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THE CANADIAN HORTICULTURIST & BEEKEEPER

Vol. 27, No. 11, November, 1919
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COUNTY ROADS

GOOD municipal government in Ontario has received an impetus by the development of County Road Systems, subsidized by the Province. This has necessarily been beneficial by adding an important public duty to the responsibility of the County Council.

County roads are not a new departure in Ontario. The value of this organization was proven by the earlier road-builders of the Province. Middlesex, Wellington, Hastings and others owe the basis of existing main roads to that system. The Highway Improvement Act of 1901 revived interest in county roads, by appropriating \$1,000,000 to be given in aid of model county roads.

The Act of 1901 granted aid to county roads in the proportion of one-third of expenditure on construction.

Grants Established on Permanent Basis.

In 1907, the county road grant was established on a permanent basis, and by subsequent legislation,

- (1) The grant for construction was increased to 40 per cent.
- (2) A grant of 40 per cent was provided for maintenance.
- (3) A grant of 60 per cent. was provided for "Provincial County Roads."
- (4) Cities are required to contribute to "Suburban Roads."

Why a 60 Per Cent. Grant.

Provincial county roads are roads which, because of their length and location, carry a considerable amount of through traffic, making them proportionately cost more to construct and maintain; and which additional cost, the district through which they pass should not be required to pay. The larger subsidy of 60 per cent. is granted to more fairly equalize the burden.

With grants of 40 per cent. for the less-travelled roads, and 60 per cent. for the most heavily travelled roads, it is estimated that the cost of county roads will now be about equally divided between the counties and the Province.

All counties in the Province are now operating under this system, and 9,500 miles have been designated for improvement, and to which the Provincial grant is assured.

Responsibility and Supervision.

Responsibility for the condition of county roads rests upon the county councils who make their own appropriations, and carry out the work under their own superintendent. The Province subsidizes their work.

County roads are primarily the market roads of the townships, radiating from the local cities, towns, villages and shipping points. They are the roads which have in the past absorbed much the greater part of township expenditure, because of the heavy traffic on them. Every citizen benefits by them.

The relief given to township councils by placing the most heavily travelled market roads under the County Road System is a direct form of aid to all the township roads.

Classification of Suburban Roads.

In addition, heavily travelled roads radiating from cities are being placed in a class of "Suburban Roads," to which cities contribute equally with the county; and the Provincial subsidy is 40 per cent. or 60 per cent. of the total, according to the class of road.

General Policy Pursued.

The basis of the Provincial subsidy to good roads is the Motor Vehicle Tax. Two-thirds of the motor vehicle revenue is derived from city and urban municipalities. This, coupled with the direct contribution from cities to "Suburban Roads" is a measure of support for main roads which is both equitable and substantial.

It has been the policy of the Ontario Highway Department to encourage vigorously county road systems and to place no unnecessary restriction on the extension of these systems so as to include all systematic work which might be entitled to aid. The prosecution and extension of county road systems to a reasonable extent will do everything that grants to township councils could accomplish, and will provide that expenditure be made under experienced supervision, with proper machinery, and that the work, when completed, will be reasonably maintained. County Councils are everywhere learning to take this view of the situation and are seeking to bring their county road systems under systematic schemes of construction and maintenance.

The ratepayer of the township can be seriously and confidently urged to lend hearty support to County Councils in their efforts to improve and maintain the Market Roads of the Province.

Department of Public Highways, Ontario

HON. F. G. MacDIARMID,
Minister

W. A. McLEAN,
Deputy Minister.

The Canadian Horticulturist

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Do You Ship Fruit?

PRICES HAVE BEEN GOOD
AND WILL LIKELY REMAIN
SO. GET IN ON THE TOP
PRICES FOR NO. 1 GOODS.

PLAN TO ATTEND THE **FRUIT
SHOW and CONVENTION
OF GROWERS, November
12th, 13th, 14th, Exhibition
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SPECIAL RAILWAY RATES
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MANCHESTER
(ENGLAND)

Invite Correspondence from
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DOES THE FALL SPRAY PAY?

FALL spraying has for years been strongly recommended by the leading Horticultural authorities. Those who have adopted the plan are convinced of its advantages. The growers in the Niagara District who applied the Fall spray last year had, with few exceptions, the cleanest orchards this year, and the practice is now becoming general.

We will produce only such quantities of

Grasselli Lime Sulphur Solution

this Fall as we receive orders for prior to November 15th, so get your order in early

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Skins must be off
and cores out.

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The Wm. Davies Co., Ltd.

[Pickle Department]

521 Front Street E.

Toronto, Ont.

The Canadian Horticulturist and Beekeeper

(See Pages 265-270)

(See Pages 265-270)

Vol. 27

TORONTO, NOVEMBER, 1919

No. 11

Fruit Diseases in Ontario in 1919

L. Caesar, Provincial Entomologist, Guelph

WITH the exception of Peach Leaf Curl, Brown Rot of cherries and plums and Leaf Spot of currants, this year has not been specially favorable to the development of diseases of fruit trees and bush fruits.

PEACH LEAF CURL.

The long continued cold, wet weather in May when the buds were bursting gave ideal conditions for the development of Peach Leaf Curl. Had the spring been warm and dry there would have been very little Leaf Curl. As usual, Elbertas, Triumphs, New Prolific and a few other varieties were the worst attacked, while Crawfords and closely allied varieties and St. John's and some others suffered much less. The total yield of peaches in the Niagara District was lessened at least 25% as a result of the ravages of this disease. Moreover, so seriously were some orchards injured by the loss of nearly all their foliage, that they will not be able to produce a good crop next year.

A good many growers were visited in the early part of the season to find out the facts about the results of spraying. In no case was a really badly infested orchard found which had been sprayed before the rains began, i.e., before the end of April. There was ample proof in every locality of the value of early spraying. It is never wise to leave off spraying peach trees until the buds have begun to burst or even have begun to swell. They should always be sprayed by the first week in April at the latest. That late spraying is sometimes effective is merely due to the character of the weather in that particular season. Early spraying, however, is always effective if well done and is therefore the only right method to practise.

FALL SPRAYING.

As to the effect of fall spraying, the New York plant pathologists are convinced that it is satisfactory. During the last three years we have tested it on a small scale in Ontario and the evidence tends to show that growers would be justified in spraying at least part of their peach orchards in the fall. The spraying should not of course be done until the leaves are practically all off and if

possible a bright, warm or moderately warm day should be chosen. We do not recommend spraying all the orchard in the fall until we have further tests. The fall spraying would also control San Jose scale on peaches satisfactorily. Apples and other fruits would be better sprayed in the spring.

BROWN ROT OF STONE FRUITS.

Brown Rot, so far as we could judge, was the great factor this spring in causing a light crop of plums and cherries in the Niagara District. The trees there bloomed during the wet weather and the constant moisture gave very favorable conditions for the development of the rot, and for its attacking the blossoms, which it caused to wither and die, instead of setting fruit. In some of the colder districts where the bloom was several days later and took place during bright, sunny weather, there were heavy crops of plums and cherries. Mr. W. A. McCubbin, who recently resigned his

position as plant pathologist, was making a special study of this subject before his departure this year.

