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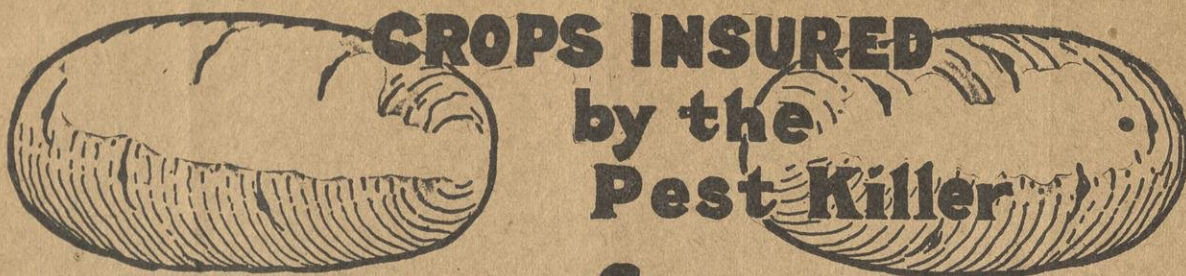
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Vol. 29, No. 5, May, 1921
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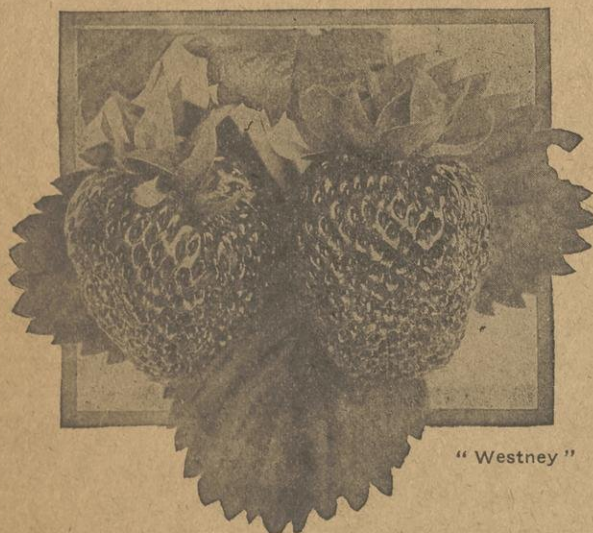
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Licensing Beekeepers*

Wm. Agar, Brooklin, Ont.

THERE were 13 inspectors out this summer (1920). They inspected 398 apiaries and 5,259 colonies at a cost of \$2,700, or approximately 51 1-4c per colony. There are about 9,000 beekeepers in the Province, and if we take the above figures as a basis to work on, the average apiary contains 13 colonies. If there are 9,000 apiaries in the Province with 13 colonies in each apiary, there would be 117,000 colonies of bees. If each colony costs 51 1-4c for inspection, it is going to cost about \$60,000 to inspect the Province thoroughly.

This is not taking into consideration the fact that a number of counties, probably eight, have little or no American Foul-brood, although considerable European Foul-brood. It would naturally not cost so much.

License System in B. C.

In British Columbia they have a license system: Chapter 17 of the Act says, "Every person who keeps bees in the province shall register his name and address with the Department of Agriculture on or before the first day of June, 1919, and on or before the thirty-first day of March in each year thereafter, and obtain a certificate of registration. Every applicant for registration under this section shall furnish such information in connection with his application as the Minister may require, and the Minister, on any grounds that appear to him sufficient, may refuse to register any applicant. At the time of registration every applicant shall pay an annual registration fee of one dollar and fifty cents, with an additional twenty-five cents for each hive of bees kept by him over the number of six, but not exceeding in any case a maximum fee of five dollars. Every person who in contravention of this section fails to register at the time, and in the manner provided shall be guilty of an offence against this Act."

Said Chapter 17 is amended by inserting therein the following:

"Where any diseased or infected

bees, hives, appurtenances or appliances are destroyed under the direction or order of an Inspector pursuant to this Act, such equitable compensation as the Minister deems fit may be paid to the owner thereof out of the Consolidated Revenue Fund."

Funds for Inspection.

If we have 9,000 beekeepers in the Province of Ontario, paying an average of say \$3 license, that would mean \$27,000 along with our \$7,000 now granted, which would give us \$34,000 over half of what would cover the Province.

At a meeting of the Dufferin County Beekeepers' Association in Shelburne on June 18th, 1920, it was moved by R. Phoenix, seconded by B. H. Smith, That every beekeeper in Ontario wishing to keep bees be requested to register as a beekeeper at a fee of \$1 for ten hives or less, and 5c per hive over this number, and the fund so received be used for inspection and educational work. This was carried unanimously.

Lambton County Association has started a movement to subscribe money

toward inspection work. I understand that at least two beekeepers have given \$50. They have over \$300. Their ambition is \$1,000. When they canvass the beekeepers, they intend to petition their township, town and county councils for help. Then they are in a fair position to go to the Government, and show what money they have and ask for a grant.

In New Ontario when settlers want a road, they get together and raise what money they can. They go to the Council if the township is organized; if not, they go direct to the Government and get two dollars for every one they raise. If the township is organized, the Council gives dollar for dollar. Then it is sent to the Government, which gives two for one. In this case, for every dollar put up by the settler, he has four to spend.

Taxing on Cash Value.

There is another way of raising money, that is by taxing according to cash value. The colonies would be assessed by the assessor when he is on



A prime swarm cluster, conveniently located on a young fruit tree.

*A paper read before the Ontario Beekeepers' Association Convention, December, 1920.

his rounds and a small percent charged as tax. This money could then be set aside for the inspection work, but as far as I can find out, this would be considered as class legislation.

In 1913 this question was up before the Convention and was not very popular, according to the Annual Report of the Ontario Beekeepers' Association. Here is the resolution brought in at that time:

"That the Executive be, ... and they are hereby directed to endeavor to have the Foulbrood Act amended so as to provide for the appointment of a Foulbrood Inspector in every municipality in the Province, and the annual inspection of every hive of bees in each municipality; one-half the expense to be borne by the owners of the bees and the balance by the Province or municipality as the Legislature may direct, such payment by beekeepers to be in lieu of taxes, provided that one Inspector may be appointed for more than one municipality."

Inspecting Own Neighborhood.

At that time, it was thought that a man could inspect his own neighborhood and do it cheaper than having an outsider do it. Mr. Pettit objected, saying, "The small beekeepers sometimes feel that the inspector wants to put them out of business, so as to remove competition." I think to-day that all inspectors would rather work out of their own neighborhood. I would like to quote some more from that Report:

"When we as a Committee representing the Association went to the Department late in the year 1911, or early 1912, to ask for an increased grant, which we got, the Minister told us, at that time, that he did not think we would be satisfied; that every time we went back and expected to have that grant increased from year to year, not to come with too great regularity. He said that we were spending a good deal of money for this, and he thought, as was done in other cases, that the beekeepers should help in some cases to defray the expenses themselves; and he suggested that we ought to have the feeling of the Convention whether the beekeepers would be in favor of paying tax and have the sum doubled and then have more inspection, and in that way there would be a greater campaign to have the Province rid of the disease."

The resolution as given above was placed before the Committee. The following resolution was brought in and was carried. Since that time you have had a chance to see how it has worked.

"Resolved, that in view of the fact that many of the Inspectors are unable to give the required time to the work

owing to the pressure of their own business, we recommend that the territory be divided into smaller districts, wherever a competent and experienced Inspector can be secured, believing that many experienced men can be obtained if nearer their homes.

"We believe that more inspection is necessary with a larger grant.

"We believe that a more competent inspection can be obtained through the local Inspector with the funds at our disposal."

Advantages of Licensing.

There are advantages and disadvantages in connection with the license system. Let us take the advantages first. If every beekeeper pays a license, it is going to make a person think twice before commencing to keep bees. Without a doubt, it is the beekeeper with from one to one dozen colonies that causes most of the damage where Foulbrood is concerned. I know several cases where men with a few colonies with disease do not care much whether they keep them or not. If they had a license to pay they would not keep them. I have burnt bees two summers for one man. I suppose as long as an inspector keeps going there and burning there isn't much danger of disease spreading. But suppose no inspector had called there in the last two years. There would be a nice nest egg of disease now. It is the same exactly in every district, where American Foulbrood has a start, and no thorough inspection done. Licensing would do away with that. I called another place where a man had 15 colonies of bees, and so afraid of them that last year's crop of honey had never been moved. In some cases an empty box had been set on top. I had all the honey to cut away before I could get near the brood-chamber. Beekeepers like that are a menace.

If all beekeepers paid a license, they would all be registered, and we would know how many there were in the Province, and where they lived. We could then figure up exactly how much the inspection would cost, and would have better data with which to approach the Government in asking for a grant.

If beekeepers paid a license they would not be so likely to start in the business unless they intended to stay at it, and would make a study of it before starting. They would be in touch with the Department and would know where to go for help. They would be better equipped to carry on the business and fight disease.

I know several beekeepers who would gladly pay a license to help along the inspection, and unless something is done, disease is going to gain ground. That something should come from the beekeepers, and until it does,

we are not going to get a much larger grant, and it is the beekeepers who are benefitted.

On the other hand, it will be a real hardship for some beekeepers to pay a license. I have in mind two girls who lost their mother this summer. They have fourteen colonies of bees, and a small garden. That is all they have to depend on for a living. They are not trained to go out in the world and earn their living otherwise. Home is home to them, even if they have only the bare necessities of life.

I have also in mind an old man who is much in the same position. When I went there this summer and found disease at that man's place, and his bees actually useless on account of disease, it nearly sent him to the poor house. At any rate he felt so badly about it that he broke down and had a cry. He had to do something to relieve his feelings. I could give you other cases where the bees are the main support. How are we going to help these people to support themselves? Send them to the poor house, and pay for their keep?

Objections to Resolution.

The resolution was turned down in 1913. Following are some of the reasons given at that time. When a man knows the disease, and even better than the inspector, why should he have to pay to have his bees inspected? Taxes are too high as they are; other lines of stock are not taxed. A man can specialize in sheep, pigs or cattle, and when he wants them inspected, the Government does it.

Another big objection was sending out men who did not understand the inspection work. That has been done. Men have to be trained, and the plan (where the experienced man goes with the inexperienced one), at present used is a good one. The idea advanced in 1913 was to let experienced men inspect their own neighborhood. The inspection work does not offer any inducement for a man to leave his own bees to go on the inspection work. At present, if an inspector gets \$5.50 a day and expenses and gets in 100 days, he has \$550 clear. If he put in the same 100 days handling bees of his own, say for the last four years, how much further ahead is he? The inspection work is a good stepping stone to give men experience in handling their own bees.

