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THE CANADIAN HORTICULTURIST

INDEX TO VOLUME XXXI

The Canadian Horticulturist

JANUARY, 1908

Volume 31, No. 1

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Where sun-gods sleeps and dryads doze
Beneath the swirl of Winter snows,

What wealth of blood and pass[illegible]me
The still, cold garden cloaks enclos[illegible]

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The Canadian Horticulturist

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The Canadian Horticulturist

Vol. XXXI JANUARY, 1908 No. 1

Fruits Originated in Canada*

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

UP to the present time no extensive list of fruits which have originated in Canada has been published, but it is now thought desirable, owing to the rapidly developing importance of the Canadian fruit industry, that such a list should be at least begun. It is with much pleasure, therefore, that I present before the American Pomological Society a preliminary paper, believing that the best place to introduce such a subject is before this society, which has done so much to systematize nomenclature and to bring new fruits into notice.

Fruits have been cultivated in Canada almost or quite as long as they have been in the United States. Early in the history of the country, apple trees were successfully planted by the French in Nova Scotia, and by 1663, according to history, trees were growing on the banks of the Dauphin, the L'Equille, and L'Orignal rivers, and in the vicinity of Minas Basin and the rivers Canard and Gaspereaux. According to Pierre Boucher, who wrote in 1663, trees were growing in the vicinity of Montreal, for he states: "Not many trees have been introduced from France, except some apple trees that bear very fine fruit in large quantity, but there are not many of these trees yet." In Ontario and the other provinces of the Dominion, the cultivation of fruits was begun later. For at least 250 years, then, fruits have been cultivated in Canada, although little progress was made while the country was thinly settled and the permanence of the settlements uncertain. There is no doubt, however, but that from the very earliest of the introductions have sprung some varieties distinctly Canadian. While many of the fruit trees introduced from France and England to Nova Scotia were suited to the conditions there, and have been the parents of many seedlings showing evidence of the blood of old French and English sorts, it was quite otherwise in the case of the province of Quebec, where the cold winters must have destroyed most of the trees, but in the Fameuse apple, which Canadians claim to be the best apple of its season, there is an instance of a variety, or a Canadian seedling, which we prefer to think, that has survived, and in the seedlings of Fameuse there is a group of varieties bearing a close resemblance to the parent which are proving of great value. In Ontario, where the cultivation of fruits was begun somewhat later than in the provinces of Nova Scotia and Quebec, the parentage of most of the seedlings may be traced to American varieties which were already quite numerous when orchards were first planted in Ontario.

Up to within a few years ago most of the fruits of merit which had originated in Canada were chance seedlings, or seedlings which had originated with little or no effort on the part of man. There is no doubt but that considerable seed was planted by the early settlers, but in those stormy times the young trees must have received little care. Later, there was less incentive to originate trees from seed, as good varieties could be procured from the New England states, hence most of the Canadian fruits of which we now have a record have originated by chance from seed fallen by the wayside.

It is not my purpose to present at this time a long list of varieties which, for the most part, would be uninteresting, and which can be studied if desired when this paper appears in the Annual Report, but to say something more about those Canadian varieties which have now more than a local reputation.

APPLES ORIGINATED IN CANADA

The apple, being the most important Canadian fruit, has naturally given more desirable sorts than any other kind of fruit. Perhaps the most noteworthy of all Canadian apples is the Fameuse. While some writers have tried to show that this apple is of French origin, and was merely introduced from France by the early Canadian settlers, there is no good evidence to support any such contention, and while there is no positive proof that it is Canadian, the evidence is very strong that it was originated somewhere along the St. Lawrence river near Montreal or Quebec early in the seventeenth century. The Fameuse and some of its seedlings stand out prominently among the high-class dessert apples of their season, and in addition to their beauty and quality they are very profitable, and if an unprejudiced vote were taken by all fruit growers who are well acquainted with apples, on what were the two best dessert varieties of their season, which is November to January in Canada, the vote would be almost unanimous in favor of the Fameuse and the McIntosh, the latter a Canadian seedling of the former.

*A portion of a paper read before the American Pomological Society, at the Jamestown Exhibition.

Assists Societies

The Woodstock Horticultural Society has been taking THE CANADIAN HORTICULTURIST for 12 or 13 years. The society was organized about 1895, at which time THE CANADIAN HORTICULTURIST was given as a special premium. Ever since that date, the members of the horticultural society have looked forward to receiving their copy of THE CANADIAN HORTICULTURIST. We know that it has proved to our advantage to give the publication as a premium to our members, and I would advise all other societies to do the same. Not only will it assist in increasing the membership, but THE CANADIAN HORTICULTURIST is of such a nature as to greatly assist the horticultural interests of the society.—M. Dawes, Secretary-Treasurer, Woodstock Horticultural Society, Woodstock, Ont.

These two apples are always in great demand in Canada, the United States and Great Britain, and high prices are usually paid for No. 1 fruit. The following are descriptions of these fruits:

FAMEUSE OR SNOW

Origin unknown. Supposed to have been a seedling originated near Montreal or Quebec early in the seventeenth century. Fruit of medium size, roundish to oblate; skin, pale yellow, either almost or completely covered with deep red or splashed and washed with red when fruit is not well colored; dots not prominent; cavity of medium depth and width; stem, short to medium in length, slender or moderately stout; basin, small, somewhat narrow, almost smooth; flesh, very white, very tender, juicy, subacid with a fine flavor and a delicate perfume; core, small; quality, very good to best; season, early winter; tree, strong grower, spreading, and a heavy bearer. This is one of the best dessert apples, and one of the most profitable where it succeeds.

MCINTOSH

Originated with John McIntosh, Dundela, Ont., early in the nineteenth century. Probably a seedling of Fameuse. Fruit above medium to large, roundish, slightly angular, highly perfumed; skin, pale yellow, almost entirely covered with crimson, dark on sunny side and brighter on rest of fruit; dots, few, small, yellow, distinct, but not prominent; cavity of medium depth and width; stem, short, stout; basin, narrow, almost smooth, medium depth; calyx, partly open; flesh, white, crisp, very tender, melting, juicy, subacid, sprightly with a pleasant aromatic flavor; core of medium size; quality, very good to best; season, November to January; tree, hardy, and a strong, moderately upright grower and an annual and medium bearer. For its season the McIntosh apple is one of the best varieties grown. In some places, it is very subject to spot, but this has not been the experience at the Central Experimental Farm, where the trees are sprayed. It has also not been found to be a shy bearer as reported by some.

FAMEUSE VS. MCINTOSH

In the provinces of Ontario and Quebec are many orchards of Fameuse trees, and in the United States, in which this variety succeeds, it is also popular and has been largely planted. It is only during the last forty years that the McIntosh apple has been propagated, the son of the originator first beginning this work, and other nurserymen eventually doing the same. The oldest orchards are in the vicinity of the original tree, which still remains alive, although in bad condition. Naturally, there was not much fruit available until comparatively recently, and it is only during the past ten or fifteen years that the fruit has become widely known. So great is the popularity of this variety at present that the nurserymen cannot meet the demand for trees. The McIntosh is superior to the Fameuse in several respects. It is larger, more uniformly handsome, and by most people considered of better quality. It is perhaps not quite so productive as Fameuse, but in our experience is a more regular bearer. Like the Fameuse, it is subject to spot, but this can be prevented by thorough spraying.

SCARLET PIPPIN

Another Canadian apple of the Fameuse group is the Scarlet Pippin, which, though not quite as useful as the McIntosh, is a very profitable sort on account of its handsome appearance, productiveness and good quality. It is sometimes called "Leeds Beauty" and is described as follows: Originated at Lyn, Leeds County, Ontario, near Brockville. Mr. Harold Jones, Maitland, Ont., has had most to do in bringing this fine apple before the public. Fruit of medium size, oblate to roundish; skin, yellow, waxy, more or less washed or splashed with bright and dark crimson, and covered with a light bloom; cavity, deep and of medium width; stem, short, slender; basin, narrow, shallow, almost smooth; calyx, generally closed; flesh, white, firm, crisp, tender, melting, juicy, a mild subacid, with a pleasant but not high flavor; core, small; quality, very good; season, early winter. A very attractive apple, and said to sell better than Fameuse, which it does not, however, equal in quality. Tree a strong, upright grower, and a heavy bearer.

ST. LAWRENCE

Closely related to the Fameuse, if not of the same group, is the St. Lawrence, which also is scarcely surpassed by any apple of its season, which is between Duchess and Wealthy. It is grown in considerable quantities in the province of Quebec, and finds a ready sale among the best class of customers. It was originated in Montreal early in the nineteenth century. The tree is a strong, spreading grower, moderately productive; fruit, above medium to large, oblate conic; cavity, medium depth, open; stem, short, stout; basin, medium depth and width, wrinkled; calyx, closed; color, pale greenish-yellow, splashed and streaked with dark purplish red; dots, obscure; skin, thin, tender; flesh, white tinged with red, tender, juicy, subacid, pleasant flavor; core, medium; very good quality; season, mid-September to October.

(To be continued)

Amateur Grape Growing

Fruits of all kinds should be grown in amateur gardens more extensively than they are at present. Most fruits are not difficult to grow. They are interesting subjects to handle, and will furnish much pleasure and reward to the grower. Among the kinds of fruits that can be trained to occupy small space if necessary, is the grape. An enthusiastic horticulturist in Hespeler, Ont., Mr. G. W. Tebbs, secretary of the Hespeler Horticultural Society, has experienced considerable success with grapes, as is evidenced by the illustration on page 3. In the following letter Mr. Tebbs outlines his methods of care and treatment:

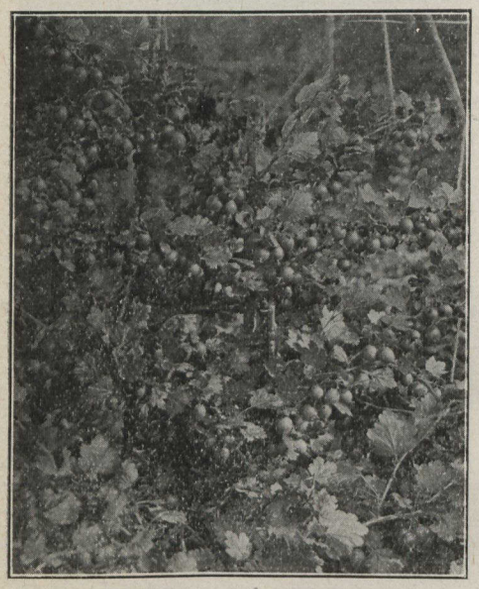
"I had no experience with grapes until two years ago, when we took over this property and found vines that were simply a tangled mass of branches —more like a hedgerow than anything else, and the grapes were not fit for chickens to eat. In the fall of the first year, I cut them mercilessly back to the main trunk of the vine. The trellises were to pieces, and I rebuilt them. The grass was growing around the roots, and during the season is still doing so to a large extent. It is the tiresome twitch grass that is so difficult to remove. I did my best, however, in getting as much air to the roots as possible. I cleaned the bark of all sorts of vermin. The first year we had a dandy little crop, not large in quantity, but good in size, and well ripened.

"Last fall, I repeated the same treatment, but began training the vines to the trellises, and did not cut back quite so vigorously, leaving about two buds on the branch. When the grapes begin to turn color I strip off a few leaves near the bunches to let in the sun, and the fruit always ripens before we get a frost. To help them out, I cut the tips off the branches and throw all the support into the fruit.

"In sending samples to the Old Country, I pack in boxes when nearly ripe, making them firmly and what I call 'cosy,' with paper shavings obtained from confectionery goods. The boxes are well papered inside, as it acts as a non-conductor of heat. My friends on the other side of the water say that the grapes arrive in A1 condition, with the bloom as perfect as on the day they were gathered. If this can be improved upon I should be glad to have a few pointers from your readers. We had bunches weighing over two pounds. If more were grown in this section as they are grown in the Niagara district, they would do just as well. I have had no early frost trouble here."

Can San Jose Scale Spread From Infested Fruit?

In the November issue of THE CANADIAN HORTICULTURIST it was pointed out that there is no danger of San Jose scale spreading to orchards from infested fruit. Many prominent entomologists expressed their opinions. As the question is one of great importance to fruit growers, a number of others were asked to contribute their views.



A Seedling Gooseberry

Originated and grown by P. Barrett, Truro, N.S.
See page 4.

The State Entomologist for Connecticut, Dr. W. E. Britton, wrote: "It seems to me possible for the scale to be spread in this way, and yet I cannot name a single instance on record where it has actually happened. As a matter of fact, in canneries the waste is utilized in such a way that there would be no danger. In some cases, as you know, the cores and parings are used for making jelly, and are either cooked or subjected to great pressure, perhaps both, so that no insects would come through the process alive. If a person should throw an infested pear or apple into the branches of a fruit tree, crushing the fruit so that portions of it were left upon the branches, newly hatched scales would doubtless become established upon the tree; but this is about the only way in which it seems possible for infested fruit to be dangerous. This is probably not liable to happen."

Prof. H. T. Fernald, Associate Entomologist, Agricultural Experiment Station, Amherst, Mass.: "I do not know of a single case where trees have ever become infested with the San Jose scale from infested fruit, though this has been shipped to all parts of this country and abroad for a number of years. It is evident that the scales themselves on the fruit cannot change their location, and the only danger would be that crawling young coming from these scales might be brought in contact with plants upon which they could live; but these young can travel only a very short distance, and if we remember that purchased fruit is rarely eaten where there are fruit trees, and that parings and refuse from infested fruit would stand very little chance of being deposited close to such trees, we can see at once that the chance of infesting such trees is exceedingly slight, and indeed may be entirely ignored in practice.

"The only way in which I should feel at all certain of succeeding in infesting fruit trees by means of infested fruit would be by securing well-infested samples of the fruit and carefully fastening these on small branches of living trees, and this too during the spring, summer or early fall months rather than during the season when infested fruit is most likely to be available for such a purpose. From these standpoints, my answer to your question would be that there is very little danger of the scale ever being disseminated by means of infested fruit."

Prof. C. D. Jarvis, Horticulturist, Agricultural Experiment Station, Storrs, Conn.: "There is little danger in disseminating San Jose scale by the importation of infested fruit. My belief is based upon a knowledge of the habits of the insect. The young insect, after moving around for a few hours, or at most for a day or two, settles down, secretes its waxy scale and never leaves that position. It is possible that when harvested, the fruit may carry some of the young moving scales, but by the time it reaches its destination they will have become fixed. It is quite probable that the scale continues to breed while the fruit is in storage or during transportation. Assuming this to be true, the only danger lies in the disposition of the parings. If they should happen to be deposited near any of the host plants of the insect during the breeding season, there is a possibility of its getting a foothold. In view of the lateness of the season, and in view of the very delicate nature of the young insect, its survival is extremely doubtful."

Prof. Leonard Haseman, Assistant Entomologist, College of Agriculture, Columbia, Mo.: "While it can readily be seen that under perfectly favorable conditions some scales could be shipped long distances and transferred to fruit trees where the fruit is used, it is not at all likely that any would spread in this way. It would be necessary for the fruit to contain full-grown females, and where the fruit is used the peelings would have to be thrown where the young could readily crawl to the trees or other shrubs on which they could feed, as the period of activity of the young is not over forty-eight hours. In general the peelings and cores of apples and pears are thrown into refuse barrels and used for food for hogs and the like. Considering everything, there need be no fear concerning the spread of this pest upon fruit. In every case of which we have a record in this state, the spread has been entirely through infested nursery stock."

The state entomologist for Minnesota, Mr. F. L. Washburn, expresses his opinion as follows: "I regard the presence of San Jose scale as a greater or less menace under almost any condition. While fruit peelings infested with San Jose scale, thrown out on the

Do You Like Grapes?

