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THE
CANADIAN HORTICULTURIST
BEEKEEPER

VOLUME 24, No. 8
\$1.00 a Year

PETERBORO, ONT.
AUGUST, 1916



"DAISY" Apple Packing Aids

The Apple Packer's Friend

The illustrations on this page will tell you instantly just how useful and time-saving are these "Daisy" aids. You can get better results in less time by the use of these "Daisy" helps than is possible in the usual way. Read carefully the descriptions of each device:

"Daisy" Folding Apple-Sorting Table

This is another of the famous "Daisy" Apple Packer's Outfits. It is light yet strongly built to meet rough usage. It folds compactly and can be readily carried from place to place in the orchard. It is thoroughly tested for strength and efficiency.

The table frame is of oak and all metal parts are of first-class malleable, thus being interchangeable in case of breakage. The cover is of No. 10 canvas.



An article every packer should have this season.
QUICK AND EASY.

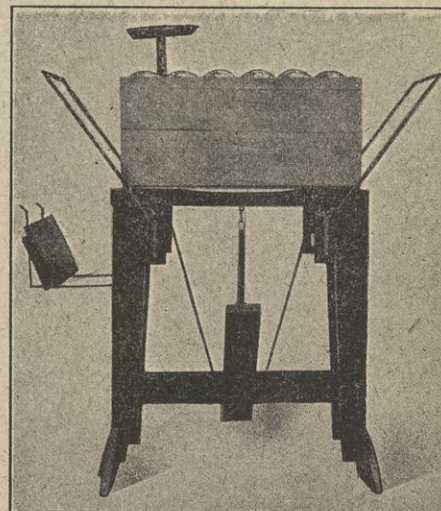
"Daisy" Apple Press

Used by all leading apple packers in Canada, United States and England. All fruit growers' supplies carried. Ladders, baskets, felt pads, racks, etc. Write for prices and complete information. Special quotations to associations.

'Daisy' Apple Box Press

That is the way the "Daisy" Apple Box Press works. A simple pressure of the foot brings the arms up over the ends of the box, automatically draws them down and holds them in place while being nailed. The fastest and only automatic press on the market.

If you pack apples in boxes, this machine will be a great convenience to you and will save you time and money.



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Firstbrook Bros.

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AND

SHOOKS

SINCE 1867

FRUIT BOXES

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Fruit Importer and Merchant

Nottingham, England

I SOLICIT your consignments. Write now for particulars of the Buckoll Service.

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The Canadian Horticulturist

Regular Edition.

The Cherry Pickers Cover

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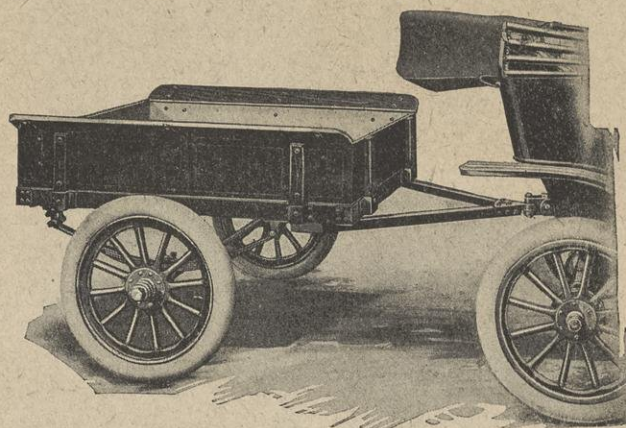
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It's the fruit and vegetable which reach the market fresh and sound that command the highest price. No matter what you have to haul, the cheapest and fastest way is by **Brantford Trailer.**

It will save time, horses and men—a sure way to earn and save money.

Our trailers carry from 1,000 to 1,500 pounds. They are strongly constructed and built for service under all conditions.

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We sell to the best class of retailers in Toronto—men who want the best goods and who pay the best prices. Our large connection enables us to get rid daily of an immense amount of fruits and vegetables. You are best served by such a firm as ours.

THE Toronto market is the best in Canada. In Toronto you get the best prices.

Toronto is a city of wealthy citizens, and of families who are free spenders. As a market for garden and orchard produce, it is the very best in Canada.

WE sell quick and make prompt returns—this as well as getting you top prices. If we were a small or new firm we could not say this. It takes time and satisfactory service to attract the best class of customers. We solicit your consignments.

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The Canadian Horticulturist and Beekeeper

Vol. 24

PETERBORO, AUGUST, 1916

No. 8

Co-operative Methods Not a Cure-All

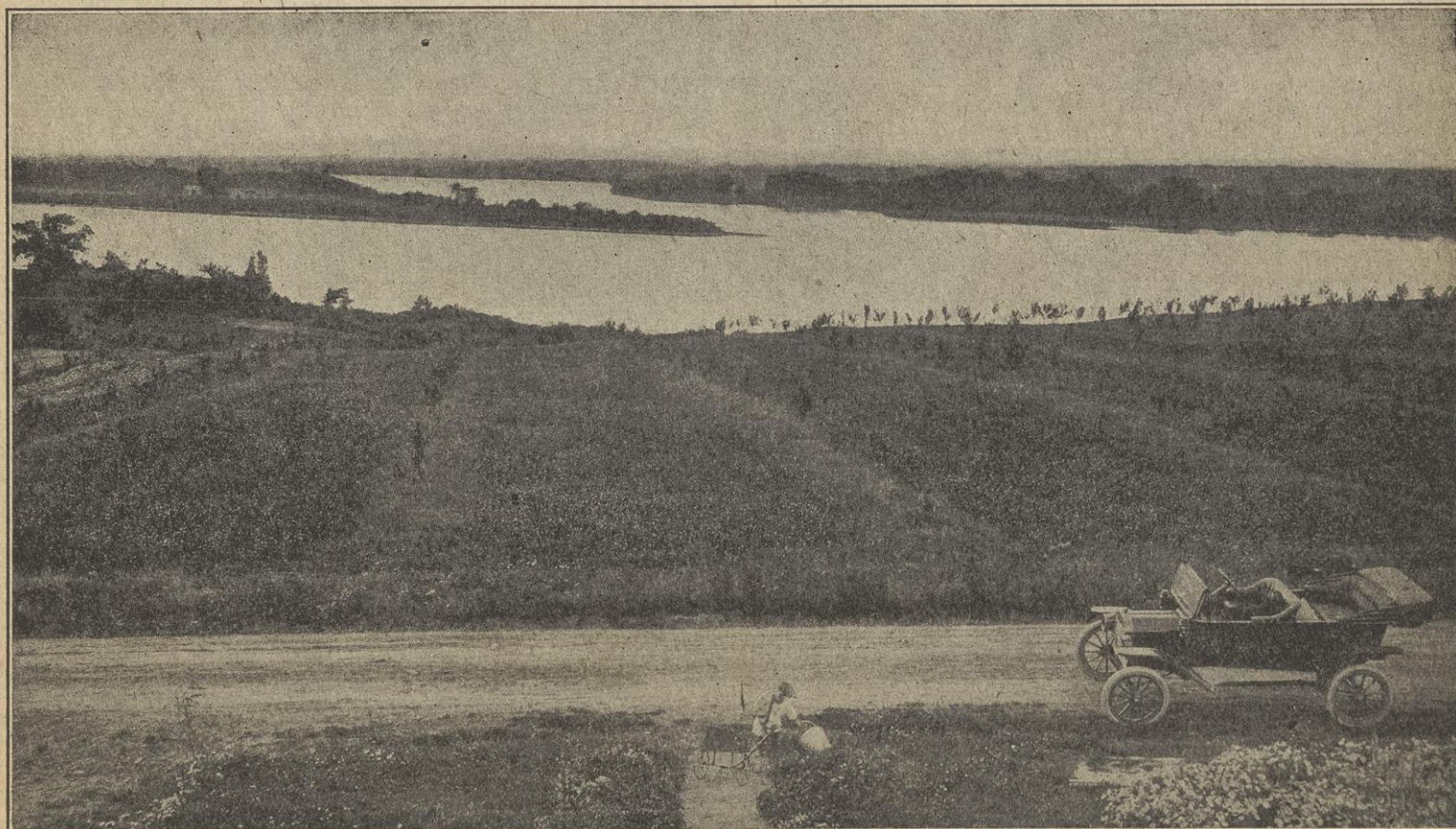
H. Bronson Cowan, Editor of the Canadian Horticulturist

FRUIT growers in the east have long looked upon the great fruit growers' organizations of the Pacific Coast States as being almost models of all that fruit growers' organizations should be. The thorough manner in which they have safeguarded every step from the pruning and spraying of their trees and the thinning of the fruit to the packing of the product in neat, attractive packages, just so many apples, uniform in size and color, to the box, has been pointed out as the explanation of their ability to outsell—not undersell—eastern fruit in the eastern markets. It has come as somewhat of a shock, therefore, to many eastern growers to find that in spite of their apparent perfection of method, all things are not well with the fruit growers of the western coast states. In fact, it has seemed at

times as if their situation could hardly be worse. The very prosperity brought about by their early successes has led, in a large measure, to their undoing. This success created a false optimism, which resulted in over plantings, excessive land values, increased cost of production, and ruinous competition between different cooperative organizations. This condition, in turn, culminated in glutted markets, and such low prices for fruit that thousands of fruit growers have been ruined and large areas of fruit trees cut down and the land devoted to other crops.

So serious did the situation become that early last fall growers, selling organizations, bankers and commercial clubs in the northwest sent hundreds of telegrams and letters to the Department of Agriculture at Washington,

urging them to have the Office of Markets come to the assistance of the fruit industry. According to the Fruit and Produce Marketer, of Portland, Oregon, the department was advised that the fruit industry was in a deplorable condition, that this condition was realized by all, and that the help of the federal government was needed in order that a plan might be found that would place the industry upon a better basis. In response to these requests the department sent to the northwest three experts to investigate conditions. These men spent many days and a large sum of money in investigating every fruit section in the northwest, and calling upon the selling organizations, bankers, growers and leaders in the different communities. They thus secured a thorough understanding of the needs of the industry. With this informa-



View in the fruit lands of the St. John River Valley Fruit Company, Burton, N.B. The St. John River Valley promises to become noted as an apple producing district. It contains numerous fine orchards and the Provincial Government is making its advantages known.

tion in their possession they called a meeting of those interested and reported to them somewhat as follows:

"We find the fruit industry of the northwest to be the greatest example of disorganization to be found in the United States. The very fact that you have a number of strong organizations makes it all the worse, because it gives you larger clubs to use in your game of tearing each other to pieces. Your principal trouble is 'selfishness.' If you have a sincere desire and are willing to do certain things, we will suggest a plan upon which you can meet on equal terms and agree."

They were answered in this fashion:

"We realize our deplorable conditions and know that if we do not agree to certain practices that we will have no industry in a few short years. We therefore are here with open hearts ready to agree to any constructive plan that will assist the industry."

Growing out of this report a Fruit Growers' Agency was formed for the purpose of reorganizing the industry, harmonizing the competing interests, bringing order out of chaos, and re-establishing better conditions. It is yet too early to decide what success will attend this new effort. In the meantime we in the east may learn some valuable lessons from the conditions that have thus been revealed in the west.

Lessons For the East.

In the first place, let us note that the primal cause of the trouble in the west was SELFISHNESS. What a flood of light that one word throws on the whole situation, both east and west! The evil worm it represents find its way to the centre of every effort of man to improve his condition, and again and again thwarts his best efforts. It explains why men refuse to cooperate as long as they think they can do better for themselves in some other way; it leads men to throw down their association when a buyer offers them an extra inducement to sell outside their organization; it is the cause which prompts growers to rush immature fruit to the market in the hope of obtaining some of the early high prices; it explains why buyers so often find inferior fruit under number one grades, and makes clear the motives which prompt even cooperative associations to cut the ground from under each others' feet in their anxiety to market their products.

What are we going to do about it?

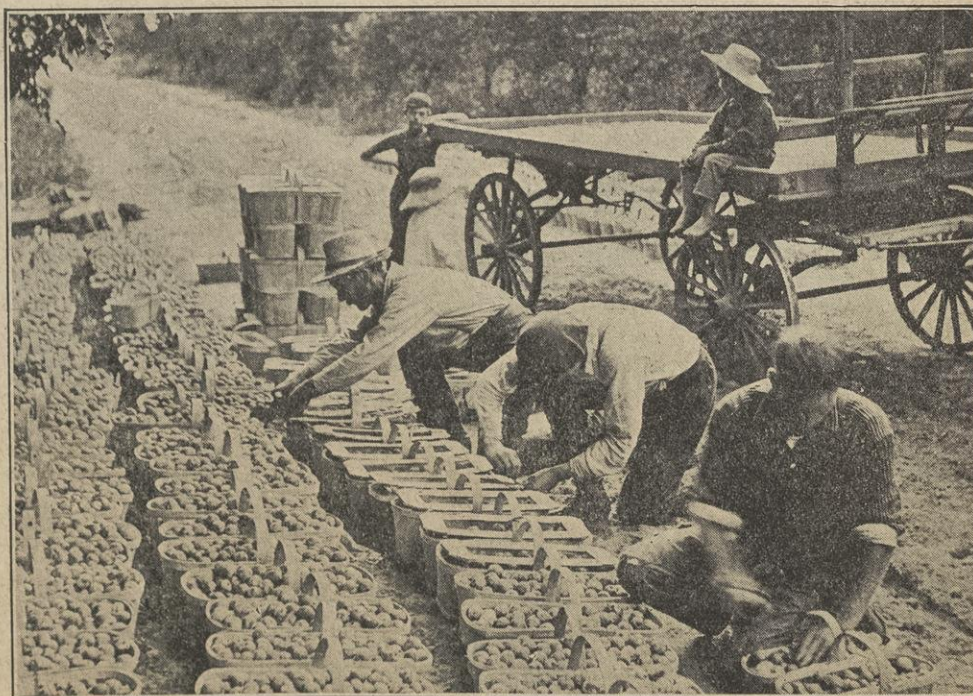
In some ways there is not much that can be done. A greater than human

agency is required to deal with this evil in the hearts of men. Let us, therefore, recognize this fact, and not make the mistake of thinking that the mere passing of laws or imposition of fines or attempts at unity of effort will be sufficient to overcome it. It may seem to disappear for a while, but sooner or later is sure to break out in a fresh spot. For the same reason, also, we should discourage rather than encourage the modern tendency to have ministers of the gospel devote more attention to learning methods of farming and attending short courses in agriculture in order that they may help the members of their congregations in a direct temporal way, instead of giving their full attention to the more important spiritual matters. Once ministers step aside from the main purpose of their calling and commence to fritter away their time on minor issues, that growers themselves are better able to cope with, disaster rather than benefit will be the result. Let us not, also, base our appeals for the adoption of cooperative methods so much on selfish arguments as by exalting the unselfish spirit which will lead a man to prefer to suffer loss rather than to defraud his neighbor. A cooperative organization that is held together for purely selfish purposes has the seeds of decay and disintegration within itself.

Let us not, also, make the mistake of expecting too much from the adoption of cooperative methods. These are important, and are always the first and absolutely essential step forward towards better conditions. They are

only, however, a means toward an end. Even were all our fruit growers to fertilize and cultivate their land, prune, spray and thin their fruit and cooperate in its sale, other and still larger problems would remain to be solved. We would still have to deal with the possibility of over production, the increasing cost of land and all kinds of supplies, the growing poverty of the masses of the people in our cities with the consequent reduction in their purchasing power, as well as competition with other classes of products. It is true we cannot deal with all these questions at once. One step at a time is the safe and ordained method for all of us. Let us once recognize, however, the necessity for taking further steps, and we will not make the mistake of being too optimistic concerning the benefits likely to attend the taking of any one or even several steps. Some of these other issues we trust will be discussed in future numbers of the Canadian Horticulturist. The broader the viewpoint we have when dealing with these problems the safer and more permanent will be the progress made when dealing with them.

The box is the coming package, for most varieties at least. It is easier to pack; easier to handle in the orchard, on the train, or in the home of the consumer; it avoids bruising, and it enables a householder, who does not want to buy more than a barrel at a time, to have three varieties in his home at a time.



Each little job takes time and costs money. Covering the fruit baskets on the fruit farm of F. Bell & Sons, Burlington, Ont., preparatory to loading for market.

Cranberry Culture in Nova Scotia

A. J. Campbell, Halifax, N. S.

THE culture of cranberries began about twenty-five years ago in Nova Scotia. Cranberries have always grown wild here, and when it was found that the removal of weeds and grass made the vines more vigorous and enlarged the yield the owners of cranberry bogs were encouraged to cultivate the berry. In the course of time a regular industry in cranberry growing was established throughout the Province, but it was in Kings county that most progress in planting and production occurred.