Then comes the question of collecting that license. How can it be done without too much cost? If it is going to take half the license to collect it, it isn't worth while. If we have to collect it by the tax collector on his regular rounds, it would cost about 7 per cent. I believe that is about the regular per cent paid to cover assessing and collecting in most places. That would cost \$1,890, not out of the way.

Beekeeping in California

Morris Spencer, Sawtelle, Cal.

(Continued from April issue.)

IN opening up your bees in the spring, the main thing is to equalize somewhat the honey in the hives, and distribute the pollen, if you can find it. Now begin to feed and build up the colonies just the same as in making increase. Be sure, however, to give them plenty of room, so that they will not get the swarming fever. If you do not want increase, it is a good idea to double up the hives just before the flow starts. Thus you have strong colonies to gather the crop.

Swarm Control.

Swarming seems to produce much terror for the small beekeeper. He will tell you that the bees will just swarm, and swarm, and swarm again. A little care will keep down these swarms and eliminate the trouble. Begin by using large enough hives, nothing less than ten-frame Langstroth. Do not try to produce comb honey only, for then one has to crowd the bees to make them seal up the small sections. Again, be sure to place your bees where there is plenty of shade. A hot sun often starts swarming in early spring.

After equalizing the brood in your hives, so that each will have the same number of frames of brood, go over the hives weekly. Also continue to equalize the brood. If one hive seems to forge ahead in brood, take away one of the frames of sealed brood, and give to a hive that is not doing so well. If any hives have started queen cells, tear

them down, shake the bees off most of the comb and give the sealed brood to some weaker colonies or to increase a smaller nuclei. One good method of building up colonies and controlling swarms, is to go ahead making increase at the first of the season. If you have a hundred hives increase them by 50 at the beginning of the season by making 50 three-frame nuclei and building them up steadily until the flow starts. Then, if you do not want the increase, double them back into the old hives, giving plenty of room and shade. You will soon have a good crop of honey, if it is available.

One annoying class of swarming here is what we call "after-swarms." The swarm is headed by several young virgin queens, which hatch at one time. The old queen goes out with the original swarm, and then these young queens begin to fight in the hive. One or more will soon fly out, followed by a bunch of bees. This makes the hive weak and if the beekeeper allows such swarming, he can look for an absence of honey.

We always give a swarm a frame of unsealed brood when hiving, as this holds them by putting the nurse bees to work. They will always stay "put" as it is called. When a swarm goes out, and is placed in a new hive, if brood is not given they send out scouts oftentimes and locate a new home, probably a bee-tree. As soon as these scouts re-

turn the entire swarm goes to this home.

Robbing among bees is quite troublesome. They have no sympathy for each other, but will take the last drop of honey from their neighbors and let them starve. This mostly happens when there is no honey coming in. When a good flow is on, they will not rob. With proper care, and by working only with the bees when honey is coming in, one can avoid this trouble. We also use a "robber cloth" as it is called, placing it over the hive when not working it. I have often helped prevent robbing by feeding in the open, a few hundred feet from the hive, while working the bees. By getting the bees working on this food, one can do pretty well in going over the hives.

Harvesting the Crop.

In extracting honey, one wants not less than a four-frame machine. We have also to be careful to let the bees seal all the honey up. It is then ripe and ready for marketing. Much of the honey market has been ruined by the beekeeper who takes out honey that is unripe or is not sealed up by the bees, thus it ferments when sold. During the last few years there has been put out what is called "chunk-honey;" it is nothing but ripe extracted honey with about one half of the can filled with comb honey. This package makes a fine grade of eating honey and the beekeeper can produce it just about as easily as extracted honey.

Building Up a Market.

We now come to the questions of turning the honey into money. One good method we have found is to build up a direct honey trade, carrying stock on hand all through the year. Produce a good ripe honey and guarantee it to give satisfaction or money back. I had the experience of building up a trade of over 400 customers in all parts of the United States, and rarely did I have any trouble. My sales have been over 50 tons this year.

The bee has few enemies in California as they can fly out nearly every month of the year. The queens, however, are often picked up in mating. The bee moth is another of the enemies, but by keeping pure Italian stock one can soon get rid of them. By scraping all lids and frames on going over the colonies, one can save quite a little wax during the year, and this helps out with the profit.

The bee inspectors of California keep after the diseases well and the beekeepers have the best of laws. Their main care is to see that bees are not kept in box hives without frames. This is where the diseases start, as the apiarist cannot look into them. The inspectors burn these as fast as found.



Hiving the swarm. Bees on the march into the prepared hive.

In locating a yard of bees, one has to see that there is plenty of pollen to use in breeding in the spring. Where there are a few eucalyptus trees, there is plenty of pollen. They also bloom in the winter season just when needed. In case there are no trees, one can place a little meal out and they will gather it and use it as pollen.

The honey crop can be much injured by the weather in the spring. In May we may have a few days of a hot spell which will dry up the entire year's crop, or we may have it just the other way with a month's fog. This may stop breeding, so that the bees have no strength when the flow starts. There are many things we can thank God for here in the golden State. One in particular is the fine climate of the foothill region where one can live and enjoy the outdoor work with the bees. That always means a good appetite for the pure honey gathered from the flowers of the land of sunshine.

QUESTION BOX

The Sex of Bee Eggs.

In "A Modern Bee Farm," 1914 edition, S. Simmins states forcibly that a queen is not capable of laying at will, either drone-eggs or worker-eggs, but that the workers have the say in deciding the sex. Do you consider Simmins or A.B.C. correct in this?—A. S. M.

"There has been considerable debate on the question of the queen being able to lay drone or worker eggs as the case may be. Theory that the workers had the power to decide the sex has been overthrown. So also has the theory, that the smaller cells in which the worker eggs are laid caused compression on the abdomen of the queen. Just how the queen lays either unfertilized or fertilized eggs is not known at the present time. We do know, from appearance, that the queen can lay fertilized eggs or worker eggs when these are most necessary. A good queen will even go to the extent of filling up all the worker cells in the combs in the spring of the year, and will not use drone cells until later in the season, although the latter may be on the same comb as worker cells. A poor queen will often fill drone cells in the early season, even though worker cells may be available. I believe the question is still open for anyone who would like to tackle the problem and find out just how the sex of the egg is decided."—Prof. F. E. Millen, Provincial Apiarist.

"How may the beekeeper keep himself and his helpers right up to the point of making the very best of his time during the short honey season?"—Morley Pettit at the 40th Annual Convention of the Ontario Beekeepers' Association.

More Honey---Less Swarms

F. Eric Millen, Provincial Apiarist, Guelph, Ont.

MANY, who have bees, find the question of swarm control, and the securing of a maximum crop of honey, without undue manipulation, a serious problem.

This season there will be an excess of early swarms, owing to the fact that the bees in many locations are approximately a month in advance in condition, unless beekeepers complete the following manipulations. This means with many that swarms will be common during the latter part of fruit bloom and dandelion blossoming period. If, however, the following directions are carried out (and they require little time), then the beekeeper will have stronger colonies when the main honey flow begins. Besides, one can make his increase or artificial swarm at the time he wishes, rather than at the time the bees would like to do it. The beekeeper can largely be master of the situation.

Directly fruit trees blossom or dandelion flowers are plentiful, give each reasonably strong colony a second hive-body, containing drawn combs or full sheets of foundation. If the colony is very strong, and the weather fine, one week after the second broodchamber is given, place an excluder on top, and add a third hive-body as a super. Leave the colony in the 2 or 3 hive-bodies until the clover flow begins in June.

As soon as it is noticed that clover is yielding, manipulate as follows. If the colony has two broodchambers and a super, remove the super and fill the second or top broodchamber with combs containing eggs and youngest brood. Place the remaining combs and queen in the first or lowest broodchamber, and place a queen-excluder over the single broodchamber which now contains the queen and the surplus brood which would not go in the second or upper broodchamber. On top of the queen-excluder place an empty super containing drawn combs or comb foundation. If a super has been used on the double broodchamber, place this on the empty super. On top of either the one or two supers, as the case may be, place the second broodchamber, now containing the eggs and youngest brood. Leave the colony this way until the morning of the tenth day. If increase is wanted, this top broodchamber can be removed, placed on a bottom board in a new location, and its entrance reduced so that only a few bees can enter and leave at one time. All the worker brood will be sealed, and there will be ripe queen-cells in this broodchamber, unless the honey flow ceased while the brood was on top.

This increase should be examined in from two to three weeks to be sure the young queen is mated and laying. If no signs of a queen are found, a queen-cell or young queen must be given and another examination made to be sure queen is laying. If no increase is desired, destroy all queen-cells in top broodchamber, not later than the morning of the tenth day or before the seventh day. Then leave this broodchamber in place, on top of the supers, and when the brood has emerged the bees will use it as a super. During this period the colony should be examined to be sure that more super room is given, if necessary.

If future weekly examinations of the broodchamber, containing the queen, show that queen-cells are being developed, they must be destroyed and all frames containing brood should be removed to the top hive-body and replaced with empty combs from one of the supers. The queen should be left in the lowest broodchamber. If sufficient super room is given, little trouble should ensue from swarming.

The Control of Swarming

C. B. Gooderham, C.E.F., Ottawa.

SWARMING is the natural method by which bees increase, but is a hindrance to the best results in honey production. Especially is this true of comb honey production.

The uncertainty of swarming, the reduction of the honey crop through a division of the working force of the colony, the possibilities of losing swarms, and the difficulty of controlling swarming without considerable labor, all make the control of swarming the biggest problem of bee management.

Colonies do not all require the same treatment. Swarming may often be prevented by the following manipulations; the introduction of a young queen; giving ample room for brood-rearing, just previous to and during the early part of the clover flow; providing plenty of super room for the storage of honey; giving adequate ventilation during the hot weather by raising the front of the hive on small blocks to enlarge the entrance; raising a few combs of emerging brood from the brood next to a super to relieve congestion of the brood chamber, and the destruction of queen cells before they are far advanced.

Colonies that have made advanced preparation for swarming and have capped cells or cells ready to cap over,

will often require more drastic treatment.

The destruction of queen cells every nine or ten days requires too much labor, and is not always effective.

In localities where the swarming season is short, the separation of queen and brood is usually effective. All the brood is removed from the brood chamber and placed in an empty super and the brood chamber filled with empty combs. The queen, and some of the bees brushed from the combs of brood, are left below with the empty combs and a queen excluder placed over them. Two supers of combs are placed over the excluder, and the super containing the brood is now placed on top. All queen cells should be destroyed when the brood is placed in the super, and again eight days later.