Photograph taken in his garden at Hespeler, Ont., in September, 1907, by Mr. G. W. Tebbs, Director, Hespeler Horticultural Society. See page 2.

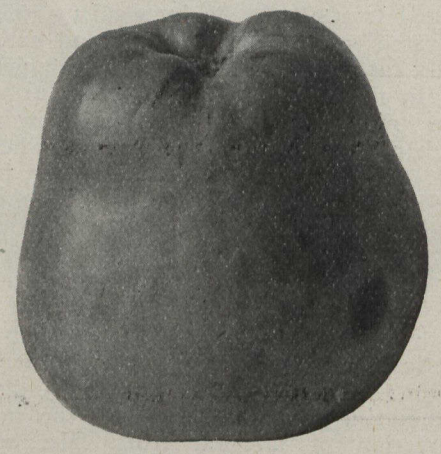
ground, might not in 99 cases out of a 100 do any harm, it is possible that some of the female scales, when they became mature, might hibernate successfully in close proximity to some tree or shrub, and the young produced in the spring would be apt to crawl upon the above mentioned tree or shrub and cause trouble. I believe, therefore, in legislation against infested fruit."

The state entomologist for Illinois, Mr. S. A. Forbes, wrote: "The question whether the San Jose scale may be conveyed by means of ripe infested fruits is not a simple one, owing to the fact that one can never say just where such fruits may be kept or placed, or what may be done with the parings. It is undoubtedly the case that the scale will live and multiply on ripe apples after they have been picked, the young fixing themselves on the fruit and going through at least the early stages of their growth. This has happened in my office, with apples kept on the office desk. There is, consequently, a theoretical possibility that young scales may escape from such fruit to trees adjacent, but the conditions under which this could happen must be extremely rare, if indeed they ever occur."

Another Seedless Apple

At the Ontario Horticultural Exhibition held in Toronto last November, Mr. W. M. Robson, of Lindsay, Ont., exhibited specimens of a seedless apple. They were picked from trees that have been growing near Lindsay for fifteen years or more. It is claimed that the trees came originally from a nursery, but all trace of their origin is lost. Mr. Robson exhibited the specimens at the request of the owner, Mr. Jas. Fleury, of Lindsay. In the words of Mr. Robson, "Mr. Fleury is desirous of having the variety tested by the experiment stations of the province and by the growers, so that its merits may be determined. It is not in the possession of any combine with hard and fast rules respecting its distribution. Its quality, size and appearance are good, and apparently it is a winter variety. It is in a state of evolution. Having dispensed with the seeds, Dame Nature may be contemplating the disposal of the cells as useless appendages. If these can be done away with, the variety has a future."

A number of fruit growers and a representative of THE CANADIAN HORTICULTURIST examined the specimens shown. Like all seedless apple productions, this variety has its defects, some of which may be seen in the illustrations on page 4 and 5. While perfectly seedless, this apple has a pronounced open core. The elimination of seeds is of little value while the core remains, as it is the latter and not the former that causes waste and annoyance to the canner and the house-wife. This apple is of good size, but its shape is uninviting. In color, it is only ordinary. The specimens examined by THE CANADIAN HORTICULTURIST were slightly past their prime, indicating that the variety is late fall in season. It is only right to say in this connection that the shaded portions of the cut surfaces shown in two of the illustrations are due largely to exposure to the air while the camera was being focused and arranged for taking the photographs. It is the policy of THE CANADIAN HORTICULTURIST to further the interests of horticulture in all its branches, to aid in the introduction



Another Seedless Apple

of new varieties of fruits that are worth while, and so forth, and to pronounce unfavorably upon varieties, methods and schemes that are of little or no use. The variety aforementioned should be tested by our experiment stations, and tested thoroughly before receiving further notice from fruit growers.

A Seedling Gooseberry

The engraving on page 3 illustrates a seedling gooseberry bush grown by Mr. Peter Barrett, Superintendent of the Truro Poor Farm, Truro, N.S. From press notices in Nova Scotia, it is evident that Mr. Barrett has a hobby along this line of horticulture. He has lived in Truro over 40 years, coming there from England. He is an enthusiastic horticulturist.

From the bush illustrated, there were picked last season eleven and one-half pounds of ripe fruit. Mr. Barrett is propagating this new variety, and considers it very promising. He has originated and is growing several other seedlings, not only of gooseberries, but also of red and black currants. These are expected to bear fruit next season. Their progress will be watched with interest.

Shot Hole Fungus

V. R. Gardner, Macdonald College

This is a disease of the stone fruits, affecting the foliage only. On the cherry, it is more commonly known as the cherry leaf spot. Reddish, more or less circular spots appear on the leaves. These spots often run together, forming large, irregular patches. They later turn brown, and finally the diseased tissues drop out, making the leaves appear as though they had been riddled with shot. This usually results in a premature falling of the leaves and a corresponding check in the growth and fruitfulness of the tree. If the trees are stripped of their leaves early in the season and wet weather follows, a new growth is often made. This does not have a chance to ripen perfectly before fall, the result being increased danger of winter-killing. Without doubt, a considerable amount of the winter-killing of cherry and plum trees is indirectly due to this fungus. In some localities, the disease is more destructive than in others. Season and soil also greatly influence its virulence.

TREATMENT FOR SHOT HOLE FUNGUS

Shot hole fungus is a difficult disease to control. As it is likely to appear any time during the season, and as new leaves are being formed on the plum throughout the summer, it is necessary to begin spraying early, and protect the new foliage by later applications. Bordeaux mixture applied before the buds open and once or twice after the fruit has set, and then the weak copper sulphate or copper carbonate of ammonia solution shortly before the fruit ripens, the same as is advised for the control of brown rot, is probably the best treatment that can be recommended. The treatment that will hold one of these diseases in check will also suffice for the other.

Some Market Prices

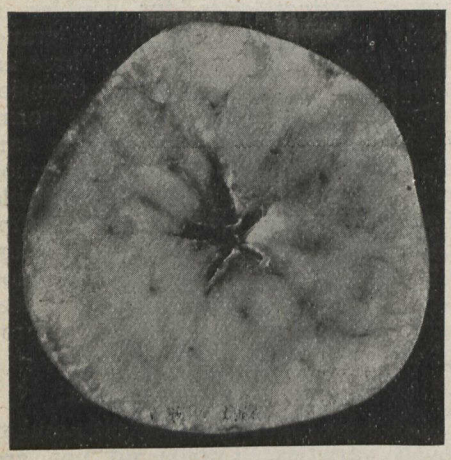
Kindly give the wholesale prices in Toronto markets for raspberries by the quart or pound, and asparagus by the bunch or pound, in their respective seasons. State the demand. Are there any canners in the district that handle berries? What prices do they pay?—J. M., Dunmore, Pa.

During the past season, raspberries averaged eleven cents a basket of about one to one and one-eighth pounds. The season was exceptional for high prices. During an ordinary season, the average price is about nine cents. Asparagus sold last season at $1.50 to $2 for an eleven-quart basket. These baskets contain from eighteen to twenty-four bunches, according to the size of the bunches. There are a number of canning factories in the province. Last season they paid nine cents a basket for raspberries and in ordinary seasons, eight cents. It is not probable that the production of either of these commodities will ever exceed the demand.

What Trees Should Be Planted?

Prof. G. Reynaud, La Trappe, Quebec

THE majority of farmers are reaping their reward from the advantages which they have been able to draw from their fruit orchards; with a large number of farmers this becomes their first



Cross Section of Seedless Apple

thought, and in this they are worthy of all our encouragement. Nothing could be better to make them love their new venture. One is astounded at the enormous sums spent in the purchase of fruit trees compared with the results obtained in certain parishes. To explain this state of things we could give many reasons, of which one of the principal is ignorance of the varieties doing well in our climate. The farmers have often been the victims of misrepresentations. Fruits from elsewhere, good and beautiful though they may be, have been sold as thriving very well in that community.

It rests with the Pomological Society of the Province of Quebec, whose principal object is to work for the advancement of fruit growing, to aid these planters by the publication of the principal varieties of apples whose culture can be made successful in our province. Such a list was made last year and the Government has commenced its distribution through the country. With this list the grower should be able to give his order with a measure of certainty, doing away with costly experiences. Further, there is room to make a distinction in this list between the trees raised under home conditions and those coming from another province. I admit, certainly, that for a professional grower this distinction is not of great importance, for he can, by careful cultivation, overcome the defects of imported stock. But with the mass of growers the trees, so to speak, look after themselves, only receiving a minimum of care in insufficiently worked land. The only trees capable of giving us satisfaction are those grown in the Province of Quebec; moreover, most pomologists recommend the procuring of trees from a nursery as close to the place of planting as possible.

Our society, without showing any partizanship, and in the interests of all, should publish a list of those who have nurseries in this province, and who sell only that which they grow. By this means it would put a stop to a fraudulent business which does not fear to be carried on even in the same vicinity where a celebrated nursery, the oldest in the country, has always given its clients entire satisfaction, at times to its own loss. I speak of the nursery of St. Roch des Aulnaies, founded by our honored president, Mr. A. Dupuis, and carried on at present by one of our directors, Mr. A. D. Verreault. It is a credit to the province.

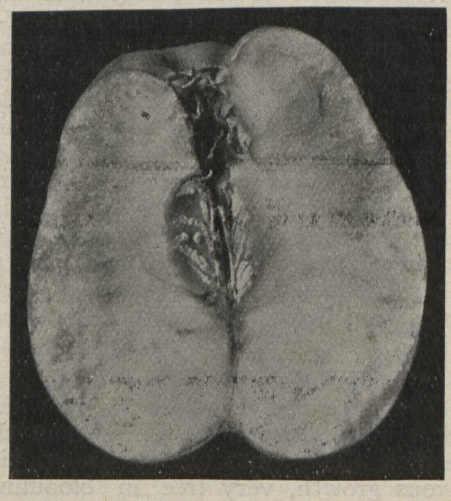
Sweet Pea Culture a Fine Art*

Max Moineau, Toronto

THE sweet pea of to-day is the result of many years of patient experimentation. Its beauty and fragrance have made it a garden favorite. Comparatively insignificant in its early state, it was, nevertheless, deemed worthy of the untiring attention of such specialists as Henry Eckford, of England; J. C. Schmidt, of Germany, and W. A. Burpee, of the United States, who have done more to enhance its attractiveness than any florists of modern times. From the six or seven common varieties extant in 1876, there have been propagated several hundred named strains, of the grandiflora and the orchid-flowering types, which so far surpass the original that they seem almost of another species. Recounting what has already been accomplished, it is easy to predict wonderful achievements for the future.

SWEET PEA HISTORY

The cultural history of the sweet pea dates back to the year 1699, when Father Franciscus Cupani, an Italian monk, and an enthusiastic botanist of Panormus, Sicily, was the first to cultivate it. He found the original purple and the white varieties indigenous to Sicily and Sardinia, the seed of which he sent to England and to other countries in Europe. From Ceylon, through the instrumentality of Linnæus, a Swedish botanist, came the original red variety, the progenitor of all our present-day reds, and the pink and white variety known as the "Painted Lady." Not until 1730 did the seed of the sweet pea become a mercantile commodity, and for a succeeding period of sixty-three years there were but five varieties known—black, purple, scarlet, white and "Painted Lady." About 1833, the striped and yellow varieties were introduced. There was no further advance until 1860, when the "Butterfly," a blue-edged variety, with notched standard, made its advent. Five years later "Invincible Scarlet" won a certificate as the very newest production, and in 1868, in Germany, was originated the "Crown Princess of Prussia," the first sweet pea of a flesh-pink color. The beautiful rose-pink "Adonis" had birth in 1882, but it was soon eclipsed by the better shaded "Princess Beatrice." For many years only a few other varieties of inferior quality were known. About 1898, the Americans, becoming enthused over the remarkable achievements of Henry Eckford, of England, introduced his seed into California, and were so successful that this state became the

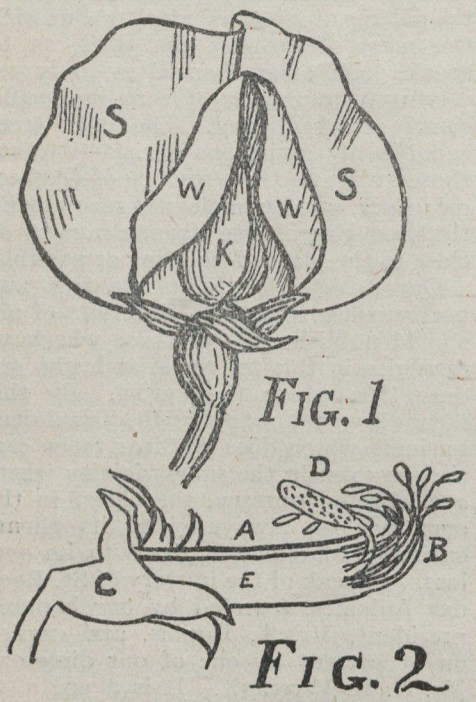


Longitudinal Section of Seedless Apple

world's principal base of supply. It was not long before more than 125 tons of seed were grown, and now in California alone the production is enormous.

* This article will be followed by one dealing with cultural data and suggestions.

Botanists have named the sweet pea *Lathyrus odoratus*, and, on account of its beauty and fragrance, classify it as the queen of the order *leguminosae*, to which it belongs. It has a calyx of five



Sweet Pea—Lathyrus Odoratus

Fig. 1.—The standard is shown at S, the wings at W and the keel at K. Fig. 2.—Shows the essential organs. The tenth stamen is at A, the nine cohescent stamens at B, the calyx at C, the pistil, stigma and ovary at D and E.

sepals, from which springs an irregular corola of five petals. The largest petal is called the standard, the two next in size the wings, and the two smaller ones, which envelop the essential organs, form the keel. Because of its resemblance to a butterfly it is said to be papilionaceous. The essential organs consist of ten diadelphous stamens—nine coherent and one by itself—and one pistil, with style and stigma, attached to a single ovary, which later forms the pod containing the ovules or seed. The earliest botanical history dates back to 1650, and although the sweet pea has been slow in its evolution, it has become so popular that its cultivation has inspired great interest among amateurs. At present there are seven distinct classes of sweet peas, and before beginning to cultivate either, it would be well to understand all.

THE GRANDIFLORA TYPE

Class I is the grandiflora type, which is a little later in flowering than the earlies. The vines are of strong, vigorous growth, very free in blooming, with extra large flowers, of good form and substance, coming on long stems in threes and fours, and all facing the same way. In this class we have a great variety of reflex, expanded, folded and hooded forms, in all colors known.

Class II is the orchid-flowering type. Of all the sweet peas grown, these are the most superior, as well as the most recent. The flowers are much larger than those of the grandiflora type, blooming in threes and fours, on long, stiff stems, with a glistening finish which resembles frosted silver, while the edges of the standards and wings are wavy, or fluted, like a cockle shell. This type was originated in England, the "Countess of Spencer" being the first, and therefore the parent, of the class. The vines grow vigorously; but, while they are very free in flowering, the seeds grow in such small numbers that the prices are high. This peculiarity is due, perhaps, to the fact that the wings fold down over the keel so closely that the essential organs are too well protected, and insect fertilization is often impossible. This type varies from a delicate shell pink to a deep rose. At present the set is comparatively small, "Enchantress," an English novelty of 1907, being perhaps the most beautiful.

DWARF EARLY FLOWERING

Class III is the dwarf early flowering type, which, when in full flower, is only fifteen inches high, blooming in sixty or seventy days from the planting of the seed. The flowers are smaller than those of the grandiflora class, and are slightly notched at the top of the standard. They are very fragrant, and when cut in sprays with the foliage, make cheering house decorations. The class contains only three distinct varieties, but the colors are quite pretty, "Earliest of All," with bright pink standard and creamy wings being perhaps the finest.

