th annual convention and fruit display of the Northwest Fruit Growers' Association, held at Vancouver in December, brought forth many good papers and discussions of interest to fruit growers. Most of the papers will be published in the columns of THE CANADIAN HORTICULTURIST. The following officers were elected: Pres., E. L. Smith, Hood River, Ore.; vice-pres., for British Columbia, Maxwell Smith; for Washington, H. G. Otis; for Oregon, E. H. Shepard; for Idaho, C. J. Sinsel; and for Utah, Prof. E. D. Ball; secretary, H. M. Williamson, Portland, Ore.; treasurer, G. R. Castner, Hood River, Ore.

The city hall, where the exhibition was held, looked like an apple Eden. The entries were

large, and the fruit of excellent quality. The walls were lined with boxes of apples grown in all the sections from the Okanagan south to California. They were arranged symmetrically on the shelves, and presented a very pleasing appearance. Although apples predominated,

there were several entries of pears and quinces. Nuts in large variety were shown. These were grown at the experimental farm at Agassiz. There were apples from the famous districts of Oregon, Washington, some from Vancouver Island, some from Salt Springs Island, and some



This shows the H. P. Spramotor arranged for spraying potatoes, three nozzles to a row and four rows, two spraying from the sides and one from the top adjustable as to height and width up to 40-in. Nozzles absolutely will not clog. 12 gallon air tank. Automatic and hand controlled. 100 lbs. pressure guaranteed with 12 nozzles open. An acre can be sprayed in 20 minutes. Has agitator clean-out pressure relief into tank, and nozzle protector all under control of the driver from seat. For 1 or 2 horses. Fitted for orchard, vineyards and grain crops. Can be operated by hand. This AD. will not appear again in this paper. If interested write now.

D. H. HEARD, 1072 KING ST., LONDON, CANADA

The Proof is in The Harvest

RELIABLE SEEDS are the first sure step towards successful results in "1908." CONFIDENCE in the Seeds you sow is certainly your first aim. Trying to save on the first cost of Seed is MIGHTY POOR ECONOMY, it being relatively a trifling expense in comparison with the cost of cultivation and the resulting products entire difference in value.

SOW

Ewing's Reliable Seeds

The result of many years' careful selection. QUALITY IS OUR FIRST AIM. It is the secret of our success. You can place confidence in the results. Sown by successful growers throughout the Dominion.

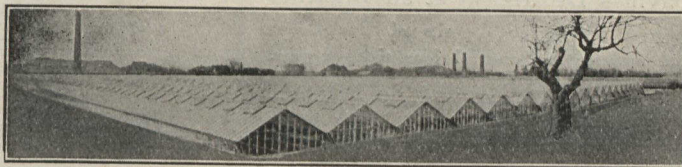
"THE PROOF IS IN THE HARVEST"

We want to send you our "Illustrated Seed Catalogue," it is worth looking into—write now.

William Ewing & Co., Seedsmen
142-146 MCGILL ST., MONTREAL

Mention The Canadian Horticulturist when writing

**SPECIAL GLASS
FOR GREENHOUSES**



Conservatories of The Dale Estate, Brampton, Ont.
Glass supplied by our Toronto Branch

GOOD QUALITY, FLAT, EVEN
THICKNESS AND WELL CUT

PILKINGTON BROS.
Limited

Toronto, Montreal, Winnipeg, Vancouver

Mention The Canadian Horticulturist when writing

FRUIT TREES

Shrubbery and Roses
Ornamental Trees
Small Fruits

It is our aim to develop by correct cultural methods and satisfactory dealing with customers a first-class nursery carrying a complete line of first-class stock for the fruit growers of British Columbia.

We select our own Buds and Scions and do our own Propagating.

HARRIS NURSERY CO.

F. C. HARRIS, Manager

Penticton, British Columbia

Mention The Horticulturist when writing

from the experimental farm at Agassiz. The prizes offered were very liberal and were keenly contested for.

In the class for the best box of apples a novel competition was seen. Each contestant was given seven minutes to make a speech and tell just why his apples were the best. There were many entries in this class, and the competition was keen. The speakers brought out the merits of their different varieties in such a way that the judges had a very hard time making the awards. They finally decided that A. I. Mason, of Hood River, Ore., with a box of Yellow Newton Pippins had won the first prize; E. A. Sheppard, Hood River, box of Spitzenbergs, second; and T. G. Earl, Lytton, B.C., Spitzenbergs, third.