Brown Rot was also the cause of rather more than an average amount of injury to sweet cherries, plums and peaches when the fruit was ripening. The very hot weather then was the condition that favored the development of the disease.

APPLE SCAB.

Apple Scab has not been so abundant as usual this year. There has been no difficulty in keeping the fruit clean in any district we have visited if the three applications indicated in the spray calendar were given. The interesting thing about the scab this year is that it developed very early. The wet weather which favored it occurring early; the dormant or semi-dormant spray was much more important this year than usual. For example, two large and well-cared-for orchards were situated side by



An unsprayed orchard almost completely defoliated by Peach Leaf Curl. Photo taken June, 1919, by Prof. L. Caesar. Note also illustration on Page 262.



A well sprayed orchard in the same neighborhood as the orchard shown on page 261 and photographed on the same day. (Photo by L. Caesar.)

side. One of these received the three regular sprays; the other only the second and third, the first or dormant one being omitted. The work was well done in both orchards but the result was that the first orchard had almost every apple and every leaf free from scab, whereas many of the early leaves on the other were badly diseased and a considerable percentage of the fruit was spotted. Our advice, therefore, based on this and previous experience, would be not to omit any of the first three applications. They are all important: some years one of them is most important, other years another; it depends upon the weather.

CHERRY LEAF SPOT.

Cherry Leaf Spot, or Yellow Leaf of cherry, was not so common as it has been on several occasions during the last five or six years, yet a good many trees lost their foliage early from this cause. This is an important disease, but fortunately not hard to control. Bordeaux mixture—with the addition of arsenate of lead for insects when necessary—is the best remedy and should be applied each year as an insurance at the times indicated by the spray calendar. Trees defoliated early by this or any other cause are very subject to winter injury.

LEAF SPOT OF CURRANTS.

Currant growers must all have observed a tendency of currants of all kinds, especially when grown in the open, to lose their foliage early, sometimes even before the fruit is ripe. The leaves before dropping turn brown and brittle. The cause is usually a disease known as Leaf Spot, together with very hot, dry weather. Tests were made by us this year to see whether we could not prevent this dropping of leaves. The

following mixtures were used. Bordeaux, lime sulphur, soluble sulphur, sulphur dust and a combination of Bordeaux and sulphur dusts. Of these, only the Bordeaux mixture applied in the liquid form gave satisfactory results. On all the other plots except the lime sulphur one and also on the check plots, the foliage dropped early, much of it even before the fruit was ripe and almost all of it before the end of August. On the lime sulphur plot the leaves remained on considerably longer than on the check plots. On the Bordeaux plots the foliage was vastly better than on any other and the parts that were sprayed four times with this are still at the date of writing, October 10th, covered with green leaves. Those sprayed three times with this mixture are not quite so good, many of the upper leaves having fallen. The various dusts were almost useless against the disease. From the striking results obtained by the use of Bordeaux, we would urge currant growers to spray their plants next year with Bordeaux mixture. There is no question that if the foliage can be retained, as we have succeeded by the use of this spraying in doing this year, currants would be much more vigorous and should yield much better than they ordinarily do.

PEAR BLIGHT.

Pear Blight, with a few exceptions, has caused but little injury this year. If growers of pears will take the precaution to go through their orchards carefully this fall and again early next spring and cut out all diseased branches, not only in the pears, but also where possible in apple trees, they would do much to prevent injury from Blight next year. No disinfectant is necessary in cold weather when the trees are dormant.

Fall Planted Strawberries

At the annual convention of the Niagara Peninsula Fruit Growers' Association, Prof. O. M. Taylor, of the Geneva Experiment Station, was asked if it paid to plant strawberries in the late fall and to replace in the spring any plants that did not survive the winter. He replied that in the most cases he would favor setting strawberry plants in the early spring. One disadvantage of setting the plants in the fall is that it makes it necessary to give them two winter protections before a crop can be secured. A few growers in New York State practice fall planting, but he urged the giving of protection to the plants to save them from injury from freezing and thawing during the winter and spring. "One of the large growers in New York State," he said, "uses about three inches of straw as a cover."

Prof. Taylor's reply did not meet with the approval of some of the Niagara district growers, who contended that fall planting was not practical. These men said that they had tried it and had failed to obtain satisfactory results. They attributed this to the fact that the plants were unable to develop any root system in the fall, and therefore were not in a proper condition to stand the winter.

Sections for Apples

"I AM coming to the opinion that the growing of apples to the best advantage is largely a sectional matter," said Mr. W. F. Kydd, of the Ontario Department of Agriculture, to an editor of *The Canadian Horticulturist* recently. "As I have visited the principal apple growing sections of Ontario I have noticed," said Mr. Kydd, "that the best Kings are generally to be found in the Ingersoll district. Kings do so poorly in most sections that there are very few places where I would recommend them for planting. Russets are not a money-maker in most sections, but they yield heavily in the Colborne district. The Cranberry variety does best in Prince Edward County."

Mr. Kydd expressed the belief that soil and climatic conditions in these districts probably had a good deal to do with the success attained by the growers in the production of the varieties of apples mentioned. Other than these factors he did not know of any special reasons why the areas in which these varieties are grown to such advantage should be limited.

Pruning wounds heal most rapidly in spring.

Orchard Tractors Coming Into Favor

CERTAIN types of tractors are being used in a considerable number of orchards in Eastern Canada and are proving so successful, their gradual adoption by many other growers within the next few years appears certain. The Macdonald College has used a caterpillar tractor in their orchard for a couple of seasons and last spring Mr. W. H. Gibson, of Newcastle, Ont., obtained a Cleveland low-down, caterpillar tractor for use in his orchard of 110 acres. A representative of The Canadian Horticulturist obtained a photograph of Mr. Gibson's tractor last summer while in operation. One point about the tractor that commends it to Mr. Gibson is the fact that it can be used in hot weather when horses could not stand the heat. "On a hot day in summer," said Mr. Gibson to the Canadian Horticulturist recently, "the temperature in an orchard is 10 to 15 degrees higher than in the open field. You know how easily a horse sweats in the open field. Place a horse in the orchard under these conditions and he will soon be over-heated even in the early morning. This year our tractor did all our cultivating in the orchard up to the first of August, and it never sweat once," he added jokingly. "What is more," he said, "it draws twice the loads that three horses would sweat at. It easily draws two disc harrows, and being built very low we can cultivate just as much ground with it as with horses. In my opinion the tractor paid for itself this year, simply by its use in controlling twitch grass. With a spring tooth harrow hitched on behind it ripped up everything, including twitch grass.

"Of course we don't use the tractor in the orchard only. We also use it for silo filling and just now it is doing our fall ploughing. However, taking into account only its work in the orchard I can positively state that the tractor paid for itself this year."

Some of the first types of tractors were not adapted for use in orchards, because of their height, but during the last few years a number of desirable orchard types have appeared on the market. These smaller but powerful machines are admirably adapted for plowing, cultivating and harrowing be-

tween orchard rows. The low height of these tractors prevents their catching in the limbs of the over-hanging trees, and with their ability to turn sharp corners and plow within a few inches of tree trunks, they have greatly simplified the work of keeping the orchard soil in good condition.