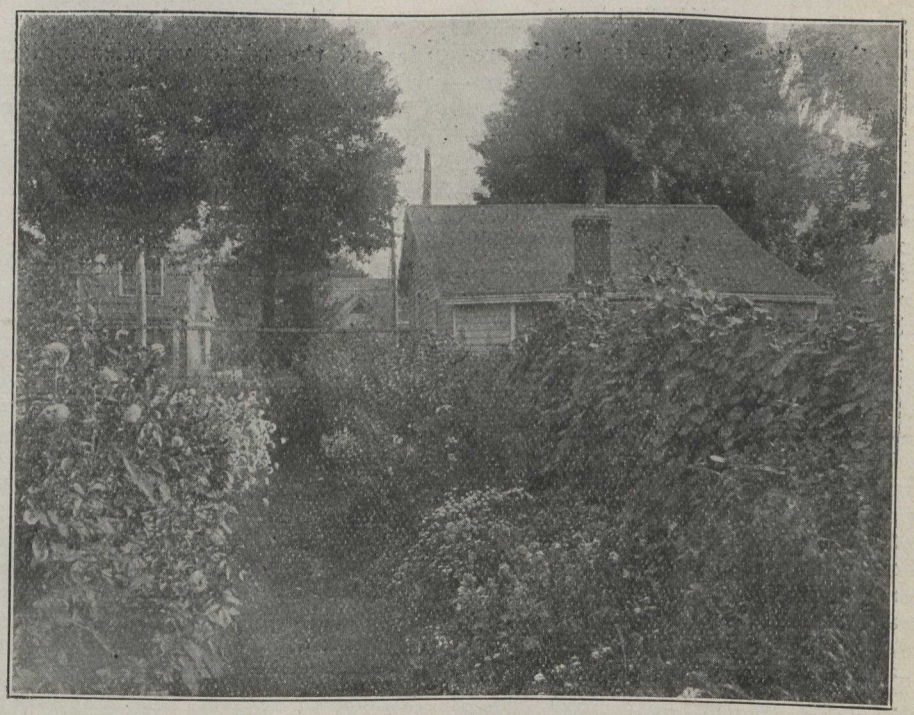
Class IV may be termed a collection of freaks, since they are malformations, and not desirable, except as curiosities. Their structure consists in poorly developed standards, and a close, or bud-like, form.

THE DOUBLES

Class V consists of doubles. It is not a distinct class, for doubles are likely to come on any of the grandiflora type. They have two, three and sometimes four standards. Occasionally there will be two or three normal flowers and one double on the same stem. This occurs frequently among the "King Edward VII." Doubles, however, are not given much attention; in fact, they should not be encouraged at all. They do not figure among first-class culture exhibits, but seeds can be obtained from any of the growers, if desired.

CUPIDS AND BUSH PEAS

Class VI gives us the cupids and the bush varieties. Cupids do not grow upright, but spread their foliage over the earth in matted clusters. The bush peas grow compact and erect to the height of eighteen inches. Neither varieties require much moisture, as they are deep rooted, and thrive in the hottest weather. They will not do so well in the same locality as the tall varieties, because their foliage is liable to mildew in damp surroundings. Both classes have many variegations.



A Mixed Garden of Annuals, Perennials and Climbers

Grown last season by Mr. J. A. Wiley, St. Catharines, Ont.

Class VII is the notched type. There was a time when the standards had a decided notch, or nick, in the centre, and sometimes at the side. The cen-

tral notch, however, has been entirely bred out of the grandiflora class, but occasionally the side notch is seen in some of the Eckford novelties. It was this side notch that got the "Butterfly" variety its name.

In whatever class he may choose to cultivate, the aspiration of every sweet pea grower should be the highest standard of perfection. This means, first of all, the keeping in touch with sweet pea specialists so that seed of the very choicest varieties may be secured; secondly, a good idea of what constitutes high-class sweet peas; and thirdly, a thorough knowledge of those requisites necessary in their culture. The most approved types are the grandiflora and the orchid-flowering singles. Developing these to the best form and size, and adding to the number of blooms upon the stem, should be the aim of every enthusiast. A flower stem must be close to ten inches in length, with the flower standard of a circular tendency, when pressed out flat, and measuring close on to two inches across, before a sweet pea can be rated as an ideal culture. To accomplish this one must be thoroughly in earnest, and ready to undergo a certain amount of work, which, if the heart is in it, need not be designated drudgery.

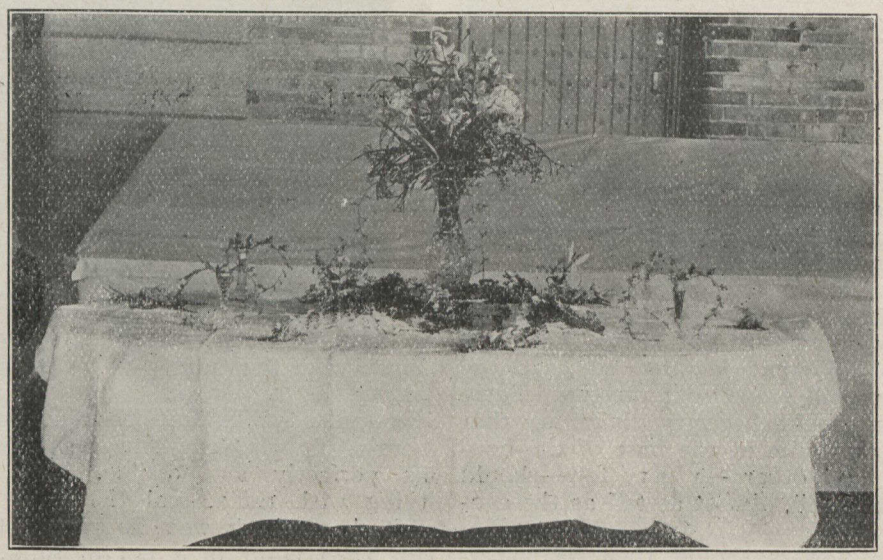
Flowers for House and Table Decoration

FOR some time now it has been fashionable to have table decorations rather flat in general effect, with here and there a high group of flowers, or perhaps only candelabra, to give the needed touch of style. These high parts of the decorations are preferably placed at the ends of the table rather than in the centre in most cases, for it seems to be the general idea that there should be no intrusive decoration to keep persons who are placed opposite each other from seeing one another's faces.

A very handsome decoration seen at a wedding breakfast was all in green, yellow and white. The selection of flowers was a little unusual, as it included, instead of the usual bride's roses and lilies, yellow orchids, smilax, ferns and lilies of the valley. The decoration was used for a table meant to seat eight persons. The table was covered with a magnificent cloth, having a border of lace which reached from the edge of the table almost to the floor. The table was circular.

In the centre of the table was arranged a little pool having a small fountain in its centre. There were gold fish in the pool which carried out the gold and white of the decorations. The pool was surrounded by a very wide and flat rope of smilax, or perhaps it would be best to call it a band. Here and there among the smilax were a few lilies of the valley, and there were two fairly large bouquets of the lilies and ferns placed opposite each other on the smilax. From this smilax circle also rose two tall glass vases whose bases were surrounded with branches of palm leaves. The vases were filled with orchids and ferns. Attached to them were small electric light bulbs which were partly hidden by the ferns. These two vases were also opposite each other and stood midway between the bouquets of lilies.

So far the decorations described have been confined to the pool and the encircling rope of smilax. Beyond this was a large margin of table. From the central decoration and across the rest of the table there extended four ropes of the smilax which hung down over the edges of the table to the bottom of the cloth. Bouquets of orchids were attached to the ends of these ropes and other bouquets were attached to the ropes about midway between the central decorations and the edge of the table.



Prize Decorated Dining Table at Niagara District Horticultural Exhibition

In harmony with this color scheme the fireplace decorations were in large ferns, palms and yellow and white chrysanthemums. Two great sheaves of ferns and palms on either side of the fireplace were set close together so that the longer branches met. The pinnacle of each had a loosely arranged bunch of yellow and white chrysanthemums, and there were more of these flowers arranged loosely around the base of the sheaves. One of the sheaves was much higher than the other, which made a much more pleasing arrangement than if they had both been of the same length. Loose bows of white gauze ribbon were tied about the sheaves about midway up, and the long, gauzy ends hung to the floor.

For the bridal bouquet the lily of the valley interspersed with orchids is considered an ideal combination. Bouquets made entirely of lilies of the valley are also very fashionable. The rose is the moment's favorite flower for the bridesmaids and is mingled with maidenhair, Farleyance and other fine ferns in a soft, full arrangement that looks easy to do but really requires a great deal of patience and skill. The bride's bouquet is tied with long loops of soft satin ribbon, and from it also depend a quantity of very narrow ribbon streamers, to which are attached clusters of the lilies of which the bouquet is composed. The bridesmaids' bouquets are also tied with broad satin ribbon of the very softest quality. The loops and ends are all of the same length, and are quite long.

For very simple table decorations which are to be done at home nothing is easier and more effective in arrangement than a long decoration down the centre of the table. The decoration is quite low, the highest points being made by the candles at either end. For this style of decoration moss is arranged in a long, irregular line going down the centre of the table. Ivy leaves and ferns laid flat on the cloth branch out from the moss in pleasing variety of line. Under the moss are concealed the receptacles which hold the water for the flowers. These may be of a moss green color, so that they may be

the more readily concealed by the moss and ferns. There should be at least nine of these water-holders, as otherwise it will not be possible to make the flowers look sufficiently scattered. They need not be large or deep, for it takes very little water to keep the flowers looking fresh during an evening. Each saucer or small cup is filled with a wire or iron stem-holder, such as may be had at any of the shops, and which are needed to keep the flowers upright. The moss and ferns may easily be twisted around the receptacle so that it will be quite concealed and the flowers will seem to be planted directly in the moss.

For such an arrangement of flowers almost any kind of blossoms is suitable. Carnations, roses, violets, chrysanthemums and lily of the valley are all admirable for this purpose, and the effect is often enhanced by the mingling of several blossoms. Simple garden flowers also look well in this way. Daisies, which may be had in colors as well as in white, are even more attractive for such an arrangement than roses. If roses are used, small ones are more attractive than the larger and handsomer blossoms. Nothing could be better than Chinese lilies and similar small and rather fragile blossoms.

The flowers are arranged in irregular bunches, as many as there are receptacles of water. The stems should all be of different lengths, so that the flowers will branch out prettily. Some stems should be very short, so that they are quite at the base of the bouquet, and others—a very few—should be quite tall, almost as tall as the candles.

The flowers should then be so arranged in the different sections of the wire holders that they branch out prettily and carelessly. The bunches ought not to be very full, and ferns, tall grasses, and graceful vines should be mingled with the flowers. Not all the bunches should be of the same height. There should be one very low bunch for the centre of the decoration, and then pairs of bunches of about equal height.

Tall candles with shades of the same color as the flowers selected or of a harmonizing shade are placed on the mossy bed at a short distance from each end of the decoration. The moss surrounds the base of the candles. The flowers are then arranged so that they look as if they had sprung naturally from the turf. The taller bunches are placed at the ends, gradually decreasing in size toward the centre. This decrease in height should not be noticeable, but should be altogether irregular.

A very simple decoration for a home dinner, but a very pretty one, is a wreath of smilax quite irregular and consisting merely of the smilax vine laid flat on the table. Intertwined with the smilax are wide open pink roses of the old-fashioned garden sort. The yellow roses are also most attractive, but are hard to find in the florists' shops in any varieties that would be suitable. The handsome modern roses do not usually serve the purpose. Chrysanthemums may also be used in this way. In the centre of this wreath may be placed a very low bowl, also filled with short-stemmed pink roses or roses and forget-me-nots. The candelabra are placed at the ends of the table, or, if it be a circular table, at the four imaginary corners.

Square and rectangular enamelled and gilt baskets are also used for floral centrepieces. Some of the gilt baskets are quite long and rather narrow, and are filled with soil, the roses and ferns being planted in this soil exactly as in the garden.

In sending boxes of flowers from florists' shops the newest fancy is to have picture boxes instead of flower designs, as have been fashionable. The flower boxes, of course, are always popular, since they are so much more appropriate than any others. The new boxes, however, with their bright and funny pictures, are also attractive.

Grafting Dahlias

Max Moineau, Toronto

Dahlias can be grafted in two ways. First, take the tubers of two different plants, as nearly alike in shape and size as possible, cut them obliquely across, fit the cut surfaces together as perfectly as possible, and after tying with raffia, seal the joint with soft shoemaker's wax, to keep out the air, then plant in a pot of sand. In the hot-bed the cut surfaces will soon unite. Be careful not to have too much moisture about the tubers, or they will rot at the joint. This method is generally known, but is not often practised. It will not change the color of a flower, and it has a tendency to produce sports, which eventually revert to the stronger original plant. However, by saving seeds of some of these sports it sometimes helps in the development of new varieties.

The second method of grafting is, I think, my own idea, and therefore original. It is accomplished with a slip and a tuber. Take as good a tuber as possible of the kind you wish to graft, being careful not to remove the eye, then bore a hole into the tuber the size of the slip you have chosen to insert from another variety. After the slip has been inserted, seal it in the tuber with a bit of shoemaker's wax, and plant in a pot of sand. Let the shoot belonging to the tuber grow for a time, to establish the life of the tuber and the union of the slip, then in about three weeks cut off the shoot, leaving only the slip. Finally, after hardening out from the hot-bed, transplant in the garden as you would other tubers. I have had better results from this method than from root grafting.

Growing Dwarf Trees

Exactly how the tiny trees of Japan are produced is known only to a score or so of individuals, says the *Windsor Magazine*. A Japanese Fellow of the Royal Horticultural Society was good enough to supply the following interesting facts relating to the methods employed.

It would seem that the quality essential to the successful dwarf tree grower is patience—infinite patience, backed by a fund of calm resignation unknown to the western mind. Fifty years is named as the shortest period in which a really good and saleable dwarf tree may be grown, while a lifetime is not long enough to produce the highest examples of the art. The tree artist merely makes the beginning; his son, or perhaps even his son's son, reaps the reward of his labors.

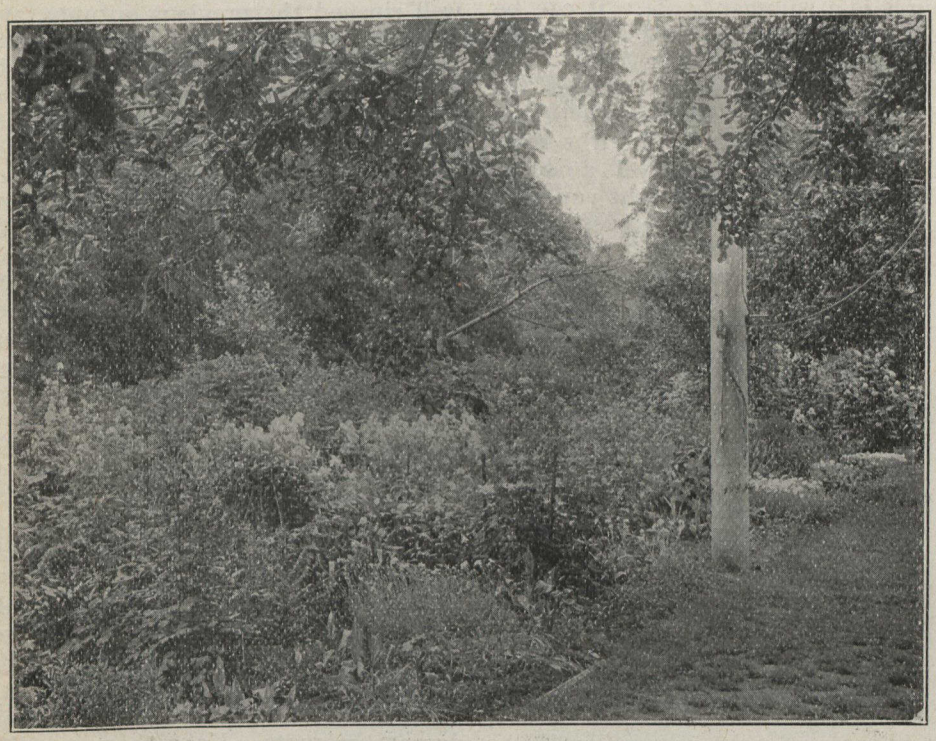
Dwarf trees are produced from seeds, or in cases where this is not practicable, from carefully selected cuttings. When the young plant begins to grow it is tended with ceaseless care, and from the commencement of its career its natural tendencies are subjugated to the will of its master. Each twig, each leaf, as it makes its appearance, becomes the object of the closest scrutiny. Shall it be permitted to grow, and if so, in what direction? May it not be advisable to cut it away altogether, and encourage growth elsewhere? These and a dozen similar questions occupy the mind of the Japanese artist, and upon their correct solution depends the ultimate value of the tree, for to be perfect the dwarf must possess a shape and balance equal to the best life-sized models.