New Catalogs

Simmers' new annual seed catalog has been received. It is larger and has been prepared more carefully than any in past years. It contains a complete list, with illustrations, of all seeds, plants, shrubs, fruits, and so forth, worth growing in Canada. Among the novelties offered is Livingstone's Coreless Tomato, a perfect shaped canning variety of large size. It is said to be a strong grower and a big cropper. A new pea, the Rivenhall Winter, should be tried by all gardeners. Among the novelties in flower seeds are a new sweet pea, Burpee's White Spencer, Double Primula Obconica and Petunia "Canary Bird."

Rennie's seed annual has been well prepared and well illustrated and contains a complete list of standard varieties of seeds, plants, and so forth. A wealth of practical information is given in the cultural directions that accompany the descriptions. This is the only Canadian seed catalog that contains lists and descriptions of bulbs for fall planting. A novelty that is being offered is Rennie's XXX Bush Green Pod Beans. It is claimed to be the finest type

The

Island King Strawberry

THIS remarkable Berry is a seedling of Lovett, grown on an island in the Bay of Quinte. The fruit created a sensation when placed on sale at Deseronto, and many enquiries were made for plants, but none were for sale at any price. The plant has a perfect bloom, is very hardy with plenty of foliage, has never shown a sign of rust or disease and as a plant-maker cannot be beaten. The berry ripens here with Michael's Early, good shipper, heavy cropper and holds its size well, in shape and size resembles Sample, but a little darker in color, has a distinct, extraordinary flavor of its own which has been pronounced as "simply delicious." Practical berry men who have watched the Island King say it is the best all-round berry yet introduced. Plants now first offered for sale at 50c. per dozen, post paid; \$2.00 per hundred, or \$15.00 per thousand F. O. B. Have orders booked early as supply is limited.

JOHN W. THOMPSON

NAPANEE, ONT.

Mention The Canadian Horticulturist when writing

Imperial Bank

OF CANADA

Established 1875

Head Office . Toronto

Capital Authorized, \$10,000,000.00

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

Rest, - - - \$4,835,000.00

Savings Department at all Branches

Interest allowed on deposits of One Dollar and upwards and credited four times a year.

T. J. POUPART

Covent Garden, London, England

CANADIAN APPLES A SPECIALTY

Commission only. All goods sold by private sale. Highest prices guaranteed. Correspondence invited.

Cables—POUPART, LONDON

References:

LONDON & COUNTY BANK, COVENT GARDEN
BANK OF MONTREAL, MONTREAL

FOR SALE—Parties desiring to purchase any of the cuts that have appeared in THE CANADIAN HORTICULTURIST, may do so upon reasonable terms. Apply to

The Horticultural Publishing Company
Toronto, Ontario

Make your garden pay double

Use the Planet Jr. Farm and Garden Tools. They save time and labor, take the place of expensive "help", and prepare for a bigger, better crop.

Planet Jrs. do great work—made by a practical farmer and manufacturer. And they last long—made of the finest materials for the purpose, and guaranteed. They pay for themselves over and over again.

No. 25 Hill and Drill-Seeder, Double-Wheel Hoe, Cultivator and Plow combines every useful tool in one strong, light, easy-running, simply-adjusted implement—opens the furrow, sows the seed in drills or in hills 4 to 24 inches apart, covers, rolls, and marks out the next row; and does thorough work as a double-wheel hoe, cultivator and plow.

Planet Jr. 12-tooth Harrow, Cultivator and Pulverizer is a great tool for berry growers and market gardeners—invaluable wherever fine close work is needed. The twelve chisel-shaped teeth leave the ground in the finest condition. Turns hard work for three men into easy and better work for one. Write today for illustrated 1908 catalogue describing our 45 kinds of farm implements including Wheel-Hoes, One-and Two-Horse Cultivators, Harrows, and Orchard and Beet-Cultivators. S. L. Allen & Co. Box 1106G Philadelphia, Pa.