Among the growers at Auburn, Kings county, is Mr. H. S. Bishop, who is considered to-day an authority on everything pertaining to cranberry growing. "Many parts of Canada," said he, "abound in tracts of land varying in area which are now considered as waste, but which may be made among the most profitable parts of the farm. Wet peaty soils, of little use for other purposes, are eminently suitable for the culture of cranberries, and the expense of preparing and planting is not excessive when the length of life of the bed is considered.

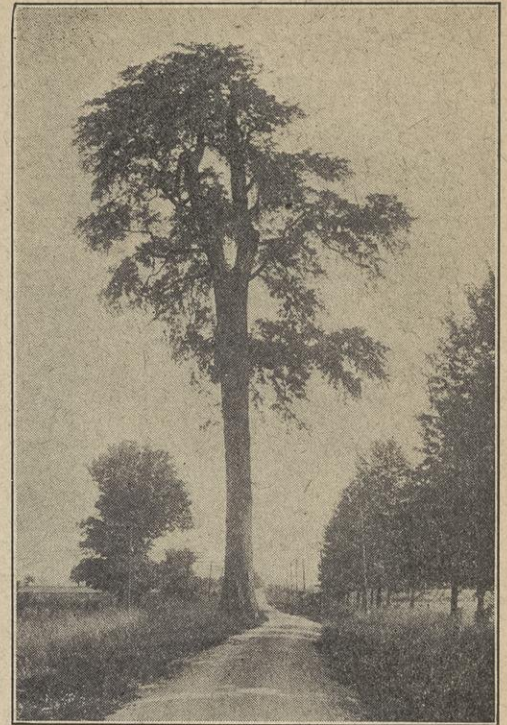
"The proper soil for the culture of this berry is a peaty alluvial soil. A peat bog, if not too deep, or any black land on which wild bog cranberries now grow will present a suitable home for the cultivated berry. Beds are sometimes made on an ordinary very sandy loam, but such soil requires the annual application of commercial fertilizer, which is not required on black soil. Moreover, ordinary soil runs more to weeds than a peat soil does. A wet soil with the water just below the surface should be selected. If land of this character is ditched and drained until the water recedes to within twelve inches of the surface the results will be satisfactory.

"The first operation in preparing a bed is to strip the sod or turf from the surface sufficiently deep to prevent the growth of bushes, grass or weeds from the roots. This is generally a difficult job, as the ground is often too soft to hold a horse and is apt to contain many sticks and logs with which it is hard to deal except by hand. After the ground is cleared and levelled it should be covered to a depth of three and one-half inches, with sand free from loam or weeds. A coarse sand in which is some gravel will be suitable. Many shallow peat bogs have a deposit of sand underneath, and where this is the case the sand can be conveniently and cheaply obtained from the bottom of the ditches. After the sand is spread the rows should be marked out eighteen

inches apart. This may be done by drawing over the bed an instrument made like a hand sled with two or more runners the proper distance apart.

"In starting a bed, not only is it desirable to get a variety of good quality and appearance, but they also should be prolific yielders. There is as much difference in the yield and quality of cranberries as of apples. Some of the wild varieties are good. Many of the best berries grown in Nova Scotia are native varieties. For planting cut vines are used, being the upright parts of the vine mowed from a bearing bed. These may be obtained from some reliable dealer who makes a business of supplying them. Vines for planting are from six to eight inches long, and are put up in sacks or barrels, about eight barrels being necessary for planting an acre. The process of planting is very simple. One worker drops the cuttings in the marked rows about fifteen inches apart. Another worker follows and presses a part of the cutting into the soil with a forked stick. The firming of the sand about the cutting with the foot completes the operation.

"In the after treatment of the bed weeding is the most important operation. This will not be difficult, however, if the ground has been well stripped and clean sand has been used. It is vitally important to keep down any weeds that show in order to give the vines a chance. If this is faithfully



A measuring point for the miles by a Huron County roadway, near Goderich, Ont.

done for three years the vines will take charge and completely cover the ground by the fourth year, thus reducing the task of weeding practically to the vanishing point. By this time also the bed will be yielding profitable crops. No cultivation is required, and, in fact, it is desirable in weeding to mix the sand with the soil as little as possible. If properly brought to this point the bed is in shape for many



A cranberry plantation at Auburn, Kings Co., Nova Scotia.



Peach harvest in the Niagara District is a busy season. This illustration was obtained before the war had thinned out the male help which now is hard to get.

years to come, and requires little attention but picking.

"There is a very general impression that cranberries cannot be raised without provision being made for flooding, but while such an arrangement is desirable it is not essential. Cranberries are grown quite extensively throughout the Annapolis Valley, and in many cases there is no provision for flooding. Of course, if the bed can be located on a small stream flooding is then possible. A dam may be built so that the bed may be flooded to a depth of eighteen inches, with a gate that may be easily opened and closed. Water should be turned on in the spring and allowed to remain until about May 20th, so that the period of blossoming may be retarded to escape the June frost. Again, in the autumn, if heavy frost is imminent before the berries are picked, the gates may be closed in the afternoon and the bed flooded for the night. A clean sanded bed, however, will not catch the frost so quickly as a bed full of weeds and grass.

"A few words may be said in regard to the use of fertilizers. There is no use for barnyard manure in connection with growing cranberries. If the bog is made on peat or muck soil with sand on top no further fertilizer is necessary for the successful growing of this fruit year after year. If the bog is planted on a white sand flat, or where the mud is very thin and the land poor, a liberal use of any of the commercial fertilizers used for growing potatoes is undoubtedly a great benefit. The berries will be larger and the vines thriftier if from four hundred to six hundred pounds of fertilizer per acre be applied about the first of June. This should

be sown broadcast when the vines are perfectly dry.

"In the earlier days of this industry picking was altogether done by hand. The bog was laid off in sections or strips of any width to suit the fancy, by stretching lines across. Each picker was assigned a section by himself, and the cost of gathering in this way varied from one to two cents per quart. Of late years this work is performed largely by the use of scoops, much more quickly and at far less cost. These scoops or pickers vary in width from fifteen to twenty-two inches, according to the number of teeth. The berries grow on the ends of the upright part of the vines. The scoop is forced into the vines just about the laterals, and as it is raised up the berries are pulled off and fall into the back of the scoop. After two or three operations of this kind, the scoop is emptied into a shallow box or basket. In this way a single operator will gather from three to ten or more barrels of berries per day where there is an ordinary good crop of fruit."

The cranberry is a cold climate plant, and will grow to perfection in Canada. It has not the same insect enemies to contend with that are prevalent in some parts of the United States, while the prices are better and the demand is practically unlimited. A well established bed will yield from fifty or sixty barrels to the acre, and the price seldom drops below five dollars the barrel. This is surely good enough for land that is practically useless for other purposes.

Mention the Canadian Horticulturist when writing advertisers.

Height of Apple Trees

P. J. Carey, Toronto, Ont.

THE proper height of apple trees is a question that is receiving considerable attention. Old trees often are beyond redemption. We have thousands of trees, however, that have had a bad bringing up and which need, and will stand, severe treatment.

In the case of young trees I am a complete convert to the low-headed trees. There is one objection to this system, that is, where there is a heavy snowfall which may do damage. Low heading gives us a lower and healthier trunk, and the tree is easier sprayed, pruned, thinned and picked. Winds do not affect them as much as the high trees.

You can cultivate low-headed trees just as closely as higher ones, as in the case of low-headed trees the limbs grow up. On high-headed trees the limbs show a tendency to grow straight out and droop. When trees come in bearing it is not necessary to cultivate close to them.

The training of the tree is everything. We have trees that are up in the air, due generally to their having been planted too close together. I have seen thousands of trees in orchards that were planted too close. In one large orchard, planted some twenty years ago, about eighty per cent. of the trees are to be taken out.

It is a bad thing for a tree to dehorn it. This operation should be done only as a last resort. Sometimes it is necessary. Bring a high tree down to not over twenty feet, and, better still, fifteen feet. If you want to cut a tree down eight or ten, or even twelve feet, and there is a large upright limb near the centre, cut it back at the juncture or joint with the main tree. In a short time it will be full of new growths.

The first principle in lowering a tree is to cut down the upward growth. On side growths the fruit tends to bear down the limbs. Always cut a limb vertically, so that the water will not rest in the cut and cause a cup to form.

In the case of San Jose Scale I have seen a tree cut down, renewed, and a new head formed. Where the new growth forms it can be thinned out and trimmed.

Speaking of the possibilities of orchard products an old nurseryman says where a dollar's worth of fruit was consumed ten years ago, ten dollars is wanted now. Unless all signs fail, one hundred dollars' worth will be required in ten years from now.

Thinning Fruit

THOSE fruit growers who have not yet attended to the thinning of their fruit should not neglect it longer. To do so, where heavy crops are promised, may mean broken limbs, split trunks and weakened trees. Vigorous thinning should be begun before the fruits attain size and weight enough to begin bearing down the limbs of the trees.

As regards the number to be left much depends on the strength of tree and branch. As a general rule, however, even the most perfect fruits should not be too closely packed, as one nice specimen is preferable to six half grown. Apples may be left nearer than pears, cherries nearer than plums, while for the best results peaches should not be nearer than six inches to one another. Apples should be thinned, leaving only one fruit to a fruit spur and the fruit from four to eight inches or ten inches apart, depending upon the variety and the tree.

Unless each peach tree is allowed enough space to develop to its maximum there will be a quantity of second grade offered for sale. In thinning, always take off those which are misshapen or injured by insects, leaving only first-class fruit. A tree which is loaded will, if it is thinned, produce as many baskets of fruit as one which is not so thinned, but the one which is thinned will produce more first-class fruit, while the other will have a quantity of small and second grade peaches. It is easier to pick and drop small green peaches on the ground than it is to pick those same peaches later and put each

one in a basket. The cost of thinning any kind of fruit (apples, pears, plums or peaches) is more than made up by the time saved in harvesting and grading, and also by the increased price of the greater amount of first grade fruit.

Spray Late Potatoes

P. J. Carey, Toronto, Ont.

DAMP weather, such as has prevailed this season, is almost sure to cause trouble among the late potatoes. It should pay well, therefore, to give special attention to the matter of spraying. Numerous tests have proved that the timely and thorough spraying of late potatoes pays even where disease is not prevalent.

To make Bordeaux mixture for spraying, carefully slake four pounds of quick lime, mix with water to a cream, strain into the spray barrel and half fill it with water. Dissolve four pounds of copper sulphate (best in granulated form) in four gallons of water (hot water works quicker) and pour slowly, with constant stirring, into the spray barrel with water, so that by the time the copper solution is poured in the fifty-gallon barrel is full.

If much spraying is to be done, stock solutions of lime and copper sulphate may be made, thus avoiding the preparation of small lots of material. The stock solutions are made by slaking sufficient lime for one spraying and diluting with the same number of gallons of water, also dissolving the required amount of copper sulphate and diluting in the same proportion. These solutions can be kept separately for an



"Peach time" in the orchard of Wm. Webb, East Hamilton, Ont.

indefinite time and can be used by measuring four gallons of each and proceeding in the manner described.

Cherry Trees

The cherry tree will thrive on light, well drained loams. The fruit likes an elevated, naturally light, dry, loamy, retentive soil. The sour cherry tree will stand a heavier soil.

As the sour cherry tree does not grow very large, it is best to plant it sixteen and a half feet each way, thus making one hundred and sixty trees to the acre.

Cherry trees can be successfully top grafted, if one desires to change the varieties in the orchard for more profitable ones. This sort of graft will succeed without any difficulty, if it is performed early in the spring, before the slightest swelling of the buds, and even before the frost has disappeared from the ground. After this period, difficulty will be experienced.

Black knot in cherry trees is the worst disease of all. The only remedy I know is to cut away the branch whenever it appears.—Rev. Father Leopold, La Trappe, Que.

When peach trees have attained a size that necessitates a ladder in picking the fruit, I begin to prune and keep the fruit producing wood close to the ground. Keep the trees low down so they can be readily sprayed without any great derrick to get at the topmost branches. I find my trees are hardy and I have a good sample of fruit from trees handled thus. J. O. Duke, Ruthven, Ont.



A fruit dray on the fruit farm of E. M. Smith, Winona, Ont., loaded for the railroad station.

The Pleasures of a Home-Made Greenhouse

G. O. Baldwin, F.R.H.S., Toronto, Ont.

THERE is satisfaction, pleasure and often profit in the possession of a modest green-house, even though it may be of your own construction. Their erection may be accomplished with so little effort and expense it is a wonder that more people do not have them. The one shown in the accompanying illustration is nine feet by fifteen feet, inside measurement. Before giving particulars of its cost and construction, I would like to describe the possibilities of such a green-house.

About the first of March the seeds of flowers and vegetables to be grown in it may be sown in pans and flats. The seedlings are pricked out into other flats, and placed on shelves as close to the glass as possible. These are kept growing on until the end of May, when it is time to transplant them to the garden. The shelves are removed, and the side beds made ready for the cucumbers and tomatoes. The long cucumber "Telegraph" is trained up wires on the south side of the house, close to the glass until it reaches the peak, when the heads are pinched out. This makes the plants bush out. Cucumbers require more sun than tomatoes, so the latter are planted on the north side, and trained up wires in the same way as the cucumbers until they meet at the peak of roof, when they too are pinched at the head.

Having fifteen feet of space, five plants of each can be grown without crowding. The accompanying illustration

of the cucumbers growing gives an idea of the system followed, and the quality of the plants. Along the bottom there are two discharge pipes, one and a quarter inches in diameter. The return pipes are under the perforated board on the extreme right, and are used for heating in the winter. The tomatoes are as prolific as when grown outdoors, they are three weeks earlier and of much better flavor, to my taste. The only things to worry about in a small house like this are the ventilation and spraying the cucumbers with cold water three times a day. Take care not to let the spray go near the tomatoes, as it has a tendency to make the fruit split. Water them only at the roots when required. One hundred and twenty-seven cucumbers and three baskets of ripe tomatoes were taken from this little green-house last year.

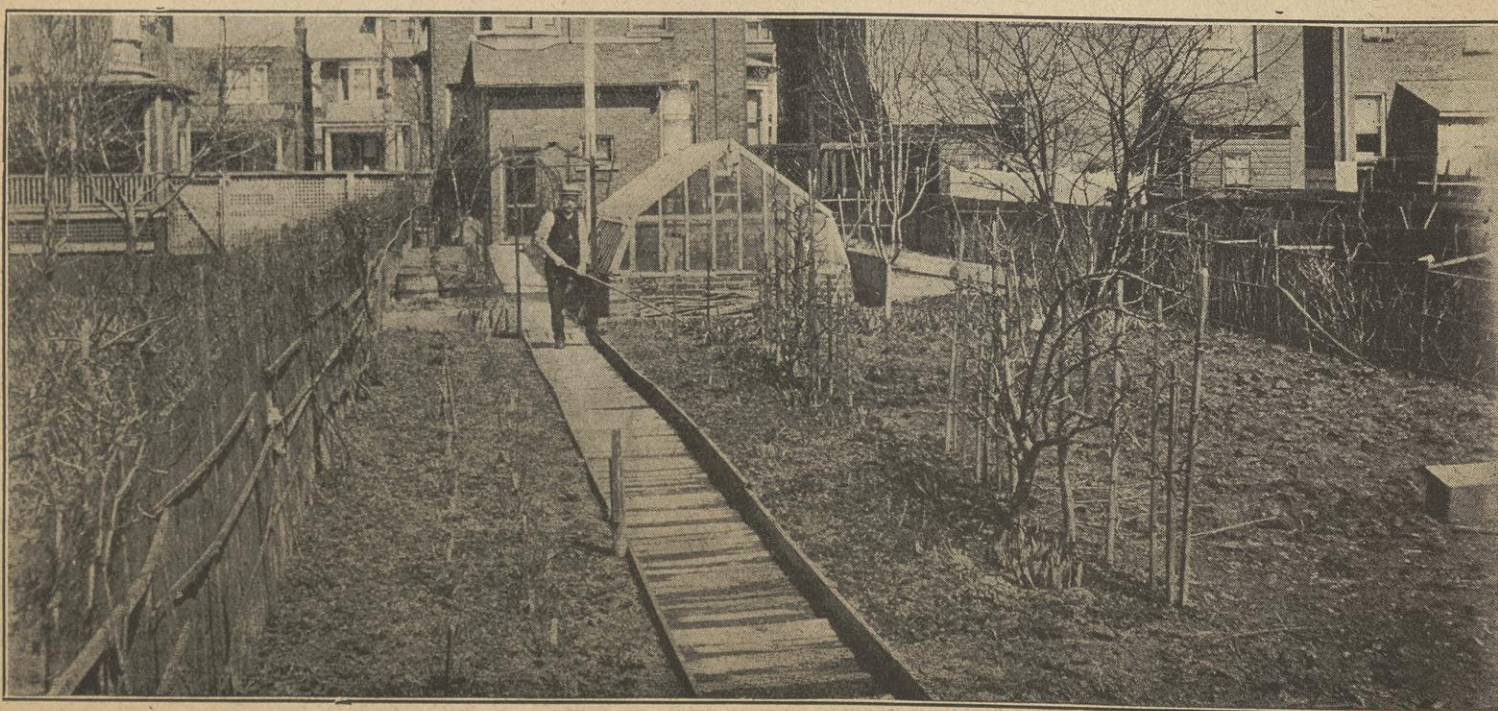
While this is going on, chrysanthemums are being got ready, which will give hundreds of bloom during October and November. I hold two silver medals won at the Ontario Horticultural Exhibition, for chrysanthemums grown in this house. The rest of the time can be devoted to the growing of salads, and taking care of plants for the following year.