Avoid draughts of cold air on plants, as they check the growth and often induce attacks of mildew. Plants like fresh air, but object to cold draughts.

Alstroemeria—Peruvian Lily.—This is a distinct and fine genus, which does not seem to have found a home in our gardens to the extent that might be expected. One or two kinds are hardy, and as charming as any flowers on a warm soil. *A. aurantiaca* and *A. Simsii* are, as far as my experience goes, the hardiest and best bloomers. I have raised a large colony of these charming plants from seed. The seed was sown in April and they came up the following April, and bloomed the same season. They were *A. Chilensis*. There were several shades of color among them.—Roderick Cameron, Niagara Falls, Ont.

What Amateurs Can Do in January

START the New Year aright, by resolving to have a better garden next season than you had last year. Plan the garden in advance. Draw a diagram on paper and draw it to scale. It is interesting work.



A Beautiful Spot in the Perennial Border

If you intend to lay out new grounds, plan with a view to the effect that the planting will produce in after years. A few general principles should be observed. Unless the plot is small, avoid straight lines as much as possible. Plan the lawn so that there will be an open space, keeping the trees and shrubs at the back and on the sides. If the area is small, the lawn should be level. On large grounds, a more pleasing effect may be produced by having the surface undulated. Walks and driveways should be as few as possible. On large grounds, they should curve gently from the point of entrance to the house.

Plant trees and shrubs in harmony with the surroundings. The largest trees should form the background. Trees of darkest foliage should be farthest from the viewpoint. Objectionable scenes may be hidden by judicious planting. Plant in groups. Occasionally single specimens with individual characteristics may stand alone. Trees and shrubs of high-colored and odd-colored foliage should be used sparingly.

Plan to have a kitchen garden next summer. You can grow better vegetables than can be bought and you get them fresher. Measure the plot of ground that you can devote to this purpose. Make a diagram of it. Draw lines to represent the rows as they will be and write the names of the vegetables that you intend to grow in the rows.

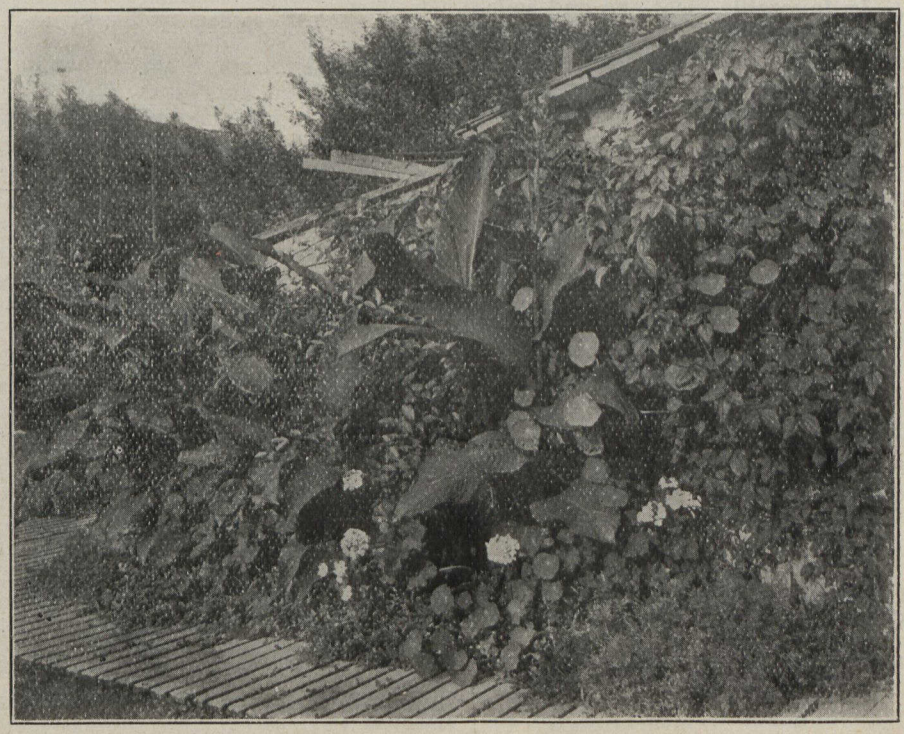
Did you start some house bulbs in September or October, as was suggested in THE CANADIAN HORTICULTURIST for those months? If so, write a letter for publication, stating your experience, success or failure, telling how you planted the bulbs and how you cared for them. Take photographs of them in bloom and at other stages of their growth and send them to this office. An important point in successful indoor bulb culture is to have the temperature as uniform as possible. Water often enough to keep the soil moist.

Watch the house plants for pests, the most troublesome of which are the green and black aphis or fly, red spider, scale and mealy bug. A dry temperature is conducive to the increasing of these pests. For the aphis, use a strong solution of tobacco water. The best preventive against red spider is a moist temperature and sprinkling the foliage, especially on the lower side. Scale may be gotten rid of by washing the leaves with strong soapsuds and rinsing afterwards with cold water. Mealy bugs should be brushed off plants with a small brush or a piece of stick. Destroy them as soon as they appear.

Prepare now for forcing some plants for Easter. Try the hortensia, the greenhouse spiræa and freesia.

Write to the seedsmen and nurseries and ask for their catalogs. The best of these firms advertise in THE CANADIAN HORTICULTURIST. Study the catalogs and make your selections early.

If too much heat is generated in the hotbed, it is necessary to raise the sash occasionally. When doing so, hang a curtain so as to prevent entrance of cold air and injury to the seedlings.



Tropical Effects Produced With Cannas

The Creeping Evergreen Euonymus

For covering smooth stone walls, the creeping *Euonymus radicans* is an excellent vine. Low walls of any kind have a nice appearance when clothed with this vine, its dark, small, evergreen leaves contrasting well usually with the color of such walls. When walls are high, some vine with heavier leaves looks better, the euonymus appearing too frail in such cases.

The euonymus clings closely and makes no unattached shoots, just what is wanted usually for furnishing a low wall. As a rule, the plain leaved one is the better sort for the purpose, but should the fence to be covered be of a very dark color the variegated leaved one may sometimes be used to advantage. The variegated leaved one is sometimes planted in positions it does not suit, such as on plastered walls, where it has been noticed; and very much out of place it was, too!

An opinion is sometimes expressed that this euonymus is slow growing. This is a mistake. It is because of its small leaves that the impression of slowness prevails, and there is not much side growth to it for a while, but in upward growth, it should not be considered a slow grower at all; given good soil it will ascend a wall in a satisfactory manner.

Wistarias

Is there more than one kind of wistaria, and which is best? Does it occupy much space, and does it like sun or shade? Is the Jackmanni a good climber to plant?—T.H., Thetis Island, B.C.

There are three or four species of wistaria, and a number of varieties in each species. The most common and best hardy species is the *Wistaria Chinensis*. In favorable locations and soils, it attains great size. It easily will cover 300 square feet, and oftentimes more. Unless it is desired to train it for special purposes, little or no pruning is necessary. The freedom of blooming can be enhanced, however, by cutting back the branches when dormant. It prefers a deep, rich soil, but if such is not available it will do fairly well in a drier soil. It prefers sun to shade. A variety of wistaria often cultivated as *W. Chinensis* is *W. Multijuga*. It is a Japanese type. The flower clusters are twice as long as the former and much looser. The writer does not know a variety of Wistaria called Jackmanni. *Clematis Jackmanni* is an excellent hardy climber and will thrive in most localities if given reasonable care.

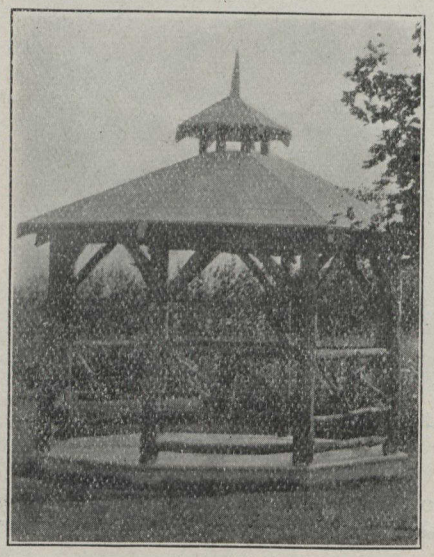
Stock Not Stack

Will you kindly inform me what the term "stack" means in the process of graftage? I saw it mentioned three or four times in the December issue?—M.A., Sherbrooke, Que.

The appearance of the word "stack" in the article referred to was a typographical error. It should have been "stock." In graftage, the "stock" is a plant or part of a plant upon which a scion or bud is inserted. In addition to this use of the word in connection with graftage, the term "free stock" is sometimes used with reference to seedlings.

A Rustic Summer House

An essential feature of well-planned grounds is a summer-house. It can be made a comfortable, useful and ornamental retreat amidst the flowers and shrubbery. When selecting a place for it, do not stand it by itself in the centre of the lawn. Locate it in a retired corner of the grounds or well amongst the flowers at the side, so that you may sit and hear the hum of the bees, or see the flowers looking in upon you, and catch, perhaps, the fragrance of a clump of mignonette. The summer-house is a



A Cheap Summer House

fitting place for communion with nature —a place to sit and think.

The summer-house should be unpretentious in design and free from trumpery embellishments. It must be waterproof, and constructed of materials that will endure. Native woods, undressed and unadorned, are useful for the purpose. The illustration on this page represents a cheap and well-made summer-house on the home grounds of Mr. W. C. Morris, Brown's Nurseries, Ont. The floor was built of second-hand matched flooring, on two by eight-inch joists and sills. The roof was made of material similar to the flooring. The diameter is twelve feet, octagon in shape. There are eight posts, four inches in diameter and seven feet high. The rails were made from the tops and branches of the young trees out of which the posts were gotten. The cash outlay was less than six dollars and two days of one man's time. This summer-house is strong, cheap and effective. It could easily be duplicated on the lawn of most readers of THE CANADIAN HORTICULTURIST.

Hydrangeas for Early Bloom

What is the proper way to treat a house hydrangea so that it will bloom early in spring?—M.M., Toronto.

To secure early flowers from a tender or house hydrangea, the wood or growth of the plant should have been well ripened the previous autumn, and the plant kept cool and dormant until January, when it should be brought out into the window or into a temperature of about 65 degrees and started into growth. Syringe or spray the branches with clear water every day to induce growth. Keep the soil moist but not soddened with water. If necessary, the plant should be re-potted into a pot two or three sizes larger before top growth has started much. The roots should not be disturbed very much in re-potting. Hydrangeas like a rich, loamy compost, good drainage, and to be kept well watered when in full growth.—Answered by Wm. Hunt, O.A.C., Guelph.

Floral Notes

Testing novelties in seeds and plants should be done cautiously.

The manure for a hotbed should come from the horse stable. Never use cow manure, unless mixed with straw.

Do not allow potted bulbs to become dry at the roots. Keep them supplied plentifully with water. If you are growing bulbs for early spring, watch them closely.

When repotting plants, do not use pots more than one or two sizes larger than the one in which the plant has been growing. Water once as soon as the plant is potted and repeat only when necessary.

In watering plants, one must use common sense. A sprinkling that penetrates the soil only half an inch or so is of little use even if applied every day. It is best always to give the plants a good soaking, and then leave them alone until they again need similar treatment.

Stockesia—Stocke's Aster.—*Stockesia cynæ* is a comparatively new plant of sterling merit. I find it to be perfectly hardy without any protection. It is one of our choicest autumn flowering perennials, growing to a height of three feet, and bearing a profusion of lavender blue flower, three inches across, closely resembling asters. There is no better flower in the border for cutting. Grow it in damp, porous soil to have it do well.—Roderick Cameron, Queen Victoria Park, Niagara Falls, Ont.

The Growing of Tomatoes*

W. C. McCalla, St. Catharines, Ontario

THE tomato is one of the commercial vegetables, and one that is going to have a great future. In this article, I shall refer chiefly to growing the main crop of tomatoes outdoors. While we all may know enough to improve the crop, we do not always put into use the knowledge we have. We are engaged as part of that great multitude whose business it is to feed mankind, and it should be our pride to produce tomatoes and other crops of a good quality at as low a cost as possible. I do not mean by that that there is any virtue in letting Canadian canners fix the price of tomatoes at such a price as leaves us less than a fair profit, or that there is any virtue in letting the transportation companies absorb most of the profits, but I do think that it is our business to increase our crops and decrease our cost of production. If we cannot produce tomatoes as cheaply as some other people, we will lose business in the long run.

PRODUCE BIG CROPS FOR CHEAPNESS

I would like to outline briefly some of the effects that go to produce a big crop of tomatoes. There is always more than one way of doing a thing. It is an important factor in the production of cheap tomatoes to produce a big crop. Of course, the early crop is somewhat different. I am speaking chiefly of the main crop of tomatoes. To grow a large crop of tomatoes, we must get plants produced from good seed. These plants must be set out in suitable soil and properly ventilated. The crop must be taken care of and well cultivated before it is ready for the market.

HAVE GOOD SEED

We need good seed, and by good seed I mean seed that has high germinating power, and that will produce tomatoes of a good flavor and of a uniform type such as we desire. When you take two tomato plants grown from the same seed in the same condition, and put them out in different soils, there is a wonderful difference in the result. I had some striking illustrations this year. Good seed is the foundation and in order to get it, I think that every grower should select his own. It will mean a little work year after year, but I am sure that it will pay. You should not only select the early ripening fruits, but fruits from the best vines that come the nearest to your ideal of what a vine should be. Place stakes on these selected vines and allow the fruit to ripen perfectly, and gather when thoroughly ripened. Slice off the top of each tomato and squeeze out the seeds with the adhering pulp into a pail of water and let it ferment for twenty-four hours, and then pour off the seeds and the pulp and wash. Take out heavy seeds and dry quickly and you will have seed of bright color and high germinating qualities.

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

The Fairyland Scene Which Snow Produces

They will come up from two to three days ahead of the regular purchased article, and make a thrifty growth from the start, a growth that you will know is a safe foundation on which to build a crop.

STARTING SEED AND PLANTS

For the late crop, we plant our seed the last week in March in hotbeds, putting the seeds in flats. When the plants are large enough to handle, in about two or three weeks, we take them out into smaller flats and place these plants in the hotbed, giving them as much air as possible. We put from 100 to 200 plants in an ordinary flat, made from soap boxes. When these begin to crowd, usually about the first week in May, we put them into frames outside, putting three or four loads of manure into the soil to give drainage.