Recent tests have shown that the tractor has come to stay. It is being improved and developed rapidly, and it has as great possibilities of usefulness for the orchardist as for the farmer. Already it is largely a question of carefully studying the different types and choosing those which are best adapted to work under the conditions which surround each particular orchard.

Securing Top Prices for Apples

WHEN a crop of apples running into upwards of 2,000,000 bbls. is being marketed, as is the case this fall in Nova Scotia, the benefits of cooperative effort are strikingly exemplified by such an organization as the United Fruit Companies of Nova Scotia, Limited. One cause of heavy losses in years gone by was created by growers failing to distribute their consignments of apples to foreign countries wisely with the result that often some markets were glutted while others were bare. How this improvement has been accomplished was described to a representative of The Canadian Horticulturist recently while on a visit to Nova Scotia by Mr. Pineo, the secretary of the United Fruit Companies. In this connection the question was asked Mr. Pineo:

"How do you control your foreign trade?"

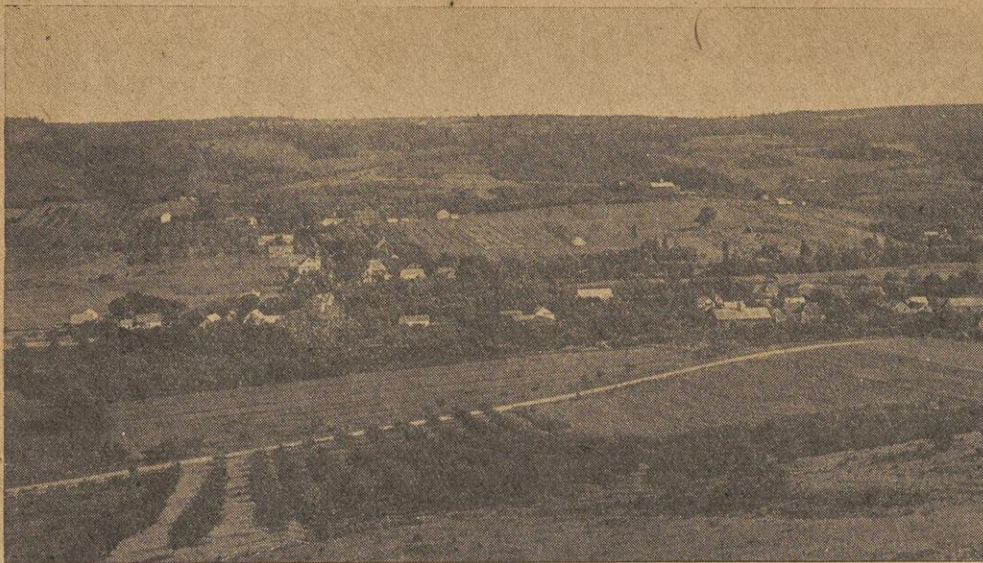
"We send our representatives to Havana, and our European representative has his office in London. These are our two chief markets. In former years we have had a western representative. We have an intelligence system which keeps us informed every other day as to the situation on all the principal markets. We use this intelligence system to prevent flooding markets and so market to better advantage. For instance, we may learn that there are 70,000 barrels of apples consigned in a certain week to Liverpool from United States ports, while on the same date shipments to London were short. Naturally we will not sell to Liverpool that week, but to London. Last year, through our intelligence system, we escaped a very disastrous Liverpool market. Independent concerns operating in the Valley were nipped on that same market because they lacked our sources of information. Such a system of intelligence is possible only for large concerns."

Small Overhead Expense.

Mr. Pineo informed us that the United Fruit Companies handled apples last year for 7c a barrel overhead expense. A lump price is paid for the season per variety and grade to the subsidiary companies. At the end of each month last year the company advanced \$2 a barrel on all apples shipped out in the month and the balance was paid at the end of the season. If farmers need the money, however, they can get larger advances on their fruit. An interesting feature of co-operative development in the Valley is the attitude of the Dominion Atlantic Railway. As individuals the farmers were not accustomed to receive any more than the ordinary amount of consideration from the railway officials. To-day, the United Fruit Com-



Low, powerful caterpillar tractors such as this one, used in the orchard of W. H. Gibson, of Newcastle, Ont., are becoming popular. They can work close to the trees and are easily operated.



King's County, Nova Scotia, contains some of the finest orchards in Nova Scotia, a number of which are here shown. The export crop of the province this year is estimated at about 1,500,000 barrels.

panies are chartering trains regularly and the railroad officials are inclined to cater to the company rather than to expect the growers to cater to them.

Warehouses.

"Our central company has no warehousing space," said Mr. Pineo. "Each local company has its apple warehouse and there the apples are stored. The local manager notifies us of what they have in stock. These apples are inspected by our own inspector to ensure a uniform and a high standard pack. When the central company receives a big order for apples the local companies are notified to have cars ready for shipment on a certain date."

The Companies' 1918 Business.

A perusal of the annual report for last year shows that in 60 days between the time of the first shipment and the signing of the Armistice the company shipped out 60,000 bbls. of apples, an average of 1,000 bbls. a day. Fortunately, when the armistice was signed and the embargo on apples going to Great Britain was lifted, the United Fruit Companies had not made material inroads on their winter fruit and were able to take advantage of the higher prices that prevailed from then on. In addition they succeeded in purchasing over 5,000 bbls. of apples previous to the raising of the embargo and on this transaction alone the management realized \$26,000 profit. All through the latter part of the season, when any kind of fruit would sell on the British market, the co-operative company maintained the quality of its pack and as a result there will be a stronger preference for United Fruit Companies' pack this season.

The company handled last year 143,964 bbls. of apples. The potatoes passing through their hands totalled

82,521 bbls. In the supply department their purchases of high grade fertilizers totalled 2,053 tons and of basic slag 1,410 tons. Their buying of mill feed and flour totalled 171 carloads, consisting of approximately 4,560 bbls. of flour and 75,778 bags of feed. In the seed department were handled 582 bags of grass seeds, 3,078 bushels of feed oats, 1,476 bushels of field seeds, and 1,275 lbs. garden seeds. The total business of the year amounted to \$1,917,689.17.

The company ended their last year with a reserve account of over \$27,000, divided in two sections, a potato reserve of \$10,000, and a general reserve of \$17,565.54. There was a business

An Orchard Freak

While picking apples of the Seek-No-Further variety in the orchard of Mr. J. F. Osborne, Newcastle, Ont., in October, one of the pickers found a bunch of eight Russets on one of the branches. The Russets were fully colored, graded number two in size, number one in condition and tasted exactly like Russets. They had a south-western exposure on a tree which had never been grafted.

The above was verified by a representative of The Canadian Horticulturist, who was at Mr. Osborne's culling table when the picker, Mr. Osborne's 18-year-old son, brought them in from the Seek-No-Further tree only a few feet away, as well as by Mr. Knox, of Orono. The Russet orchard was over one acre distant.

profit on the year's operations of \$16,619.09. "It looks well, does it not?" asked Mr. Pineo, "when a concern without a cent of paid-up capital has a reserve of \$27,000 and a profit of over \$16,000 on one year's business?" We agreed that it did.