A more effective method is to remove the queen from the colony at the time the first active queen cells are found and to destroy the cells. Eight days

later again examine the colony and destroy all the queen cells but one, or destroy all and give a ripe cell of select parentage. In this way a young queen is obtained that will not swarm. This plan, however, may cause a certain amount of loafing, until the new queen starts laying. This may be overcome to a certain extent, by giving a ripe cell at the time of removing the queen.

It is a good plan to keep the queen's wings clipped for, should a swarm emerge, the queen will be unable to fly and will fall to the ground when she leaves the hive. The queen is then caged and the parent colony moved to a new stand. A new hive is placed on the vacant stand and the swarm will return, when the queen can be released and allowed to run in with it. The supers from the parent hive should be given to the swarm. Eight days later destroy all queen cells except one in the parent colony, to prevent after-swarms.

Swarming Seasons in Canada

F. W. L. Sladen, Dominion Apiarist

THE earliest swarming in Canada takes place in the south-eastern part of Vancouver Island, where, at the Experimental Farm at Sidney, swarming frequently begins about the fifth of May. The honey flow from clover comes as early as June, and in July and August, the weather is usually so dry that little honey is gathered.

The next earliest part of the country is the Lower Mainland and the most western of the mountain valleys, that is to say the Okanagan Valley, which is only from 1,000 to 1,400 feet above sea level, and southern and eastern Ontario. In the latter region, strong colonies will frequently commence swarming as early as Victoria Day, May 24, when the honey flow from dandelions is at its height. Regular swarming is deferred until the commencement of the clover flow about one month later. This year the season, so far, is exceptionally early in Ontario.

In the rest of Canada, including the Prairie and Maritime Provinces and even the North, general swarming begins during the latter part of June, if there is a flow to induce it, and continues throughout July. In the North swarming continues throughout August in the many parts where this month gives a good honey flow.

Preventing Swarming.

There is no fixed procedure for preventing swarming. One method, applicable everywhere, is to kill or remove the queen at the commencement of the main honey flow in all the colonies that show larvae in queen cells,

The colonies are examined for this purpose every nine or ten days during the swarming season. Nine or ten days after the queen is removed, every cell except one is destroyed. However, instead of leaving one cell, a better plan for the experienced beekeeper is to raise a batch of queens from the best non-swarming colony, in a colony or two from which the queen was removed. Then give one of these cells to each of the colonies from which the queens have been removed, the surplus cells being placed in nuclei especially made to take them. This procedure is carried out a second time after an interval of nine or ten days. Thereafter, there should be a sufficient number of young mated queens in the nuclei for one to be introduced instead of a cell to each remaining colony that needs treatment, and also to replace all the old queens in the apiary. By this means, the apiary, possibly an out-apiary, need be visited only once every nine or ten days during the swarming season. The treatment not only prevents swarming, but also requeens and gradually improves the strain of bees.

It is not too early to begin to think about next winter. How are you going to protect your bees? Get all the information you can on this subject now and be prepared when the time comes.

"Drones will fly as late as 5.30 to 8.00 o'clock in the evening."—F. W. L. Sladen

THE EDITOR'S DESK

The Crop Outlook

Reports reaching this office indicate that there is not likely to be a bumper crop in Ontario this season. The southern and western counties are suffering from a very dry spell and as this copy goes to press (May 20th) dandelion and fruit bloom are practically over. Clover in this district has heaved badly in a great many sections. The colonies, however, are in excellent condition to gather any crop that offers itself.

Central and Eastern Ontario counties are now in the middle of their dandelion and fruit flow and many of the careful beekeepers report colonies occupying three Langstroth ten frame broodchambers. Clover conditions are only fair. Sweet Clover seems to have suffered more from heaving than the Alsike. We have not heard from Northern Ontario beekeepers.

Backyard Beekeeping

Just recently there have been several cases come to our notice where city beekeepers have found themselves in trouble over the keeping of bees in the city. Two cases in particular involve beekeepers who at the time they commenced lived on the northern outskirts of the City of Toronto, and were practically situated in open fields. Now the property around them has been built up until one finds himself with some seventy odd colonies on a small lot and the neighbors objecting.

Ignorant fear on the part of the public is undoubtedly the chief trouble, but on the other hand, it is quite evident that a city yard must be made up of exceptionally gentle Italian stock, carefully managed and restricted to a very moderate number. There are many professional men keeping bees within city limits in Ontario. They keep them as an instructive and profitable hobby and enjoy the interest of their neighbors in their pastime, but the colonies are only handled during a good honey flow and all hybrid or cross stock is weeded out and replaced with gentle strains just as soon as they appear.

There have been threats at civic action pointing toward the exclusion of bees from the city limits in various cities in Ontario. We think that every case of irritation which has come to our notice could have been avoided by reducing the number of colonies and introducing the best of Italian stock to the balance. Our city beekeepers have done much to educate the public as to the value of the beekeeping industry

The Canadian Horticulturist

Published by The Horticultural Publishing Company, Limited.

The Canadian Horticulturist is published the first of each month in three editions, as follows:

FRUIT EDITION.

Devoted entirely to the interests of commercial fruit and vegetable growers—official organ of Ontario Fruit Growers' Association and of Niagara Peninsula Fruit Growers' Association. Subscription Rates.—\$1.00 a year; \$2.00 for three years.

FLORAL EDITION.

Devoted to the interests of amateur horticulture—landscape gardening, floriculture, fruit and vegetable gardening—and to the work and progress of Horticultural Societies. Subscription Rates.—60 cents a year; \$1.00 for two years.

BEEKEEPING EDITION.

Known as The Canadian Horticulturist & Beekeeper, and devoted to the interests of the beekeepers of Canada. Official organ of the Ontario Beekeepers' Association and of the New Brunswick Beekeepers' Association. Subscription Rate.—\$1.00 a year.

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Advertising rates, circulation statements and sample copies free on request.

Communications should be addressed

THE CANADIAN HORTICULTURIST,
Peterboro, Ontario.

The Pooling System

ONE of the most remarkable developments of the co-operative handling of fruit, as well as of other farm products, during recent years has been the pooling system. Among the first organizations of farmers to try out and make a success of this system were the raisin growers of California. So successful has this method proved that it has been adopted by many large successful organizations. Among the first farmers in Canada to adopt it, if not the first, were the milk producers in the Fraser Valley of British Columbia, who sell their milk through the Fraser Valley Milk Producers' Association. During the past three months widespread attention has been called to this system of selling through the action of the grain growers' associations of western Canada, when they appointed a strong committee of their best men with the object of applying the pooling system to the handling of the grain crop of western Canada.

Under the pooling system growers signed contracts with their central organization binding themselves to sell their crops only through their own central organization and authorizing the central company to deduct from the sale price the selling cost involved. In some cases a percentage is fixed to cover the selling cost. Generally these contracts are made for a period of five years. In the case of the Fraser Valley Milk Producers' Association, the producers first signed contracts for one year. The results were satisfactory, and the following year contracts were signed for two years. These contracts also proved satisfactory, with the result that recently the producers have signed contracts agreeing to sell only through their central organization for an indefinite period, with the stipulation that the contracts can be terminated by either side to the agreement upon giving a year's notice.

Numerous advantages are claimed for this system of selling. As a rule no effort is made to sell the products of the pro-

ducers until a sufficiently large number have signed contracts to insure their organization having a volume of business that will practically guarantee a success. The contracts, worded as they are, make it unnecessary for the central organization to sell stock. Banks are willing to accept the contracts as security and to make loans on them in view of the fact that the selling costs are a first charge upon the crops of the members. This method of contracting crops prevents individual growers from withholding their crops through temporary causes of friction in the management of the company. This is a source of protection to the company. Already the adoption of this principle is being considered in Ontario by some of the leading cooperative associations. We are certain to hear much more about it during the next few years than we have in the past.

A Central Organization

THESE are days when people are beginning to wonder if it is not possible to be over-organized. There are so many cooperative organizations of one kind and another, the question is being asked, What next? Nevertheless there is a growing need for a further step in the cooperative movement. In Ontario during the past few years the development of large central co-operative organizations has created a new situation. Previous to a few years ago there were practically no large central co-operative organizations, excepting possibly the Ontario Cooperative Apple Growers' Association, which, for various reasons, was never able to function effectively.

During the past few years there have been formed in Ontario several large central co-operative organizations each filling a separate and distinct field. The largest of these is the United Farmers' Cooperative Co. Ltd. This company directs activities in several separate fields, including the marketing of live stock,—in which its sales now amount to several million dollars annually—the marketing of eggs, the purchase of farm supplies and even the handling of groceries in a wholesale way. The Cooperative Wool Growers' Association is another large company which has been meeting with considerable success. Last year there was formed a new dairy company, United Dairymen Cooperative, Ltd., which in its first six months of business sold over a million dollars worth of dairy products. This year this company expects to conduct a business greatly exceeding last year's record. More recently there has been formed the Niagara Peninsula Growers' Ltd., the object of which is to market the fruits of the Niagara Peninsula fruit growers.

The foregoing organizations have much in common. It should be possible for them to learn from the experience of each other. At present there is no means by which they can do so. It is true, they might all unite with The Canadian Cooperative Union. This may be the logical step for them to take. So far, however, the Canadian Cooperative Union has devoted its activities mainly to producing co-operative enterprises in the towns and cities. Some step needs to be taken by means of which it will be possible for representatives from the co-operative organizations representing farmers to get together regularly and compare notes and at the same time arrange for united effort when such seems desirable.

The Right Principle

THE Provincial Minister of Agriculture, Honorable Manning Doherty, has been criticized for having offered to pay the salary for the first year of the new cooperative company in the Niagara Peninsula. While possibly there was some justification for this criticism, on the ground that he was pledging Governmental support for one commercial concern as against other commercial companies already in the field, we believe that the public will be inclined to be lenient in the matter in view of the fact that Hon. Mr. Doherty realizes that the most effective means possible of developing agriculture in Ontario is to promote marketing organizations among the producers.

For several decades the Ontario Government has spent annually large sums of money, endeavoring to induce farmers and fruit growers to produce better grade products and to grade these properly. Much of this advice has been wasted because producers have not had marketing organizations through which they could sell their own products. When high grade products have been produced, middlemen have often received most of the benefit. Thus producers have not seen enough profit in producing the best goods to encourage them to make the effort involved.

As soon as farmers commence marketing their products co-operatively in large quantities, they quickly learn the requirements of the different markets to which they cater and the profit that may be derived when large quantities of high-grade products are marketed under standard grades. This leads them to advise the producers as to what is required. This advice, coming, as it does, from their own officers, placed in a position, as they are, to know market conditions, is heeded and quick improvement may be noticed. It is doubtful if the oranges and raisins of California or the apples of the states of Washington and Oregon and of the Okanagan Valley of British Columbia would have been known as they are to-day in the eastern markets of this continent, as well as in Europe, had it not been for the efforts of the well-organized producers' companies which have promoted their sale. These companies were quick to see that their success was going to be determined by their ability to supply large quantities of high grade products regularly to their customers in the different markets of the world. By doing so they have been able to pay their members such satisfactory prices for their products that they have secured and now have no difficulty in holding their co-operation in promoting the production of the largest possible percentage of high-grade fruit.