It was an exceedingly difficult matter to get good plants last spring. It was practically impossible to get seedlings out in the cold frames. When the farmers were forced to put them out, they encountered bad weather. I saw 1,000 plants that turned yellow and went back; they made no growth for two or three weeks. A stunted plant, like a stunted hog, is a poor proposition into which to put feed and labor. I have heard men say that you cannot kill a tomato plant, consequently they handle them as roughly as possible. It is hard to kill them, they will stand a lot of abuse, but I am satisfied that abused and stunted plants never give the results that thrifty plants do.

This double handling does not take so much extra time as one might think. I do it nearly all in stormy weather, when it is too unpleasant to work outside. I like to put them about four by four when they finally go into the frames; it makes them thrifty in every way, and they are ready to make growth as soon as they go into the field. The soil on which tomatoes are planted should have, as a first consideration, good drainage. My preference is a rather light, sandy loam, thoroughly underdrained, and I get my best crop from the higher parts of the field. This light soil grows the very best tomatoes, potatoes, melons and squash, and a great many other crops. Be sure and have it rich enough.

Greenhouse Construction for Vegetable Growers*

J. D. Fraser, Leamington, Ontario

THE growing of vegetables in Essex county is not a business of choice with us, but of necessity. For years the fruit industry was the main industry of the section along the shores of Lake Erie. Great areas were planted in peach trees, and many growers had all that they were worth invested in the business. Then a frost came and wiped out the orchards. We then began to look for something else to grow, with peaches as a side line. With that end in view, we put up some small greenhouses in a very modest way and began growing tomatoes, which proved very profitable. As a rule, our tomatoes mature two or three weeks earlier than those grown in any other part of the Dominion, and therefore we were able to sell our tomatoes at a good price. We again replanted our peach orchards, and about five years ago, they were cleaned out a second time, and thus we had to go into vegetable growing on a large scale.

Our first houses were small and were not convenient. The stress of the business made it necessary to improve them. We find it important that the greenhouses shall be located as convenient to the dwelling-house as possible, because it is something that has to be looked after very closely. If it is far away from his dwelling-house, the grower is much hampered.

We have strong winds from the south-west that come across the lake. We like to have our greenhouses sheltered from these winds, because they are easier to heat, and it is easier on the house. In no case, however, is it advisable, either for defence or protection, to exclude the house from all the benefit of the sunlight; we want every possible ray of sunlight.

Our first houses were built of chiefly wood and glass, and their life was very short. I know one that was put up that began to decay the next year. When there is any chance for the water to lodge, the timber begins to go down at once, and for that reason we have discarded the wood as much as possible. We are now using cement. It is cheap, and once constructed it does not rot out. For supports, we use gas-pipes, set in cement, being very careful to place a pole six inches below the ground to keep the gas-pipe from rotting off at the surface. We have a great deal of chestnut. I do not know whether or not it is as good as cyprus, but we find cyprus to be good, and very much better than pine, and I think that the life of chestnut is two or three times as long as pine.

Question.—How does it compare with the price of cyprus?

Answer.—I do not know. We can buy it at very reasonable prices.

The next material is paint. One should never put up any timber in a greenhouse without first painting it; that is very important.

There has been considerable discussion and difference of opinion between greenhouse growers as to the kind of glass to use, whether to use butted glass or lipped glass. If you use lipped glass, you must lay it in putty; if the glass is quite square and well cut, butted glass is all right. If the glass does not fit, it will leak, and leaks are injurious. I think twenty by twenty is the right size to use.

Mr. T. Delworth, Weston.—How heavy do you have the bars?

A.—About two and one-half inches is the standard; it depends somewhat on the system of construction used. From a vegetable grower's standpoint, I would not build a house over from 80 to 100 feet. My reason for that is that if a house is too wide, it is hard to get enough air into it, and in order to finish vegetable plants in the house, they have to get a free circulation of air or they will be too short.

Q.—How do you construct the roof?

A.—We built our last house fourteen feet, ridge and furrow. We have the glass laid east and west or north and south; we have a house each way. The east house, built a couple of years ago, is running north and south, with the sun striking on the side in the morning and in the evening on the other side. The house I built this spring is in shorter spans of fourteen feet, and set the other way. Where the house ends, there is a glass slide of about three feet in six, and we can open this sash on the south and ventilate, and we can also open the sash at the top. In May and June, when it is very hot, a current of air comes in. The fresh air comes in at the bottom and the hot air goes out at the top. It is as comfortable in the house on a hot day as outside. We drive our teams alongside of the house and take out the plants. We have a main walk in the centre and a narrow footpath leading from it, and we gather our plants in a low wagon and take them out in that way. If the house is 100 feet wide, you are never more than fifty feet from the centre. Where it used to take five men and a team to get plants out in the ordinary way, one man and a team can now keep a gang busy in the field.

BENCHES

If tomatoes are grown with the intention of maturing the crop in the house, we have to start our seed about the first of January, and as the days are usually dark, it is hard to start the seed on flat or ground benches. Therefore, it is a good idea, in building a house, to have a few raised benches in order to get bottom heat. You can always manage to get good plants by using bottom heat to get them started. After they are started, you can use the ordinary flat benches. If you have a little border of cement running round them, it is so much the better, but you can get along without it if you wish.

The matter of heating, I suppose, is the greatest item of expense. Vegetable growers have been put to a great deal of expense through the ordinary plumbers of the local towns undertaking to lay pipes in the greenhouses. I have found for my own part that it is very foolish to give a man a contract to put in the pipes in a greenhouse unless you are sure that he knows what he is doing, or unless you know yourself how to manage it. The first time I had pipes put in, they were almost useless, and I had to take them out again. I then learned how to lay pipes myself. When a person is experienced and knows what he is doing, it is all right to go on with it, because any ordinary plumber can arrange the pipes if you show him how to do it. But the ordinary plumber does not know anything about heating a greenhouse, and therefore it is best to give it to some person who thoroughly understands it.

Mr. Delworth.—What material do you use for gutters?

A.—Two by five chestnut scantling. We support them by gas-pipes, and where the rafters strike this two by five, there is a bolt that lies over the scantling. We take a brace and bit and bore holes near the edge of the scantling, and then cut out with a chisel two little corners, and the bolts drop in there. There is no chance for the water to lodge, and the rafters strike against this piece and the end is cut off square. The bolt goes through and touches the beam, and there is no contact point except the one small corner. The gutter is made of galvanized iron, with the edge turned down about half an inch to make it stiff, and that fits into the notch in the rafter.

Mr. Delworth.—Do you heat by steam or hot water?

A.—Steam; our snowfall is very light.

Mr. Delworth.—From my experience of heating from hot water, if I had a

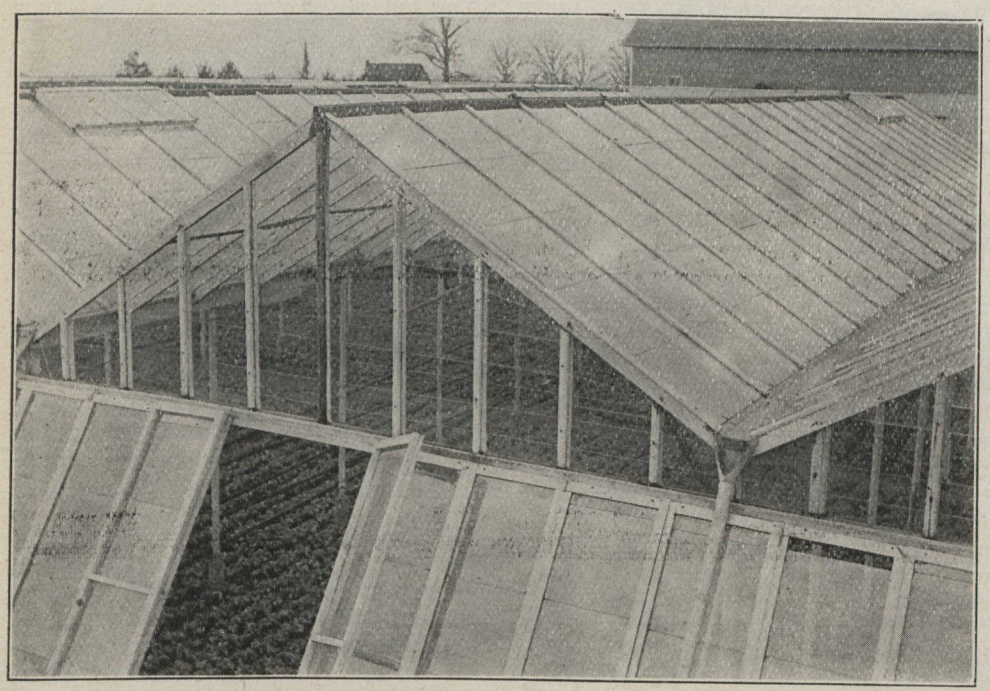
*A portion of an address delivered at the convention of the Ontario Vegetable Growers' Association last November.

gutter like that, I would be very much troubled with snow. I would prefer one large house, thirty feet in width, standing alone.

Mr. Fraser.—These things work out according to the location in which one lives. We have found it to be to our advantage, when we build an extra house, to leave a space between that and the other house of a little more than is necessary, in order to have room to drive through with the team, and in this space we have a protected warm place for hardening the plants.

There are some houses in our section heated with hot water, and they work very satisfactorily. Where the house centre of it, using the earth to bank it around the outside. The sash was made for sixteen by sixteen glass, and we have two sashes joined together by hinges, so that they could be folded up and put away. Sometimes we had four inches deep of earth, and sometimes seven by seven of earth to each plant. Of course, these plants were heavy to handle. We found a convenient way to handle them by simply opening the sash on the outside and driving along with the team. These houses were easy to ventilate; that is only practical for a cheap house.

Q.—Which would you think was the most economical for vegetable grow-



A Portion of Mr. Fraser's Greenhouses at Leamington

is large, it is not practical to heat with hot water, because it won't circulate, but some of the large American growers are using hot water in the ordinary return flue boiler, and then pump the water through the pipes. Of course, that is only practical where it is a large plant. They claim that where they have a large plant, it is very satisfactory. The water has got to go, and every portion of the house is heated perfectly.

We first began with very low houses, but we found that there was not sufficient air in them. I would rather have a house fairly high, except in a case where it was intended to grow plants only for setting out in the field, as we did when we first started. We found that we could build a very cheap house by taking posts and setting them in the ground about ten feet apart, eighteen inches high, and spiking planks on the inside, running up the ridge with about one-third pitch, and then digging out a trench in the ing, a house forty feet, or two houses twenty feet wide, open underneath?

A.—If I was not going to have a house more than forty feet wide, I think I would make just one house. It would be wide up to thirty-five feet anyway for one house.

Q.—You think that would be preferable to small ones?

A.—Yes, except where two houses might come in handy if you wanted to use one at a higher temperature.

Q.—I mean to have them connected?

A.—I think I would prefer the one house.

Q.—Which would you take, a large one or a small one?

A.—The big one is the easiest to heat. When you get a large house heated, it will not cool off so fast, but it takes longer to heat.

Mr. Delworth.—You have a larger body of air in there?

Mr. Fraser.—In our case, we get more benefit from the sun. It shines in the sides of the house and heats it up to ten degrees higher than it will the other one at the same time of day.

Sparrows Destroying Buds

Peter Barrett, Truro, N.S.

During the past few years I have been noticing the increasing number of house sparrows and the mischief being done by them on the red and white currant bushes. Already one-half or two-thirds of the buds have been picked off this season by these birds and they still keep at it so long as there are buds left or leaves put forth in the spring. I first discovered them doing the mischief some years ago, in the fall, when hard, dry frost set it. I was inclined to spare them as food for them was scarce, but apparently they were worse when the buds began to open in the spring. Now, however, when the mild weather is prevailing, the birds seem bent on destroying all the buds of these bushes.

Bushes, five feet high, that ought to have yielded in the past, and for years to come, eight pounds of fruit per bush annually, are destroyed; some of them I dug up. I thinned out the others and hoped for better results from open bushes. But, alas, the bushes being near a spruce hedge, were at a disadvantage. A snowdrift destroyed them. The sparrows find shelter in a hedge. I then set out bushes in an open, exposed view, but find that the birds are still destroying the buds on them.

Potato pits should be made on dry ground so that the bottom of pits will not be wet. They should be about two and a half feet deep by three feet wide and any length desired. The potatoes then should be put in the trench and covered well with straw with eight to 10 inches of earth on the straw. When hard weather sets in, the pits should be covered with a foot of manure.

At a meeting of the Toronto branch of the Ontario Vegetable Growers' Association, the following officers were elected for the ensuing year: Pres., Thos. Delworth, Weston; vice-pres., C. Gibbard, Doncaster; sec.-treas., F. F. Reeves, Humber Bay; executive committee, A. Shuter, Bracondale; R. Larkin, Toronto; J. W. Rush, Humber Bay; C. Plunkett, Woodbridge; and H. J. Sharpley, Bracondale; directors on provincial board: C. Aylmer, Sr., Humber Bay; Jas. Dandridge, Humber Bay; F. F. Reeves, Humber Bay; J. W Rush, Humber Bay; John McKay, Doncaster; C. Gibbard, Doncaster; J. J. Brown, Humber Bay; auditors, Ed. Eagle, Weston, and A. Shuter, Bracondale. Mr. Thos. Delworth was appointed representative on the board of the Canadian National Exhibition.

The annual meeting of the Ottawa branch of the Ontario Vegetable Growers' Association was held last month, at which the following officers were elected: Pres. D. Smith; vice-pres., W. Trick; secretary, T. Mockett; representative on provincial board, I. A Farquharson, Hull.

The Cream of the Kootenay

One 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.

ALONG the banks of the Columbia River, in what is known as the Kootenay District, is located one of the best fruit sections of British Columbia. Some of the best lands in the province are, as yet, of but little value owing to drawbacks that will be removed in time. These include poor transportation facilities, distance from market and other similar handicaps.

Eighteen Duchess Apples on a Fifteen-inch Branch.

The unusual advantages of the fruit lands near Robson are bringing that section to the front rapidly. The land is rich and easily cleared, good markets are readily available, and the transportation facilities are the equal of any section in that province. Robson is situated on the Columbia River. It is one hour and ten minutes run on the Canadian Pacific Railway from Nelson, a city known as the inland metropolis of British Columbia. Within one mile of Robson is Castlegar Junction, which gives direct connection to the boundary country, Rossland, Nelson and the main line points east and west. Steamers bound for the Arrow Lakes, and making connections with points on the main line, leave Robson daily. Transportation facilities are ideal when compared with lands in other sections of the province where the growers have to depend on a freight steamer that calls at intervals or when they have to drive many miles to market their fruit.

Our representative had heard much about Robson, and decided that the best way to get at the true facts of the district was to visit the land. A day was spent in going over the property in company with five other gentlemen who were interested in fruit lands. One of the party, a Mr. Snider, had spent $500 in looking over fruit lands in other parts of British Columbia. He was so impressed with the soil and possibilities that he bought two lots and asked to have others reserved for him. Others in the party have since purchased lots. Many of the settlers were busy clearing their property and erecting houses for their families. This is an easy task owing to the small timber on the land and the close proximity to a sawmill where lumber can be purchased and "rafted" to the owner's waterfront.

Most of the soil along the river is of excellent quality and is suitable for the culture of all kinds of fruit usually grown in that latitude. The lower land is surveyed into long, narrow strips, with an average acreage of fifteen acres. Each lot has a river and road frontage. The north end of each lot abuts the upper bench which rises gradually to a height of about 400 feet. The land can be cleared at a cost of from $30 to $80 an acre. The land is valued at $100 an acre, which is very reasonable.