Pear Psylla

ONE of the worst pests of the pear orchard is the pear psylla. "In New York State," said Prof. O. M. Taylor, of Geneva, N.Y., at the last annual convention of the Niagara Peninsula Fruit Growers' Association, "we have been working on this test for eight years. Prof. Parrott has issued a valuable leaflet dealing with it. Badly infested orchards require five treatments and those not so seriously affected should be given at least three. Briefly, the following methods of control are recommended:

"First. Clean cultivation is required to prevent the flies from wintering in the accumulations of matted weeds, grass, and leaves.

"Second. Remove the rough bark to prevent the flies from wintering on the trees and to expose the trees more completely to the spraying mixture.

"Third. Spray thoroughly with black leaf forty, using three-quarters of a pint to 100 gals. of water and adding 3 lbs. of soap during a warm spell in November or December and March or early April.

"Fourth. Spray thoroughly with lime sulphur mixture at winter strength to destroy the eggs. Apply the mixture in late April or early in May before the blossoms open.

"Fifth. Spray thoroughly just after the blossoms drop to kill the newly hatched nymphs. Use black leaf forty in the proportion of three-quarters of a pint to 100 gals. of water, and add 3 lbs. of soap or kerosene emulsion with eight parts of water. Direct the spray into the axils of the leaves and wet both surfaces of the leaves thoroughly."

Lime Stops Club Root

Tests at the Ohio Experiment Station, Wooster, show that the club root of cabbage may be controlled by heavy applications of lime on the infected soil. From 70 to 80 bushels of limestone per acre are required to completely destroy the disease. Club root also attacks cauliflower, particularly when grown on soil infected with the club root of cabbage. The lime applied to control the disease is also effective in sweetening the soil, thus resulting in greater crop increases.

Beeswax—A Valuable Bye-Product

H. W. Sanders, Sturgeon Creek

THE big meat-packing firms have so developed the "bye-products" returns from their slaughtering operations that it is an undoubted fact that they pay more for an animal than they receive from the sale of their meat. The profit comes from the things that are thrown away on the farm, and so far has this been carried that it has been well said that the packers in Chicago use "everything but the squeal" from the Porkuss Americanus which furnishes the subject for their researches in natural history. Likely they will be using the squeal one of these days for a Ford motor-horn.

Beeswax is the beekeeper's most important bye-product and it is a sadly neglected source of income. A visit to the honey-house of the average beekeeper shows nearly always a pile of cappings and old combs waiting to be rendered down, and sometimes cakes of wax all mixed up with dirt and refuse of all sorts. The owner feels that with a small lot it is hardly worth the trouble of cleansing and shipping, and so it accumulates dust upon some shelf and takes up valuable storage room where it might be turned into working capital. Besides one's own combs and cappings it often pays to buy up those belonging to the neighbors and with every lot handled experience is gained till at length the wax business may be made to pay quite a nice little income.

Beeswax is the secretion of the honey-bee when fed liberally with honey, and in the summer season the beekeeper often sees chains of bees hanging heel to heel, while they digest their hearty meals of fresh honey and "sweat" the wax out of their bodies. It appears as a little plate of wax from between the segments of the abdomen, and is soon used in the wonderful architecture of the honeycomb. Just how the bees build comb is unknown, even though we can watch the whole process in a glass hive. There is a moving, running mass of bees all over the work, yet, watch as you will, never will an individual bee be seen performing any particular part of the work. Each seems to do everything at once and the beautiful white comb seems to grow and take shape as a result of their labors.

From then on the wax begins to get darker in color passing gradually from all stages of brown to black as it is used for generation after generation of brood-raising, and the central part

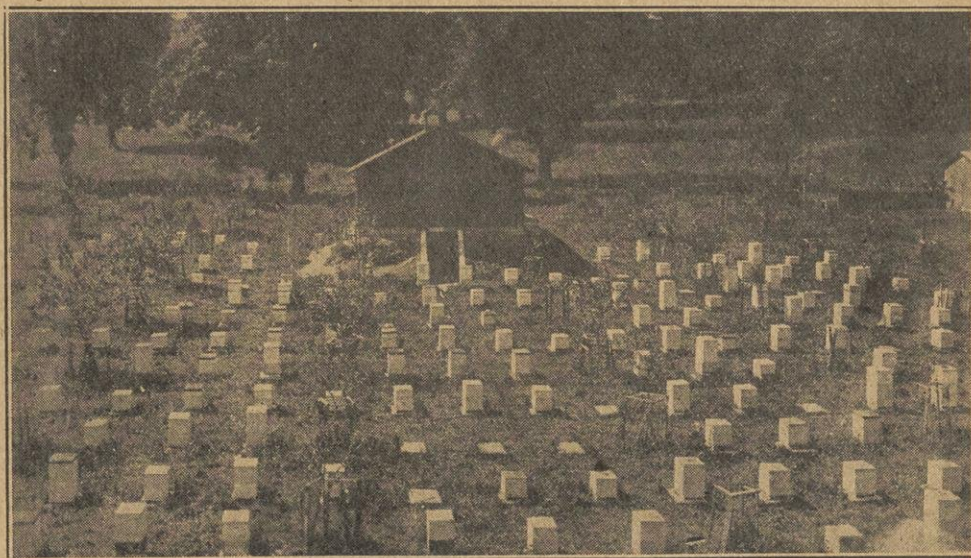
will become choked with the skins of the cocoons left behind by the emerging bees. Indeed it sometimes happens that one sees bees stunted and small from being nurtured up in these cramped quarters. This, together with the fact that old combs generally get enough breakages to destroy their symmetry makes it a wise policy to discard the oldest every year, and to permit the bees to build a certain amount of new comb to replace those which are to go to the wax-press. Here, by the way, may be mentioned that comb-building is often a remedy for swarming troubles, as bees secrete a certain amount of wax involuntarily and when they have no place to build it seek another home. So we plan to discard around ten per cent of the oldest of our combs each season. Besides these there are the cappings from the extracting, and the contents of a can that is carried around in the tool box during the summer for the collection of odds and ends of wax. It is surprising how much accumulates of bits of burr and brace comb, patches of drone comb that are cut out to make room for foundation in otherwise desirable combs, and so forth.

Rendering beeswax is a job that can usually be saved for winter. The busy season has passed and there is time to do the work that will make it into those nice yellow cakes that bring the best prices from the dealers.

The first attempt to render wax usually results in daubed and smeared utensils, stove and kitchen, and a row between the beekeeper and Mrs. Beekeeper, who has her own ideas about

the matter. But if care is used there should be no mess on the stove and it is better anyhow to keep special pots and kettles for the job, and not attempt to use the regular household equipment.