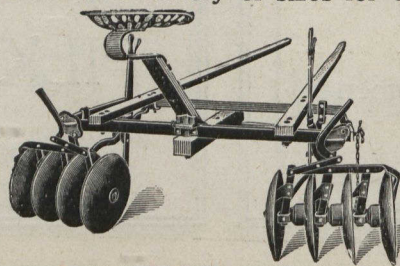
PLANET JR.

Write for the name of our nearest agency



The BISSELL ORCHARD DISK

A Reversible Disk Harrow which may be used in the In-Throw or Out-Throw form. Gangs can be set close or extended to reach under trees. Built in a variety of sizes for one or two horses. Has the capacity and good features of all other Bissell Disk Harrows. A very useful implement for Orchard, Vineyard, Fruit, Garden, etc., work. Manufactured exclusively by



T. E. Bissell, ELORA, ONT.

DEPT. "N"

Write for Prices or for Agency.

Mention The Canadian Horticulturist when writing

Pear Blight

We Can Cure It

Our work has extended over a period of three years. Process and formula patented. Address correspondence to

Pear-Blight Remedy Co.

Vacaville California

Mention Canadian Horticulturist when writing

of green podded bean in cultivation. It is early in season and bears continuously for several weeks. This variety cannot be obtained except by ordering direct by mail.

The Steele-Briggs catalog is worthy of this well-known firm's enterprise. In it are listed innumerable varieties of seeds, plants and shrubs. The illustrations have been well selected and well made. They add greatly to the appearance of the catalog. Some well-tried novelties are being offered, such as, Steele-Briggs Perfection Cucumber, the new 'mum "Enchantress," the new white comet aster, "Express," and many others. This firm also handles all kinds of apparatus and devices for making work easy in the poultry yard, the orchard and the garden.

A catalog that should be in the hands of all growers of vegetables, fruits, flowers and ornamental plants is that of John A. Bruce & Co., Hamilton. The varieties of seeds and plants offered by this firm have been selected with a view to offering only those kinds that are most valuable to Canadian growers. A large number of novelties are being introduced this season, among them several varieties of vegetables, including three new sweet corns. The floral novelties for 1908 include the chrysanthemum, "Bridal Robe," several new sweet peas and many others.

"Great Crops of Strawberries and How to Grow Them," is the title of a well-known book issued by the R. M. Kellogg Co., of Three Rivers, Mich. The edition for 1908 has been prepared with greater care than those of previous years, and it surpasses them in quality of illustrations as well. Write for a copy.

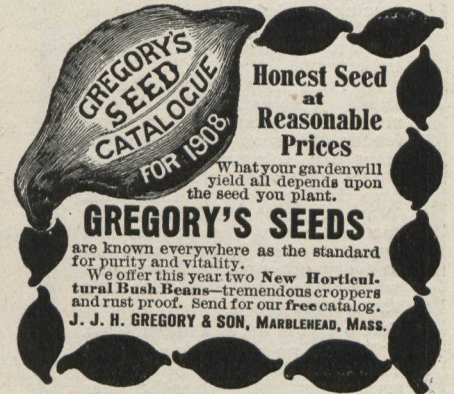
Canadian grown strawberry plants of high quality are listed in the catalog of W. H. Vanderburg, Poplar Hill, Ont. All the varieties that have proven successful under varying conditions in this country are offered for sale. The descriptions are good. Some excellent information is given on the culture of this fruit

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



The Sower Has No Second Chance

Good sense says make the most of the first.

FERRY'S SEEDS

have made and kept Ferry's Seed Business the largest in the world—merit tells.

Ferry's Seed Annual for 1908

tells the whole Seed Story—sent FREE for the asking. Don't sow seeds till you get it.

D. M. FERRY & CO., WINDSOR, ONT.

During the spraying season of 1907, I used one of the latest models Wallace Power Sprayer, and find that its lightness permits me to work on softer ground with one team than is possible to do with many other outfits on which two are necessary. My team can handle it easily at any time, and maintain a pressure of 100 lbs. or over (have run it to 150 lbs.), and that, too, without having to lose time in resting them. It turns out as good a fog as any other kind of sprayer, and in abundance. It is the most perfect and up-to-date machine I have yet seen, furnishing more than the required amount of power without a cent of cost, and it is never balky.—R. Doubrough, Vineland, Ont.