Hon. Mr. Doherty realizes that once the fruit growers of the Niagara Peninsula unite in marketing their products, the whole force of their organization will soon be utilized to conduct an educational work among the fruit growers of the Peninsula to induce them to supply fruits for sale by their company that will ensure the company being able to market its products to advantage in competition with similar producers' companies, not only in the western States and western Canada but in the central and eastern States as well. Hon. Mr. Doherty is on the right track. He is to be commended for the wisdom and energy he is showing in carrying his policy into effect.

I. F. MILLER,
R. R. No. 2 - Brookville, Pa.

shippers: "The fruit show which it is proposed to hold in London in November next, will demonstrate to the public that, for quality and appearance of its apples, the British Empire can challenge the world. It is gratifying to place on record that at last such a show is to be held in the capital of the Empire. The public, however, are already aware of the excellence of Empire-grown fruit, and the value of the exhibition will lie more in stimulating the better distribution, by packing and grading of the same fruit for market purposes. There is no country in the world where apples are packed with quite the same

efficiency as those received from America. Canada is now a keen competitor with the United States, and the regard which is being paid to grading and packing in the great apple-growing Dominion of the Maple Leaf is undoubtedly doing much to enhance the prestige of Canadian produce amongst us, as compared with that of Oregon and Washington, Virginia and New York. This enterprise deserves all the encouragement possible. Just now, the Dominion fruit industry is rightly labouring under a grievance arising out of the price-controls muddle. We do not suppose that there has been any deliberate attempt to favour the home producer at the expense of overseas fruit-growers, but it is unfortunate that this impression should gain currency among our kinsmen across the Atlantic.

National Fruit Exhibition

A National Fruit Exhibition, which promises to be one of the most important ever held in this country, is projected for some time early in November next, and it is important that Canadian shippers should be well represented among the exhibitors. The project is to be financed by the Daily Mail, and this will ensure a great deal of valuable publicity. The technical arrangements, the definition of the classes, and of the particular scope of the exhibit, will be in the hands of the Horticultural Branch of the Department of Agriculture and Fisheries, assisted and advised by representatives of the English apple industry, and of the Dominions.

Full details have not yet been settled, but it has been decided that there shall be three main subdivisions: (1) Open to growers of fruit in the British Empire; (2)

open to growers of fruit in the United Kingdom; (3) open to growers of fruit in the Dominions. The first class is designed to permit of competition between the Dominions and the home growers. The exhibitors must be individual growers.

While the competitions as such will be limited to individual growers and growers' associations, and probably confined to displays of fruit in actual commercial packages, ample space will be available for provincial or federal exhibits. As the opportunity is regarded as quite exceptional in the facilities it will offer for the best kind of publicity, it is strongly recommended that steps be taken to see that, in addition to the full participation of growers and shippers in the competitive classes, all fruit provinces of Canada are adequately represented in the general display.

MOTT'S NORTHERN-BRED ITALIAN QUEENS.

Hardy, prolific and resist disease well. Sel. unt. 1, \$1.50; 6, \$8.50; 12, \$15.00. Sel. guaranteed pure mated or replace free: 1, \$1.75; 6, \$10.00; 12, \$18.00. Sel. Tested, \$2.50 each. Plans "How to Introduce Queens and Increase," 25c. E. E. MOTT, Glenwood Mich.

BEEKEEPERS!!!

10% Reduction on all Hives, Supers and Frames, Reduction in Foundation

Let us have your order NOW. We are in a position to make prompt shipment. Satisfaction positively guaranteed. Write us to-day. Catalogue sent on request.

The Canadian Bee Supply and Honey Co., Ltd.

Head Office and Factory—Aurora, Ont.
Branch Salesrooms: 87 Jarvis St., Toronto.

Pure Italian Queens

	Six	Ten
Untested	\$1.75	\$1.50 each

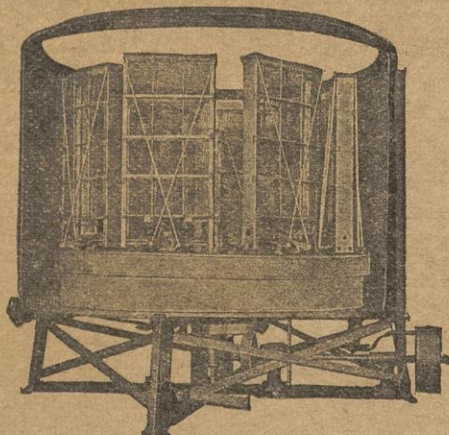
Price includes American Exchange and safe delivery guaranteed.

If wanting queens for May or June delivery, better order now—don't be disappointed by delay. My queens come from the best breeders in the Southern States and I can strongly recommend them.

EDWIN V. TILLSON

TILLSONBURG - - - ONTARIO

The Markle "New Idea" Honey Extractor (Patented)



If you are considering a power extractor you can make no mistake in buying this machine. The difficulty of securing material has delayed its being placed on the market, but we can do it now with every confidence in its efficiency. The following unsolicited letter from one of Canada's largest and best known honey producers tells what he thinks of it:

Mr. W. J. Craig, Manager Bee Dept.,
Ham & Nott Co., Limited.

Dear Mr. Craig,—I was very much pleased to see the new "Markle" honey extractor go through a test far more severe than it will ever have to undergo in extracting honey. That was at the Field Meeting of the Brant Beekeepers' Association. I might just say that I have tested this new extractor for two seasons in our extracting. We did all our honey extracting with this machine for two seasons, and I have no hesitation in recommending it. It extracts and turns the best machine got out previous to this. Yours very truly, combs when at full speed, and it can be set at any desired angle for extracting. I would be very loath to go back to (Signed) R. F. HOLTERMAN.

Brantford, Ont., June 11th, 1920.

Write us at once, as the season is advancing, and only a limited number can be got out in time for it.

HAM BROTHERS CO., Limited - Brantford, Ont.

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We Get Best Prices

OUR facilities enable us to realize top prices at all times for your fruit, vegetables or general produce. Aside from our large connection on the Toronto Market, we have established branch warehouses with competent men in charge at Sudbury, North Bay, Cobalt and Timmins. In time of congestion on the Toronto market we have a ready outlet through these branches. We never have to sacrifice your interests.

WE SOLICIT YOUR CONSIGNMENT.

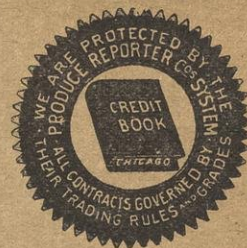
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Your address for Holland grown Hyacinths, Tulips, Narcissi, Gladioli, Iris, Paeonies and all miscellaneous bulbs and roots. Please write for catalogue.

APPLE BARRELS

New, standard-machine made, best quality. Delivered anywhere in Ontario and Quebec. Write for prices. Contracts made with Fruit Associations and others.

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ONTARIO.

TREES & SHRUBS
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NURSERYMEN LIMITED
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PAEONIES

Look over the paeonies in bloom and choose your varieties, and send us before June 1st your order for October delivery. We will send you (express charges collect) the most brilliant red "Felix Crousse," the queen of whites, "Festiva Maxima," and the best dark pink "Mons Jules Elie." Two roots each, six in all, \$1.75. Offer good only to June 1st. After that date double price.

H. P. VANWAGNER.

R. R. No. 5 - Hamilton, Ont.

Apple Exports Good

Over 888,713 barrels of apples were shipped from Halifax to the United Kingdom during the past export season. Shipments also went to Newfoundland and the West Indies. This makes the season just closed the second best on record. The best season was in 1911-12, when 1,250,882 barrels were shipped.

Monthly shipments were as follows:

August	..	2,246
September	..	97,999
October	..	188,538
November	..	164,566
December	..	150,170
January	..	129,094
February	..	106,993
March	..	43,547
April	..	5,560

Total .. 888,713

Killing Shade Trees

Undesirable shade trees, such as Norway poplar and Balm of Gilead may be killed by girdling the trees about four feet from the ground; then the bark should be stripped to the roots. This will cause the tree and its roots to die; later the entire tree may be removed and the stump grubbed out.

When a tree is sawed off at the ground without girdling, the stump and roots of the poplar variety may immediately send out hundreds of small sprouts which are difficult to destroy.—Ohio Experiment Station.

Parsley will thrive in shady places.—J. D. Nairn, Bartonville, Ont.

The Fruit & 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.

H. J. ASH

44-46 Church St. - Toronto, Ont

CONSIGNMENTS OF FRUIT AND VEGETABLES SOLICITED.

Shipping Stamps furnished on request.

DAWSON-ELLIOTT CO.

32 West Market St., Toronto, Ont.

Wholesale Fruit and Produce Consignments Solicited.

PETERS, DUNCAN Limited

88 Front St. E., Toronto, Ont.

See Advertisement on another page.

GLADIOLI

Varieties exhibited National.
\$2.50 per 40, in 20 named varieties.
\$5.00 per 100, in 10 named varieties.
\$3.50 per 100, good mixture.
\$18.00 per 1000, ¾-inch, 5 varieties named.

SANSBY,

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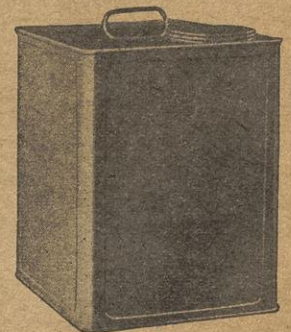
A Little Foresight—or Much Regret

Which is Your Choice This Spring?



You want your Honey Containers on hand when you need them—not weeks later. That is good business. Present indications are that the demand for honey containers will be heavy this season. You can readily understand how difficult it is for us to judge the season's requirements ahead when orders do not arrive until the last moment. It also takes time to stencil the pails with your name on receipt of your

order. Yet we want to give you the most prompt service possible—we want to be able to ship your order without delay. You can be assured of this only by placing your order well ahead of the actual season. Will you co-operate by ordering immediately?



Send for a copy of our Price List.

MACDONALD MANUFACTURING CO., Limited

Spadina Ave. and Richmond Street

TORONTO**CANADA**



Gladioli Bulbs that Bloom

THE Gladiolus is one of the most satisfactory flowers grown because it blooms continuously when it is cut and put in water, just as well as when in the ground.

There is no reason why every family cannot enjoy this grand flower, for the simple reason that it is easy to grow, cheap as a tulip, beautiful as an orchid.