First separate the old black combs from the cappings and lighter wax. If there is a solar wax extractor available these latter may be melted in summer by the heat of the sun, if not it is a simple job to melt them and pour into soaped vessels with flaring sides so that the cake will come easily out. Then the dirt adhering to the bottom can be scraped off and added to the dirtier portions that are now to receive a more elaborate treatment. First soak the whole mass in cold water for 24 hours. This saturates the cocoon skins that they will not soak up melted wax, and the water also dissolves any soluble dirt in the combs. Pour off the water, and then add them to fresh boiling water, little by little, till all is melted. Stir and break up the melting mass to get the wax well melted, and be careful not to let the pot boil over or there may be a disastrous fire, for liquid wax is highly inflammable. Now lower into the kettle a small basket made of fine screen wire, and dip out wax from inside the basket. As wax is dipped out it may be run into soaped vessels as above. Keep dipping and adding till all of the combs are melted and most of the wax has been extracted, then take the pot off and let it cool. When all is cold there will be a cake of refuse and wax mixed on top, and these are saved till there are enough to make the use of the wax press profitable. It may take a year or two for



Apiary of J. O. Levac, Rigaud, Que. This apiary is composed of 175 colonies of Italian bees. All hives are nine frame L's, and have produced this year 27,000 lbs. of white clover honey and 2,500 lbs. of dark honey.

Notes and Comments

J. L. Byer



Mr. D. A. Davis, of Birmingham, who will address the coming Beekeepers' Convention.

sufficient wax to accumulate to make the purchase of a wax-press justified, or a home-made one may be built using a bench-screw as the "squeezer." The press must be exceedingly strong, for great force is used and a weak one will break when it is most needed. The exact pattern does not matter so much provided that it will squeeze a burlap sack and get the wax out of the contents. Excellent presses are made by most of the supply dealers. The residues are placed in a bag, boiled again to get out what will come through the burlap, and finally pressed in the press till every bit of wax is extracted from the mass of slumgum. The wax is then shipped to market, and a sack of wax will make a very nice deduction from a bill for the purchase of the season's equipment. A little wax may often be sold locally. By pouring it into moulds holding a few ounces a really fancy price may be obtained by selling to the local tailor and harness or shoe repairer, who are often anxious to get "real beeswax," and will pay what is asked for a small cake. Moulded small, the wax may be sold from the notions counter of a department store for the same purpose, and I have even read of beekeepers making their wax into little candles which fetched a nice price as a novelty.

Boot and shoe polishes and harness and furniture dressings often contain beeswax, and these and other manufactures ensure that wax will always find a ready market so that beekeepers have only themselves to blame if this important source of profit is neglected.

IF bees are not put in good shape for winter this year, one thing is certain, the weather man cannot be held responsible. September and October to date (23rd) have both been months of splendid weather, and work of fall preparation has been a real pleasure as compared with some former seasons.

Some have been delayed in getting sugar for feeding, and this long continued spell of fine weather will be a real blessing to beekeepers thus affected, as it has been just as easy to get bees to take syrup at this late date as in early September. One of our apiaries was fed up for good in week of September, and we just finished feeding the last lot on Oct. 20th. As to which dates will show most satisfactory results, is of course yet to be proven, but provided all have enough stores, I expect to see little difference, owing to the unusually mild weather that is still prevailing, giving the bees a nice chance to have stores in good shape for winter use.

Honey Prices.

I have just been reading a news despatch in which it is stated that some thousands of tons of sugar from Canada were being sold to confectioners and others in the United States at from 18 to 19 cents per pound. The circumstances in connection with this case are too lengthy for me to go into detail with here, but with sugar under any circumstances being sold at such a figure, it does not look as though honey is going to take much of a drop for a while.

Only a few days ago I again made a round of the wholesale houses in the city that handle honey, trying to get some to supply customers who had depended on getting honey from us. I found very little honey in these places—some dealers had none at all, and prices ruling were very little below that of last season. If there is much honey in the country, it is finding some other outlet besides the wholesale men this year.

The Convention.

I have heard that the convention is to be held on the 11th, 12th and 13th of November, and that is all the information that has come this way to date. Yes, I expect to attend and also to see a bumper attendance from all over the Province, as well as some from other Provinces and States over the line. With us it is a sort of annual holiday always looked forward to with pleasure, and whether we meet for education, recreation or both, we always feel that meeting up with

other people of like aspirations has a tendency to take away some of the conceit that most of us are more or less heir to, causing us to be broader minded and more inclined to respect the opinions of others even if we do not always agree on some matters.

Cellar Ventilation.

While we have always wintered our bees outdoors with but a few exceptions some years ago, this fall we purpose placing about 70 colonies inside of a cellar we have had built this past summer. This is in addition to the apiary near Fenelon Falls which were wintered inside last winter and will go inside again this fall. At the latter place there are no outside cases, and I have been allowed the use of a cellar as long as bees are left on the place.

At home we have a number of old cases past their usefulness and in addition we bought 30 colonies in September, all in single walled hives. As our house cellar does not keep vegetables well owing to the furnace being there, we decided to build a cellar for the double purpose of wintering some bees in and also storing vegetables in one compartment.

As I am anxious for instructions as to ventilation for the benefit of the bees, I shall briefly describe the cellar and hints on this phase of the wintering question will be gratefully received.

The cellar is near the side of a steep hill, but as hill slopes to north and face of the same is on another's property, I could not tunnel in side and have an easy entrance. Soil is gravelly—in fact we dug gravel out of the cellar and used it in construction work. It is six feet deep, clear, and top of wall is just level with the surface. Six feet deep we struck clay, so bottom is of that material, but covered with cement concrete. Tile were placed all around wall and outlet is at north-east corner, at side of hill, only a few feet from the wall. Cellar is 25 feet long and 10 feet wide, inside measure. Reinforced concrete top over all, and roof will be covered with earth five feet deep at ridge and taper off to about three feet at sides of cellar. At south-west corner we have a gangway from cellar four feet long and four feet wide, same height as cellar proper and roof also covered with earth. A door at each end of the gangway and then flight of stairs to another door, stairs being of course covered by small lobby. Practically all under ground and I have no fear about it being warm enough but am all at sea

as to how to ventilate it. Or will it need much ventilation? According to Doolittle I should not worry about this matter, but when I read what Ernest Root, Dr. Miller and some other lights say about the need of fresh air for bees inside of a cellar—well, it makes me scratch my head and wonder. I suppose I might try it out on the well known test as applied to discerning toadstools from mushrooms; if you die, they are toadstools. If I put the bees inside and they get no ventilation and die—ventilation is necessary. If they live, just the opposite conclusion. In either case the test is drastic, but I suppose it is quite reliable.

The Honey Trade of the Future

By W. A. Chrysler, Chatham.

WHILE on a visit to one of the largest and also one of the most reliable firms in the United States who bottle and sell enormous quantities of honey throughout the country, I was somewhat surprised to learn that they blend practically all the different flavors and colors of honeys produced in that country into one mixture. This would indicate that there is a change taking place in the marketing of honey. From the stand that many of our best honey producers have taken in the past I can imagine them lifting their hands in horror at the thought of spoiling the excellent table honeys of distinct flavors and producing an inferior grade and inflicting it on the consuming public.