IF YOU HAVE APPLES OR POULTRY TO CONSIGN

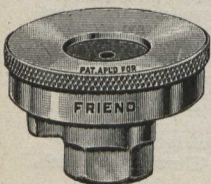
we can handle them for you to advantage. If apples are in car lots, write us and we can sell them for you f.o.b. your station

THE DAWSON COMMISSION CO. Limited

Cor. West Market and Colborne St.

TORONTO — ONTARIO

"Friend" Spray Nozzle



The spraying outfits made by the "Friend" Mfg. Co., Gasport, N.Y., U.S.A., including their celebrated "Friend" Nozzle and Shut-off, are this year leaders. Thousands sold last year to satisfied customers. If not personally acquainted with "Friend" ideas talk with such men as Joseph Tweedle, E. M. Smith and others.

"Friend" outfits sell in the good old quiet Quaker way. No travelling men. No flashy ads, but by their own merits. Tell us what There is in need of and we'll do the rest.

BY THE SUPERIOR STENCIL MFG. CO. AND RUBBER STAMPS
FOR BRANDS
WE MAKE ALL KINDS FOR ALL PURPOSES
124 YONGE ST. TORONTO.

Northern Grown Trees'

Apple, Pear, Plum, Cherry, Peach, Grapes, Small Fruits, Deciduous and Evergreen Ornamentals, Roses, Flowering Shrubs, Climbers, etc. Specialties:—Mammoth Dewberry and Wismer's Dessert Apple. Catalogue Free; it tells the whole story.

J. H. Wismer, Nurseryman, Port Elgin, Ontario

SAVE TREES THIS FALL

Thousands of trees will be dead by spring unless protected by Scalecide, best for trees and machines, will kill San Jose Scale at 1 to 16 of water, "SCALECIDE" instantly mixable with water, and stays mixed. Non-corrosive to man or beast. In 1-5-10 gallon cans, 25 and 50 gallon barrels. Efficient, guaranteed. Free particulars. B. G. PRATT, CO., Mfrs., New York SPRAMOTOR CO. Sole Canadian Agents, 1080 King St., London, Canada.



ESTABLISHED 1860
DOMINION NURSERIES

We offer for the Spring of 1908 a full line of

FRUIT TREES SMALL FRUITS
SHADE TREES SHRUBS
VINES ROSES, etc.

We have no Agents. We sell direct. Our prices are reasonable. Send for new catalogue just issued.

The Smith & Reed Co.
St. Catharines, Ontario

Mention The Horticulturist when writing

A Square Piano for \$30.00.—Heintzman & Co., Limited, 115-117 King Street West, Toronto, are clearing out what is pretty much one floor of square pianos at not only \$30, but some of them at \$25, and again others at \$35, \$40 and \$45, in payments of \$5 down and 50c. a week.

Ideal Fence is Made to Last

Any farmer who knows fence knows Ideal is his kind as soon as he sees it. He sees the big, strong wires and how they are put together and that pretty nearly settles it.

When he wants particulars, he gets them straight. He finds Ideal wires are all No. 9 wires, the heaviest that are used for fencing in Canada. ALL No. 9, mind you; not big at top and bottom with some flimsy light ones in between.

He finds they are all of hard steel. Just about twice the strength that you get in soft wire fences. He sees that the upright stays are substantial (they are No. 9, too) and he knows they help do the work of the posts. When he examines into the way the big, strong horizontals and uprights are locked together at every crossing, he knows that when he puts up Ideal fence it's there to stay.

Take a look at the lock shown below.

There's no getting away from it, it's the best thing of the kind used on any fence—grips the wires at five bearing points. It makes every part, strengthen every other part. There are no weak places. The fence is one complete whole. Extremes of heat and cold don't make it sag. Climbing nor anything else won't loosen it.

Don't you want that kind of a fence? It is the Standard railroad fence of Canada. More of it sold for farm use than any other. Just write and let us mail you our book on fencing, giving particulars.

**THE MCGREGOR
BANWELL FENCE CO., Ltd.,
Dept. S. Walkerville, Ont.
THE IDEAL FENCE CO., Ltd.
Dept. S : Winnipeg, Man.**

NOTE THE LOCK



A Record of New Fruits

W. T. Macoun, Horticulturist, C.E.F., Ottawa

During the past three hundred years many varieties of fruits have originated in Canada, some of which are of great merit. The Dominion and provincial governments through their official publications have recorded a large number of those originated, but up to the present time no complete list of Canadian fruits has been published. In view of the fact that many new varieties are being originated every year, it seems desirable, before the task becomes too great, to prepare as complete a list as possible, so that in future all that it will be necessary to do will be to add to it the new ones.