This statement will, I trust, convince the most sceptical that profit, combined with pleasure, may be obtained from such a green-house. Its construction was simple. Enough second-hand bricks were obtained to build the walls,

eighteen inches below the ground, and two feet above. The rafters and glass were bought second-hand, when a city florist pulled down his green-house in order to build elsewhere. It is heated with a No. 10 Jacket hot-water heater, made by The Dominion Radiator Co. The pipes and boiler cost twenty-eight dollars. Two coats of paint completed the construction, for a total outlay of sixty-four dollars. I did the work myself, with a little assistance from a neighbor, in cutting and screwing the one and a quarter inch pipe used for the radiators. If you continue growing vegetables all winter, two tons of nut coal, at eight dollars a ton, will be required, otherwise less than a ton will give you all the heat required for the chrysanthemums in the fall, and raising seeds in the early spring.

It is not too late to put up trellises or stakes upon which to train tomato vines. Stakes, as a rule, do not allow the plants room to spread out enough. A convenient form of trellis is made from a barrel hoop with two or three stakes nailed to it, so as to lift it eighteen inches or two feet from the ground. A second hoop may be also nailed to these stakes for extra large or unusually small growing varieties. A hoop is placed over each plant, the branches of which are allowed to hang over the top.

One of the quickest-growing dwarf annuals is sweet alyssum. Sow the seeds as soon as the ground can be worked in spring and you will be repaid with an abundance of snowy-white sweet-scented flowers.



This simple and inexpensive homemade greenhouse, owned by Mr. Geo. Baldwin, of Toronto, has produced large quantities of flowers, vegetables and pleasure for its owner. Note what Mr. Baldwin says about it in the article on this page.

The Garden of a Summer Cottager

By the Late W. J. Stubbs, Peterboro, Ont.

"From shapeless roots and ugly bulbous things,
What gorgeous beauty springs!
Such infinite variety appears,
A hundred artists in a hundred years
Could never copy from the floral world
The marvels that in leaf and bud be curled."

—Ella Wheeler Wilcox.

"Come into my garden and sit with me," is an invitation seldom given in Stoney Lake, for the very good reason that gardens are a luxury in that part of Kawarthadom. They are about the only thing lacking in the equipment of the ideal summer homes that there abound. Therefore, those who are the proud possessors of a productive plot of ground, whether natural or artificial, enjoy it to the full.

One of the most unique, and at the same time the most extensive gardens in the Kawartha Lake District is that in connection with the beautiful summer home of Mr. James Eakins, near Mt. Julian. It has for its presiding genius Mr. G. E. Oxley, Mr. Eakin's son-in-law.

Five years of careful study and planning on the part of Mr. and Mrs. Oxley, have transformed the virgin plot into a most charming spot. Irregular mounds of earth have been levelled, and valleys filled in, until the greater part of the property, consisting of over nineteen acres, reflects the general scheme of transformation so ably carried out.

The bungalow, thoroughly modern in every respect, faces the large expanse of water in Stoney Lake towards Juniper Island and Eagle Mount, while the garden lies to the rear, and is separated from the "cottage" by a narrow inlet, which is spanned by a rustic bridge one hundred and ninety feet long, lighted by acetylene gas from a one hundred and twenty-five light system.

Mt. Julian, up which the property extends to within sixteen feet of the summit, not only provides protection from the north and east, but creates a gentle slope to the south and west, and gives the necessary elevation for a huge water tank, containing four thousand two hundred gallons, with a forty pound pressure in a distributing system of one thousand eight hundred feet of iron piping, and two hundred and twenty-five feet of garden hose. Water is forced up the mountain by a hydraulic pump, driven by a three and a half horse-power gasoline engine.

The first evidence of the great abundance of flowers grown last summer, was a large bed of gladioli, containing one hundred and sixty bulbs of four main varieties, located north of the cottage; but not till the rustic bridge was crossed and a winding path threaded, did the full beauty of the situation flash upon the visitor.

The view that greeted the eye was one not soon forgotten. Stretching out in a fine sweep towards the mountain, was a tennis court two hundred feet by sixty. To the right, along the south side, and up the east end, extended a thick border of the stag-horn sumach. To the left a few large maple trees and an open view of the lake and Mill Bay. On the opposite side ran a border of perennials two hundred and forty feet long, (with a cedar hedge as background) containing a wealth of color in forty-nine varieties, with crimson, lavender, blue and white predominating—but no red, that color being fully represented in the rose garden to the left of the tennis court.

The rose garden measured sixty by eighteen feet, and contained one hundred and sixty bushes: seventy Killarney brilliants and whites, fifty Richmond reds, twenty Royal Sunsets and twenty Madam Tafts. The rich glowing shades of brilliant scarlet, and sparkling white and pink, and the pungent perfume made one think instinctively of some of the noted rose nurseries. Over two

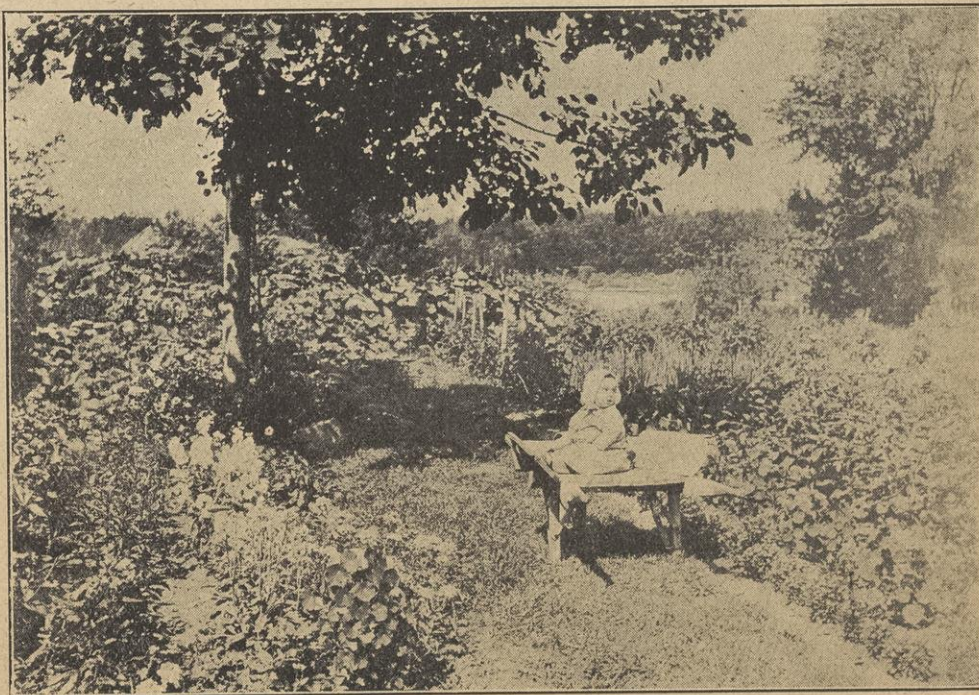
thousand blooms were taken from this bed alone last season.

Beyond the perennial border and cedar hedge lay the vegetable garden,

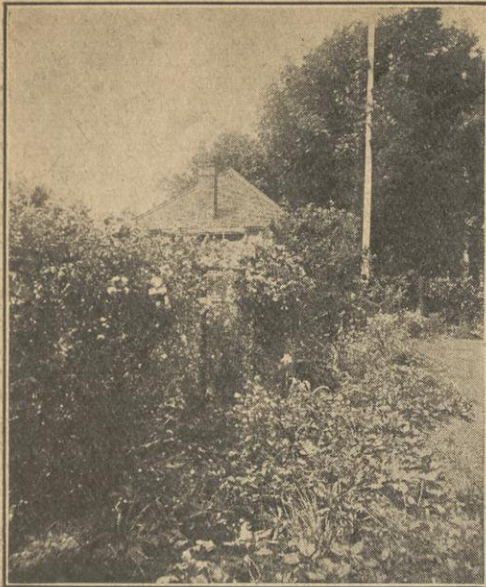


Cucumbers grown by Mr. Geo. Baldwin, Toronto, in his homemade greenhouse. See article on other page.

systematically arranged to produce the best results. Another border of flowers extended along the garden side of the hedge, consisting of zinnias,



A spot where flowers bloom in Mr. Eakin's Stoney Lake garden.



Climbing roses and larkspur in the garden of Mr. J. H. Bennett, Barrie, Ont.

verbenas, petunias, stocks and English honeysuckle, while the other side of a narrow grass path was edged with blue lobelia.

The sight of the garden would warm the heart of any vegetarian, with its generous quantities of beets, peas, beans, carrots, turnips, radish, parsley, spinach, onions, Swiss chard, kuli, tomatoes (cultivated up a single vine), asparagus, celery, cabbage, Brussels sprouts, red and green peppers, horse radish, parsnips, citron, black, red, and white currants, gooseberries and rhubarb. Besides these there was a large plot devoted to potatoes and corn.

The border of perennials, however, was the feature of this beautiful garden in which Mr. and Mrs. Oxley took

great pride. The rich blue tones of the *anchusa Italica*, with its large pyramidal, graceful spikes of flowers, of the *lobelia*, and *salvia* (meadow sage), of the hybrid *delphiniums* (larkspur), and of the *platycodon* (Chinese bell flower); the pure, glistening white of the *cimicifuga simplex* (snake root), of the *digitalis* (fox-glove), of the *achillea* (milfoil), of the *shasta daisy*, *Alaska variety*, of the *chrysanthemum*, and of the *gypsophila paniculata* (baby's breath), with minute, gauze-like flowers, and the exquisite combinations of blue and white in the *clematis* and *campanula* (Canterbury bells); blended in perfect harmony with those other varieties of myriad coloured flowers interspersed among them, such as the poppy, stocks, *dianthus*, *barbatus* (Sweet William), *hollyhocks* and *phlox*; while the pronounced yellow of the *coreopsis lanceolata grandiflora*, *helenium* (sneeze wort), *heliopsis* (orange sunflower) and *English marigold*; the gorgeous brown and crimson of the *gaillardia grandiflora* (blanket flower); the soft lavender of the *scabiosa caucasica* (blue bonnet), the delicate pink of the *pyrethrum* (giant daisy), and green of the *mignonette*, all skilfully arranged, presented a delightful study in colour effects.

Mr. and Mrs. Oxley delight in sharing the glories of their garden with their friends. Most generously they have supplied flowers to the Red Cross Association of Stoney Lake, who realized from their sale over fifty dollars. How suitable that the products of this lovely garden should be put to such a worthy purpose.

do, you will be disappointed again. The best plan is to have the plants up and potted several weeks before they really need to be moved indoors.

There is always a risk in potting a plant which is in full growth, in summer weather, and the moving is likely to prove fatal, unless we are careful. Everyone who knows anything about plants, does not need to be reminded of the enormous quantity of moisture sucked up by the numerous tiny roots. He probably knows, too, that this water passes up the stem and leaves, and feeds the plant. To suddenly deprive the plant of this, its principal source of sustenance, is to give it a great shock. The little roots are so tender and fragile, and so very easily broken, it is impossible to secure all of them when taking up the plants.

The first thing to do is to prune the plant back severely, even if it means cutting off blooms and buds. The stronger the growth, the more can be cut away. At least a half should be removed. By doing this, the amount of moisture required by the top of the plant from the roots, is reduced. The next thing is to cut around the roots with a long, sharp knife, leaving just so much of a ball of earth around the plant as will drop easily into the pots to be used. When using the knife, cut well under the plant, then it can be lifted out without pulling and tearing up the roots, which spoils the roots left with the plant.

Do not set seed-flats directly on manure in a hotbed. There should be three or four inches of soil to absorb the odor and steam from the manure.

Summer Preparations for Winter Flowers

B. C. Tillett, Hamilton, Ont.

AUGUST marks the close of the construction work of the season, and in that respect may be regarded as a turning point in garden work. All the same, those who are really interested in gardening, have never finished, and if they have reached the end of one season, there is the next one to begin thinking about. Truly, it may be said, a garden is a never ending source of enjoyment. Shakespeare says, "The man that hath not music in his soul is fit for treason, stratagem, and spoils." It occurs to me that he might aptly have substituted the word "gardening" for "music," and been equally correct.

The true gardener, when August comes around, is admiring all that has been accomplished, is thinking also of the seasons before him—winter and

spring, his green-house, his cold-frames, and his house. Be one's garden small or large, we get the same pleasure out of it, it, in fact, depends upon the disposition of the gardener himself, more than upon his garden. The gardener who wishes to attain the best results, and an unbroken succession of plants and flowers, is aware that during this month there are many things that must be got ready for winter and spring.

For instance, if we would save some of the fine plants we are now admiring in our gardens, so as to have them still with us when the snow is on the ground, we must be getting to work. One of the mistakes so often made in trying to save plants for the winter, is to leave them too long out of doors. Do not wait until the arrival of early frost or the first snow flurries. If you



Double flowered dahlias. (Photo by H. J. Moore.)



Beekeepers attending the Summer Course in Beekeeping at Ontario Agricultural College, Guelph, June 12-16, 1916.

and we will see that the brood which forms part of the value received in a full colony has very little if any value in this work. Colonies which are weak in spring, and these are the only ones which need strengthening, are weak in the bees and not in brood. At this time of the year the queen is keen to expand the brood nest and she is only limited by stimulant and by the number of her attendants. Instinct forbids her to lay more brood than the bees she has can care for and keep covered during the cool weather. How decidedly foolish it is then to add frames of brood alone to the care of weak colonies, and see it chilled the first cold snap! Even adding the brood with all the bees that are clinging to same is not worth while. You may be sure in such a manipulation that you are adding some bees which will fly back to the parent colony, and the bees you have left will have all they can do to keep their own frame warm. No assistance is therefore rendered to the queen in the efforts to expand the brood nest. These considerations disqualify both full colonies and nuclei for the work, and the pound package comes into its own. These may be shipped from the south early in the season (May 1st to 21st) and in a queenless condition. They serve the purpose admirably, as the bees which come are usually young and well adapted to brood rearing work, and, furthermore, there is very little danger, if any, of introducing disease to your yard with their use.

To make increase without looking for crop is often the aim of the beekeeper, and it is in this objective that the rivalry of the full colony, nucleus and pound package become most pro-

nounced. The guiding star for decision here seems to me to be an estimate of the personal ability of the beekeeper. The first outlay and the final returns are the two pivot points. An expert beekeeper who knows what he may expect in the way of stimulation (honey-flows and pollen sources) may profitably buy full colonies and increase making each original frame of brood eventually a colony. He is prepared to give a great deal of time and care to the nursing of his one-frame nucleus, which is practically what he makes up out of his full colony. Time and season may forbid this practice, hence it often pays the same expert to form two or three-frame nuclei that are better able to take care of themselves. The reader will plainly see that the debating ground between the full colony and the nuclei for this purpose is merely a matter of first cost and transportation. Where does the pound package come in? One of the great difficulties presented to the beekeeper when buying full colonies or nuclei is the necessity of guarding against the introduction of disease into his apiaries. Even an expert is often fooled in this respect. Most of our pound package trade comes from the more southern districts of United States, and it usually requires over three days for them to arrive at their destination after being shipped. In this fact lies the strongest plea for their use. Having no combs into which to deposit any honey which they may have in their honey sacs at the time they are shaken into the cage, they cluster and consume it while travelling in their efforts to support colony life. Thus the principle of the McAvoy Shake Treatment

for Bee Disease is accomplished, and the bees may be spoken of as being automatically treated en route. On other counts, there is much room for difference of opinion, but our experience justifies the statement that the queen travels more safely in the nucleus package. Shippers of pound packages are making searching investigations into the possibilities of reducing the loss of queens, and it may be that we shall have to revise our opinion in a year or two. Where the beekeeper is possessed of plenty of drawn comb there is more profit in buying the pound packages in my opinion. This asset enables him to buy the smaller packages (1 lb.) early in the season up to June 15th in Ontario, and they require very little attention to develop into full fledged colonies. Unless he has drawn comb, however, the larger packages are more satisfactory for his purpose because it is necessary for bees to be present in force to build satisfactory combs. Dr. Phillips, of Washington, tells us that the production of wax requires a temperature of 95 dgs. Fahr. (practically blood heat) so the force of this point will appeal to all. Do not expect too much of your bees when commencing with packages. Like a boy, they take time to develop. They must have stimulus, both honey and pollen, and the weather often interferes radically with the pollen gathering. A careful observer who has a supply of old combs with pollen which is not mouldy, may overcome this difficulty considerably.