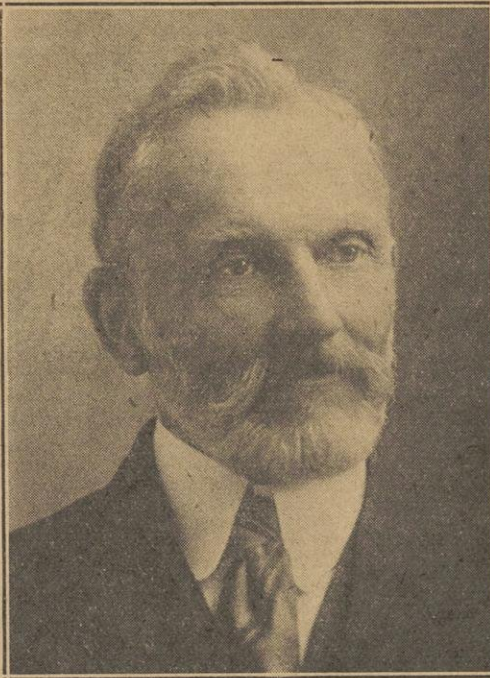
If the bee-keepers of Ontario were to mix their clover, basswood, buckwheat, aster, goldenrod and all other varieties together it would give them an unenviable reputation. Are the honey producers of Canada going to see to the marketing of their product or are we going to stand by and see it commercialized? Many bee-keepers say that they are quite indifferent as to what the dealer does with it so long as they can sell it without any trouble. The consuming public is a secondary consideration with them.

One of the greatest assets the Canadian honey producers have, and one of the greatest public safeguards, is the lithographed pails when the name and address of the producer is printed on each. A honey producer should put up his honey intended for table use in containers with his name and address on them, which would insure that it will not be changed.

There is, however, another side to this question, and that is, what is go-

ing to be done with the many varieties of honey offered to the large buyers and distributors? From their point of view it would be difficult to keep the different grades separate. Where a firm is doing a large business with many travellers on the road continually and can sell immense quantities of any product, even though it be of inferior quality when better goods can be secured only periodically. What think you, Mr. Beekeeper?

Are we interested enough to do our best to see that the consumer gets what he wants, not just what he is forced to buy?



Mr. R. F. Holtermann of the firm of Foster and Holtermann, Brantford, one of Ontario's largest apiculturists. He has held many positions in the beekeeping world, including the presidency of the International Beekeepers' Association and the Ontario Beekeepers' Association. He is a prolific writer on apicultural subjects and runs between 800 and 900 colonies at present. Mr. Holtermann will speak at the coming convention on "The Production of Honey."

An Interesting Experiment

A bee mating experiment was carried out last July by F. W. L. Sladen, Apiarist of the Dominion Department of Agriculture on Duck Island, at the eastern end of Lake Ontario. Duck Island is eight miles from the nearest land and no bees are kept there. The results showed among other things, that the queens mated by hand picked drones, not more than about two weeks old, became drone breeders. They produced from less than one per cent. to about fifty per cent. of workers.

Don't forget the Convention on the 11th, 12th and 13th. Help to make it the best yet by being present.

QUESTION BOX

Conducted by H. G. Sibbald

Wintering Questions

We have never kept bees before, but this fall we found a nest of Italian bees in a tree. They have very little honey.

1. I would like to know if I can put them in a hive and feed them sugar for the winter.

2. In what kind of a place should they be kept?

3. Should they be put in their winter quarters before the ground freezes?

4. We have a warm basement under the hen house, where the hens are not allowed in winter, can we keep them there?

5. How should the bees be treated when the spring comes?

1. Yes.

2. In a sheltered, warm place.

3. I would prefer to pack them outside in a case 4 or 5 inches larger than the hives to allow that much packing and 6 or 8 inches on top, leaving a small entrance through from the inside hive to the outside.

4. Not very well. The temperature might not keep even enough.

5. If packed outside, see that they have enough feed and let them alone.

Would Nucleus Swarm?

When preparing nuclei for winter, four in a divided hive, I found three pieces of empty comb about the size of the hand, on the bottom board. The cluster of bees died from starvation and there was some dead brood in the comb. Was this a stray swarm, or would a nucleus swarm out? Nuclei are on two Langstroth frames.

A nucleus will often swarm out from a small hive. Queen breeders often put a piece of Queen Excluder metal over the entrance to prevent the queen getting away. Of course this is done after she is mated and laying.

Feeding Hints

Will you please give me directions for feeding my bees for winter.

1. How much feed do they need?

2. How late can bees be fed?

3. How is the best way to winter bees?

1. A strong colony of bees needs 35 pounds of stores to last from Oct. 1st until clover season. It would take 50 pounds of sugar syrup to make that weight in sealed stores. Syrup made 2 sugar, 1 water.

2. Bees can be fed almost any time if they are in a warm place, but Oct. 15th is about the latest date they should be fed outside in unpacked hives.

3. Bees winter well in a good dry cellar, also outside in packed hives.

Beekeeping in Western Ontario

Is there a good opening in Western Ontario for bees on a large scale?—J. H.

There are good openings in all parts of Ontario, plenty of them. From the standpoint of living in or near a desirable town, there are not so many, but with motor cars this is not so serious.

Vicissitudes of a Beekeeper

By D. Anguish, Lambeth

THE beekeeper who has pursued his craft for several years knows well that the glowing reports of the fortunes to be made in the bee business that one hears of these days are sadly lacking in veracity. In many cases it is men who ought to know better who have been responsible for creating an entirely false impression in the minds of the general public regarding the rewards of the beekeeper.

One would almost think to read or to hear some of these men speak that all that a beekeeper did was to set out his hive about the month of April and from then until the end of October the bees did nothing but "gather honey every day from every opening flower," which the beekeeper sells at 25c or 30c per lb. and retires to Florida for the winter with a bankbook increased by some thousands of dollars through the efforts of the busy bee.

To readers of the Beekeeper this seems ludicrous, but it about represents the idea that exists in the mind of the man in the street regarding the emoluments of our calling. The plain fact is, that the bee business is like all others in that it has its ups and its downs, and in many cases more of the latter than the former.

Every beekeeper knows that seasons vary greatly and localities vary just as much. One season is good in one locality and poor in another, and the next season may be exactly the opposite. It is a mistake some beginners are inclined to make to think that if they have had a poor crop the location is to blame, and forthwith they pull up stakes and move to another where the honey flow has been better. There is no guarantee whatever that in the new locality their former experience will not be repeated.

This last season has been one of those in which there have been more poor locations than good ones. Honey gathered in a poor season is of poor quality, just as grain and fruit are good or bad according as the season has been favorable or otherwise. We have two apiaries about 50 miles apart and

at both places this year the crop has been poor. The one located fifty miles from home is if anything the better of the two as it is situated in a buckwheat section, though the bees did not do as well on buckwheat as they have done. This, I think is due in some measure to other beekeepers crowding in in these sections. I may say here that I sometimes wonder if it is wise for a beekeeper to tell how well his bees have done in certain locations. It is something like fishing. If an angler announces that he knows a certain hole where good catches can be made he will soon have so many devotees of the fishing art there, that soon the hole will be quite fished out.