NO IRRIGATION NECESSARY

The average annual precipitation of the district is about 28 inches, and, what is of more importance, the rainfall is fairly evenly distributed throughout the year. May and June each average about two and one-half inches of rain; July, one and one-quarter inches; August, three-quarters of an inch, and September one and one-third inches. 1907 has been rather a wet year. In August as high as seven inches of rain was recorded. It is evident, therefore, that sufficient moisture may be calculated on for filling out the fruit and producing a heavy crop. Irrigation, therefore, is unnecessary.

In addition to the rainfall a considerable amount of moisture percolates from the mountains and, on some lands, forms a natural sub-irrigation system. Even in an exceptionally dry summer the soil, on much of the land, is moist enough to grow the most tender crops. The land has a gradual slope to the Columbia River, which makes a costly system of drainage unnecessary. Abundance of good drinking water is available.

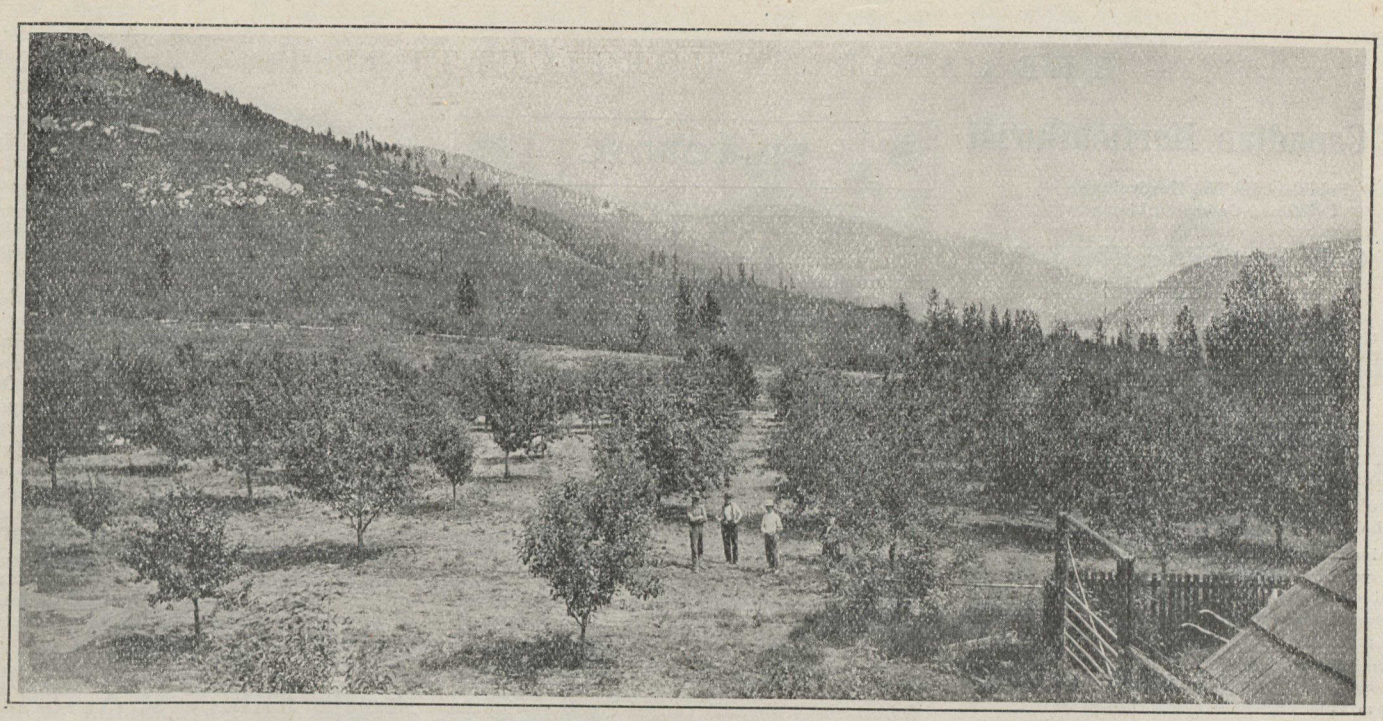
A great natural advantage possessed by this land lies in the fact that it faces the south. It is protected from the north by a high bench of land that makes it an almost ideal spot for the culture of tender fruits or early vegetables. The protection afforded from the north winds makes the temperature several degrees warmer than in other places less favorably situated.

MILD WINTERS

No fear of winter-killing need worry the Kootenay fruit grower. For the last three winters the lowest recorded temperature in Nelson has been six degrees below zero, and that was in February, 1907, when British Columbia experienced one of the worst winters of modern times. In an average winter in this district, zero is very seldom recorded. The winter seldom commences before December or extends beyond February. In March, as a rule, cattle can find a living in the brush on the clover which runs riot and grows abundantly everywhere. Late frosts are practically unknown.

It should be carefully noted, however, that these mild winters are confined to a comparatively small area, and that one hundred miles or so from the centre of the Kootenay a much lower temperature is met with. The Kootenay district is a sunny district. It is not in the Dry Belt, and does not suffer from

Bird's-eye View of Robson, B C., with the Columbia River in the Distance.



A Fairly Well Established Orchard Expected to Yield $500 to $1000 an Acre.

drought, hot winds or dust storms, but it enjoys a very large proportion of bright, breezy, sunshiny days, which develop the fruit quickly and give it that brilliant color, texture and flavor that the sun, and the sun alone, can give. At the same time the heat is never excessive, the highest recorded during the last three summers being 94 degrees in the shade. The nights are pleasantly cool, and yet not cool enough to check or prevent the ripening of fruit. On November 2, the representative of THE CANADIAN HORTICULTURIST was picking wild strawberries at Robson. Sweet peas, roses and dahlias were in full bloom and there had been no frost up to that date.

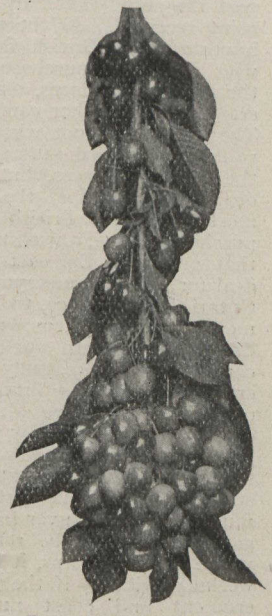
EXCELLENT MARKETS

While there are some other districts that can produce fruit equal to that of the Kootenay district, there are none in British Columbia that can compare with it for markets and transportation facilities, and in this respect the Robson District is very favorably situated. The great Northwest of Canada is almost at its doors, and with its large and ever-increasing population, provides a good market now, and must continue to provide a market for all the fruit that can be produced for many years to come. Indeed, owing to the comparatively small area of first-class fruit land, it is a question if the supply will in the future meet the demand.

Nelson, Rossland, Trail, Grand Forks, Fernie and many other large places are within a few hours' run from Robson. The markets, in proportion to the available supply, are almost unlimited. It will not be long before the hardy varieties of fruit will be shipped from the Kootenays to Great Britain.

The following prices may be taken as representative: Strawberries, $1.75 to $4 a twenty-four pound crate; raspberries, $2.75 to $4 a twenty-four pound crate; cherries, $1.50 to $2.50 a twenty pound box; red currants, $1.25 to $2.25 a twenty-four quart box; black currants, $2.50 to $3.50 a twenty-four quart box; gooseberries, $1.25 to $2 a twenty-four quart box; apples average $1.75 a box, forty pounds; pears, $1.75 to $2.25; potatoes opened at $60 a ton and at the end of the year were $26; carrots, $20 to $25; turnips, $25; parsnips, $30; beets, $30; onions, $45; eggs, 35 cents to 75 cents a dozen; hay, $16 to $30 a ton.

Taking into consideration the prices paid and the large crops raised, it is not surprising to hear of big returns being realized. A conservative estimate places the yield from an acre of trees in full bearing, anywhere between $500 and $2,000 a year, and from an acre of strawberries $200 to $1,000. Many ranchers say that they are making much more.



Branch of Royal Anne Cherries.

While the orchard is maturing, it is customary to grow vegetables or berries between the trees, and practically every kind of vegetable does well and commands good prices. Poultry and dairy products also serve as useful side lines, while trees are growing.

As a place for a home, Robson offers exceptional advantages. The climate is mild in winter and not too hot in the summer. A church has been established and a school will be opened at an early date. Settlers at Robson are not forced to give up the comforts and pleasures of life. Nelson, being only a short distance away, affords an opportunity to shop in a fairly large city, and the enjoyment of evening entertainments. Daily papers are delivered at Robson every morning. Should the province continue to develop as rapidly as it has during the past few years, land that is now selling for $100 an acre will treble in value in the not distant future.

Fishing and hunting are both of the best. Deer were seen while our representative was inspecting the land. The scenery is beautiful. All things considered, it would be difficult to find a more ideal land in which to live, or a more natural and congenial industry in which to be engaged. This is the view of those people from Manitoba and the other western provinces who are now making their homes in British Columbia.

A number of experienced fruit men, who had visited almost every part of British Columbia in search of fruit lands, have selected Robson as their future home. Most of the land around Robson is owned by a real estate firm (McDermid & McHardy, of Nelson, B.C.), which has issued a well-illustrated booklet showing views of the country and giving information for intending purchasers. After visiting this part of the country one does not wonder that Robson has been named, "The Cream of the Kootenay."

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

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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
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EDITORIAL

OUR FRUIT IN ENGLAND

The British Columbia government and fruit growers are to be complimented on winning the gold medal at the recent exhibition of the Royal Horticultural Society in London, England. Their energy and exactitude in displaying the products of British Columbia orchards at this exhibition in England and at others in other parts of the world are most commendable. Nova Scotia also made an excellent display at the Royal Exhibition. It is to be regretted that Ontario made such a poor showing. The fault lies, not in the quality and character of the fruit, but in the condition in which it arrived. This was due largely to haste and carelessness in the matter of preparing the exhibit for shipment. After being packed and prepared for the Ontario Horticultural Exhibition, some of it being kept in cold storage, then exposed to the warm temperature of Massey Hall and handled over and over again by judges and passers-by, which bruised the fruit and caused slackness in the package, the exhibit was hurried off with little or no attention being paid to the matter of re-packing and re-selection. Fruit for exhibition in England cannot be expected to arrive in good condition unless it is placed in the hands of the transportation company in a condition that will give it a fair chance.

Ontario fruit can hold its own in competition with the world. We would suggest that next year the government employ an expert to purchase and select the best samples of fruit grown in the province, and to pack it with the same care that is exercised by the packers of British Columbia and Oregon. By so doing, it may be expected that Ontario will redeem the reputation made by the unfortunate shipment that was sent to England last fall.

BRITISH COLUMBIA INSPECTION

In various issues of THE CANADIAN HORTICULTURIST during the past the question of government inspection and fumigation of nursery stock in British Columbia was discussed, and it was suggested that an inspection station be established near the eastern boundary of that province. Many letters that support the stand taken by us were and are still being received. As the matter is one of great importance to British Columbia fruit growers who desire to purchase nursery stock from the eastern provinces, we feel that their interests demand further comments on the subject. The question is not whether British Columbia can grow as good nursery stock as Ontario or the other provinces, but whether it is a fair deal on the part of the local government almost to compel British Columbia growers to purchase home-grown stock when they want that grown in the east. Neither is it a fair deal for eastern nurserymen; to ship stock from Ontario, for instance, to British Columbia costs money and entails some risk. In spite of these drawbacks, eastern nurserymen feel that they can compete successfully with coast and western United States firms, but under present conditions they are almost prohibited from entering the province by the unjust and unreasonable British Columbia law that compels all stock to be fumigated at Vancouver. Nursery stock for points in eastern British Columbia must go to Vancouver for inspection and fumigation, and then be returned to destination, which place, perhaps, it has passed by rail two weeks previous. If the British Columbia government and coast nurserymen would ask themselves the question, "How would my stock fare if consigned to Windsor, Ont., and compelled to go to Ottawa for fumigation before finally reaching Windsor?" they soon would see the position of eastern nurserymen. Before the present law in British Columbia was passed, eastern nurserymen shipped stock successfully to all parts of that province, and seldom was there any kicking over losses. This goes to show that the kicks that come nowadays are due to the abuse in inspecting and handling that the stock receives.

The success of the short courses in fruit growing held recently at Grimsby and Trenton, under the supervision of the Ontario Government, marks a new departure in the progress of the industry in that province. No commendatory words are necessary to justify their continuance. Such courses cannot be too highly valued. They add interest and zest to the operations of the orchard. Such courses are given with just enough theory to make them interesting. If full advantage is taken of them, they will add materially to the annual income of the attendant fruit growers. The government is to be commended on instituting these courses.

Apple Shippers' Association

At a meeting of representative apple shippers held in Toronto on Nov. 27, an association was formed to be known as the Ontario Apple Shippers' Association. The following officers were elected: President, Samuel Nesbitt, Brighton; secretary-treasurer, John Brown, Brighton; executive committee, D. C. Matthews, Colborne; Matt. Stetsinger, Thornbury; Frank Everist, Toronto; J. G. Anderson, Lucknow; R. J. Graham, Belleville; E. D. Smith, M.P., Winona; F. L. Fowke, Oshawa; M. S. Schell, M.P., Woodstock; W. H. Matthews, Trenton. Among the resolutions passed were the following:

1st. That whereas, there are about 450,000 barrels of apples stored at different points in the province of Ontario for export to Europe during the next three months, and, whereas, it will require from 200 to 250 refrigerator cars per week to move this fruit, that we make a demand on the railways along whose lines these apples are stored to furnish sufficient refrigerator equipment to handle this business as required. The bulk of this fruit will require to be shipped during the months of January and February.

2nd. Shippers shall have the option of directing apples via Portland, Boston or St. John, as service is inadequate at any one port.

3rd. That where cars are fitted up for protecting the apples from frost, such as the putting in of straw, shavings, boards, etc., such fittings be left in the cars and returned to the shipping points for the reloading of apples, as such equipment this season (particularly straw) is unusually expensive.

4th. That in case the railways along which apples are stored are unable to furnish refrigerator cars, that shippers be supplied with good tight box cars, and be allowed expense for fitting them up, and also that the man in charge of said cars be carried to and from the seaboard free of charge, and that the cars so fitted up be returned to the shipper who fitted up same.

Strawberry Plants.—Growers of strawberries recognize the superiority of Canadian-grown plants. Among the Canadian nurseries that supply high-class plants, is that of W. H. Vanderburg, Poplar Hill, Ont. Mr. Vanderburg has been in the business over nine years, and is in a position to furnish plants that are reliable and true to name. He offers a large list of varieties. A handsome catalog has been issued, which is valuable, not only for its descriptions of varieties, but for accurate cultural directions. Mr. Vanderburg is an old and well-known advertiser in THE CANADIAN HORTICULTURIST.

Our Apples in England

W. Hieatt, Covent Garden Market, London

During the past few years there has been great improvement in the manner of packing and sorting Canadian apples, but it is still faulty in one or two particulars. Occasionally we find a mixture of varieties in the same barrel and very often a mixture of grades. This condition of affairs should not be. Buyers soon spot the brand on such packages, and when the next consignment arrives, it does not realize satisfactory prices. The best policy is to pack fairly and honestly.

Canadian shippers should consign always to the same buyer in the same market. By so doing, more satisfactory results and prices are secured. Canadian apples are doing well this season, as ours are scarce and poor in quality.

Keep Up Standard

Editor CANADIAN HORTICULTURIST,—The following circular has been sent by the Fruit Division to all the Dominion fruit inspectors. It will be of interest to all who have apples in store for repacking:

"You will note by the sales' catalogs, particularly from Liverpool and Glasgow, that there is a surplus of the smaller grade of No. 1 apples on the market at present, the effect being, of course, to greatly lower the price for this class of apples. This is an indication that you should in no way relax your vigilance in the examination of this grade. Brand "Falsely Marked" any barrel marked No. 1 in which the apples fall short in point of size. In order to maintain the reputation of Canadian apples, it is more necessary that emphasis be given to the matter of size in a year like this, when the general crop is undersized, than in an ordinary year when there should be a normal quantity of large apples."—A. McNeill, Chief, Fruit Division, Ottawa.