GLADIOLUS FERGUSON'S EXHIBITION, MIXED—A wonderful mixture, containing a large percentage of the best varieties and latest novelties. Per doz., \$1.00; per 100, \$6.00.

GLADIOLUS PRIMULINUS HYBRIDS—A mixture of this charming type with all its wonderful assortment of delicate shades. If you want to be introduced to novelties—here is your opportunity. Dozen, \$1.00; 100 \$6.00.

A LIST OF GLADIOLUS covering 125 of the finest varieties to date, with full description and cultural directions, will be mailed gratis on application.

FERGUSON'S WAVED OR COUNTLESS STRAIN MIXED SWEET PEAS—The mixture par excellence, comprising only the finest and most distinct varieties, every one of which has the well-known wavy standard and wings of the true Spencer type. This mixture is made up by ourselves and is one of the most superb combinations ever offered. Pkt., 15c; oz., 50c; 1-4 lb., \$1.50; 1 lb., \$4.50.

DUPUY & FERGUSON

38-42 Jacques Cartier Square, Montreal

BRITISH COLUMBIA

Provincial Horticulturist

W. H. Robertson, District Horticulturist for the lower mainland, has been appointed Provincial Horticulturist. His appointment is a popular one, as his knowledge of horticultural problems is extensive. Mr. Robertson was born in Nova Scotia, lived in Ontario for a time, where he graduated in horticulture from the Ontario Agricultural College, Guelph, and later, went to British Columbia.

General Condition of Orchards

(Furnished by B.C. Horticultural Branch)

THE general condition of the orchards this spring in the Vernon District is much improved. The color of the bark in the majority of orchards is more nearly normal, in comparison with the light color of bark in evidence in many orchards last spring conditions which have prevailed, but undoubtedly more care and feed has been given to the orchards this year than ever before.

In the Penticton District all varieties of apples are nicely in the "pink," and, with the exception of Winesaps, promise favourably. Apricots are setting well, and from present appearances a great deal of thinning will be needed to ensure a first class pack. Sweet cherries are well past full bloom and promise well. Peaches may be considerably lighter than was at first supposed.

At Summerland, Peachland and Naramata sweet cherries and plums are now in full bloom, and from blossom prospects a good crop may be expected. Apple trees are well in the "pink," and lime sulphur control for mildew should be applied at once, as the damp dull days which have prevailed are ideal for the development of this disease.

The orchards are in splendid shape and the season's operations are well up to date. A greater number of orchards are this year seeded to cover crops, which are all doing well.

Powdery Mildew and Apple Scab

It is anticipated that growers throughout the entire Okanagan Valley will have to contend with a more serious outbreak of these two diseases than was the case in 1920. This is due to the climatic conditions which are prevailing.

Much powdery mildew is in evidence. To effectively control this disease it will be necessary for sprays to be applied consistently and thoroughly from now on. Lime sulphur 1-35 should be applied under good pressure, as the apples are in the "pink." This should be followed by another when the petals have fallen, or in what is known as the calyx stage. A further application should be made at about 1-40 in 10 or 12 days time. If the outbreak is serious further sprays may be necessary, but it is hoped that both scab and powdery mildew can be controlled with about three sprays.

Many consider it more advisable in spraying for scab, to omit the first 10 days spray; that is, the spray which is applied 10 days after the calyx spray, and to apply it approximately three weeks after the Calyx spray.



"Burlington" Steel Fence Posts Give Lifetime Service

Made of heavy high carbon steel and coated with rust resisting paint, "Burlington" Steel Fence Posts last indefinitely. They increase the value of your property by insuring permanent fences.

"Burlington" Steel Fence Posts are easy to erect—just drive them with a mallet. No holes to dig or fill in. The convenient clips hold the wire firmly. "Burlington" Posts stand any farm strain. They are the best post for your farm.

Sold by hardware, fence and implement dealers, or write direct for booklet about fences.

BURLINGTON PRODUCTS, LIMITED
307 SHERMAN AVENUE NORTH
HAMILTON, CANADA

NIAGARA PENINSULA

Annual Meeting

THE shareholders of the Niagara Peninsula Growers Ltd. held their first annual meeting on May 9 at Grimsby, and received the report of the Provisional Directors. This was adopted. It was pointed out that the control of the Company is spread over the entire district. Any district shipping over \$300,000.00 worth of fruit is entitled to an additional director. 625 shares have already been subscribed, this bringing in \$62,500.00. The total receipts to date have been \$12,340.00, with expenditure amounting to \$8,155.00.

A permanent board of directors was appointed as follows: Burlington, H. T. Foster; Stoney Creek, T. J. Mahony; Winona, J. P. Bridgmar; Fruitland, G. H. Carpenter; Grimsby, Col. H. L. Roberts; Grimsby East, H. K. Griffith; Beamsville, Jas. Taylor; Vineland, A. W. Smith; Jordan, H. W. Honsberger; Peachland, A. Craise; St. Catharines, F. L. Blaikie; Queenston, J. M.

Crysler, Fonthill; and G. C. Fenwick, Brown.

Messrs. Richardson, Gowans and Watson of Hamilton were appointed auditors.

It was decided to pay the Directors a fee of \$5.00 and the executive \$3.00 for each meeting held. A meeting of the directors followed, at which T. J. Mahony was appointed general manager at a salary of \$8,000.00 per year. The officers elected are: President, Col. H. S. Roberts, Grimsby; Vice-President, Arthur Craise, Louth; Secretary-Treasurer, G. G. Bourne, Grimsby.

Niagara Fruit Growers Ltd. have acted wisely in appointing Mr. T. J. Mahony as their general manager. Mr. Mahony is thoroughly acquainted with conditions in the Niagara Peninsula. He is a practical grower, and last year proved his ability as an organizer and business executive by the successful manner in which he handled the grape crop for the grower in a large portion of the Niagara District. If Mr. Mahony receives the full support of the fruit growers there is no reason why both he and they should not make good in the big new venture that is to be tried out this year.

FRUIT BASKETS

11 and 6 Quarts

The new government standard. We would be pleased to supply your requirements for this year.

Write us for prices.

Agents Wanted

HYSLOP & SONS
GREENSVILLE - ONTARIO



We have a large stock of all sizes

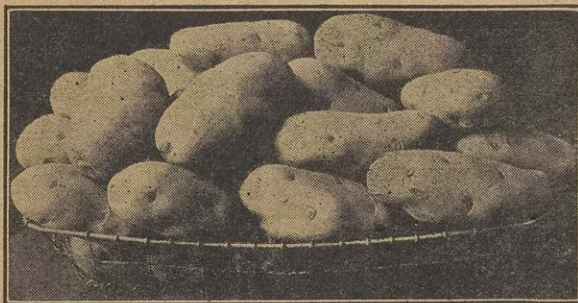
FLOWER POTS
FERN OR BULB PANS

AZALEA POTS
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Order Filled Promptly.

Send for Prices

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



Sprayed Potatoes

They not only command best market prices but the yield is much greater. Here's actual figures:—At a cost of \$1.00 to \$3.00 a potato crop was increased from practically nothing to 400 bushels to the acre.

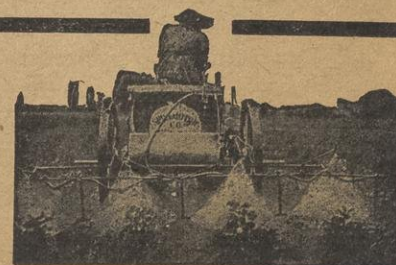
Spramotor
It isn't a SPRAMOTOR unless we made it

You can't afford to lose a third or half your crop!

The time to plan for potato spraying is right now! Order a Spramotor at once, and get 250 to 300 bushels of potatoes to the acre, besides having the outfit for all spraying, painting, whitewashing, etc.

There's a Spramotor for every purpose—prices from \$7 to \$400—hand operated, horse power and gasoline engine machines. Write for free ninety-page book on crop diseases and spraying. Gives Government figures and formulae, valuable reports, directions, etc.

SPRAMOTOR CO., 14 King St., London, Ont.



Banking by Mail



Those living at a distance can do their Banking By Mail just as safely and conveniently as though done in person. Many Farmers save themselves special trips to town by adopting our system of Banking By Mail. The Manager will explain this helpful plan. Write or see him, the next time you are in town.

THE MERCHANTS BANK

Head Office: Montreal. **OF CANADA** Established 1864.

With its 149 branches in Ontario, 47 branches in Quebec, 1 branch in New Brunswick, 3 branches in Nova Scotia, 44 branches in Manitoba, 44 branches in Saskatchewan, 87 branches in Alberta and 14 branches in British Columbia, serves rural Canada most effectively.

WRITE OR CALL AT NEAREST BRANCH.

SOCIETY NOTES

Gananoque

THE Gananoque Horticultural Society, although organized only a year ago with a membership of 127, has already enrolled 368 members this year. The motto of the Society is "Gananoque More Beautiful," and already there is evidence of a desire to live up to it.

A survey of the river front has been made by a committee and suggestions for improvements adopted by the directors. Another committee has in hand the regulating of bill-boards, shade trees, neglected lots, etc. Prizes are being offered for the best kept lawns, flower and vegetable gardens, in each ward. Plans are, also, already under way for a Flower, Fruit and Vegetable Show about the end of August.

The Mayor and two members of the council are on the Board of Directors, together with prominent professional and business men, and a number of enthusiastic ladies. All are working to make Gananoque—"The Canadian Gate-way to the Thousand Islands"—as beautiful as its environment.

St. Thomas

THE membership of the Society is now nearly 1,500. It is confidently expected that at least 2,500 members will join this year. Members are located in some 75 towns and cities throughout Canada and the United States. Some \$16,000 has been raised in cash donations,

FARMING AND FRUIT GROWING

These two industries will be big factors in the solution of the food problem of Europe. It will pay you to increase your crops.

If you require a loan to do so, consult the Manager of any of the following branches:

Niagara Falls—J. B. A. O'NEIL, Manager.
St. Catharines—B. B. MANNING, Manager.
Welland—W. D. S. FRASER, Manager.

THE DOMINION BANK

IMPERIAL Lubricants

FOR ALL FARM PURPOSES

IMPERIAL POLARINE OIL
IMPERIAL POLARINE OIL HEAVY

For gasoline-burning engines—automobiles, tractors and trucks.

IMPERIAL POLARINE "A"

For motors requiring an unusually heavy oil.

IMPERIAL POLARINE KEROSENE TRACTOR OIL
IMPERIAL POLARINE KEROSENE TRACTOR OIL
EXTRA HEAVY

For kerosene-burning stationary engines and tractors.

IMPERIAL PRAIRIE HARVESTER OIL
IMPERIAL GRANITE HARVESTER OIL

For open bearings of separators, binders, etc.