One Sized Frame.

I have found the one sized frame of medium size a great help in our work this year. The bees in the buckwheat district put up some surplus besides their own winter stores so we brought them home and distributed them amongst colonies at home and out yards, reducing the sugar bill quite a bit.

I see by The Beekeeper that our good friend, Mr. Deadman, has been giving some good suggestions on the handling of bees and preparing them for winter by his system. Why use so many sized frames though when one would fill the bill equally well with bodies and frames all alike. This is an age of standardization, and it would seem that the maximum efficiency of any system or machine can only be reached when the component parts are standardized and can be produced at short notice. For the beekeeper, I think this would be of immense advantage. I speak from the experience of many years with different sized bodies, bottoms, tops, frames and other appliances, losing much valuable time hunting for something to fit when if we had standard frames, etc., much time would be saved. Using only the one size frame this season has been of great assistance to me. I know that beekeepers, myself included, are somewhat of faddists on the appliances

they use. Some will have one thing and some another, but why not have a hive and frame that can be converted to fit all requirements by very little trouble and that does not necessitate a change in the size of frame. By adding supers or taking off you can have any sized brood nest required.

The Quadruple Case.

Recently I have noted several articles in The Beekeeper on the best cases for wintering and all are unanimous in their condemnation of the quadruple case. Why this should be so, and why it should be criticized as being so heavy and such a burden to pack and unpack when the writers have had no experience with them beats me. For myself I have used the quadruple case for many years, and have some still in use that were made over 25 years ago. They are made of one inch undressed lumber and are good cases yet. Those I have been making in recent years, however, are all of half inch or inch sawed, all but the bottoms which are one inch. It is a pleasure to pack bees in them and as simple as A. B. C. When packed you have four colonies all close together helping to keep each other warm until next spring and coming through the winter in the pink of condition.

The Coming Convention

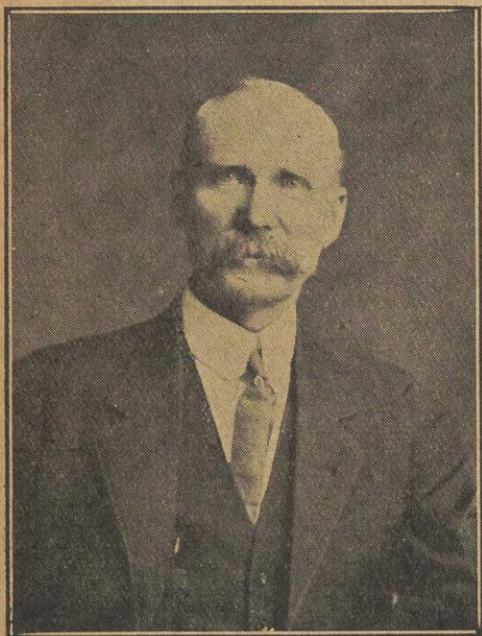
By W. W. Webster, Little Britain.

THE thirty-ninth annual convention of the Ontario Beekeepers' Association will be held in the Carls-Rite Hotel, Toronto, on November 11th, 12th and 13th, 1919. Conditions are approaching normal again and the convention will be held the same week as the Fruit and Flower Exhibition, making it possible to combine an association honey exhibit as in the past.

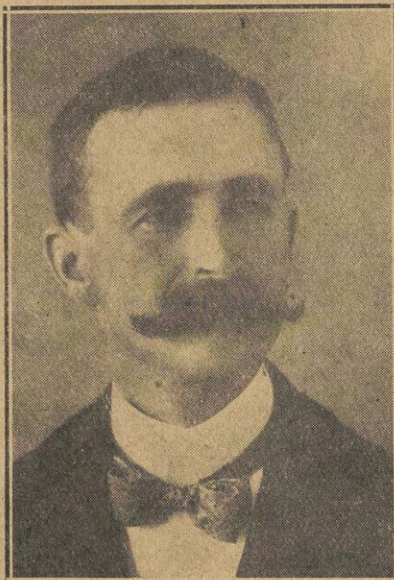
The attendance at the Ontario Beekeepers' convention has always been good and this year the executive have spared no pains to secure excellent speakers and a wide range of subjects will be discussed.

Pleasant are the reminiscences that arise in our mind as we remember these annual

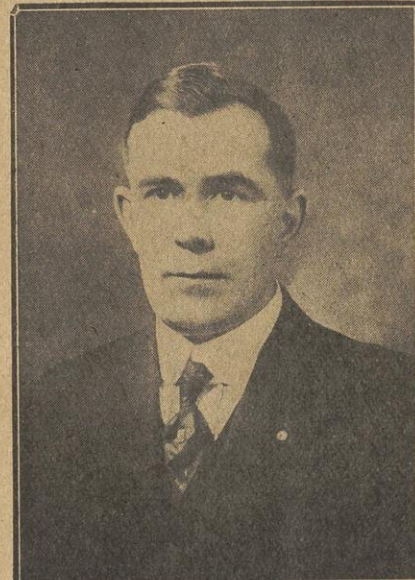
PROMINENT MEN AT THE COMING CONVENTION



Mr. James Armstrong, Selkirk, Ont., President of the Ontario Beekeepers' Association.



W. W. Webster, Little Britain, Ont., 1st Vice-President of the Ontario Beekeepers' Association.



F. Eric Millen, Provincial Apiarist and Secretary-Treasurer of the Ontario Beekeepers' Association.

gatherings of bygone years, though tinged, perhaps, with sadness when we recall some whose faces we see no more. We recollect the hearty handshake, the jovial laugh, the earnest inquiry as to how things were going with the bees, and that spirit of good fellowship and helpfulness that always has characterized our conventions, and not ours alone, but every convention where beekeepers meet.

We are safe in saying that few who attend the convention can fail to receive practical benefit from it if they are interested in the pursuit of apiculture. It has been our privilege to become personally acquainted with many of the speakers at the

coming convention. We have heard them talk on apiculture and have visited their apiaries, and have no hesitation in saying that these men are no theoretical visionaries, but men of long practical experience in the art of beekeeping, men who have faced and overcome the same difficulties and discouragements you are facing, and who are thereby eminently fitted to solve your beekeeping problems. If you want to get some sane, sound, practical ideas that will be worth hard cash to you during the next season. If you want to meet some of the most outstanding beekeepers in Canada, if you want to be benefited intellectually and financially, and have a good time come to the convention.

Extracted Honey and the Marketing of It

By G. A. Deadman, Brussels

DID you have much of it? What kind was it? Did you keep clover, clover and basswood separate from your dandelion and fruit bloom, or it may be from your buckwheat? Did you get any golden rod or other fall honey, and what did you do with it? Was it well ripened?

There is one thing I hope you did not do. I hope you did not let your dandelion or fruit bloom mar the flavor of your clover or let your buckwheat do likewise.

It does not pay to let strong flavored, amber-colored or dark buckwheat honey get mixed with your clover, and should never be done. Better by far to give these away than to do this, for the reduced price of your clover honey thus tainted will result in a loss possibly more than if those objectionable honeys had never been.