Ontario Fruit in the West

Despite the efforts which eastern fruit men are putting forth to capture and retain the markets of the prairie provinces, there is less Ontario fruit on sale in our cities and towns this year than for some time past. Consumers paying the prices ordinarily charged for barrelled apples here expect a better quality in the article than a good proportion of the Ontario fruit offered in our markets can show.

Despite the Fruit Marks Acts, packers seem to be able to fill up the packages pretty much as they like and the centre of many a barrel contains altogether too varied an assortment to rank in the grade it's stamped. Such practices as these, continued for any time, will work for the permanent closing of this market to Ontario fruit. The east will learn to its own loss that this country cannot be made a dumping ground for unexportable fruit.—*Farmer's Advocate*, Winnipeg.

Want New Fruit Market

"In the opinion of the fruit growers of Ontario and the dealers of Toronto the time has arrived when the city of Toronto should have an adequate fruit market, open on equal terms to all the transportation companies running into Toronto." The foregoing resolution was passed unanimously at a joint meeting of representative fruit men, dealers and a special committee of the City Council, held in Toronto on Dec. 18. Among the fruit growers in attendance were: W. H. Bunting, St. Catharines; Wm. Armstrong and H. St. C. Fisher, Queenston; L. A. Hamilton, Clarkson; and P. W. Hodgetts, secretary of the Ontario Fruit Growers' Association. Those who appeared for the dealers were: W. H. Dawson, T. Ferguson, Chas. Kempton, Thos. Vance, R. W. Husband and David Spence. Alderman Foster was elected chairman of the committee, and Controller Hubbard, Alderman Chisholm and Alderman Lytle were present. The meeting was attended also by Property Commissioner Harris.

Addresses were made by nearly all those present, in which the importance of the fruit trade to Toronto was urged. There was unanimity in declaring that the present accommodation at the Scott St. market was inadequate, and that all transportation companies should have equal facilities. The concensus of opinion was that a permanent market, to be kept open the year round, should be established at Bayside Park. A revenue of from 10% to 15% on the outlay was promised. It was pointed out that the proposed location would be convenient for marine as well as railway traffic.

Property Commissioner Harris said that it would be impracticable to report on the advisability of suing Bayside Park until the viaduct question had been settled. Neither would it be possible to use the wharf on the east side of Yonge St., because it was a private one. He was of the opinion that something should be done to better the facilities for handling fruit, and would do what he could to improve matters. Mr. Harris predicted that the radial railway lines soon would carry most of the fruit traffic. Commissioner Harris was instructed by a resolution to report on the matter.

COOPERATIVE COMMITTEE

Mr. A. E. Sherrington, Walkerton, reported as follows: "The committee held two meetings during the year 1907. At the first meeting, various methods were discussed for carrying on the work of cooperation. It was decided that we should again cooperate with the departments of agriculture for Ontario and the Dominion in holding a large number of fruit institute meetings, when the benefits of cooperation could be brought before the growers. Your committee desires to express the appreciation for the help that the Dominion Department has rendered to us by sending their inspectors to assist at the fruit meetings. We trust that they may continue to give us their aid at the first meeting in March.

"The subject of book-keeping for the association was discussed. A committee was appointed to work out a uniform system of book-keeping for the associations. A great deal of information was obtained from the associations on the subject, and at the June meeting it was definitely arranged to get out a set of counter check books and a uniform plan for as many of the associations as wished to avail themselves of the offer. Ten associations adopted these books, but owing to rush of work at the factory, there was some delay in getting them out. The committee also discussed getting out other books for the associations, but nothing definite was done. The committee hopes, however, that they may be able to work out some possible scheme for another year. A number of resolutions relating to the industry generally were passed.

"During March, April and June, somewhere in the neighborhood of 60 fruit institute meetings were held. These meetings were addressed by Messrs. D. Johnson, Gifford, Carey, Baker, myself, and a number of other fruit growers. In most cases, these meetings were well attended and a great deal of interest was taken in cooperation and the industry generally. In connection with the meetings, a large number of associations were founded. We have now something over 40 in operation, and so far as I am aware, they are all making a success of it.

"Your committee finds that there is a great deal of work to be done yet to bring the cooperation to perfection. Cooperation has taken hold of the people in America. A few weeks ago a man from Cornell visited this province to study the cooperative systems in use here. He expressed surprise at finding such a young province as Ontario so far advanced in the methods of handling the products of her orchards over such states as New York. He said that it spoke volumes for the enterprise of our government. A few days ago I had a letter from a gentleman who wishes to have the opportunity of laying before the associations a plan for the consolidating of the associations, and with that end in view, a meeting will be held in the near future, probably in early January, to hear this gentleman's suggestions."

Up-to-date Sprayers

It has been our privilege to inspect the latest product of the Spramotor Co. at London, who are to be commended for the enterprise shown in their many machines. Their hand-operated machines have for so long a time been recognized in Canada as standard, that a mere mention that they are being turned out in larger numbers each year is enough. Our attention has been drawn to their latest type of horse-power and gasolene-power machines.

These machines show great ingenuity. The horse-power machine is capable of doing a great range of work. Having a capacity of 12 nozzles at 125 lbs. pressure, makes it possible to spray all small and medium sized trees, such as apples, pears, plums and peaches, perfectly with one man, and a boy to drive. The plan is to use one line of hose with an extension pipe of suitable length and an eight-nozzle cluster or smaller for small trees, and, all except the largest apple trees, can be sprayed in passing. The large air chamber (12 gallons capacity) gives ample reserve to stop for short intervals at each tree if desired. The motor being of large capacity will pick up the pressure from tree to tree, not possible hitherto. By a simple change of spray rods the rig can be changed from a tree spraying rig to spray vineyards, potatoes, or grain crops.

The extent to which this company has gone to make the sprayer under the control of the driver is commendable. As the pressure is regulated automatically, no attention is required in that respect, yet a means is provided to throw in and out of gear by hand. The stand pipes that spray the grapes are so arranged that they can be raised or lowered or made wider or narrower, each independent of the other, thereby providing a means of keeping the nozzles the right height and distance from the vines, all of which is under the control of the driver without moving from his seat.

Growers who have 100 acres of grapes, that are sprayed five times during the season, say that they have never during the entire season had a nozzle clog, which tells the story of the nozzle protector. We could not suggest any improvement to this fine rig. It is a gratification to have a Canadian concern who are so well ahead of the times.

The new features in the way of nozzles and accessories all tending to greater effectiveness and economy, show great activity and invention. Mr. Johnson, of Forest, who used one of the power machines this year, says he saved $50 in labor and material, besides doing a better job. We would recommend any who require changes or renewals in their spraying rigs this year to send for really valuable literature, supplied free by the SPRAMOTOR WORKS, 1169 King St., London, Ont.

As an indication of the development of the nursery business in British Columbia, it is interesting to note that M. J. Henry, of Vancouver, recently shipped from that city eight tons of seeds and trees to Shanghai, China.

At the Royal Horticultural Society's show in London, Eng., the fruit exhibit of the British Columbia Government was awarded the gold medal. Nova Scotia fruit also received awards. The Ontario exhibit arrived in bad condition.

During the several years I have taken your journal, I have read it carefully each month. It has been a valuable aid to me, and I believe it is the best fruit publication with which I am acquainted.—A. Ross Matheson, Pomona, N.Y.

NOTES FROM THE PROVINCES

By Regular Correspondents and Others

Nova Scotia

G. H. Vroom, Dominion Fruit Inspector

After a long, hard struggle, the apple crop in Nova Scotia has been gathered and safely stored in the fruit houses along the line of the Dominion Atlantic and Halifax and South-Western Railways. The weather conditions have been unfavorable and help very scarce. On Oct. 21, the whole country was white with snow and thousands of barrels of apples on the trees. In some instances the snow, in addition to the weight of the fruit, broke the trees down. In a few localities slight damage was done by frost on the same night, but nothing serious.

Prices for Gravensteins have been disappointing, owing to the fruit being very green and, in some instances, spotted. Other varieties are clean, or nearly so, and prices are good. No. 1 King, Ribston and Blenheim net from $2.75 to $3.50 a barrel; No. 2, about $1 less; No. 3 have not paid for shipping. Most of this grade, however, have found their way to the evaporators, the proper place for them.

Up to date, Jan. 1, about 250,000 barrels have been exported. This does not include what has been purchased by Americans and shipped to Boston and New York. Several thousand barrels have been shipped to South Africa, and have arrived at Cape Town in good condition. The crop in Nova Scotia this season will run up to nearly 600,000 barrels.

Prince Edward Island

Rev. Father Burke, Alberton

The fruit situation this year is dispiriting. There was a short crop of apples again, when we expected a large one—one of the shortest in our history; still, across the straits, in Annapolis Valley, the Bluenoses harvested a bumper crop. They are the envy of all Canada this year.

But we must not lose enthusiasm, even if there be not much to rejoice over; our day will come. The officials are appreciative of our position and are endeavoring to console us somewhat. A little success usually produces more exhilaration than any amount of good advice, although both are useful in their place. We are advised to go right ahead and plant out extensively. If the present orchards were in plentiful bearing, the natural impetus of profit would accomplish this.

We have received the enclosed letter from the Chief, urging larger plantings and appreciative of Nova Scotia's profits:

"Dear Father Burke,—You will no doubt be preparing your program for your annual meeting. I feel certain that some inducement for larger plantings could be offered if you could arrange to organize the buying of the stock. If you were to formulate some plan, such as appointing a committee to look after this matter, at your annual meeting, and were to notify the general public through the papers that this matter would come up, I have no doubt you would prepare the public mind in such a way that when the actual work was begun, planters would be prepared at once to cooperate with you. How does the matter present itself to you? Is there anything practical in it?

"Many of the fruit growers of Nova Scotia are this year netting from $100 to $300 per acre off their orchards. This will pay them if they do not have another crop for five years; but the chances are that they will make from $50 to $150 regularly every year.

"In October I took a trip through the Annapolis Valley, and did not visit a single well-kept orchard where the profits were not extraordinarily large. Prince Edward Island people can do just as well and there is no reason why they should not share in this industry.—A. McNeill, Chief, Fruit Division, Ottawa."

It will now be in order to prepare for winter meetings, wherein all our difficulties and experiences may be fully discussed and new year's work cut out with care and hopefulness.

Quebec

Auguste Dupuis, Village des Aulnaies

We had a cool and very rainy spring, summer and fall. The trees in the orchard and the nursery made a strong growth. Fruits matured late and none except the apples had the sweetness and flavor of other years.

The apple crop in general was below the average. Fameuse, Colvert and Duchess had a very poor crop. Alexander, Red Astrachan, St. Lawrence, Wealthy, Golden and Roxbury Russets, Tolman Sweet and Yellow Transparent produced a fair crop in L'Islet county. The prices realized were $3 for No. 1, and $1.50 a barrel for seconds and thirds.

The plum crop was extra good in L'Islet and Montmagny counties. Over 8,000 barrels and a great number of boxes of plums were shipped from five railroad stations. Unfortunately buyers came down from Montreal too early; the plums were too green; they paid $2 a bushel for the first carload. Growers in every part of the county thought that the fruit suited the Montreal market and made their harvest, but the price went down to $3.50 a barrel. These unmatured plums did not please the retailers nor the consumers. Those who sold later realized $9 a barrel in Montreal. All my crop was put up in four and eight gallon boxes, which sold easily at 35 cents a gallon for the finest and 30 cents for common. The varieties considered the most profitable are Early Red, Moore's Arctic, Lombard, Jones' Seedling, Hudson River Purple Gueii, Quackenboss, Coe's Golden Drop, Reine Claude de Montmorency, Yellow Meldowka, Blue Damson, Grand Duke. These sold better in eight-gallon boxes. Bradshaw, Green Gages, Reine Claude d'Oullins, and Washington were packed in baskets, or in four-gallon flat boxes, as they cannot be shipped safely in large packages.

To show what small plum orchards can produce, I will cite that of a neighbor, Mrs. L. M. Déchène, who gathered and sold to the Quebec Fruit Exchange, 1,300 gallons at 25 cents, or $325. We measured the ground of the orchard; it is only 290 x 90 feet. In the vicinity a Reine Claude de Montmorency tree produced four bushels and a half, measured in presence of witnesses. The tree was not over 12 feet high. Mr. George Boulet, of Cap St. Ignace, gathered 80 barrels (2,000 gallons) in a small orchard of 250 trees, planted 12 x 12 feet in 1896, and 1,800 gallons of Downing gooseberries, planted between the plum trees, which are mostly Bradshaw, Moore's Arctic, Lombard, Gueii, Imperial Gage, Quackenboss, Coe's Golden, and Reine Claude de Montmorency. No crop here gives such good returns with so little work and expense as a plum orchard on good, sandy soil, protected by windbreaks, with currant, gooseberry or raspberry bushes between the rows to keep the snow and dead leaves on the ground for the protection of the roots in winter.

Such crops as this year's create enthusiasm and induce land owners to plant new orchards.

Montreal

E. H. Wartman, Dominion Fruit Inspector

Canadian varieties are turning out very satisfactory in the Old Country, both as regards quality and condition, particularly our little Snow apples, which have brought $5 to $5.50 a bbl. This season has been a remarkable one for shipping apples. Iced cars have landed apples in fine shipping condition. Even to-day, Nov. 19, apples are arriving free from frost.

Once within the last 30 years I have had apples in a storehouse frozen so hard as to rattle in the barrels on Nov. 5. One thing that may have induced shippers of apples to load cars improperly was scarcity of cars. I inspected three cars containing, respectively, 300, 304 and 309 barrels. This means 25 tons per car, and necessitates piling five deep, or four barrels on bottom barrels—675 pounds. This weight causes great damage to bottom row, even squeezes them so flat that heads have been pressed out and new barrels had to be secured to replace the damaged ones. Again, in unloading a five-layer car of apples by incompetent men, there is breakage and more loss to be added. The man who loads a car three tiers will succeed in getting his fruit to market in much better condition than the other case. Apples of No. 1 quality are retailing here from $4 to $5 a barrel.

British Columbia

C. P. Metcalfe, Hammond

Trees went into winter quarters in fairly good condition. The exceptionally dry season caused the leaves to drop earlier than usual.

Fungous diseases and insect pests were not very troublesome last season; the fruit, in consequence, was above the average in quality. The returns also have been very good. The demand for plums and prunes in the markets of the Northwest and Manitoba having far exceeded the supply, higher prices have been secured for No. 1 apples than has been the case for many years, and prices are still going up.

The provincial government undertook to make an exhibition of British Columbia fruits at different points throughout Great Britain and Ireland, for the purpose of demonstrating the possibilities of fruit growing in British Columbia. The parties in charge also did a little immigration work by giving lectures, illustrated by stereopticon views, and distributing of literature bearing on fruit growing. The British Columbia exhibit has for two consecutive years carried off the gold medal at the Royal Horticultural Society's Exhibition in London, besides many other medals won by the different exhibitors.

Alberta

E. B. Edwards, K.C., Edmonton, Alta.

Raspberries, strawberries, currants and gooseberries grow freely in this district, but as yet few people cultivate them. Apples are being tried, and some have been grown. In November I bought some Lindley grapes that came from Ontario, and paid 55 cents a basket for them.

There are not any handsome ornamental vines here. People content themselves with using the homely hop vine around their houses. I am trying the Dutchman's pipe. I intend, also, to try the Virginia creeper, which grows well in Winnipeg.