The Horticulturist of the Central Experimental Farm requests, therefore, that the secretaries and members of fruit growers' associations, horticultural societies and farmers' institutes, assist in preparing this list by sending to him the names of any seedling or cross-bred fruits of Canadian origin which they think should be recorded. It is especially desired to get information regarding local or unnamed seedlings of merit. Please send, if possible, the originator's name, the date of origin, the name of the place where originated, a description of the fruit, and any other information regarding it. Any or all of these particulars would be appreciated. Even if the name and address only of the originator were sent, it would enable us to correspond with him and get further information.

The Horticulturist will be glad to examine and report on the merits of any new fruits which may be sent to him. Letters and mail parcels under five pounds in weight may be sent free of postage.

The Popular Piano-Player.—The player-piano has stirred up any amount of enthusiasm in musical circles, if the many sales being made by Heintzman & Co., Limited, 115-117 King Street West, Toronto, are to be taken as a criterion. This firm have a very wide selection of player-pianos at terms of payment to suit almost any purchaser.

Buy an Organ for \$10.00.—The one hundred organs of well-known makers that Heintzman & Co., Limited, 115-117 King Street West, Toronto, are clearing at \$10, \$15, \$20, \$25, \$35 and up, are going like a fire on a windy night. These organs can be bought at these prices, in payments of 50c a week.

TREES, PLANTS, VINES

AS GOOD AS THE BEST AND
BETTER THAN THE REST
AT ATTRACTIVE PRICES

Write for Descriptive Price List

A. W. Graham, St. Thomas, Ont.

"\$100" STRAWBERRY PLANTS

Highland, Hummer, Hundred Dollar, Abundance, 3 W's, Arnout, Evening Star, Ekey, Oak's Early, Golden Gate, Oswego, Saratoga.

150 varieties, including all that have proved of value.
Send post card for prices.

E. B. STEVENSON, Maple Bank, GUELPH, ONT.

FOR ANY STORE

The right metal ceiling lessens fire-risk, beautifies any interior, is cleanly and lasts almost forever. Such a ceiling is easily put up, and costs no more than the common kinds. Learn the facts about

PEDLAR ART STEEL CEILINGS

More than 2,000 designs, suitable for every use. Side-walls in equal variety to match. Let us send you a book that tells the who's story of the ceiling that shows no seams. Address— 211

The PEDLAR People (Est'd 1881)
Oshawa Montreal Ottawa Toronto London Winnipeg

FLOWER POTS

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

The FOSTER POTTERY CO., Limited
Main St. West, Hamilton, Ont.

Mention The Canadian Horticulturist when writing

FREE BOOK FOR YOU

Beautifully Illustrated **Mighty Interesting**

If you want to know how to grow big crops of big red strawberries and how to get big prices, send for our 1908 book. It tells all about soil preparation, setting, mating, pruning, cultivating, spraying, mulching, picking, packing and marketing. All of these essential features and many more are explained in such a way that you can't go wrong. It was written right out in the strawberry field by a man who has made a fortune growing strawberries, and he tells you just exactly how he does things. Send your address. That's all. The book is free.

R. M. Kellogg Co., Box 570, Three Rivers, Mich.

THE CENTRAL NURSERIES IMPROVING FOR TWENTY-EIGHT YEARS

HULL'S Trees, Vines, Plants, etc., are reliable to variety and quality. Our customers say so. Try us.

New Priced Catalogue Ready Soon.

A. G. HULL & SONS, ST. CATHARINES, ONTARIO

THE PHOTO-ENGRAVERS LIMITED.