The beginner is ever with us, so that it would hardly be fair not to consider this question from his viewpoint. If I may use my own experience as a criterion, he is enthusiastic, inexperienced, inquisitive, and somewhat dubious of his new pet's affection. To such an one the only recommendation lies between the nucleus and the pound package. First cost looms large before the beginner, but these two packages have one feature in common which recommend themselves to his somewhat timorous nature. The colonies are weak to begin with, and less likely to show "fighting spirit" for a time. The beginner develops with the colony and learns from experience when to handle and when not to handle his "darlings" (?) He is only safe in buying nucleus from well-known and reputable beekeepers who are experts in diagnosing disease. Such a man would see to it that the disease did not get a start among the bees he intends to sell and will give his guarantee. With this difficulty removed the nucleus offers many advantages. It has some drawn comb; brood in all stages; some honey and pollen as well as the bees, and there is less likelihood of inattention causing disaster. The directions necessary to the beginner when he receives

his first shipment of nucleus are much simpler than those sent with the first pound package, and the fact that the centre of the hive, the queen, travels more securely in the nucleus than in the pound package is again a big inducement in favour of the nucleus.

To sum up, then, I feel that the relative value of the commercial packages of bees is determined in the following order: 1st, the experience of the buyer; 2nd, the prospective season; 3rd, the sources of stimuli; 4th, the objective aspired to, and 5th, the resources of comb and capital. Beekeeping at best has an element of chance which belongs to any line of special farming, and some of us like to "plunge" where others prefer to play a safe game. It seems to me that the latter would be much better for the profession as a whole, and that we should rather strive to study the mean result of our seasons than the extreme possibilities of good seasons.

Swarm Control

Swarm control is a hard problem for the busy farmer. Every beekeeper knows that swarms and a good honey crop don't go together. There are various methods recommended by experts to control swarming if one has the time to properly follow them out. Where time is limited, any elaborate plan falls flat. The plan I usually follow is to clip all the queens during the first examination in the spring. Just before fruit bloom, if the colony is reasonably strong, I put on a super containing all worker comb, and allow the queen to rear brood in it until the clover flow starts. As this gives plenty of room for brood rearing, some colonies do not swarm at all. Slip an excluder under the top story when the clover flow begins in earnest. Then if a swarm issues the usual plan is followed; the queen, being unable to fly, is caught, put in a cage, the old hive removed, and a new one containing full sheets of foundation is put in its place. The swarm soon returns, the queen is released and the extracting supers put on top again. The old brood chamber should be removed to an entirely new location. This is supposed to prevent after-swarming, but does not always prove successful. To prevent this I usually put all the sealed brood (about four or five frames) with the swarm, cutting out all queen cells first. This keeps the original colony as much concentrated as possible. The remaining frames of brood with one or two ripe queen cells are allowed to build up for winter.

For wintering some change of method from packing in outside cases would be welcomed where bees are kept as a side-

line. The extra work of packing in the autumn and unpacking in the spring, two of the busiest seasons of the year, is out of the question for the busy farmer. As one man expressed it, "Life is too short for such a plan even if it is the most followed." Many large beekeepers are looking with favor upon the single packing case in which the colony is left packed the whole year around. If this plan is adopted there must be plenty of room left before the frames to make a deep entrance and provide plenty of ventilation. An arrangement can easily be made for contracting the entrance for winter. For cleaning off the bottom of the hive a small scraper can be put in through the wide entrance. The outer boxes must be made deep enough to admit one super. Planer shavings are suitable for packing, and can be obtained in nearly every town and village. Cushions made of any good stout material filled with shavings are used as a covering for the brood nest. When packing in the autumn, all the work required is to place a cushion on top of each brood chamber and fix the entrance block. A large number of colonies can in this way be packed in a couple of hours.

"Make haste slowly" is a good motto for the beekeeper who is not a specialist. The main thing is to start right with a few good colonies of pure Italians in modern hives, and increase gradually as experience is gained. By supplying a good article a profitable market can soon be worked up for any surplus, and if the enterprise proves profitable and to the owner's liking, it



Private Harold E. Weyler, of Southwold. A Middlesex Beekeeper on the firing line in France.

can be made one of the main features of his farming operations.

The best honey gatherers, as a rule, are the best resisters of disease, probably on account of their vigor but possibly an extra amount of honey coming in may have a beneficial effect, as it is a well known fact that disease thrives best in seasons when the honey flow is poor.—Chas. Stewart, Albany, N.Y.



The apiary of Wm. Graham, Monklands, Ont.

Notes for August

Morley Pettit

J. C. Duff, one of the apiary inspectors, reports that bees in Dufferin County are not in very good shape and he cannot see how they will be in time for storing surplus from clover. In Peterboro they are a little better, but the clover is nicely out in bloom on date of writing, June 26th, for more than a week, but the weather has been unfavorable.

A discussion of weather conditions this season is not very pleasant to those engaged in any kind of agricultural work. The continued rain and cool weather has made everything very backward. This seems to have affected breeding as well. Some apiaries, however, at date of writing had been in shape for honey flow for two or three weeks, and the struggle has been to keep down swarming impulse waiting for the flow to begin. Clover is now all out in full bloom and bees are inclined to rob. At the College apiary they have been working on honey dew on the Spruce trees for some time. This, of course, gives some stimulant to brood rearing, but is not an agreeable sight to the experienced beekeeper. Development of colonies has been at a standstill now for more than a week. It is to be hoped that when this report appears in the press conditions will be very different. If not, the effect will be very discouraging on beekeepers in general.

A particularly discouraging report comes from Mr. U. H. Bowen, of Niagara Falls. Mr. Bowen, who is well known as one of the most successful beekeepers in the Province, writes as follows:

"I have been having a new experience with the bees this spring, the like of which I have never had before and hope I never will again. The bees wintered fairly well, lost very few in the cellar, but some were considerably weakened from dysentery, but on the whole not in very bad condition. I set them out from the 15th to the 25th of April, about 225 colonies, and on the 5th of May moved 100 of the strongest colonies to the out-apiary about three miles away. Of the colonies left at home most of them had bees enough to cover from three to five frames, and these in ordinary circumstances should have built up and been pretty fair colonies by the time clover was in bloom. Everything was apparently in normal condition until about a month ago. The letter was dated June 12th. One afternoon when the sun was shining brightly after a warm shower and the bees were flying freely, I found the ground covered with young bees unable to fly. Many of them appeared to be rather too young to attempt to fly, but most of them were old enough to be field bees, but were unable to fly more than a foot or so. I examined a good many of them and so far as I could see they were perfect in every way, but for some unaccountable reason were unable to fly. The only abnormal feature was that some of the bees appeared to be rather full about the abdomen, but this was not the case with all of them. Thousands of them died that day and continued to die until at the present time there is not one good colony left of the 120. Many of the hives have no bees at all, and most of them not more than a handful. I do not think there are 20 colonies with bees enough left to build up by fall. Of the bees I took to the out-apiary a few colonies were affected the same way, but not so badly as those at home. It apparently made no difference whether the hives were short of stores or had an abundance. I put feeders on some 40 colonies, but that made no difference, the bees died just the same. There were a few cases of European Foul Brood in the yard,

but that had nothing to do with the trouble. Two other apiaries in the neighborhood have been affected in the same way."

Frank C. Pellett, State Apiarist of Iowa, who was here helping with the Summer Course, went with me to visit Mr. Bowen on Saturday, June 17th, and there was hardly a single colony in the apiary which one would expect to build up in time for winter. The bees are not dying now and the dead bees have settled away in the grass, so that practically no evidence remains. We examined the combs carefully and found no indications of any brood disease, with the exception of one or two colonies slightly affected with European Foul Brood. It is unfortunate that Mr. Bowen did not think to let me know about this trouble until it was too late to secure fresh specimens for bacteriological examination. The symptoms are unlike any other disease that has been described. Similar cases where a few bees from some of the weaker colonies of an apiary die in this way have been reported, but such a wholesale loss where the death occurs amongst the youngest bees has not been published to my knowledge. It is unfortunate that we have no bacteriologist to put on work of this kind.

A Visit to Mike's

In Manitoba we find almost every nationality keeping bees successfully, and there are a number of ideas that we would do well to copy from those who have had experience in other lands.

Upon the request of an intending purchaser the writer made an inspection trip to Mike Hnatuk's apiary at Tyndall, Man. We found Mike busy building himself a fine new house, having a suitable cellar for the wintering of his bees. The colonies in the apiary numbered forty-eight, some being in Langstroth hives side by side with what we might name Polish-Canadian ones.

Fortunately Mike can talk a little English, so we were able to learn a little about his methods and a few of the reasons for his success. "We want to look at your bees, Mike, and perhaps buy twenty or more colonies. Do you have a smoker?" "Yes." Having filled the smoker and lighted it, we go to one of the hives and our friend says, "This is a Canadian hive, you understand it, so hop to it." This we did. When the cover was removed we found a thick woolen cloth underneath and under this a covering of burlap over the frames. The hive itself was a well-made double walled one, having an entrance board so that the door could be closed or enlarged at will. This board had small holes bored through it to admit air when removing the bees from their winter quarters.

It is interesting to note that the colonies having the perforated boards to close the entrances, stood shipment a great deal better than those that had netting over the entrances. We found the hives very strong in bees, having exceptionally good Queens, judging by the amount of brood and also by the worker bees and queens themselves. Mike said: "Yes, my queens are all young. I never keep them more than two years, as old queens often die during the winter, and old ones swarm too often." "How do you introduce your queens?" "That's easy; put a little garlic in the hive and leave it there over night, having removed or killed the old queen bee several days previous; then rub a little garlic on the young queen and



By interesting these children in beekeeping Mr. L. A. P. Stone, of Erie Beach, Ont., reports that he was able to increase his sales of honey. He believes that it is a good method.

let her run in the hive. The bees and queen are then all the same smell." "Does the garlic affect the honey?" "No, you don't leave it in long enough."

The next hive to be examined was one of the large Polish ones, having a double wall with a space of four inches, filled with sawdust or chaff. This hive has the same sized frame as the Langstroth, because of the fact that Mike uses a four frame automatic reversible extractor. In the Polish hive the frames stand on end and are spaced by means of little nails.

Many of these hives are very large and have two colonies in the same hive, with a thin board separating them, one entrance facing the south and the other the north, or one west and the other east. Mike says: "Make the hives warm enough and it does not make any difference whether the door is south or north." The colonies in this apiary are exceptionally well protected, in fact we might say they are right in the bush.

The next hive we came to was one made out of a hollow log, having a cover made of thatch grass. This colony is used only for increase, the hive being made in a hurry during the swarming season.

Mike is certainly making a success of producing honey in a locality where his bees have only the native plants to gather from. It would appear that his success depends largely upon the keeping of the colonies warm by the use of double walled hives and also by having young queen bees in the colony. When asked where he sold his honey he answered: "I sell the good honey to Jews for ten cents per pound and the poor honey I use for making honey wine; come to my house and try some." "Good stuff; how do you make it?" "Honey one part, water three parts, boil three hours and hang hops in the mixture and boil for one-half hour, keeping it up to volume, by adding hot water. The longer you keep it the stronger it gets." "Happy thought"; don't keep it too long.

Climatic conditions have changed now and with the exceptions of an odd day, the clover has been yielding nectar profusely, and the bees have been teaming it into the surplus cases rapidly. Thus prospects are brighter, and with a big crop from buckwheat to come, it makes one feel more cheerful.—W. H. Kirby, Oshawa.

Bee-keepers' Supplies and Methods

W. A. Chrysler, Chatham, Ont.

If all the articles and implements used in connection with bee-keeping were gathered together, it would be an amazing sight and one which no other industry could produce. Many different styles of hives, frames, sections, etc.—many useless, fashionable, and orthodox, others useful and practical, stare at the beginner in the catalogue. Is the beginner excusable if he should buy many things that are not necessary in bee-keeping because they all seem to be recommended! While there has been an effort to standardize certain goods, and to make them more uniform, there has been no effort to discard those that are useless and unnecessary. It is, I think, fairly estimated that ninety per cent. of the beginners in bee-keeping before very long become quitters. The bulk of supplies are sold to them. The manufacturers must cater to that trade, and create special catchy features to assist beginners in methods that are not disputed to be orthodox and up-to-date. As the advanced and intensely practical bee-keeper has no axe to grind, he makes no claim in a public way to have more practical appliances become universal in bee-keeping. He either makes them or has them made to order.

There has been some material advancement made in honey and wax extractors in late years, but there are many supplies that should be dropped from the list. About a quarter of a century ago a leading manufacturer in the United States brought out a hive called the dovetailed hive. He advertised it so extensively that beginners thought it something altogether superior and that they would get more honey from it, while the bee-keepers in Canada had been using that identical hive for many years, except that the corners were made lock cornered and called dovetailed. It was a new feature and it took, and the makers in Canada and United States had to fall in line and make that feature also if they wished to hold the trade. That novelty has worn off somewhat, and others from year to year have taken its place in frames, covers, bottom boards, etc. The Hoffman frame that has had such an enormous sale (the nuisance to the practical man) has been featured in every conceivable style. The arguments in its favour were that they were fool proof in spacing and that the bee-keeper could handle two, three or four of them at once, thus playing with them that way if he did not have a full colony of bees to work with. Bee-keepers don't handle frames that way. The thick top bar feature of frames is to prevent burr combs just because a few bee-keepers twenty years ago thought so. I thought so myself.

Proper bee-space has more to do with reduction of burr combs than the addition of high priced lumber, where it is not needed and which occupies valuable room in the hive. One-half to five-eighths inch is ample thickness for any frame if made in such a way that its projecting ends have full depth, thus making it twice as strong at a frame's weakest point. With narrow end bars properly staple-spaced or the staples left out one has a frame that costs only two-thirds as much, is stronger, and is one which busy bee-keepers can handle without encouraging profanity.

It is evident that there is some inclination to discard the follower, or division board, in a hive, that has been tolerated for a quarter of a century or more. In a recent issue of *Gleanings in Bee Culture*, E. R. Root recommends that they be discarded. What

will become of the edge on Hoffman end bars now? It cost much in advertising the feature for years, but then it brought trade. New features always do, if judiciously put forward, whether they have merit or not. Dummies, division boards and followers have no legitimate place in a bee hive. Sun Wax Extractors are only playthings and time wasters and produce inferior wax. Comb carriers, comb buckets, entrance guards, queen and drone traps and many other articles should be dropped from supply catalogues and be regarded as relics of out-of-date methods. The bee-brush is another implement that should be discarded, and if it has been used should be burned, for by it foul brood can be spread innocently and with great speed.

A man can kill more time freeing bees from combs than in any other way. Our text books and schools of instruction in bee-keeping are retaining many antiquated and useless methods as being orthodox.

Why cannot the beginner be instructed in the same methods, use the same fixtures that the advanced, and extensive bee-keepers find necessary?

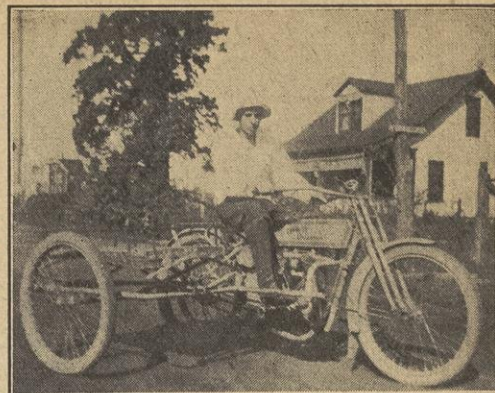
Consider the old orthodox method of transferring bees and the practical one given in the July issue of *The Beekeeper* by a farmer bee-keeper signing himself C. B. L. He became disgusted with the prevailing method, and invented a sane and satisfactory one which he did not get out of books or papers.