Flowers grow luxuriantly. Such roses, carnations and chrysanthemums as Ramsay grows in his greenhouses would be hard to equal anywhere. He has a floor space of 150 x 200 feet. The long period of sunlight is very favorable to growers.

In ornamental and street trees, elm, ash, mountain ash and spruce grow well. We have a Civic Improvement Society in Edmonton. It was founded to encourage the growth and care of trees, gardens, lawns and to improve the appearance of the city in any way possible.

POULTRY NOTES

At this season, when new-laid eggs are scarcest, doubt sometimes arises in the minds of many of us as to whether our poultry possesses the laying qualities that they should or whether the fowl are good, and whether the shortage of the egg supply is the result of improper feeding and housing. Many breeders advertise breeding stock from winter-laying strains. This sounds well, and is sometimes true. The establishment in two or three years of a winter-laying strain is within the power of any one of average intelligence who will set themselves to attain that end.

The present is the best time to take notice. With the use of trap nests, accurate account may be kept of each hen's returns, but this is work that takes up too much time for the average poultry keeper. It is not a hard matter, though, to find which pullets laid first or the hens that laid best through the month. This will not be hard to determine, for in most flocks, not over half the number of hens kept are laying. The best 10 or 12 layers should be branded that they may be easily distinguished and placed in a separate pen in the breeding season. By the selection of a good male to use with the hens so chosen, in two or three seasons, a laying strain should be established.

With regard to feeding in winter time. By experience, and the experience of others eminently qualified to know, the following mixed ration of grain is recommended: Two parts of oats, two parts of wheat and one of corn or two bushels of oats, one of wheat and half a bushel of corn, mixed together. Each day, is given with this, of course, some soft food, meat and green food in reasonable quantities. A constant supply of cracked oyster shells and mica grit is kept in a convenient place in each pen.

Ferry's Free Seed Book.—For half a century farmers and gardeners have regarded Ferry's " Seed Annual" as the best guide, not only for the buying of seeds, but for their planting and care. Daily reference to its text and illustrations proves it to be the actual beginning of a successful season. The new edition for 1908 is now ready for free mailing. Another remarkable feature developed by the house of Ferry is the method of distributing seeds to dealers throughout the country so that the planters everywhere can secure at their home store exactly what they want, when they want it, with the absolute assurance that it is fresh and fertile. Everyone should send at once to D. M. Ferry & Co., Windsor, Ont., for the 1908 edition of "Ferry's Seed Annual."

A new edition has been called for of the booklet containing "5,000 Facts About Canada," compiled by Frank Yeigh, of Toronto, and issued by the Canadian Facts Publishing Co. of that city at 25 cents per copy. A copy should be in the hands of every intelligent Canadian.

Gregory's Seed Catalog.—Gregory's new seed book is ready for free distribution. It is one of the few seed books published strictly in the interest of farmers and gardeners. Not only does it illustrate and describe the new and old varieties, but it also helps make the planting a success, by giving expert advice on the raising of various vegetables. This year Gregory offers, besides many new varieties, a potato that's a wonder. It's called "Big Crop," and it is claimed that it will out-yield all the well-known varieties, is least affected by rot, and is deliciously mealy. It produced last season on their own farms at the rate of 836 bushels per acre. To learn more fully about this great potato, and the best methods of planting, write to-day for Gregory's Seed Book. Remember it's free. J. J. H. Gregory & Son, Marblehead, Mass.

Brown-Tail Moth

P. J. Shaw, Truro, N.S.

In company with three others, I returned recently from Digby Co., where we had been looking over the district infested with the brown-tail moth. In three days we succeeded in finding only three or four nests. While the whole of the infested area was not gone over, and while our search necessarily was incomplete on account of the snow, yet the result is very encouraging. It indicates a considerable reduction in the numbers of this serious pest.

If the campaign against this insect is carried on as successfully as it has been since the time of its discovery in the province last spring, there is a fair prospect of holding the insect in check, if not of exterminating it completely.

FOR SALE AND WANT ADVERTISEMENTS

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

Apples in Halton County

R. J. Hare, Milton, Ont.

From time to time writers in THE CANADIAN HORTICULTURIST refer to the apple producing features of the different parts of the province, but not much has been said about Halton county. Great possibilities are lying dormant in that county. A large percentage of the farms contains land that is well adapted for growing winter apples. Much of the soil is mixed with limestone, which is excellent for apple trees. Most of the farms are well drained, although there are some small sections of the county that are flat and heavy.

The mountains that run through the centre of the county make excellent shelter from the west. Close to these mountains lie farms that would grow apples to perfection. Many of them are paying the farmers large profits. There are a few men who are making more money from 10 to 12 acres of apple orchards than they would make from 100 acres devoted to grain and stock. There should be more large orchards in the county.

The farmers should cooperate in the selling of their apples. Some of them to-day receive only $1 a barrel for choice winter varieties, when they should get $2 to $2.50 in the orchard.

There is some stony land that should be planted with apple trees. This land gives no return to the owners, but will grow apples fairly well. The northern portion of Nelson township, and the southern end of Nassagaweya, contain land of this type, and might be planted with apple orchards profitably. The apple business in Halton county should be not only a side line, but a leading industry.

New Fruits

Prof. H. L. Hutt, O.A.C., Guelph, reported at the recent Convention of the Ontario Fruit Growers' Association as follows: "Comparatively few seedling fruits have been sent in this year for examination. Among the few is one which I believe to be the most promising seedling which has yet come before my notice.

"1. The first is a seedling of Swayzie, received from Prof. Macoun, Ottawa, and by him named the "Ottawa." This apple does not in any way resemble the Swayzie, but instead, very closely resembles Ben Davis in shape and general appearance. It is fine-grained, juicy, mild subacid, but I consider it of only fair quality. Mr. Macoun, however, considers it the most promising seedling they have yet raised, because of its good keeping qualities. It may be valuable where a hardy winter apple is required, but would not be of value where better varieties can be grown.

"2. A seedling sweet apple grown by Mr. Wm. Moore, of Mansewood, Halton county. This is a bright red apple, medium in size and oblate in form, something of the size and appearance of Wagener. It is, however, of particularly fine quality. Mr. E. Morris, to whom I sent samples, declared it was very much superior to Tolman, having a pleasing sweet flavor. It is a good keeper and of about the same season as Tolman. Mr. Moore reports that the tree is a vigorous grower, and came into bearing early and has been very productive. There is not a great demand for sweet apples, but this apple is worthy of propagation because of its extra fine quality for home use.

"3. On the second of April of this year, I received a box containing a dozen specimens of apples from Mr. Isaac Pike, Bethesda, Ont. They were large, handsome specimens, in excellent condition, about the size of Northern Spy, but of a solid, bright red color; in fact, the handsomest specimens I have seen for a long time. Mr. Pike explained that he had some years ago planted 30 seedling trees for the purpose of grafting, but two of the trees had such handsome foliage that he decided not to graft them, and these two trees have borne the specimens sent in. Upon inquiry as to how the seedlings came to be bearing the same fruit, he explained that when he received these trees they were on the same root, but as he was able to divide them, he made two trees of the one, hence both trees were of the same variety. The trees came into bearing early and proved hardy and productive. He says the fruit will hang on unusually well in fall without being blown off, and, for this reason, he allows them to hang until they obtain their beautiful color. It is of excellent quality and a good keeper, keeping in fine condition until May. Mr. E. Morris, to whom I sent specimens, says: 'This apple is certainly worth propagating. Its large, handsome appearance and good keeping qualities would certainly make it a valuable acquisition.'"

Mr. W. T. Macoun, C.E.F., Ottawa, explained that the purpose of the new fruits committee is to prepare and preserve historical records of new seedlings, and to obtain unbiassed reports on the same. On the Central Experimental Farm there are now over 2,000 seedlings growing. Mr. Macoun was of the opinion that the apple mentioned as Pike's Seedling in Prof. Hutt's report is not a seedling at all, but a variety that has been grown for some years in eastern Ontario, known as the Kinkead.

The Maine Agricultural Experiment Station is now sending out a bulletin on the Potato Plant Louse. This publication contains an account of the injury inflicted by an insect which has been present to a troublesome extent in that state; the life history of the species based upon field and insectary observations; a discussion of its occurrence upon plants other than the potato; and suggestions as to remedial measures.

London Horticultural Society in 1907

C. B. Butler, Secretary

THE commencement of our season of 1907 was the annual meeting held in January. It was attended by a large number of enthusiastic members. In March, Mr. J. S. Pearce, park superintendent, lectured on trees, shrubs, and so forth, and gave some very practical hints on the growing of annuals. A great many members were present. Later on, in May, the Society made arrangements with Mr. Wm. Hunt, of the Ontario Agricultural College, to give a lecture. This lecture also was attended by a large number of members and their friends, and was thoroughly enjoyed by all present.

In March, a very fine display of carnations was made in the City Hall by the Canadian Horticultural Association. A large number of the citizens attended, and it was the means of bringing a number of new members to the London Horticultural Society. Late in June, the Society had its first flower show. It was a very successful one. Though there were not very many roses in bloom, owing to the lateness of the season, the tables were well filled. Many flowers which at previous shows had not been shown, such as peonies, iris, and so forth, were exhibited. There was quite a good attendance on both days. Thirty-five members of the society made exhibits. Owing to the dryness of the season and the fact that the garden watering had been cut off by the Commissioners, the directors of the society looked forward with some apprehension to the annual August show, which was to be held in conjunction with the Canadian Horticultural Association, who were this year meeting in London. This show proved to be one of the finest ever held in London. The attendance on both days was very large, and all those who attended were loud in their praise of the beautiful flowers exhibited. Forty-nine members of the society sent exhibits, and the Canadian Horticultural Association made a grand display of ferns and gladioli. Everyone went away from the city hall with a fixed determination to do better. Many strangers were present, who expressed very great surprise at the wonderful display. Some gentlemen from New York stated that they had not seen any amateur show in that city comparable to it. One gentleman from New Brunswick was very enthusiastic, and took the names of the growers of gladioli, determined to have some of the fine blooms in his garden in 1908. The London Horticultural Society never make any charge for admission. A box is placed at the door for voluntary contributions, but, needless to say, the expenses are never covered by the donations.

The society, again this year, as in the preceding one, obtained the sanction of the school trustees, to make a distribution of seeds to the scholars of the public and separate schools. Over 16,643 packages of flower and vegetable seeds were distributed to the scholars, the cost of each packet being almost nominal, just enough to cover the expense of obtaining them at wholesale price and making the distribution. All the public schools are interesting the children in the growing of flowers, and fine beds of tulips, geraniums, and so forth, were seen around the public school buildings. The society have in view the matter of having an exhibition by the children, but this would necessarily have to be in September, when the school has recommenced after the summer holidays. This plan has not yet been worked out by the society, but will be in the near future, as each year more children seem to be interested in flower growing, and an exhibition by them of flowers of their own grow-

ing would undoubtedly stimulate them to greater effort.

The society made a distribution in the spring and fall to its members, and each month has held a meeting of the directors. Representatives were appointed to cooperate with other societies in the city, to endeavor to have the city council interest themselves in the purchase of suitable grounds in different parts of the city for the children. These grounds are badly needed, and as the city is rapidly growing, now is the time for the aldermen to take up this matter. If it is left over for a few years, land values will be greatly enhanced, and a much larger expenditure would be required.

Our Apples in New Zealand

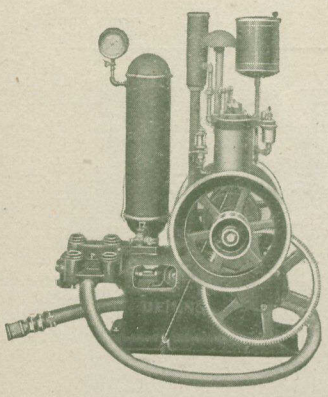
T. H. Race, Mitchell, Ont.

In his official report to his government, the commissioner for South Australia to the International Exhibition held recently in New Zealand, the following reference was made to the display of apples made by Canada: "It may "not be out of place to state that Canada sent "a consignment of apples which were thirty "days on the voyage, and were placed in cold "storage on arrival. Every week a case was "taken out of the storage and placed on dis- "play, and these apples retained their freshness "and flavor for months, up to the end of the "exhibition."

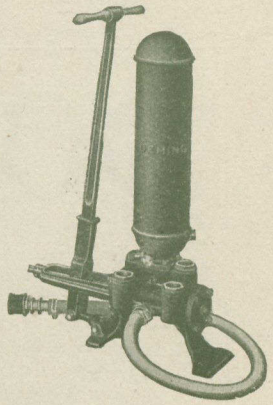
I would just like to add that these apples—all grown in British Columbia—were in cold storage out from Victoria to Sydney, Australia, during their voyage. From Sydney to New Zealand, five days' sailing, they were on the deck of a steamer exposed to the summer temperature of that zone. They were, in fact, over five days exposed to this temperature before being securely housed again. We had in the consignment about thirty-four varieties, and they all kept well to the end except the Blenheim Pippin, Blue Pearmain, Fall Pippin, and one or two others that I have forgotten. The Jonathan, King, Spitzenburg, and Spy kept particularly well, and proved great favorites with the people of the South Sea empire. The Snow apples opened out in splendid condition, and as long as it lasted created a great interest.

When the New Zealand apples came in, during the month of March, we had still a pretty good showing, and the striking contrast in regularity in shape was very noticeable. All the New Zealand apples are more or less irregular in form, which is always an evidence of a coarseness in texture, and they never attain the beauty in color so characteristic of our Canadian fruit. I feel confident that we laid the foundation for a considerable trade in apples between British Columbia and all the Australian colonies, New Zealand especially. In arriving in the latter country in September, I found the market supplied with apples from San Francisco, selling at a very high price. We showed the New Zealand and Australian people that we produced a very superior apple to that of California, and we demonstrated the fact that it could be laid down in good condition in their market at a reasonable cost.

On the steamer coming this way in June there were about one hundred and fifty cases of Tasmanian apples consigned to Seattle. They were piled on the deck of the steamer and covered with canvas. The captain had four of the cases opened to let us look at them, and I have no hesitation in affirming that those apples would pass through Hades uninjured. The variety was a pippin of some sort, resembling in size and color our Newtown, but as hard and coarse as a quince. They would arrive in Seattle about the sixth of July as solid as our Swede turnip in November. I saw some fairly good apples in Tasmania, but none that we may be afraid to compete against in any part of the world.



Almost Spraying Time



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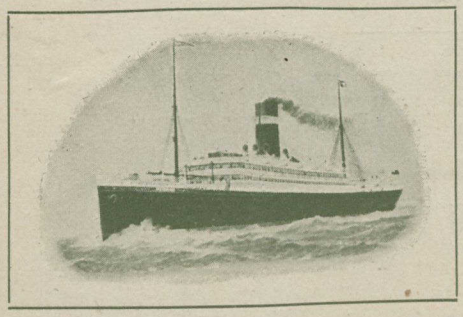

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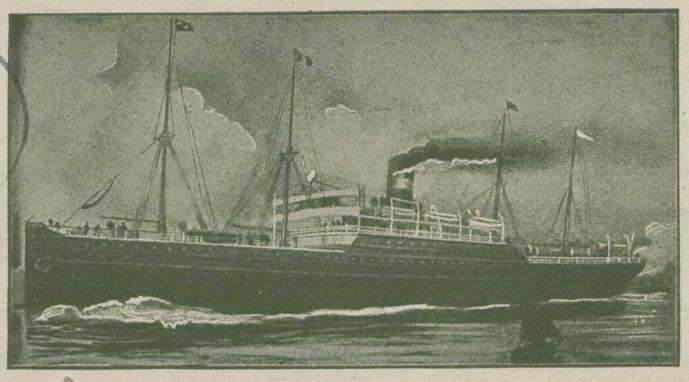

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