DESIGNERS ENGRAVERS
ILLUSTRATORS AND ETCHERS

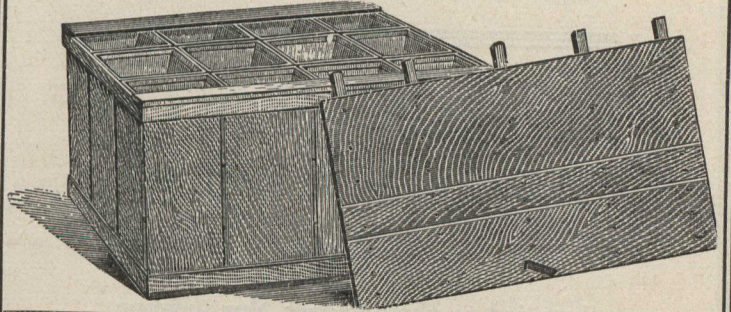
10 JOHNSTON LANE

TORONTO PHONE MAIN 5251 ONTARIO

Mention The Canadian Horticulturist when writing

BASKETS

We are Headquarters for all kinds of Splint Baskets



Veneer supplied for the protection of trees from mice during winter

FRUIT PACKAGES A SPECIALTY

SEND FOR OUR PRICES

The Oakville Basket Co. - Oakville, Ont.

Mention The Canadian Horticulturist when writing

Gerhard Heintzman
Art Pianos

Louis XV Case

THE ARTISTIC PIANO OF CANADA IS THE
"GERHARD HEINTZMAN"
 New Catalogue mailed free on application
 GERHARD HEINTZMAN, Limited
 97 Yonge Street, Toronto 127 King St. East, Hamilton

ART. DEPT. CANADIAN MAGAZINE

Mention The Canadian Horticulturist when writing

Feed Your Land

WITH GOOD MANURE AND GET
GOOD RETURNS

MARCHMENT'S
SURE GROWTH COMPOST
— IS THE BEST —

Supplied to the Largest Nurserymen
and Fruit Growers in Ontario

S. W. MARCHMENT

133 VICTORIA ST., TORONTO

Telephones Main 2841

Residence Park 951

Mention The Canadian Horticulturist when writing



Underwood

It is worthy of note that out of 15 styles of typewriters introduced during the past few years, 13 have been built as closely in imitation of the Underwood as the patent laws would permit.

It took 25 years to learn that typewriters were built on the wrong plan—upside-down in fact. The advent of the Underwood revolutionized the typewriter industry, and this revolutionizing has continued for ten years.

The latest achievement is the perfecting of the Underwood Book-keeping Typewriters which are effecting wonderful economies in the work of the office. They are a source of very considerable profit. If you have orders to enter or bills to render you can't afford to be without them.

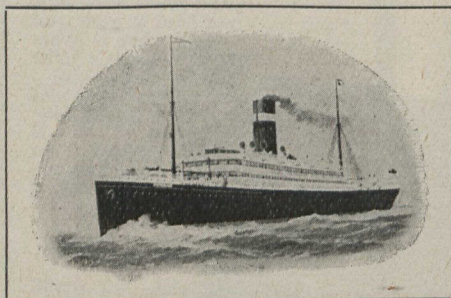
United Typewriter Co.

Limited

7-9 ADELAIDE STREET EAST, TORONTO

and in all the principal cities

Mention The Canadian Horticulturist when writing



ALLAN LINE STEAMSHIP CO.

(Established 1854)

LIMITED

SERVICES

St. John, N.B., and Halifax, N.S.
to Liverpool (Royal Mail Service)
St. John, N.B., and Halifax, N.S.
to London, via Havre

Portland, Me. . . . to Glasgow
Boston to Glasgow
Glasgow to Philadelphia (via St.
Johns, Nfld. and Halifax, N.S.)

Liverpool

STEAMER
TUNISIAN
CORSIKAN
VIRGINIAN
GRAMPIAN
VICTORIAN

From ST. JOHN, N.B.	From HALIFAX, N.S.
Feb. 14th, 8 a.m.	Feb. 15, p.m.
Feb. 22nd, 3.30 p.m.	
Feb. 28th, 8.30 a.m.	Feb. 29, p.m.
Mar. 7th, 4 p.m.	
Mar. 13th, 9 a.m.	Mar. 14, p.m.

Glasgow

STEAMER
ONTARIAN
PRETORIAN
SICILIAN
LAURENTIAN
IONIAN

From BOSTON
Feb. 15th, 9 a.m.
Feb. 29th, 8 a.m.

From PORTLAND
Feb. 8, 3 p.m.
Feb. 22, 3 p.m.
Mar. 5, 11 a.m.