An Inspector's Report

Speaking at the annual meeting of the Lincoln and Welland Counties Beekeepers' Association, Mr. J. F. Dunn, of Ridgeway, gave a report of his inspection of the apiaries in Lincoln and Welland counties during the season of 1915. He visited 70 apiaries and examined 651 colonies, of which 148 were diseased. 140 colonies were infected with bacillus, pluton or European foul brood. This disease was brought into Welland county about four years ago, making its appearance at Fort Erie. It spread rapidly north and west, a large number of apiaries in Lincoln county as well as Welland being infected.

One apiary run by the inspector in 1915 was Italianized four years ago, and although the disease is on all four sides of it, it has not reappeared. None but Italian bees were allowed in the apiary during that time. In fact, just as soon as the bees in any colony showed less than the three yellow bands the queen was destroyed and a purely mated Italian put in their place. When first Italianized this apiary was diseased, the queens were destroyed in August, and in May of the following year thirty-three per cent. of the colonies had cleaned up the disease. Every colony, including those apparently cured, were put through the treatment. The hives were disinfected and colonies put in full sheets of foundation. There has been no trouble since. Not all Italians are immune, but there are many good strains that will resist the disease.

In the county of Lincoln there were eight affected with bacillus larvae or American foul brood. It is also deadly, but with radical treatment can be overcome. Italians are not immune to A. F. B. Last fall E. F. B. made its appearance in the township of Wainfleet and some apiaries were badly infected, but in almost every case the dis-



This motor tri-cycle, owned by L. A. P. Stone, Erie Beach, Ont., has proved useful for marketing honey. It will carry 200 lbs., is faster than a horse and buggy and costs but little to maintain.

eased colonies were treated within a very short time after inspection, and in most cases were Italianized. Nearly all the cases in the eastern part of Welland county were treated promptly and Italianized. It is safe to say that seventy per cent. of those colonies were given Italian queens. The balance, unless supplied with yellow queens, will be re-infected in 1916.

Wintering Bees

On successful wintering depends not only the safety of the investment represented by the bees, but also the success or failure of his honey crop in the ensuing year. Bees that do not come through the winter in good condition take a long time to build up to normal strength, and thereby a certain amount of honey surplus is lost.—H. W. Jones, Bedford, Que.

The students of the Ontario Agricultural College, are to-day in a very different position from that in which I was when I took my first lessons in bee-keeping. The College has now an organized department of apiculture. They have a competent instructor. They have all the modern apparatus for handling bees. In my younger days we used the puff ball and brimstone, wore woollen mits, and carried a cow bell.—

When I was a boy about forty years ago everyone used the old box hive. I think Mr. Alphangle was the first to use moveable frames. My father used the old box hives and shook the bees off the combs with puff ball and brimstone. Then the honey was placed in different kinds of receptacles and the brightest combs kept for our own use. When not bright and when filled with pollen, the honey was placed near the stove and strained through cheese-cloth.—Wm. Couse, Streetsville.

This has been a great clover year in this section of Ontario and a fair crop of honey has been secured to date, July 19th, but we have had no rain for a month and expect the flow to stop very soon. From indications (notwithstanding a big crop) honey will advance in price over last year, I should judge about 10 per cent. Bee-keepers should not get the idea that there will be too much honey to go round. A bee-keeper should, when circumstances permit, keep table honey for sale to the retail trade the year around.—W. A. Chrysler, Chatham, Ont.

Niagara District Notes

By F. G. H. Pattison, Winona, Ont.

During the last week of June a great improvement in the weather took place, since when we have had steady, bright, fine weather only broken by an occasional thunderstorm. July 11th to 13th, inclusive, a hot spell visited us, the temperature running up to over 90 in the shade all three days. On July 2nd, the eastern portion of the Niagara District, from St. Catharines to the Niagara River, was visited by a heavy storm of thunder and lightning, accompanied by a very high wind, which almost reached the proportions of a cyclone. In several localities large hailstones fell. Both hail and wind did a lot of damage, many fruit trees being blown down. Considerable quantities of green peaches, pears, and other fruits were knocked off the trees. The cherry crop was considerably damaged, and a good deal of harm was done to strawberries, raspberries, gooseberries, currants, etc. Tomato and potato plants were also damaged, being stamped down flat. The western end of the district had a storm with a good deal of rain and some wind, but no appreciable damage was done there.

At the present date (July 14), the strawberry crop is nearly over. It has been the best in years, both in quantity and quality, and the growers have done well out of it. The lowest prices reached were 9c to 10c per box, and by the crate, \$1.80 to \$2.00. Canning factories contracted at 6c per box. Mr. Jas. Wagstaffe, head of Wagstaffe's Limited, a jam factory in the outskirts of Hamilton, stated as follows: "We usually import from 50 to 60 carloads of American strawberries prior to the beginning of the Canadian berry season. This season, owing to the plentiful local supply, we have only imported 30 carloads, and expect to break all previous records this year in the quantity of berries handled."

Clarksons, near Toronto, report a very large crop. They are said to have had in the neighborhood of one million boxes, and for some time were shipping at the rate of from four to five carloads per day.

The Canadian Express fruit special made its first trip of the season, per G.T.R., on June the 27th. At St. Catharines, all the loading is being done at the Western Hill station, instead of at Geneva Street, as formerly. The express company is erecting a new fruit shed near the Western Hill station, to facilitate the handling of fruit. This fruit special will run daily till the end of the fruit season.

At a recent convention of canners, etc., Mr. Wagstaffe was the only representative who refused to be included in the canners' amalgamation, preferring to conduct his business on an independent basis.

A report from Niagara-on-the-Lake for the last week of June says: Home-grown strawberries, the finest ever seen, are coming in to the local stores in large quantities, and are meeting with a ready sale. The berries are large and much sweeter than the Southern fruit which has been on the market earlier in the season.

At the present date (July 14th), fruit prospects for the Niagara District are as follows: Gooseberries, red and black currants, are excellent crops. The two former have already appeared on the market. Small gooseberries (such as Downing) meet with a poor sale, but large gooseberries are in good demand. Black currants are likely to sell well. Jam factories are contracting at from 6 to 7 cents per lb. Raspberries and blackberries suffered a good deal from winter-killing and also from the excessive wet weather, but all healthy

bushes are heavily loaded and there will be a good crop, provided the weather is not too dry.

Early sweet cherries have been scarce and prices good. Late black cherries are a better crop, but later white ones are quite scarce. Sweet cherries are likely to sell well at from \$1.00 to \$2.00 per large basket. Sun cherries are not more than from 5c to 60 per cent. of a crop, and there is likely to be a good demand for them; 75c to \$1.00 is the ruling price at present.

Plums are not more than half a crop. Bradshaws are the best. Lombards are about half a crop. Gages are light; Early Japanese are a failure, except Burbank, which has about 30 per cent. of a crop. Grand Duke, Reine Claude and Monarch are fine.

Pears: Bartlett's, 65 to 75 per cent. of a crop; Duchess, light; Anjou and Kieffer, fair.

Peaches are from 70 to 80 per cent. of a crop. Early and late peaches are good. Elbertas, fair; Crawford's, Fitzgeralds, etc., rather light.

Apples are about half a crop in this district, and promise to be of good quality where spraying has been properly done. There seems to be less scab here than in any other part of Ontario, and the codling moth has not been as bad as usual.

A report from Beamsville, of July 10th, says: "All varieties of sweet cherries started off at soaring prices. The crop will apparently be hardly half that of last year."

"Strawberries are getting on the light side, and very few will be coming in after to-morrow. The clear weather has improved the cherry crop, and the various varieties are nice samples. Red currants are due any day now. The crop is very fair and the fruit in good condition."

Grapes look very healthy and are likely to have a full crop.

The Experimental Station, at Vineland, has had a company of boys from a Toronto boys' home engaged at various kinds of work on the farm. These boys are having their annual summer outing, camping near the harbor; and by working partially for the Government during the day are enabled to pay the expenses of the outing.

At a meeting of the Citizens' Freight and Express Campaign, held in East Toronto early in July, it was resolved: "That the Ratepayers' and Business Men's Associations of the East End pledge their support and aid to the Citizens' Express and Freight Campaign Committee in their campaign in securing free freight and express delivery through all parts of the city."

Comprehensive plans have been laid for the carrying out of canned fruit campaigns in this district this year, for the benefit of Canadian soldiers in the hospitals of France and Great Britain.

An arrangement has been arrived at whereby the first campaign, now opening for the preparation of berries and other early fruits, will be carried on in Hamilton. Later in the season, during the peach harvest, the campaign will open in St. Catharines, with an objective of 50,000 quarts.

Meetings of the Canadian Club Committee and the fruitgrowers of Burlington, Winona, Grimsby, and Beamsville, took place between the 11th and 14th of July, and the fruitgrowers, in the same generous spirit that prevailed last year, signified their intention of supporting the work of the Canadian Red Cross Society fruit department in a thorough and far-reaching manner.

A report from Hamilton, of July 11th,

says: "There will be a great difference in the various late cherry crops this year. There is likely to be a large quantity of black sweet cherries, while the white varieties will be very scarce. The reason is that the black cherries bloomed later than the others and thus escaped much of the wet weather."

In the Winona district there will be a fair crop of sour cherries, while in the neighborhood of Burlington there are not many on the trees. The reason given is that in some districts the growers did not get an opportunity to spray the trees at the proper time. It is reported that in the central part of Halton County there is a blight on the cherries. As a consequence, they have fallen from the trees.

A report from Lambton County says that the fruit crop looks good. Peaches promise a good crop. Leaf curl has been bad in unsprayed and insufficiently sprayed orchards. Apples promise a medium crop. Heavy dropping has taken place in some sections. Small fruits are a good crop, particularly raspberries.

A report from Simcoe, Norfolk County, says: "In all the unsprayed orchards and in many sprayed orchards—so called—apple scab was evident, both on the leaves and fruit. In the unsprayed orchards, of course, this will cause the dropping of nearly all the young fruit."

Mr. Jas. E. Johnson has word from New York State that apples are already very scabby there, and that the total apple crop will be much reduced on that account. We therefore believe that the careful fruit grower who has made a thorough job of spraying this year will find a ready market for his fruit, as good clean fruit will likely be scarce and high priced. We are consequently advising growers to apply a fourth and possibly a fifth spray to insure the crop, if possible, from further attacks of fungus diseases."

In spite of the backward spring and the late setting of plants, Mr. C. H. Godfree claims the record for the St. Catharines district in producing the first ripe tomatoes. These plants, which were "Bruce's First and Best," were not set out until May 24th, and the first ripe fruit was picked about the 2nd of July. On Monday, July 10th, the first basketful was picked, and was of first-class quality.

A report from Toronto, of July 11th, says that cherries are spoiling terribly this season, a few hours often sufficing for them to go bad. The best eating sweet cherries are selling around \$1.50 to \$1.75 per 11-quart basket this week. Ordinary cooking cherries are worth 50c to \$1.00, according to quality.

On July 10th a deputation from the Beamsville fruit dealers waited on the Beamsville Council and asked for the privilege of loading shipments from their platforms along King Street, on the cars of the H., G. & B. There is no accommodation for this fruit now at the Dominion Express shed at the H., G. & B. station. The Council agreed to grant this privilege as long as the fruit was not loaded out of waggons. The Superintendent of Works is to keep an eye on the operations and see how they work out.

On July 13th there was abundance of small fruits on the central market, Hamilton. Red currants sold at 8c per box. Strawberries were very scarce at \$2.00 to \$2.75 per crate. Sweet cherries, \$1.00 to \$1.50 per large basket; sour cherries, 65c to 90c; new potatoes, 55c to 65c per basket; new peas, 50c to 55c per basket; new carrots and beets, 30c to 35c per doz.; new cabbage, 60c per doz.; new beans, 80c to 90c per basket; gooseberries, 10c per box. Home-grown tomatoes are expected to be on the market very soon.

Notes on Montreal Fruit Trade

E. H. Wartman, Dominion Fruit Inspector, Montreal, P.Q.

This 15th day of July finds our Ontario and Quebec strawberries nearly to an end. To-day New Brunswick strawberries and Ontario raspberries have arrived, which is a true sign Ontario and Quebec strawberries are about finished. My surprise is, we have had the smallest shipments of strawberries in many years from Ontario. Therefore, our commission men here have reaped a small harvest. The question is, where has Montreal gotten her supply, or has she been satisfied with only a taste and expects to make up by using other fruits more plentiful? Few are aware that within 30 miles of Montreal fruit growers have found out in the past few years raising strawberries in this vicinity has been a profitable business. Therefore acreage has increased year after year, so we have large quantities near home. Some days Montreal received over 3,000 crates from these outlying districts; not 27 size either, but 54's, which is the common crate here—a rough, strong crate, and when delivered on easy springs lands the fruit in good order and it sells quickly at remunerative prices to growers. The box used very largely is the one marked short, the balance the standard 4-5 qt. When I compare prices obtained by Quebec and Ontario I find Ontario men get quite an ad-

vance on Quebec growers' prices for same quantity of fruit. However, our Quebec berry growers are fortunate, living so near this big market. No excessive express rates to pay, as they carry their own to market, and where cooperation comes in, where one grower has half a load his neighbor fills out, say, from 15 to 30 crates, adjusting expenses. As to quality of Quebec berries versus Ontario I am not here to be the judge, but will say I bought 12 boxes Quebec berries on Bonsecours Market for 75c. When I got them home I picked out 19 berries and measured the circumference of each correctly, finding the average size a little over 5 1/4 inches; the largest 5 3/4 inches in circumference. The next test was to sugar a few and taste them, and I declare I could not detect any bad taste in any of them; in fact would pronounce them phenomenally good in flavor. Therefore, we would conclude if Quebec should double her acreage another year, Montreal will not require many from other provinces, although it takes a very large quantity to flood this market, as this fruit is a particular favorite. I was told by a friend of mine living on Island of Montreal he had last year 20,000 boxes of berries on his own plantation. This gentleman had 4,000 barrels apples in one season. I give these figures, as many have no idea such quantities grow on the Island of Montreal.

Raspberries from Ontario have started. First crate sold at 25c per qt. by crate. We are hopeful large quantities of this fruit will be shipped here, although prospects are not the brightest, on account of winter killing of canes. What do come here in good order will likely bring long prices. I could mention the name of a berry grower in Prince Edward Co. who made a fortune selling berries from 10 acres to the canning companies at 7c per qt. Of course to-day it costs a great deal more to produce a crate of berries than 30 years ago. All could not expect to be as successful as this man, as he was a real expert along this line; had a cannery at his door, losing no crate or berry boxes, and free of express charges. One fruit firm here this season had to pay \$172 express charges on one day's shipments from Ontario. This is quite a charge against one day's fruits.

California fruits are arriving; about 15 cars per week; quality improving all the time in size and color. Peaches, plums and Bartlett pears. Fruiters buy this fruit readily, as it has very fine appearance and good keeping qualities, of uniform pack.

I will now give you a crop report of 45 large healthy apple trees just outside my window, but don't want you to take this as the general crop of Quebec. Last year, if apples had had a chance to mature on these trees, I would have expected 50 barrels. These were of the Fameuse type and codling. The boys took them all before being nearly ripe. When looking for one to eat at picking season not one was to be found. Would judge same trees this fall would produce 25 barrels, but am quite sure the crop will be marketed in the same way as last year. I can only look out of the window and see them go. This property is taxed very high and owner will get no returns. Some would say, and rightly too, where is your police protection? This orchard is within the city limits. Another orchard of 13 acres in same district, worth \$10,000 per acre, with finest of McIntosh and Fameuse, guarded by tenant all day long and even by this protection, will lose a large quantity. Would not advise any-

Douglas Gardens OAKVILLE, ONT.

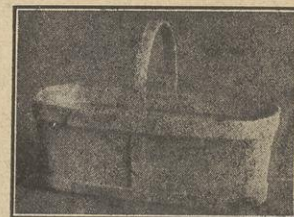
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 - No. 38—Ducel, Mons., light mauve-rose, mid., fragrant, each 75c
 - No. 40—Dupont, Mons., Milk-white, mid., fragrant, each \$1.00
 - No. 42—Edulis Superba, mauve pink, early, fragrant, each 40c
 - No. 43—Elie, Mons., Jules, pale lilac, rose, early, fragrant, each \$1.00
 - No. 50—Festiva Maxima, pure white, early, each 50c
 - No. 63a—Humci Carnea, rose-pink, late, fragrant, each 30c
 - No. 79—Or. Couraune d', white, late, each 80c
 - No. 91—Schroeder, Baroness, flesh-white, mid., fragrant, each \$2.50
 - No. 96—Umbellata Rosea, violet-rose to Amber-white, the earliest, very good 75c
 - No. 101—Whitley, Syn. Queen Victoria, milk-white, early, mid., fragrant, each 35c
 - No. 108—The Moor, Purple-garnet, single, early, each 75c
- Also a good line of Phlox, Helenium, Hemerocallis, Spirea, Aquilegia (Columbine), etc., etc., etc.