IMPERIAL CAPITOL CYLINDER OIL

For steam cylinder lubrication—tractors and stationary engines.

IMPERIAL GAS ENGINE OIL

For stationary or portable engines using kerosene or gasoline.

IMPERIAL POLARINE CUP GREASE
IMPERIAL THRESHER HARD OIL

For grease cup lubrication—clean, solidified oils.

The Imperial Charts of Recommendations indicate exactly what grade of Imperial Polarine will give best results from your type of tractor or automobile. See charts at your dealer's.

A Wide Variety But All Alike in High Quality

NO one oil meets the requirements of all farm machinery. That's why Imperial Lubricants are made in many different grades—a special one for each type of machine. Every grade is carefully formulated and tested. All conform to the highest standard of quality.

Imperial Farm Lubricants completely coat rubbing surfaces, reducing friction and wear. They cut down repair bills. They slow up depreciation. They keep your machinery running smoothly and giving good service all the time.

Listed at the left you will find the right lubricant for every farm need. The Imperial Oil man will gladly advise you. Talk it over with him.

IMPERIAL OIL LIMITED

Power - Heat - Light - Lubrication
BRANCHES IN ALL CITIES



and this will be considerably increased.

The landscape department is in charge of Albert Pimlatt, who, although a young man, has had considerable experience in horticulture in the Old Country. He has eight or ten men, mostly practical gardeners, under him. Even this large staff has been inadequate to meet the demands of the members in designing and planting their home surroundings.

Considerable interest is being manifested in the coming International Show of the American Gladiolus Society on August 24-25. The use of Alma Ladies' College has been granted by the College Board for the convention and show. The dormitories will be used to house the out of town guests, some of whom are coming from as far as California. An elaborate program of entertainment is being prepared, the chief event being a banquet at Port Stanley. From the interest shown by Ontario Societies and United States

fanciers, the most successful show in the history of the A.G.S. is assured.

A rare collection of Iris has been given to the society by A. C. Amy of St. Paul, Minn., and another from the O.A.C., Guelph. S. F. Woods, past President of the London Society, will send enough Iris "Comte de St. Clair" to supply each member with a bulb.—F. E. B.

First prize for lilacs was won by Mrs. E. N. Coutts, who also cleaned up in the vegetable classes. A beautiful specimen of calceolaria was shown by Mrs. W. H. Paterson. Other prize-winners were Mrs. M. B. Quantz and Mrs. Alex. Doherty.

The judges were W. G. Preston, W. H. Paterson and Miss Bessie Armstrong.

Tulip Show at Agincourt

A profusion of gorgeous blooms was shown at the annual tulip show of the Agincourt Horticultural Society on May 17. Flowers raised by the children in the school plots won a number of prizes.

Mrs. John Elliott won the special prize for the best individual tulip shown and the prize for the best early tulips. Mrs. G. B. Padgett was first in the parrot tulip class, and Mrs. J. E. Burrows in the Darwin class.

New Societies Formed

Quite a number of new horticultural societies have been formed in Ontario this year, with an aggregate membership of about 2,000. These are as follows: Almonte, Beamsville, Bridgeburg, Brooklyn, Cardinal, Creemore, Glencoe, Harrow, Highgate, Iroquois Falls, Mimico, Matilda Township, Mount Dennis, Orono, Paisley, Paris Road, Petrolia, Preston, St. George, St. Mary's, Smithville, Wales, Watford.

If You Want a Full Crop of Good Quality—Spray!

and spray systematically with Insecticides that furnish maximum poisoning strength and killing power.

Abundant yield and prime fruit are assured the farmer or fruit grower using

CANADA PAINT INSECTICIDES

for orchard and garden spraying. While entirely non-injurious to the foliage or fruit C. P. Insecticides effectively control the profit destroying insect pest.

C. P. DRY LIME SULPHUR

is just such an Insecticide possessing all the well known virtues of the Lime Sulphur Solution without any of its disadvantages. Put up in convenient sized con-

tainers it is very easily handled, mixes readily with water, adheres effectively to the foliage and retains its strength under all conditions of climate.

The Canada Paint Dealer in your town can supply you with this and the other C. P. Insecticides including

PARIS GREEN
ARSENATE OF LIME

SPRAYIDE
ARSENATE OF LEAD (Dry and Paste)

A FREE SPRAYING BOOKLET full of useful information will be mailed you on request. Write to our Montreal Office to-day for your copy.

THE CANADA PAINT CO.

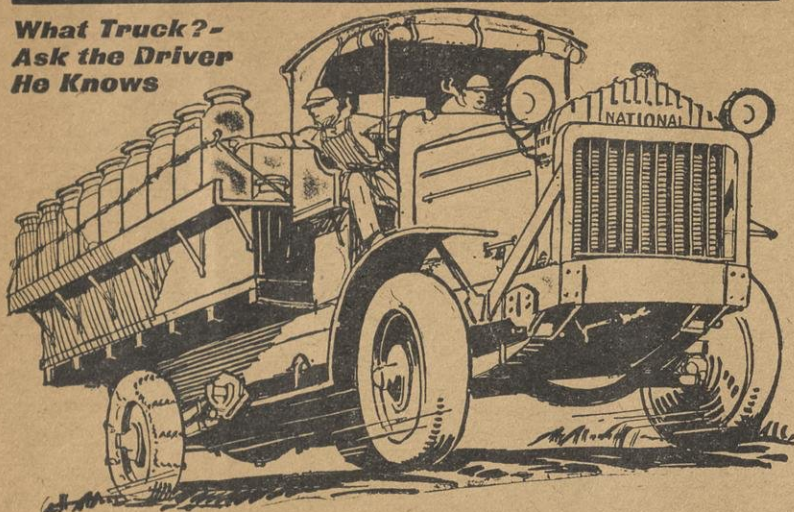
LIMITED

Makers of the famous "Elephant" Brand Genuine White Lead

MONTREAL TORONTO HALIFAX WINNIPEG CALGARY VANCOUVER



**What Truck?—
Ask the Driver
He Knows**



You can depend upon National Trucks to give continuous transportation because factory and dealer organization stand back of what you buy. National service covers Canada. Service stations are easily reached, no matter where you are located. National dealers know that the sale of a truck has only commenced when first installed. It is their aim to keep your National on the job twenty-four hours a day, every day in the year.

Made in 1, 1½, 2, 3½ and 5 ton models, there is a National to suit your needs.

**NATIONAL STEEL CAR CORPORATION, Limited
HAMILTON, CANADA**

"Write for illustrated catalogue and name of the nearest National Dealer."

Made-in-Canada

NATIONAL TRUCKS

Paeonies, Iris, Delphiniums

and all rare and hardy plants..
Send for 1921 Catalogue now ready.
Special prices for those planting in quantities.

Every hardy plant worth cultivating, true to name.

GLADIOLI.

All the leading varieties at moderate prices. Special terms for large growers.

Hybrid Tea Roses.

Clean grown Irish stock, all leading varieties.

DOUGLAS GARDENS
OAKVILLE - - - ONTARIO

GLADIOLI

*Some of The Best
All Flowering Size Bulbs
1¼" and Over*

	Each	Dozen
Europa, snow white	15c	\$1.25
Loveliness, beautiful cream...	10c	1.00
Mrs. Frank Pendleton, salmon pink	15c	1.25
Niagara, creamy yellow	10c	1.00
Prince of Wales, light salmon	15c	1.25
White Giant, large white	25c	2.50
20 mixed bulbs to one address		\$1.00

My price list of all the leading varieties for the asking.

ROBERT CAMERON
210 Ontario St. St. Catharines, Ont.

The Late Mr. Frankland

MANY amateur horticulturists, as well as florists, particularly in and around Toronto, heard with great regret recently of the death of Henry R. Frankland. Mr. Frankland was an enthusiastic horticulturist. Although he was an amateur, he was closely associated with the professional side of the business through membership for many years in the old Toronto Gardeners' and Florists' Association. Mr. Frankland was one of the most active men in the formation of the Ontario Horticultural Exhibition, of which at one time he was the President. For many years he was the Chairman of the Horticultural Section of the Canadian National Exhibition, a position he held at the time of his death. Big hearted, big physically, with abounding energy and determination, he was widely known to the members of the trade, and he was always looked upon as a staunch champion of the interests of horticulture. He was active in securing many improvements in connection with the exhibiting of flowers and other horticultural products at the Canadian National Exhibition, including the erection of the Horticultural Building itself.

For some years past, Mr. Frankland, who for many years was collector of Inland Revenue in Toronto, has devoted his chief attention to a large farm at Hornby, not far from Toronto, where his love of horticulture was in evidence. He will be missed by many members of the trade, who will feel that they have lost a personal friend and good comrade.

Simcoe Reforestation

Simcoe county, Ontario, is acquiring a block or 800 acres in the township of Vespra for planting out a municipal forest under the Ontario Government's reforestation scheme. The land, useless for ordinary agricultural purposes, is being secured at a cost of about six dollars per acre. There is some second growth pine, white birch, red oak, and a little hardwood on the property. The whole block was once covered mainly with pine, and since this was removed the land has remained practically idle. The land is within a mile of a railway station and about eight miles from Barrie, the county town.

Preserving By Freezing

THE preserving of fresh fruit by freezing will soon become of practical commercial value. The United States Government for several years has been investigating this method, and reports that such fruits as strawberries, raspberries, logan berries, blue berries, currants, and cherries are now being frozen.

The process is simple. The fruit in the same crates in which it is marketed is subjected to a temperature of about 10°F. Soft fruit is usually subjected to a lower degree. The fruit can be kept in storage as long as the temperature is maintained. The frozen product must, however, be used as soon as it is thawed, as thawing breaks down the tissues and allows the fruit to decay rapidly. The frozen fruit is in every way comparable to the fresh product.

Freezing does not do away with mould, though it will not develop as long as the fruit remains at the temperatures advised.

The Canadian Horticulturist

40 Years Ago

(Issue of May, 1881.)

"The Brighton grape does well at Trenton, County of Hastings. Dr. Henry W. Day, of that place, writes: 'I have now in my garden a Brighton grape vine planted in 1877. It is an excellent grower.' The fruit is of excellent quality and the vine an early and abundant bearer."

"We have received Mr. Lewis Woolverton's samples of the Princess Louise apple, which was exhibited at a winter meeting of the Association, and very highly recommended in the report of the committee on new fruits. We fully coincide with him in the opinion that it is destined to take a leading place among our Canadian varieties."

20 Years Ago

(Issue of May, 1901.)

"Now that Canadian pears are finding a place in British markets, and are likely to bring remunerative prices, it will be well to inquire the varieties to be planted for export. The fewer the number of varieties sent, the better will these become known, with a consequent readier sale."