NEW STEAMERS, LOW RATES, SUPERIOR SERVICE

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

THE ALLAN LINE, 77 Yonge Street, TORONTO

H. & A. ALLAN, General Agents, MONTREAL

Mention The Canadian Horticulturist when writing

Deming Spraying Pointers



DID you ever know the grief of having a spray pump break down right in the middle of the season when you were busiest? With one such experience you would hardly care for another; if the fault lay in a poor, unreliable pump that you had purchased because it seemed like an easy "saving," you probably doubted seriously, afterward, whether or not it paid you.

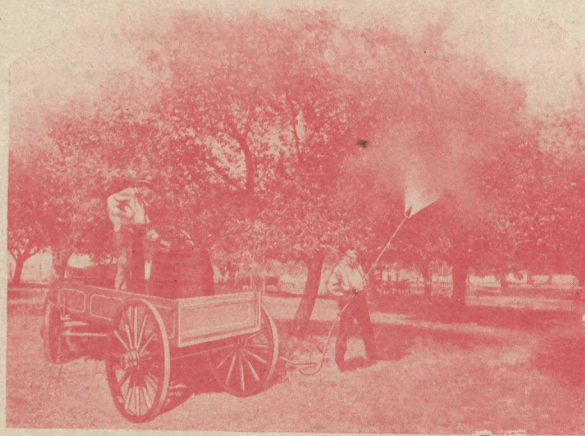
Was that really economy?

DEMING SPRAYERS are built on the theory that cutting first cost at the sacrifice of quality is a poor saving—and the practice of everyday use confirms this idea. So far as concerns appearance, an iron pump is as good as a brass one; but "looks" end when the pump leaves the

store, and beauty does not make a very long stand against hard usage and corrosive chemicals.

The parts which make a pump good or bad are inside—you cannot see them, but they are there just the same. In DEMING SPRAYERS these parts—valves, valve seats, plunger, cylinder, etc., are brass—spraying materials cannot corrode them; hence the life of the pump is increased.

DEMING SPRAYERS are made for you. Eighteen styles, hand and power; nozzles and attachments galore—suited exactly to your need. Let us help you select your outfit. Nineteen eight Catalogue and "Expert Testimony" will please you.



The Deming Company, Salem, Ohio

J. A. SIMMERS, TORONTO

BLACKIE BROS., HALIFAX

Mention The Canadian Horticulturist when writing

DONALDSON LINE

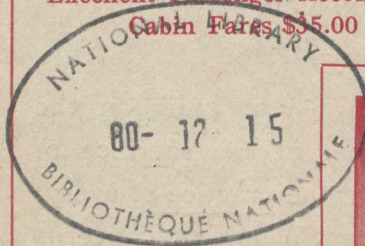
WEEKLY SAILINGS

TO GLASGOW

From Montreal in Summer and St. John, N.B., in Winter

THE FAVORITE LINE FOR FRUIT AND PERISHABLES—MODERN STEAMERS, PERFECT VENTILATION—USING SIROCCO FANS, COLD STORAGE REFRIGERATORS

Excellent Passenger Accommodation on the High Class Twin-Screw Steamers "Athenia" and "Cassandra."
Cabin Fares, \$35.00 to \$50.00; Steerage \$26.50 to \$30.00. Other Steamers, cabin only, \$35.00.



SS. "ATHENIA," 10,500 Tons, Twin Screw

THOMSON LINE

ATLANTIC REFRIGERATOR SERVICE

WEEKLY SAILINGS

TO LONDON

ALSO SAILINGS TO NEWCASTLE, LEITH AND ABERDEEN

From Montreal in Summer and Portland, Maine, in Winter

COOL AIR, COLD STORAGE, SIROCCO FANS—FOR BUTTER, CHEESE, BACON, APPLES AND ALL PERISHABLES, USE ONLY THIS LINE

FULLEST INFORMATION GIVEN ON APPLICATION. ASK YOUR RAILWAY AGENT, OR

The Robert Reford Company, Limited

110 UNION STATION, TORONTO, ONTARIO

HEAD OFFICE—MONTREAL, QUE.

BRANCHES—QUEBEC, ST. JOHN, N.B., and PORTLAND, MAINE