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Three Banded and Golden Italian Queens

Untested—\$1.00 each; 6 for \$5.00; 12 for \$9.00.

Selected untested—1 for \$1.25; 6 for \$7.00; 12 for \$14.00.

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Queen Breeder. RIDGETOWN, ONT.
Send for Price List. Cash with Order.

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QUEENS FIRST QUALITY**

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QUEENS AT 50c.

These queens are guaranteed to be as good as money can buy. They are bred by the same methods and with the same care as the high price ones. They are bred from imported mothers, the best in the world, and will produce bees that is the best for honey gathering, for gentleness, and are not inclined to swarm.

	1	6	12	25	50	100
Untested.....	.50	3.00	6.00	11.75	22.50	43.75
Select Untested....	.65	3.50	6.75	12.50		
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We guarantee that all queens will reach you in good condition, to be purely mated and to give perfect satisfaction.

All orders filled at once.
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one to buy this orchard on a speculation to make money out of McIntosh apples, even if they do bring \$9 per barrel at times.

In 1902 myself and family spent the summer at sea shore—Myrtleville, Co. Cork, Ireland. Outside our cottage door was a 20-foot wall around a nice garden and orchard. I said to John, the professional gardener, why do you have this great wall around your garden? Why, said he, if it were not there all our fruit would be stolen. I said, in Canada, we only have such walls around penitentiaries and jails.

But think on Island of Montreal it would take just such precautions to save the fruit, so a man could count on a few barrels as his own.

MARKETING IN 1916.

It is in a season such as the present, when Ontario apples are of a poor quality and other fruits (except peaches) less than a normal crop, that the greatest care should be exercised in grading, packing and marketing. The principal aim of fruit growers should be to cater to the tastes and requirements of the consuming public. If they have not sufficient quantities of high grade fruit to meet the demand, then there should be no attempt to "palm off" the more inferior grades on an unsuspecting purchaser who is looking for No. 1 fruit.

That, in a few words, is the danger which will confront Ontario growers this year. Apple production has been lowered by unfavourable weather conditions and the quality of the fruit has been reduced by the very serious development of apple scab in nearly all parts of the province. Under such circumstances it is reasonable to presume that the demand for apples will be good, the greatest demand being for the higher grades of which there is the least supply.

What will be the result? The apple producers must realize at once the necessity of much more careful and honest grading than ever before. If they do not—if they yield to a temptation to include in their No. 1 grade any fruit of inferior quality—they will be giving themselves a commercial setback from which they will not soon recover. The season of 1916 is going to be remembered as one of poor quality and low production, but it should also be remembered as a year in which the lower grades of fruit were honestly packed.

Canadian fruit is being given some publicity. In the dining cars of our Canadian railroads and in many of our leading hotels, cafes and restaurants, attention is being called, on the menus, to Canadian grown fruit. The Niagara Peninsula Publicity Association is advertising the merits of fruit grown in that district. The one aim of this publicity is obviously to increase consumption during a period of stress. The effort will be wasted if the growers themselves do not pack and market fruit which merits advertising.

Why this publicity if the supply is limited? One reason is that the advertising of "Canadian Fruit" will stimulate public interest. There are few house-holders who know anything about our fruit industry—its scope, importance and value. Just as a demand for a trade mark is created by judicious advertising, so will the advertising of Canadian fruit accomplish similar results. When industrial conditions again become normal, public interest will remember "Canadian Fruit" and in seasons of large production an increased consumption will offset many difficulties which have heretofore been experienced. People will eat Canadian fruit who have never eaten it before

EUROPEAN FOUL BROOD

is spreading in various parts of the country. The first step in its cure is a vigorous strain of ITALIANS

**The Root Strain of Bees have shown
.. Themselves to be Highly Resistant ..**

While we do not claim their introduction will alone cure European Foul Brood, or that it will not make a start in their colonies, we have reports of where they have, with a little help, fought themselves nearly clean of European Foul Brood which was all around them in black and hybrid colonies.

These queens will be ready for delivery about June 1. Orders will be filled in rotation. Later in the season we will make delivery promptly. PRICES.—Our regular price is \$1.50 in June and \$1.00 after July 1 for untested queens; but we will club them with Gleanings in Bee Culture for one year and a queen for \$1.50, provided we can fill orders for queens when we have a surplus of them. This will probably be July and August.

The A. I. Root Company - - - Medina, Ohio

and our home markets will thereby be extended.

There is one other reason why a certain amount of publicity is desirable this year. The export trade is restricted. There is no regularity of steamship sailings to Great Britain, and a large proportion of the available space is required for commodities which are not exported in such large quantities under ordinary conditions. Consequently the amount of fruit to be marketed at home will be greater than it otherwise would be.

Insect Pests in Manitoba*

During the past two years, insect pests have been reported as doing a great deal of damage to shade and ornamental trees in Manitoba, so the Department of Horticulture and Forestry of the Manitoba Agricultural College decided to give a series of lectures and demonstrations on sprays and spraying, for the control of tree pests. This work is in charge of the writer. Demonstrations were given at fifteen points in southern Manitoba.

At each of the places visited, a great deal of injury was found to have been done. In some of the towns in the southern districts as high as 30 per cent. of the Manitoba maples were found to have been killed and a very large percentage injured. A reliable authority in one of these places estimates that 50 per cent. of the native maples have been destroyed. The aphids and the cankerworm have been responsible for nearly all of the losses sustained in the places visited.

The Department are recommending the use of arsenate of lead for the cankerworms and other biting insects, and nicotine sulphate for the aphids.

Spring and fall cankerworms were found quite abundantly at Carman. In some places trees were almost defoliated by the cankerworms.

Several people in some vicinities reported the presence of a small dark brown beetle in enormous numbers. These beetles attacked the various members of the poplar family. Cottonwoods, balm of gilead, and willows were very badly infested. The insects appear very quickly, and do the damage in a short time. After they attacked a grove, the trees appeared as though scorched by fire. Specimens of these beetles were collected, and upon examination proved to be the willow leaf beetle. (*Galerucella decora*), a species of beetle which infest poplars and willows.

Cutworms have been doing great damage to garden crops, spring grains, and alfalfa. A gentleman living near Portage la Prairie had an eight-acre field of alfalfa nearly destroyed by the red-backed cutworm. Several sections, one square foot in area, were examined to determine the degree of infestation. Counts were secured which ranged from 28 to 70 to the square foot. One could be perfectly safe in saying that there were millions of cutworms in that alfalfa field. In another section, a 60-acre field of wheat was practically destroyed by cutworms.

The spruce gall louse was found to be doing damage to black and white spruce in various sections of the country.

*An extract from an article appearing in July issue of the Manitoba Horticulturist, by J. A. Neilson, B.S.A., Manitoba Agricultural College.

An even distribution of Bordeaux on the surface of the leaves is highly important. To obtain the best results the spray machine should provide a constant high pressure and the nozzles should give a fine, mist-like spray. Sometimes 50 gallons of Bordeaux per acre is sufficient. If more is necessary it should be used when blight is severe.

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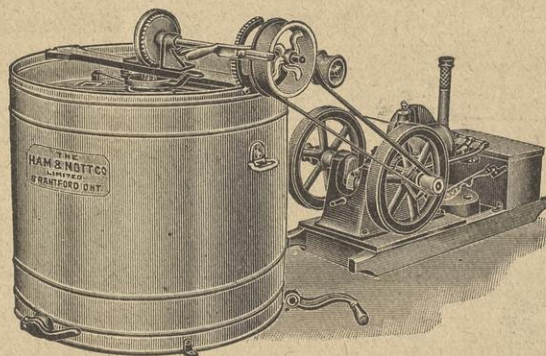
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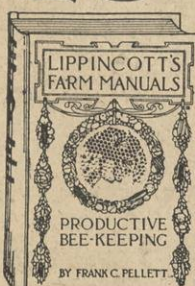
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Strawberry Growing in Quebec

By C. W. Baxter

"What beautiful strawberries!" This remark has been very frequently heard on the Bonsecour market in Montreal during the past strawberry season. The excellent quality of the fruit has prompted many purchasers to enquire where they are grown, the name of the variety and the method of production. It is doubtful if there is any province in Canada where strawberries can be grown more successfully and profitably than in the province of Quebec. Notwithstanding this fact, small-fruit growing has not yet received the attention which this industry deserves.

There are many districts in the province favorable to the growing of strawberries, but none more so than the Lake of Two Mountains with St. Joseph du Lac as the central point. With the many hills and valleys there are few farms where ideal location and soil does not obtain. The principal varieties grown are the Wilson, Haverland and Jessie.

The average size of the plots is from one to three acres and a new plot is set out each year. A few growers practise close planting in order to lessen the possibilities of winter injury and to control weeds. Two crops are taken off and then ploughed up.

The past season has been an ideal one, abundance of rain and cool nights, which retarded the ripening sufficiently to allow of practically all the berries to be harvested without waste. No difficulty has been experienced in obtaining pickers.

Unlike the strawberry growers of Ontario who ship their fruit in crates containing 24 to 27 boxes, the Quebec growers use a crate containing 54 boxes—three layers of 18 boxes each.

In a season like the present, good wages are made at the rate of 50c per crate, and as a rule much of the picking is done by members of the grower's family.

The methods of marketing differ from those in Ontario: instead of hauling the fruit to the railway station and shipping by express, the grower loads his crates on to his wagon and drives to market, a distance in many cases of forty miles.

As the Quebec grower produces very few, if any, other kinds of tender fruits, and as things are quiet just at that season, his time is very profitably employed. Thirty-five crates containing about 1,800 boxes, can be loaded on an express wagon and drawn by a team for long distances without overburdening the horses.

The grower leaves his home about seven o'clock in the evening and drives to Montreal. On arrival he places his wagon in its accustomed place in the market, stables his horses and retires for the night. The placing of produce the night previous to market day is a general practice and the produce is protected by the police department. The early hours of the morning finds the grower beside his wagon ready for business. Very few sell direct to the consumer; they prefer to sell by the crate or by the load to the wholesaler and the retailer, who return the crates when empty. As a rule mid-day finds the grower with his fruit all sold and ready to return home.

By this method the grower puts in a very profitable day. If marketed in the same way as in Ontario, a load of 35 crates would represent an outlay of \$25.00 for crates, express, and hauling. The cost to the Quebec grower does not exceed \$3.00 for this trip, leaving him a balance of \$22.00 as wages for himself and team for one day.

Strawberry growing in Quebec has proven to be a very profitable industry and this year will net the growers from \$375.00 to

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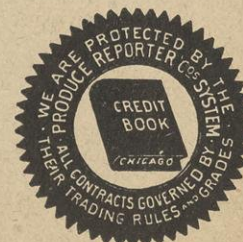
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Branch Warehouses: Sudbury, North Bay, Cobalt, Cochrane and Porcupine. References: The Canadian Bank of Commerce (Market Branch) and Commercial Agencies.

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\$500.00 per acre. Planting is on the increase and although the marketing is now confined to the city of Montreal, it would not be surprising to find that in a few years the markets of Quebec will be supplied with strawberries grown within the province.

Town Planning

Thos. Adams, Town Planning Adviser, Commission of Conservation, Ottawa

It is around the home that gardens are most wanted and most easily obtained. Provision should be made in all town planning to give adequate garden space to each dwelling. For practical reasons it is not possible to house all our people in the cities in detached homes, but we should try to make that our ideal and do what we can to discourage any tendency towards the tenement house or other overcrowded conditions. The horticultural society is the best means of encouraging the individual householder to lay out his garden attractively and use it to the best advantage. Without the aid of such a society the lack of uniformity creates an untidy and generally unsatisfactory effect.

Tenements and other buildings of that class which are occupied by a number of families using a piece of ground in common have usually too little open land attached to them. The important thing in town planning is to insist on sufficient space being provided around the tenement to allow of there being plenty of space for light and circulation of air. If this were done it would be found that even in connection with such buildings there would be scope for the horticulturist in the designing and planting of the open space that would be provided for hygienic purposes.

The objection to even the best class of

"apartment houses" as residences is not that they represent unsatisfactory living conditions, but that they are usually without sufficient open space surrounding them. When we arrive at the stage that we shall insist upon a building having a proportionately increased area of land surrounding it, as it increases in height, we shall be able to get healthier conditions as well as scope for garden treatment which will open up a new and interesting field.

Large "apartment houses" should have sufficient space adjoining them to enable shade trees, tennis courts and recreation spaces for children to be provided as part of the equipment of the group of dwellings. Under a proper system of development the space so provided would not be wasted land. Instead, it would be regarded as necessary open space for hygienic purposes, and its use for recreation and gardening would give this open space the position of being a real asset in the rental value of the premises.

Asparagus Culture

SOME six or seven years ago, Mr. W. C. Dempsey, Prince Edward Co., Ont., set out about two and a half acres of asparagus. In a recent interview Mr. Dempsey told me that he was having fairly good success with it, but that he had waited many years for these results. I had an opportunity of seeing the trays being loaded with this delicacy and my thoughts naturally turned to the question of the profits to be derived from asparagus culture. The results of my enquiries fully convinced me that in order to successfully grow asparagus on a commercial scale, years of experience and patient waiting are required, and even then only half of the way to success is

won, as a market and a reputation must be found before it can be made a profitable line to follow. There is no reason why almost any one cannot have a small bed of asparagus sufficiently large to supply the home table, but the growing of asparagus in a commercial way is not a business for the average farmer. It belongs to the realm of special farming, where only those who have a liking for that particular line of work can make a success of the business.—W. G. O.

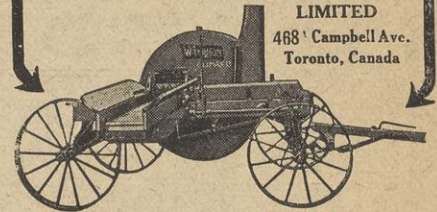
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on your barrel of apples increases its value materially in the eyes of the customer. He is willing to pay more for fresh, snappy, unbruised apples. By using

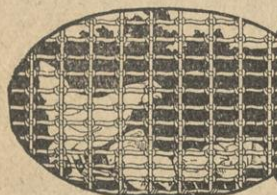
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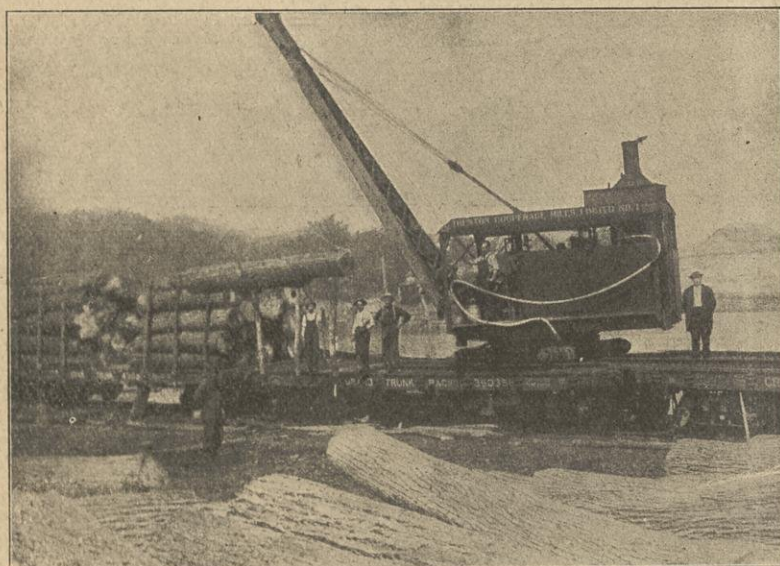
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Summer Care of Small Fruits

W. T. Macoun, Dominion Horticulturist

Strawberries.

On the care which the strawberry plantation receives during the growing season, will depend to a large extent the kind of crop there will be next season. The more runners that can be placed with hand and trowel so that the plants will root quickly and be evenly spaced, the better. Very often there are too many plants in one place and not enough in another. Where plants are crowded and much less than six inches apart, the crowns do not develop well and the fruit is liable to be small. It is important to keep the plantation free of weeds and the ground cultivated as long as possible, as late growth, in the case of strawberries, will result in better plants. A light covering of clean straw is desirable when the ground freezes in the autumn, to prevent alternate thawing and freezing in the winter or following spring.

Raspberries, Gooseberries and Currants.