Bartlett, Duchess, Bosc, Lawrence, Anjou, Louise Bonne were recommended.

"Some varieties of apples, otherwise good keepers, are apt to scald in cold storage. York Imperial, Peck's Pleasant, Grime's Golden and Greening are all susceptible. This tendency may be largely abated by care in spraying and fertilization."

"Among the multitude of peaches that have proved their value this year, there are few of the white-fleshed free stones that have equalled the Mountain Rarripe."

Striped Cucumber Beetle

A MATERIAL that acts as a poison, repellent and fertilizer has been developed by the Ohio Experimental Station, Ohio, for the control of the striped cucumber beetle.

This is composed of one part of calcium arsenate and twenty parts of land plaster. This was found to be superior to twenty-five different materials and compounds tested for controlling this beetle.

The dust may be applied with a simple shaker, made by punching a score of holes with an eight-penny nail into the bottom of a half-gallon tin can.

As soon as the young plants come up, the first application is made. During fair

weather two applications per week are adequate, but during rainy seasons dusting after each rain is necessary.

Usually ten to twelve applications per season are required. The dust adheres best, however, when the plants are wet with dew or rain.

Thieving Extraordinary

A most extraordinary example of thievery was recently perpetrated on A. H. Spera of Stoney Creek, Ont. He had just completed the planting of a new plum and cherry orchard of several hundred trees. On making an inspection a few days later, he found that all the trees had been pulled up and carried away. This is an entirely new type of vandalism, that is probably due to the increased value and scarcity of fruit stocks.

Yakima Valley

Recent reports state that shipments of Yakima apples have fallen this season far below the record for last year and large quantities of apples are still on hand. On top of this come further reports that the outlook for the coming crop is that it will be a record breaker. It is estimated that there may be seventeen thousand cars.



Beautifying Your Home

Your lawn, your flower-beds, your walks and drives, your house itself may be all that beauty and careful attention can provide, but the effect will be spoiled by an untidy fence.

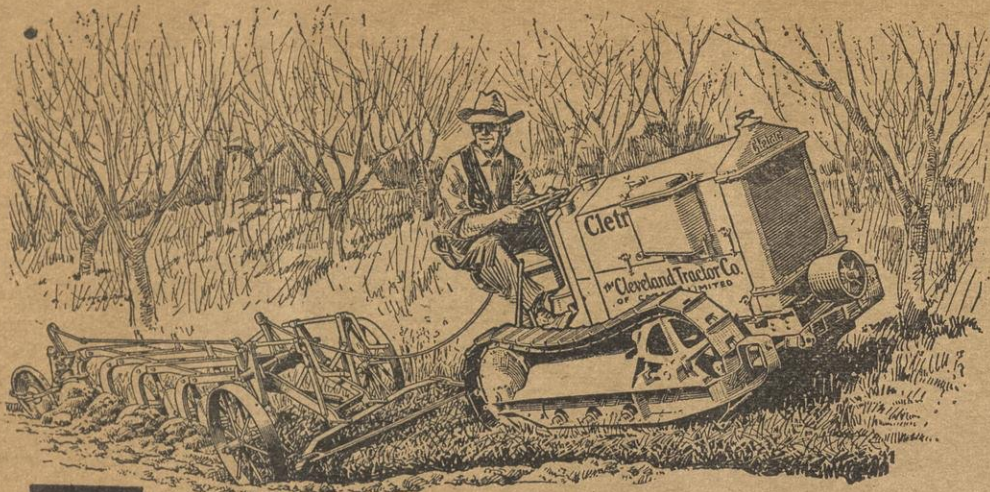
MAKE YOUR PLACE LOOK NICE FROM THE STREET

Frost Angle Steel Picket Fence increases the beauty of the city residence or the country estate. On account of its simplicity of design, its strength and beauty, it is adaptable to parks, libraries, churchyards and schools.

Made in heights from 3 feet up.
Consult a Frost dealer or write

Frost Steel and Wire Co., Limited
Hamilton, Ontario

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HARD THIS WAY, BUT—



EASY ON A TRACK THE CLETRAC WAY.

Cletrac's Just Right For The Orchard

Cletrac gets at every corner of the orchard. Compact and smooth-bodied, it threads its way in and out amongst the trees, doing every job of cultivation. Works close up to the trunks without bruising the bark, and goes easily under out-hanging branches.

Cletrac rides lightly on top of the soft soil in orchard or field, on its broad tracks without sinking in. Does the work of three men and six horses. Just as powerful on hills and side-slopes as on the flat. Does every hauling and belt-work job about the farm.

Our booklet, "Selecting Your Tractor," is packed full of Cletrac facts. Write for your copy at once and get in touch with the nearest Cletrac dealer.



THE CLEVELAND TRACTOR COMPANY
OF CANADA, LIMITED

Home Office: 21 Ottawa Street, MONTREAL
Western Sales Office: 261 Fort Street, WINNIPEG

FLOWER SEEDS KELWAY'S

choice strains of Florist's Flowers are unsurpassed and we can point to over 300 exhibition Awards gained in all parts of the world.

Prices always available—spot or growing crops.

The Address

KELWAY & SON Wholesale Seed Growers
LANGPORT, ENGLAND

POULTRY POINTERS

If natural incubation is used, have the hens set in a place by themselves, and use some convenient nest that will give absolute control over the setting hens. It is a good plan to set a number of hens at the same time. Test the eggs as you would in the incubator and double up after each testing, and again double up when the chicks are hatched.

Don't be too flattered if the growing chicks run after you whenever you appear. The truth of the matter is that they are hungry. Keep growing feed before them all of the time.

A standard-bred male at the head of a mongrel flock will improve the quality of the stock materially. A mongrel male will produce no improvement in quality.

Every poultry keeper must fight mites. They are carried by sparrows and in various other ways. Mites thrive in unclean houses—in the nests, on the floor, and in cracks and crevices about the roosts. They are first noticed in early summer hiding under and about the perches. When allowed to multiply they spread to all parts of the house. They attack the bird at night and live by sapping its blood. They may kill little chicks and effectively reduce egg production. When you first notice the mites clean the house thoroughly and spray the nests, dropping boards, walls and perches with kerosene. As a precaution, white-wash the entire house.

The disposition of the male bird has considerable to do with the fertility of the eggs. A male that is greedy and quarrelsome is apt to drive hens away from the feed, and gulp down more than is good for him. Such males become over-fat and consequently sluggish. On the other hand, the too gallant male will stand back while the hens are helping themselves. His condition becomes as bad as that of the greedy fowl, for he is underfed and has not the proper strength to fertilize. Neither of these conditions applies where hopper feeding a dry mash is practised.

There is a good and a bad trait connected with having the fowls tame. It is good from the fact that tame fowls are contented, and contented hens are layers. Wild and excitable hens are, as a rule, poor layers. Tame fowls can be picked up without scaring the rest of the flock. On the other hand, tame fowls are often allowed to eat out of the hands, and are thus given extra food on account of their cuteness, the consequence being over-fat. Have the fowls tame, but do not over-indulge them. Hopper feeding is a remedy.

It is urged that all poultry-keepers adhere strictly to the following principal rules in handling their poultry and eggs:

Keep the nests clean; provide one nest for every four hens.

Gather the eggs twice daily.

Keep the eggs in a cool, dry room or cellar.

Market the eggs at least twice a week.

Sell, kill, or confine all male birds as soon as the hatching season is over, so as to produce infertile eggs. The male bird has no effect on the number of eggs produced.

THE HORTICULTURAL WORLD

The United States Department of Agriculture has warned the people of that country against a new vegetable gold brick, the jack bean, that get-rich-quick gentry are introducing under various aliases, such as "Pearson bean," "Wonder bean," "Wataka bean," "Gotani bean," "South American coffee bean," etc. This bean comes from the West Indies, where supernatural powers are ascribed to it by savage disciples of Voodoo worship. Any belief in its power to fill the pocketbooks of Northern folks would be weird indeed.

Bows of yew for modern archers are to be made from trees sold on a United States national forest in the State of Washington. The yew has long been known as the best of all bow woods. Famous English archers

would have no other. One of the three species of yew in America, the ground hemlock, is found in the North Atlantic region and in Canada.

The United States Department of Agriculture states that tomato seed that comes from canning factories should be avoided, as it is usually made up of a mixture of strains and varieties, and is likely to carry disease germs and produce an inferior yield and quality of fruit.

The United States has prohibited the importation of fruit stocks, cuttings, buds and scions from Asia, Japan, the Philippine Islands and Oceania. While importation has not hitherto been large, it is not intended that such stock shall continue to come into that country accompanied, as it might be, by the innumerable kinds of insects and diseases that abound on the other side of the Pacific.

Speaking before a committee of the On-

PLANTS FOR IMPORTATION

Roses, Buxus, / zaleas, Paeonies, Flowering Shrubs of all kinds for outside and for forcing.

FRUIT and NURSERY SEEDLINGS for budding
EVERGREENS and TREE stock
LINING OUT STOCK of all kinds
ANY QUANTITY. BEST PRICES

HARRY KOOLBERGEN

BOSKOOOP

HOLLAND

Send all enquiries and orders to Arch. P. Marshall, Niagara Falls, Ont., Canadian Agent.

TULIPS FROM HOLLAND

All charges paid to any point in Ontario.
Send for complete List. Per 100
Artus, Red \$3.00
Bacchus, Scarlet 3.00
Canary Bird, Yellow 2.90
Chrysolora Yellow 3.00
Couleur Ponceau, Cherry Red 2.90
Dusart, Dark Scarlet 3.00
LaReine, White 3.00
Pottebakker, white, scarlet and yellow 3.25
Rose Gris De Lin 3.00
Thomas Moore, Orange 3.00

Say it with flowers and let it be Gladioli.
Send \$1.00 for large box of blooms in season.

J. B. KENNEDY,
400 Mornington Road - Stratford, Ont.
Grower and Importer of Gladioli and
Tulips, Wholesale and Retail.

Dutch Bulbs For Canadian Gardens

Grower to Grower

Tulips, Narcissi, Hyacinths, Crocuses, Etc.

Import orders accepted from Horticultural Societies, School Boards, Park Commissions, and private individuals, up to end of August. Order early. Catalogue ready in April.

We have been twenty-three years in the Canadian trade, and our business has grown steadily in that time. Our trade-mark is "QUALITY."

VAN'T HOF AND BLOKKER

Bulb Growers and Exporters.

AKERSLOOT - - - HOLLAND

Write our Canadian Office:

430 BRUNSWICK AVENUE, TORONTO.

PERRY'S SEEDS

Alpine and perennials, unique collection; many new varieties unobtainable from any other source.