Often there is far too much wood left on the bushes of these fruits for best results. Attention is drawn to this now, as pruning of these fruits can be done, if desired, as soon as the fruiting season is over. Raspberry canes should not be left closer than six inches, the dead and weaker ones being removed and the strongest left. Where canes are not covered with soil in winter, the thinning out may be left until spring, when one can tell, before pruning, which canes, if any, have been injured by winter. Bending down the canes and covering the tips with soil, or where there is little snow, covering the plant entirely, will ensure the canes wintering well. Gooseberries are difficult to pick at any time, but, if the bushes are kept well pruned, picking will be much easier than if there are many branches. Branches older than three years should be cut out. The best fruit is borne on the two and three-year-old wood, but there should be a few strong new shoots, well distributed, allowed to remain each year. About six fruiting branches with their side shoots will be sufficient. Red currants are pruned somewhat as gooseberries, but a few more fruiting canes may be left. Unlike the red currant, the fruit of black currants is borne on the wood made this year, hence severe pruning of the older wood is desirable to ensure strong new wood each year.—Berwick Register.

Niagara Fruit Shippers

The fruit growers of the Niagara District have received some general improvements in shipping train service through the transportation department of the Ontario Fruit Growers' Association. By an order of the Railway Board the railways are now allowing \$3.00 for the material used in putting in a Slated floor in the Refrigerator car if they are not thus equipped. Shippers are to keep a record of all cars floored, including those for which the authorized allowance is paid.

A better service has been promised on account of the large shipments of berries from Vineland and Jordan, and on account of the early arrival of the fruit train.

Under an order, dated May 15th, 1916, Ottawa shipments will be expected daily, except Sunday, from Jordan Harbor and Vineland Station. A car is to be placed at Jordan daily, except Saturday and Sunday, shipments from Port Hope East to Montreal being accepted in this car. This service is to continue from July 1st to August 31st.

No British Embargo on Fruit

The July number of the Agricultural Gazette contains an interesting report by F. H. Grindley, B.S.A. of the Fruit Department, Ottawa, on the present condition of fruit export to Great Britain this year as follows:

"In January last the president of the British Board of Trade hinted than an embargo would shortly be placed upon fresh fruits. Soon afterwards a similar ban was reported to have been placed upon canned, preserved, bottled and dried fruits. The reason given for this action was that the vessel space was required for cargoes which were more essential to the needs of the British people.

Ever since that time there has been a great deal of concern among Canadian growers and exporters of fruit as to the possibility of reaching the British market with their products.

Realizing how serious would be the results of such an embargo, not only to the fruit trade of Canada, but to the British importers and retailers of fruit, interested parties put forward every possible argument against the adoption of such a measure.

Fortunately these petitions made by the Department of Trade and Commerce, the Acting High Commissioner in London, the Canadian Fruit Trade Commissioner at Leeds, and others, resulted (1) in the removal of the embargo on fresh fruits shipped from the Dominions of Great Britain, and (2) the free entry of canned fruits, etc., provided that each shipment was accompanied by a certificate of origin.

At the present time, therefore there is no restriction upon exports of fruit to Great Britain, so far as their free entry into that country is concerned. The only feature now to be considered—and it is an important one—is whether or not the demands upon vessel space will be sufficiently great to minimize the space available for fruit. Judging from the delays which occurred last year, and the fact that conditions promise to be very similar next season, we are persuaded that shippers will be wise not to depend upon any regularity in the steamship service.

The "Old Country" markets, in a year of average production in Canada, receive approximately 1,000,000 barrels of Canadian apples. It is, therefore, apparent that a serious situation would arise if any pressure of circumstances were to interrupt that trade, and thereby throw upon our Canadian market an additional supply of apples equivalent to over 6,000 carloads. A concerted effort by the fruit growers to extend their home markets, organize distribution and increase consumption in every possible way, would help very materially to relieve the situation. Such efforts would have the additional advantage of effecting results that for some years have been essential to our domestic fruit trade. Canadian fruit growers have been almost too dependent upon the export market, and have not given sufficient attention to the development and extension of the home trade; the present restrictions on the export trade, should they continue, may, therefore, be in one sense beneficial.

During the past two seasons there has been a most satisfactory demand for the higher grades of fruit, but a very limited market for fruit of inferior quality. We believe, then, that if growers will do their utmost this year to produce a crop of high quality, they will find no difficulty in marketing it at good prices.

We feel hopeful, too, that the facilities for exporting fruit will not be as inadequate as rumours would lead us to believe.

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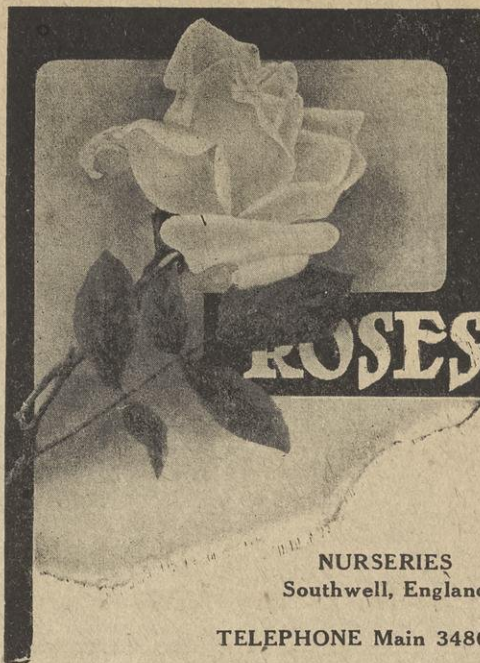
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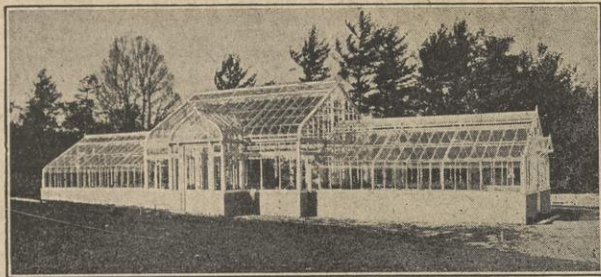
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British Columbia Fruit Growers' Convention

The first mid-summer convention of the British Columbia Fruit Growers' Association and the British Columbia Entomological Society will be held at Penticton, B.C., on July 20 and 21. The program as outlined includes addresses and papers by the following on the subjects given:

D. Johnson, Fruit Commissioner, Ottawa—"The Marketing of Fruit."

Lionel E. Taylor, Kelowna, vice-president of the B. C. Entomological Society—"Birds in their Relation to Fruit Growing and Agriculture." This address will be illustrated by lantern slides.

Dr. F. F. Westbrook, president of the British Columbia University, Vancouver—"Agricultural Education in British Columbia."

R. M. Winslow, Provincial Horticulturist, Victoria, B. C.—"Why Advertise B. C. Fruit?"

R. C. Abbott, coast markets commissioner, Vancouver, B.C.—"Opening the Coast Market for Okanagan Fruits and Vegetables."

R. C. Thehern, Assistant, Dominion Entomologist for British Columbia—"Important Insect Pests of Okanagan Fruits, and Their Control."

J. W. Eastham, Provincial Pathologist, Vancouver, B.C.—"The Control of Plant Disease in Irrigated Fruit Districts."

Tom Wilson, inspector of Indian Orchards, Vancouver, B.C.—"Cutworms and Their Control."

Other probable speakers who have not been definitely arranged for as yet include Hon. William Manson, Hon. H. Bark, Idaho, and Prof. W. S. Thornber.

Telegraphic Reports

Commencing about August 1st, the Fruit Branch of the Department of Agriculture at Ottawa will publish at frequent intervals (probably twice weekly) reports covering fruit conditions in all parts of Canada. These reports will contain the following information:

1. Fruit crop conditions in all commercial sections.
2. Wholesale prices in leading Canadian markets.
3. Quantities of fruit being exported.
4. Condition of fruit on arrival at destination.

This information will be of great value to all who are commercially connected with the fruit-growing industry. The reports will be received in Ottawa by telegram and distributed immediately.

Anyone wishing to receive these telegraphic reports can do so by making application to the Fruit Branch, Department of Agriculture, Ottawa.

Fruit Crop Items

The second fruit crop report issued by the Dominion Fruit Division has just come to hand and shows some changes since last month. Incessant rains in Ontario and Quebec during the month of June has caused some falling off in fruit prospects. The wet weather has caused a rapid development of scab in practically all districts of these two provinces. The Annapolis Valley and Nova Scotia has had good weather, and as yet little scab is reported. It is estimated that the total crop will be close to 1,000,000 barrels.

Prospects on the whole, however, are that there is promise of a fair apple crop, some sections having a much larger yield than others. British Columbia has the promise of a fairly large crop.



The Hand Scuffler in Use.

Do You Want a Handy HAND SCUFFLER

THE handy hand scuffler is an ideal implement for garden weeding, and mulching. It is made of the best saw steel, and has three cutting edges, on two sides and one end. Lying flat on the ground, a slight pressure either in pushing or pulling only is required. It can be used endwise to chop tough roots. It is especially adapted for cleaning around bushes and plants.

Made in two sizes. The blade on the large scuffler is 9 inches by 3¼ inches; in the small one 6 inches by 2¾ inches. The handle is about five or six feet in length. The small size is more convenient for the enthusiastic woman gardener.

SPECIAL PREMIUM OFFER

One hand scuffler FREE (as above) with each new single subscription to The Canadian Horticulturist at \$1.00. Will also sell these (express extra) direct to subscribers at 50c. for the small and 75c. for the large size.

THE HORTICULTURAL PUBLISHING CO.
Peterboro, Ontario LIMITED

The Fruit and Produce Market

The Commission firms undernoted wish consignments of fruit and general produce. They will be pleased to have you write them for information, shipping stamps, etc., if you have fruit or vegetables for sale.

Top Prices, Quick Returns and a Square Deal

THE WENTWORTH ORCHARD CO., Limited
109 King St. East and Yonge St. Wharf, Toronto

The only wholesale Commission House in the city to have consignments by either boat or rail unloaded directly into Warehouse. Wentworth Brand Fruits are advertised extensively and there is a constant demand for them. Ship to The Wentworth Orchard Co., Ltd. Send for Shipping Stamp.

References: DUNNS, ROYAL BANK

H. J. ASH

44-46 Church St. - Toronto, Ont.
CONSIGNMENTS OF FRUIT & VEGETABLES
SOLICITED

We give personal, consistent and reliable attention to every consignment. Shipping stamps furnished on request.

DAWSON-ELLIOTT Co.

32 West Market St., Toronto, Ont.

Wholesale Fruit and Produce. Consignments Solicited.

STRONACH & SONS

33 Church St., Toronto, Ont.

Wholesale Fruit, Produce and Commission Merchants.

A Good Firm on Two Good Markets

TOM ADAMS AND BROS.
Fruit Merchants
BRISTOL

TOM ADAMS AND BROS.
Fruit Merchants
SWANSEA

Head Office:—BRISTOL

Get in touch with them to-day if you want top prices for your produce.

This Space Costs \$1.40
per month.

Order now for the next
four months.

Apple Receivers

Representing

Simons, Shuttleworth & Co.
Liverpool and Manchester.

Simons, Jacobs & Co. Garcia, Jacobs & Co.
Glasgow, Scotland. London, England.

SIMONS FRUIT CO,

David L. Dick, Manager.

27 CHURCH ST. : TORONTO, ONT.

Information regarding export markets on request.

HERBERT PETERS

88 Front St. E., Toronto, Ont.

Wholesale Fruit and Produce

See advertisement on page 206.

WANTED

Consignments of Cherries, Tomatoes, Peaches, Grapes and all kinds of fruit; also carlot apples. Centrally located, convenient to all car tracks. Commission 10%.

HYSLOP & SONS, 132 Princess St. Winnipeg, Man
References—Any mercantile agency, or Bank of Hamilton, Hamilton, Ont.

FRED BARKER

25 Church St., Toronto, Ont.

Representing J. & H. Goodwin, Ltd., Manchester; Thos. Russell, Glasgow; Nothard & Lowe, London; G. R. Cooper, Liverpool.

APPLE RECEIVERS.

Consignments Solicited.

LAING BROS.

307-309 Elgin Ave., Winnipeg

Wholesale Fruit, Groceries, Produce,
Grains, Hay and Commission Merchants

We want Consignments

of Tomatoes, Peaches, Cherries, Grapes, and all kinds of fruits and vegetables in baskets, in car lots or less. We make a specialty of barrel apples in car lots. Write us.

McBRIDE BROTHERS

J. R. McBride, Proprietor.

Fruit Exporters, Importers and Commission Merchants.

Consignments solicited. Terms cash.

35 CHURCH ST., - TORONTO, ONT.

SAMUEL HISEY

82 Front St. E., Toronto, Ont.

Wholesale Produce and Commission Merchant. Consignments Solicited.

The Oldest
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McWILLIAMS & EVERIST
Send your
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Established 1885

Telephone: Hop 5468
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WALTER FORD,

Fruit Broker and Potato Factor,

New Hibernia House,

Winchester Street,

Borough Market,

LONDON, S. E.

Depots:

King's Cross Potato Market
Stratford Market

Consignments of Apples will receive prompt attention and Account Sales with remittance will be despatched immediately after sale of Goods. Shipping Mark (F).

FREE LAND For the SETTLER in Northern Ontario

Millions of acres of virgin soil obtainable free and at a nominal cost are calling for cultivation.

Thousands of farmers have responded to the call of this fertile country and are being made comfortable and rich. Here, right at the door of Old Ontario, a home awaits you.

For full information as to terms, regulations, and settlers rates, write to

H. A. Macdonell

Director of Colonization
Parliament Buildings, TORONTO

HON. G. HOWARD FERGUSON,
Minister of Lands, Forests and Mines.

The Poultry Yard

F. C. Elford, Central Experimental Farm, Ottawa

During August, two things especially must be provided against—lice and heat. Make sure that there is plenty of shade, provide this as mentioned last month, and keep everything clean and look out for mites.

Once a week the quarters should be thoroughly cleaned and disinfected. A hand spray, or even a small broom, and Zenoleum applied regularly, will keep the coops sweet. While you are at it, clean out the poultry-house the hens were in last winter. Give it a thorough house-cleaning, taking out all the furnishings; leave them in the sun for several days; scrub and clean the house; disinfect and whitewash before the furnishings are put back again.

Any chicks that are inclined to be weaklings should be disposed of. Feed them a little extra and sell them for table use, or

if their constitution is not strong enough for this, kill and bury them at once. They are easy marks for any poultry disease that happens to come along. They become carriers of disease and lice. Get rid of them. Read over last month's notes. Many of them are timely for August.

Quince as an Ontario Fruit

QUINCE has never become very popular as a fruit, yet it is one of the oldest, being much in favour as far back as the time of Henry VIII. Some people are quite fond of quinces and if they were more extensively grown and used they might be more popular.

Some five or six years ago I planted a number of trees in my garden just to see if they would grow and produce fruit. They have grown fairly well and do not seem to be seriously affected by this rigorous climate. We have had some fruit from them also, and it is as delicious as any that can be bought.

We have found that the quince does best on well drained clay soil. It will not produce good growth on wet land. The tree should be kept open to the sun and trimmed carefully. The growth is slow, but trees will usually bear at about four years old. I am quite convinced that the quince is worthy of a much better place in the minds of most people than it now holds.

The most effective way of supplying the requisite fertility for strawberry plants, and the one that insures the largest returns for the investment of time and money, is to apply nitrate of soda at the rate of seventy-five to one hundred pounds to the acre, according to the apparent needs of the soil and plants. This should be done by hand.

Strawberries can be grown with less work than any other kind of fruit.

Defining Grades of Apples

D. Johnson, Dominion Fruit Commissioner, Ottawa

THE amount of ink spot that is allowable on a No. 1 apple has proved to be a most difficult matter to decide. There has been little or no trouble defining a No. 1 apple, but it is different with a No. 2. Our fruit inspectors are being sent from shipping point to shipping point, instructing growers as to what is a No. 2 apple.

Dealers complain that we are not strict enough. They want a package that will hold up for some time after purchase. We find defects develop rapidly, sometimes making apples of apparently good quality go wrong sooner than expected.

Many of the No. 2 apples placed on the market are no better than a No. 3, although a couple of months earlier they may have been good No. 2's. Some growers are so conscientious they pack a No. 2 apple that would grade No. 1. Others pack a No. 1 that should be No. 2.

There are all kinds of No. 3's. It is unfair to consign fine, well matured, nicely colored apples, with only a little scab, into the No. 3. This is what has made it necessary that we should define the No. 3 grade, or have two grades for No. 2. When growers have branded their apples No. 3, no matter how good the quality, they have had difficulty selling them by letter or wire, as the buyer has been afraid they might be trash.

THE oldest line of steel beam plows in the Dominion, made in the old Wilkinson Plow Co's factory, by old Wilkinson Plow Co. experts—every one of them men who know their business. It is the standard line of plows and includes 25 or more styles to choose from. U. S. S. Soft Center Steel

Wilkinson Plows

Moldboards, highly tempered and guaranteed to clean in any soil. Steel beams, steel landsides and high carbon steel coulter. Clevises can be used either stiff or swing. Each plow is fitted especially with its own pair of handles—rock elm, long and heavy and thoroughly braced. The long body makes it a very steady running plow. Shares of all widths—specials for stony or clay land.

General purpose, light, medium, and heavy, side hill, sod, drill or one horse plows

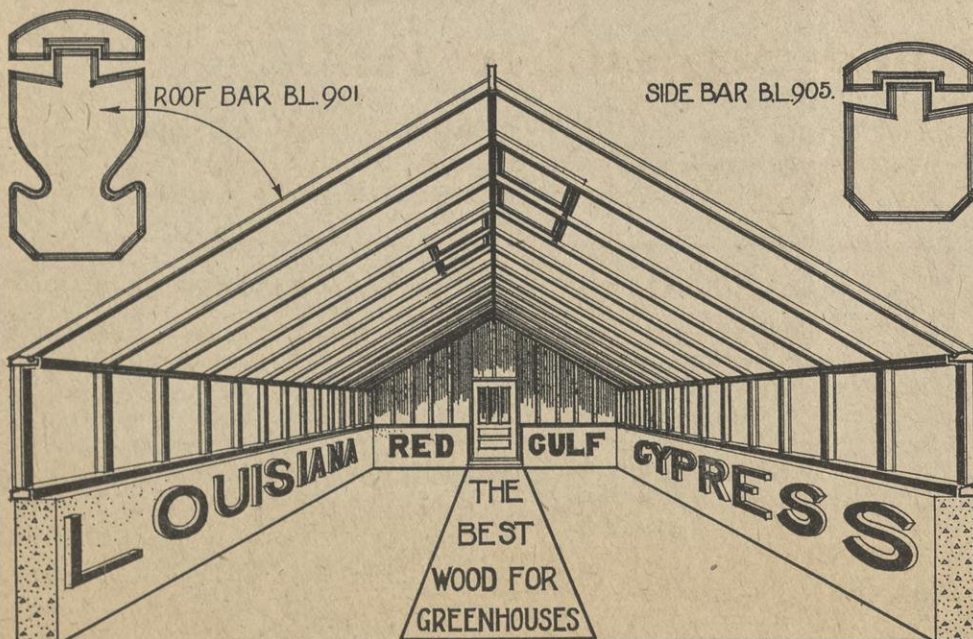
The plow shown turns a beautiful furrow, with minimum draft and narrow furrow at finish. Ask for new booklet.

The Bateman-Wilkinson Co., Limited
431 Symington Avenue, Toronto Canada



Repairs
for all
Wilkinson
Plows

GREENHOUSES



MANUFACTURERS GREENHOUSE BARS AND SASH

Batts Limited

366-415 PACIFIC AVENUE

WEST TORONTO

Annapolis Valley

Eunice Buchanan

Although there was no late frost in the Annapolis Valley, June was exceptionally lacking in sunshine, having fifteen days when it rained—and at times very heavily. July has made no change so far (July 4th), as it has rained three days out of four, some of the downpours exceeding those of June.

Strawberries promised an enormous crop, as the first blossoms were not injured by frost. The first berries were gathered about June 24th, and made 20c at the station, but the continued rains have softened the fruit and made it difficult to pick.

Those who were fortunate enough to get their seeds in early have luxuriant peas, spinach, lettuce, and such-like small stuff, especially if they hoed early; but those who were later may stand under umbrellas and watch the weeds racing the plants. In places, some of the crops are under water. Tomatoes were planted after June 10th, and blossomed about June 19th.

The first cutworms were noticed on June 4th, but we soon ended their raids with a damp bran mash tinted with Paris green. Seeding down and other work has been delayed, but the weather conditions have not hindered the ravages of the green apple bug or of the canker worms. Some orchards have been badly attacked by the latter. What looks suspiciously like fire blight has appeared in several orchards; some of the affected trees are dying in groups after leafing out.

In unsprayed orchards, spots are developing rapidly, especially on the Gravensteins; in sprayed orchards, where the spray missed the tree tops, spot is also appearing, but considering the muggy weather there is not as much spot as one would expect. By the end of another week we shall be better able

to judge the prospects for a clean apple crop.

Berwick, July 4th, 1916.

Late Blight of Potatoes

Late blight makes its presence in the field known when the vines are about 10 inches high. The disease first appears on the under surface of the leaf. The best time to detect this disease is early in the morning when the dew is still on the leaves. At that time slight growths of white mould will be seen, which disappears as the temperature of the day increases. These growths will be found on brownish-black spots, somewhat irregular in outline and occurring in the beginning near the edge of the leaf. As the disease becomes more intense, it spreads over the entire vine. The result of this disease is early death of the vines, a small yield of potatoes and rotting in the bin of potatoes from diseased vines.

Spraying the vines prevents late blight. Bordeaux mixture has been found the most efficient mixture. The home-made mixture is by far better than the prepared mixtures sold on the market. Substitutes for Bordeaux mixture, such as lead arsenate and sulphur have been found unsatisfactory. Lead arsenate is slow in action and often clogs the spray nozzles.

The principle involved in the use of a spray to prevent blight is based upon the method of the spread of these diseases. The small germs causing the blight are blown by the wind from field to field and from plant to plant. The germs fall on the leaves and there germinate. A thin film of Bordeaux mixture on the surface of the leaf will kill the germ when it lights and thus prevents disease.

Making Bordeaux Mixture.

The usual formula for the preparation of

Schools and Colleges

MOULTON COLLEGE

34 Bloor St. East, Toronto, Ont.

A Christian School for Girls. Matriculation, English, Music Courses. Fall term opens September 20th. Calendar on request.

Harriet S. Ellis, B.A.,
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NEW FIREPROOF BUILDING

PERFECTLY SANITARY
FITTED WITH EVERY
MODERN CONVENIENCE
LARGE PLAYGROUNDS

Academic Work up to the first year
University. Music, Art, Household
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The Capital offers exceptional advantages.

For Calendar apply to

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SKINNER
SYSTEM OF IRRIGATION
Control complete. Prevents drought losses. Reduces labor bills. Increases profit. Special Portable Line for \$11.75. Send for new Bulletin.
The Skinner Irrigation Co.
217 Water Street Troy, Ohio.

Annual Exhibition and Fall Packing Number

Published September 1st

THIS is our big Annual Fall Special and is one of our best and most important issues. It is published just when our fruit growers are planning for their fall and winter work. Several hundred sample copies, too, will be distributed at the Canadian National Exhibition by our representatives.

SPECIAL COVER

The front cover will be a special full page cover design, printed on heavy coated stock. It will add much to the attractiveness of the issue.

ARTICLES

A splendid array of special articles is being arranged. These will deal largely with the fall problems of the fruit grower—packing, shipping and marketing fruit—and will be secured from authorities on these questions.

RATES

Advertisers who are planning fall campaigns and wish to get in touch with the progressive fruit grower will do well to reserve space early in this Special Number. Rates are as usual—\$1.40 per inch per insertion.

FOR OUR BEST SERVICE RESERVE SPACE NOW.
COPY MAY BE SENT UP TO AUGUST 25th.

The Canadian Horticulturist

Peterboro, Ontario

CLASSIFIED ADVERTISEMENTS

Advertisements in this department inserted at rate of 3 cents a word for each insertion, each figure, sign, or single letter to count as one word, minimum cost 30c., strictly cash in advance.

REAL ESTATE

ALL KINDS OF FARMS—Fruit farms a specialty. Write for Catalogue. W. B. Calder, Grimsby.

FARMS—All kinds—Fruit, stock, grain or dairy farms for sale. Also have clients with good city property who would exchange. H. W. Dawson, Brampton, Ont.

SPRAYING.

SAVE MONEY—Get our Spraying and Garden Supply Catalog. Morgan's Supply House, London.

BEEES.

FOR SALE—Untested Golden Italian Queens, 60c each. J. F. Michael, Winchester, Ind., U.S.A.

ITALIAN BEES AND QUEENS as advertised on page 206. Catalogue free. Deroy Taylor Co., Newark, N.Y.

BEST THREE BANDED QUEENS at lowest prices, after June 1. Also Bees by the pound. Satisfaction guaranteed. Send for circular. J. H. Haughey, Berrien Springs, Mich.

BEEES—Per pound, \$2.15; per frame, \$2.35; queen, \$1.00. Comb foundation, light brood or extracting, per pound, 60c. Langstroth hives and frames, painted and empty (new), \$1.60 each. Address Aurora Apiary, Aurora, Ont.

FOR SALE—Italian queens from the best honey gathering strains — untested queen, 75c; 6, \$4.25; 12, \$8.00; tested queens, 1, \$1.25; 6, \$7.00; 12, \$12.00. Robert B. Spicer, Wharton, N.J.

NOTICE—Gray Caucasian Queens. Their superior qualities are early breeding, great honey gatherers, very prolific, very gentle, great comb builders, give better body to honey, very hardy, will work when other bees stay in hive, good winterers, the best all-purpose bee. Give me a trial order. Prices for August and September: untested, \$1.00; select untested, \$1.50; select tested, \$2.50. Now is the time to requeen with the Gray Caucasian Queens for next season. Fay L. Barber, 290 State St., Louville, N.Y.

BEE SUPPLIES.

BEEKEEPERS—Please write for our Catalog. Morgan's Supply House, London.

NEW HIVE—Tested out three years. More honey produced. No heavy lifting. Non-swarming and robber proof. Winters properly without labor or expense. Present equipment easily changed to etc. Other advantages. Send for particulars. Wm. F. McCready, Box 4, Estero, Florida, Lee County.

1,000 GUMMED HONEY LABELS, two colors, any wording, for \$1.30. Catalogue free. Eastern Label Co., Clintonville, Conn.

SEEDS.

YOU WANT "Reliable Seeds," get our Seed Price List and Save Money. Morgan's Supply House, London.

Bordeaux mixture is five pounds of copper sulphate (blue stone) and five pounds of stone lime to 50 gallons of water. The two chemicals must be dissolved separately. The weights should be accurate. Guess work often causes more harm than good. First dissolve the copper sulphate in about ten gallons of water and then dilute the solution to make up 25 gallons. Then in another tank slake the lime before making an attempt at forming a solution. Then allow the lime to dissolve in water, gradually bringing the solution up to 25 gallons. Then stir in the lime solution and pour into the copper sulphate solution. This process requires two tanks capable of holding at least 25 to 50 gallons.

Paris green can be added to the copper sulphate and lime mixture which will kill insects. Usually from one to two pounds of Paris green for every 50 gallons of Bordeaux mixture is used. In this manner, one spraying can be made to serve a double purpose.

Fraser Valley, B.C.

The Fraser Valley growers are expecting a big season in berries and are opening off-

ces at two points, Hatzic and Mission City.

It is expected that about 30 carloads of berries will be shipped from this section in addition to the quantities sent to the jam factories. The number of acres under berries is very large this year and it is expected that this acreage will almost be doubled next year.

More B. C. strawberries are being sold in parts of Manitoba than ever before. Winnipeg jobbers have been pushing the sale of B. C. fruit strongly.

The British Market

An English correspondent, writing a few days ago about fruit conditions in Great Britain, says, "I am under the impression that there will be a good demand for apples from Canada this season. The English apple crops are not looking at all well, though it is early to pass an opinion at present. They will likely be small, scrubby and wormy. If any of the districts do better than others, it will probably be the districts that have only been planted of late years.

"Canadian apples coming on to this market do well, especially if the samples are good and clean. One of the troubles of a number of shipments in past years from Canada is the fact that many of the ends come out of the barrels in transit. This is probably owing to the nailing, and you will understand that where the bottoms and tops come out of the barrels the apples are considerably damaged and numerous barrels lost out of the shipment."

Win Against the Hessian Fly

TO Escape the Main Attack of the Fly—sow your wheat late. The early brood is most destructive to young wheat and provides for future broods. Your own Experiment Station will tell you this.

THE Best Wheat Yields come from plants that enter the winter strong and vigorous. Your own experience will tell you this.

TO Win Against the Fly, seed late, feed the crop with available fertilizers which will hasten growth to overcome the late start, and secure vigor with consequent resistance to later broods. Use 200 to 400 pounds per acre containing at least 2 per cent. of ammonia. Acid phosphate alone does not give the necessary quick growth and resistance to the fly.

In Farmers' Bulletin No. 640, U. S. Department of Agriculture, fertilizers are recommended to give vigor to late sown crops and resistance to the Hessian Fly.

Write for our map showing best dates for sowing wheat in your locality; also our Bulletin, "WHEAT PRODUCTION," both mailed free.

Soil Improvement Committee

OF THE

National Fertilizer Association

CHICAGO

Dept. 148

BALTIMORE



*You can keep the fine
natural color
in Raspberry Preserves*

if you make them with

Lantic Sugar

Long cooking fades raspberries. You can avoid this by using LANTIC SUGAR which dissolves instantly on account of its "FINE" granulation. LANTIC is the best sugar to use for all preserving on account of its purity and high sweetening power. LANTIC is a pure cane sugar equally good for the table, for general cooking and for preserving.

**100-lb. Bags
10 and 20-lb. Bags
2 and 5-lb. Cartons**

"THE ALL-PURPOSE SUGAR"

*Order from your grocer by name in
these full weight original packages*

PRESERVING LABELS FREE—Send us a red ball trade mark cut from a bag or carton and we will send you a book of 54 ready gummed printed labels containing 6 for each of the following fruits: strawberries, raspberries, blackberries, currants, grapes, cherries, plums, peaches, and pears. Address

Atlantic Sugar Refineries Limited, Power Bldg. Montreal

38



We have a large
stock of all sizes

FLOWER POTS

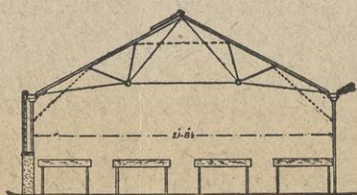
FERN OR BULB PANS

**3 AZALEA POTS
and Rimless Pans**

Orders Filled Promptly.

Send for Prices

THE FOSTER POTTERY CO., Ltd.
HAMILTON, ONT.



STYLE C

This is a New Model for 1915, the result of fifteen years' experience in Greenhouse construction for Canada.

Dotted lines show location of wind-ties that positively prevents vibration of the sash. Supplied in widths up to 25 feet 2 1/4 inches from post to post.

KING CONSTRUCTION CO.,
40 Dovercourt Road Toronto.

FRUIT MACHINERY CO.

INGERSOLL, ONT.

Manufacturers of the Ontario Power Sprayer Model 2-B, the handiest of them all. Engine fills the tank. Also a complete line of Apple Evaporating Machinery and power evaporator equipment. Our complete power systems for evaporating as we install them are practical, sanitary and labor saving.

Write for free illustrated catalogue on spraying and evaporating.



On the side bench are tomatoes and cyclamen; on the centre, cineraria, Calla Lily and numerous other plants not yet blooming.

A Charming Glass Garden Erected for Major Merritt

THOSE of you who have been privileged to enjoy Major Merritt's delightful hospitality at his St. Catharines residence, Ontario, may recall seeing the old greenhouse in your strolls about the grounds. Materials for it, so the Major informed us, came direct from England many years ago. It was, indeed, an interesting bit of construction. The narrow 6 inch wide glass was cut with a curved end and each one lapped deeply over the light below it.

The framing was of wood, and in comparison to our light, airy steel framed structure, did, indeed, seem a bit cumbersome.

With the tremendous advance made in recent years, in the highly successful growing of all kinds of flowers and plants in the modern constructed glass gardens, the Major concluded his greenhouse had outlived its usefulness.

We were asked to replace it with one of our up-to-date

curved eave houses, having three compartments or separate garden plots.

The one at the left is for general blooming plant favorites—a mingling of the delightful old-timey kinds with the newest sorts.

The centre one is filled with ornamental foliage plants, mostly of tropical origin.

The compartment at the right of it is a grapery, which in the Fall is also used for chrysanthemums.

It is a layout which is as thoroughly practical as it is attractive.

We would welcome the opportunity to send you our Two G's Booklet, which fully illustrates and explains a similar subject.

We call it "Our Ideal Layout."

Lord & Burnham Co. *Limited of Canada*
Greenhouse Designers and Manufacturers

Royal Bank Bldg., Toronto

Factory, St. Catharines, Ont.

Transportation Bldg., Montreal