Hardy and adapted for Canadian climate.

HARDY PLANT FARM, ENFIELD, ENGLAND

THE RED TERROR

:-:

in this district is the

:-:

FOREST FIRE

It robs the public treasury. It cuts off employment. It undermines our cooperage industry.

This advertisement is inserted by the Sutherland-Innes Co. Ltd., of Chatham, Ontario, manufacturers of Staves, Hoops, Heading, Head Liners, standard machine-made Apple Barrels, etc.

FOR SALE and WANT ADS

Advertisements in this department inserted at the rate of 5 cents per word. Each word, initial or group of figures counts as one word. Minimum 50 cents cash, strictly in advance.

BEEES AND BEE SUPPLIES

WANTED—Bees, full colonies only. A. F. Hodgson, Jarvis, Ontario.

ITALIAN QUEENS—Three-banded, select untested, guaranteed. Queen and drone mothers are chosen from colonies noted for honey production, hardiness, prolificness, gentleness and perfect markings. Price, May and June \$1.50 each; 12 or more \$1.25 each. Send for circular. J. H. Haughey & Co., Berrien Springs, Mich.

FOR SALE—A few strong colonies Italian bees. J. Raymond Ball, Knowlton, Que.

QUEENS OF QUALITY—Our Hand-Moore and good honey gatherers. Bred strictly for strain of three-banded Italians are beautiful business. Untested \$1.50, half doz. \$8.00, select \$2.00. W. A. Latshaw, Clarion, Mich.

MOTT'S NORTHERN - BRED ITALIAN QUEENS—At Glenwood, Mich., have a world-wide reputation. Only 172 miles from Windsor, Ont. See display ad. on page 80 for price.

FOR SALE—A limited number of leather colored Italian queens, the kind that get the honey. L. C. Keet, in 1919, produced 40,000 pounds of honey from 200 colonies. Geo. R. Howe, Sackets Harbor, N.Y.

QUEENS FOR SALE—Italian queens, recognized honey-gathering strain. June 10th (a little earlier if possible) until close of season. Untested, each \$1.75, six \$10.00, twelve \$18.50. R. F. Holtermann, Brantford, Ont., Canada.

HARDY ITALIAN QUEENS—\$1.00 each. W. G. Lauver, Middleton, Pa.

"SHE-SUITS-ME" three-banded Italian queens. After June 15, one to nine queens, \$1.50 each; ten to twenty-four queens, \$1.40 each; twenty-five and up, \$1.25 each. Before June 15, \$2.00 per queen. Canadian bills and checks accepted. Allen Latham, Norwichtown, Conn., U.S.A.

QUEENS ON APPROVAL—Bees by package or colony. Write for price list. A. M. Apple-gate, 840 Main St., Reynoldsville, Pa.

PURE ITALIAN QUEENS, \$2.00 each. F. L. Barber, Lowville, N.Y.

BEE SUPPLIES

HIVES, Hive markers and Scales. Write for large catalogue of bee supplies and books. Morgan's Limited, London.

FOR SALE—40 new 2-storey 8-frame hives, set up and wired, \$4.00 each; 40 unbound zinc excluders, 40c each; 30 pounds brood foundation, 5-lb. box, \$3.75; six-frame automatic reversible power extractor, nearly new (Ham & Nott), \$50.00. W. H. McLean, Cardale, Man

EMPLOYMENT

FOREMAN WANTED—With good experience in orchard and vegetable work. Give particulars as to experience and where obtained, age, education and other qualifications. Good salary to qualified man. Horticultural Department, Macdonald College, Que.

MISCELLANEOUS

FOX FARMING—Select stock for sale. Correspondence solicited. Literature free. Blake Vannatter, Georgetown, Ontario.

SAVE YOUR TREES—Write for catalogue of insecticides and sprayers with free complete spray calendar. Morgan's Limited, London.

POULTRY SUPPLIES

EGG CASES, FILLERS, LEG BANDS AND MARKERS—Write for large catalogue of all poultry supplies. Morgan's Limited, London.

REAL ESTATE

ALL KINDS OF FARMS—Fruit farms a specialty. Write, stating requirements. W. H. Calder, Grimsby.

SEEDS, BULBS, PLANTS, SHRUBS

BULBS OF ALL DESCRIPTIONS.—Write for prices. C. Keur & Sons, Hillegom, Holland. New York Branch, 82-84 Broad St.; also 10418-113th St., Richmond Hill, L.I., N.Y.

SOLD OUT OF GLADIOLI.—Send name and address now for next season's catalogue. J. Kennedy, Morningside Gladioli Gardens, Stratford, Ont.

GLADIOLI—A wonderful chance to start growing Gladioli. Bubbles and planting stock varying in sizes from 1/4-inch to about 3/4-inch of all the rare and leading varieties, at one half wholesale prices. Write for price list at once. Dr. Robert W. Schnarr, 771 King St. W., Kitchener, Ontario.

SAVE MONEY—Import your bulbs and perennials direct from Holland. Get catalogue at once. Morgan's Limited, London.

tario Legislature recently, Mr. W. T. R. Preston, of Port Hope, who has had a long experience with trade conditions in Great Britain, stated that enormous sums of money are lost annually by farmers in Ontario through failure on the part of the Government to take proper precautions in regard to the marketing of Ontario farm products in Great Britain. Mr. Preston agreed with the statements that had been made by Hon. M. Doherty that the Canadian apple trade overseas is in the hands of a large ring which fixes prices, regardless of the great gulf between the prices received by Ontario producers and British consumers. Mr. Preston advocated the erection of large warehouses in Great Britain where Canadian apples could be stored, re-sorted and sold under Government supervision.

Robins Damaging Orchards

Editor, THE CANADIAN HORTICULTURIST: In your issue of July, 1920, there appears an editorial entitled "The Cherry and the Robin," which would appear to encourage the general destruction of this bird in certain districts. As this branch administers the Migratory Birds Convention Act, I would ask you to advise your readers that the robin is protected by this Act, which recites that:

"The killing, capturing, taking, injuring or molesting of migratory insectivorous birds, their eggs, or nests is prohibited throughout the year, except as herein-after provided."

One exception referred to is given in Section 2 of the Act which provides:

"If migratory insectivorous birds should under extraordinary conditions become seriously injurious to agricultural or other interests in any particular locality, the Minister may issue permits to kill such birds so long as they shall continue to be injurious. Applications for such permits shall include a full statement describing:

"(1) the species and an estimate of the number of birds committing the damage;

"(2) the nature and extent of the damage;

"(3) the extent of the agricultural or other interests threatened or involved.

"Such permits shall be revocable at the discretion of the Minister. On the expiration of the permit the person to whom it was issued shall furnish to the Minister a written report showing the number of birds killed, the dates upon which they were killed and the disposition made of the dead birds."

Such permits would only be issued after an investigation of the alleged conditions. —J. D. Harkin, Dominion Parks Commissioner, Ottawa.

In the Garden

Edna Mead, in The New York Times.

What can they know of the things I know
Or see of the things I see,
When I climb to the height of the garden at night,
And they will not climb with me?

They never shall catch the tinkling tune
Of the foxglove's rosy bells,
Nor see white candy-tuft like laces
Framing the purple pansy faces.
They never may learn the bedtime song
Of the thrush that trills in the jasmine vine,
Nor watch the sweet peas' drowsy bonnets
Nodding down from the trellis line,
While the pale-hued phloxes' whispered call
To the blue delphinium by the wall
Is a thing they never can hear at all!
And yet it is not hard to be
A part of the garden pageantry
If the heart climbs too, set free.

But what can they know of the things I know
Or see of the things I see,
If I climb to the garden's end alone,
And they will not climb with me?

New Peach Grader

Peach growers across the line are displaying keen interest in the new peach-sizing device perfected by the bureau of markets, United States Department of Agriculture. Application for a public patent covering the sizer has been granted by the patent office, and many requests for drawings have been received by the department.

The machines will be used in the peach belt during the coming season. The performance of the sizer will be carefully watched by peach growers and manufacturers generally, and if the device proves to be all that is claimed for it the next peach season will doubtless find a large number of the machines in practical operation.

The object sought by the use of the machine is to handle fruit more efficiently than heretofore and at lower cost. The over-all dimensions of the machine are 24 by 15 feet, and with from 10 to 15 packers working at one time, each machine permits a run of from two to three carloads of peaches a day. The device can be operated by an electric motor of less than one horsepower capacity, or by a small gas engine, and can be run at half capacity, if desired. According to estimates of the designers, the machine should sell commercially at not more than \$450.

It is thought that, in addition to sizing peaches the machine has possibilities for grading fruits such as apples, pears, and oranges. The device now is being tested for grading sweet potatoes.

Red June is a popular summer apple in the south-eastern states. It is of solid red color and good in quality.

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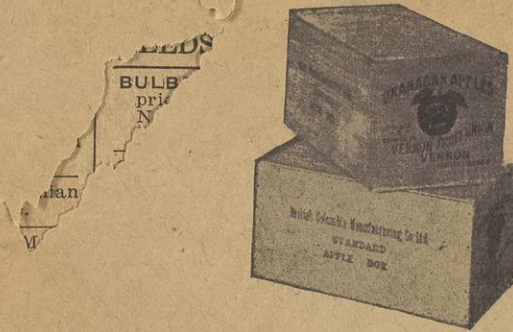
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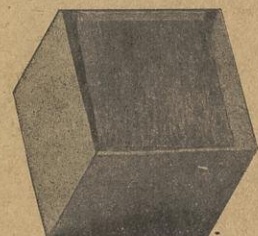
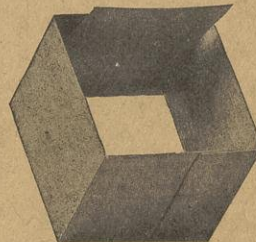
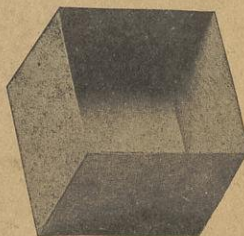
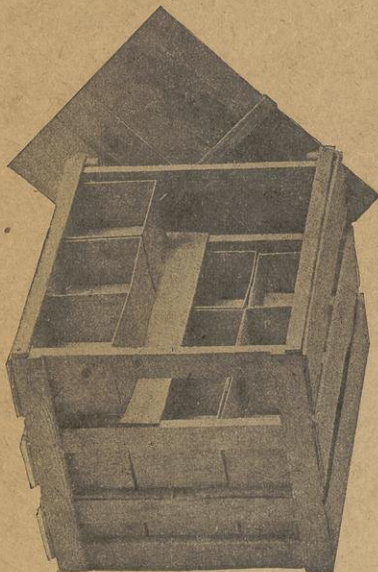


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