A Defective System.

Any system of management that permits the mixing of the lower grade honey with that which is best is defective, to say the least. Apart from the reduced price for this mixed product and consequent loss, it is little in comparison to having a good name for selling a first-class article, an article that advertises itself. As we use some of those, shall I say, tremendous catalogues mailed to so many by the large departmental stores, I am impressed with the magnitude of the costs of advertising of these large firms. And then I contrast it with that which most of us beekeepers do. Perhaps I should not say that or put it that way. Certainly most of us do not spend much money in printers' ink, but our product is advertising us whether we will or no. It is up to us to sell only an A1 article for an A1 article. We can sell inferior or lower grades of honey, but let it be understood that they are such and that the price corresponds with the kind.

A Good Price.

There are many, and may be many more than we suppose, who are willing to pay a good price for a good article, but what catches most of us is when we pay a high price and get inferior goods. You can sell a man inferior goods if you make the price accordingly, and he will not think the less of you, but the man he abhors is the one who sells inferior goods and does not say so or charge an inferior price.

A Good Name.

We are told that "a good name is more to be desired than great riches," and so it is, and is in more ways than one, for such a man can look another in the face, and if he is a beekeeper he will find that his honey will advertise itself so much so that it will not be least of his joy in living to

know this, but that where his honey once goes the call comes for it there again, and, not only so, but its fame spreads and extends until he shall never lack a market for his product.

The Best Frame.

The size of frame we use in our extracting supers either helps or hinders in this

a shallow at hand for occasions such as I have mentioned and so there should be no excuse for spoiling your good honey by getting it mixed with the poor.

Unripe Honey.

Whatever else you do or leave undone do not extract your honey before it should be. I do not say it is essential that the honey should remain in the hives until the close of the season and have to get on a ladder to lift off the top super, but have enough supers so you can have your honey mostly capped over at least before extracting. One cannot say positively at long distance range when honey is ready for removal, for in a dry hot season it naturally will be sooner than in a wet one. Honey may not be all capped over and yet fit for removal, or it may be capped over and yet not ripe.

If your honey granulates hard one would be safe in saying it is well ripened, but if slow to granulate and when it does it is coarse in the grain with some on top still liquid, well you extracted it too soon, that is all.

Some Experience.

I have been "moved" to write on this subject from some experience I have had recently. I was told that such an one had some good clover honey to dispose of, but on

ONTARIO BEEKEEPERS' ASSOCIATION 1919 CONVENTION PROGRAMME.

Following are the speakers and subjects:—

Wm. Agar, R.R. No. 1, Kleinburg—"Beekeeping in New Ontario."

J. L. Byer, Markham, Ont.—"The Selection of a Location for Beekeeping,

Prof. L. Caesar, O. A. C., Guelph—"Spraying and its Relation to Bees."

D. A. Davis, Birmingham, Mich.—"Importance of Queens and Simple Methods of Rearing."

C. B. Gooderham, Central Experimental Farm, Ottawa, Ont.—"Experimental Work in Beekeeping."

R. F. Holtermann, Brantford—"The Production of Honey."

Prof. J. E. Howitt, O. A. C., Guelph—"The Beekeeping Part in Food Production." Illustrated.

Harry W. Jones, Bedford, Que.—"Feeding and Stimulative Feeding."

F. W. Krouse, Guelph, Ont.—"The Deep Hive."

R. W. Muckle, Winnipeg, Man.—"Beekeeping in Western Canada."

John Myers, Stratford, Ont.—"What Would Beekeepers Like to Know?"

Wm. Couse, Streetsville—"Beekeeping."

keeping our best grade of honey separate. The larger the frame the more difficult it is. We use both the half and full sizes. The object in using both sizes is that combs that may be defective for the brood chamber would do for the supers, but when it comes to final choice, I would say use the shallow. Perhaps nine times out of ten a shallow super will hold all the fruit bloom or dandelion honey there is, and then you can easily remove it or extract it separately at the close of the season. The same with buckwheat. There is one sure thing, which is by using these shallows you have or can have less mixed honey and more of the A1 kind. They are nice to handle too, which is a recommendation to those who are light weight.

An Extractor to Suit.

When ordering an extractor have one that will take two shallow frames in each basket. A four frame extractor then will take eight frames and yet be a very little larger than a four frame ordinary Langstroth one. By doing this it seems that the difference in the time taken will be very little. By using the combination system it is ideal in this respect as you always have

examination it was as I have described, not ripe, and the producer, for want of super room had to remove it before it was ripe, or let his bees be idle. But this is not the first time, however, we have seen that kind, worse than that, it would sour and foam over the top. We have no greater enemy in the beekeeping world than those who produce stuff like that. I remember such an one selling this kind near here and those who bought it of course would not buy more because they always had some on hand, for a little of that goes a long way.

Choice Clover Honey.

In answer to an advertisement for clover honey in this journal, I had a reply from a well known beekeeper saying, "I still have some extra choice clover honey." To me there is only one kind of "choice clover honey." I went down and saw this consignment and imagine my surprise to find some 10,000 lbs. of this shipment tainted with dandelion and fruit honey. Somebody is going to drop a cool \$500 on that through not keeping different kinds of honey separate. Do not mix your honey, but if you do, then do not apply to it the misnomer of "extra choice clover honey."

The 'Beginners' Outfit in Honey Production

Morley Pettit

AFTER a young man or woman has spent a season working as apprentice for a commercial honey-producer, the question of making a start must be faced in time to prepare equipment during the winter months. So many have asked my advice in this matter that the publication of some suggestions might be of value to others as well.

As personal equipment, the study of one or more good textbooks on the subject comes next after practical experience, and, indeed, should accompany it. The perusal of beekeepers' magazines and attendance at their conventions, adds interest and enthusiasm to the desultory knowledge they dispense.

For apiary work one needs a good all-black veil, a large-sized smoker and a good hive-tool. All three are almost equally indispensable.

At first the question of specializing or not should be fairly faced. There is absolutely no question in my mind. Very few successful lawyers practise medicine at the same time. It has been a matter almost of heart-ache for me to see a number of promising young men start with bees, then, because they needed the money and thought they could spare the time, do a dozen other things when they should have concentrated on one. The natural result is that they have made a success of nothing, and reflection has been cast on one of the most profitable and important branches of agriculture.

The first decision with reference to equipment is the style of hive, and a fundamental principle is the advantage of one size of frame throughout. It is probable that the best type for strong men is the 10-frame

Jumbo, with supers, the same as the brood chambers. For men who do occasionally feel a limit to their strength, and especially for women, I would strongly recommend the 10-frame Langstroth, but with it I would have one shallow super as a "food chamber" for each colony, to remain with it winter and summer. The supers in this case should again be the same as the brood-chamber.

It would be possible during the first season, when finances are liable to be low, to get along with only one super per colony by extracting alternately from it and from the shallow food-chamber, provided the latter is left full of honey at the end of the season. Ultimately, the equipment should insure four bodies per colony in addition to the shallow. Allowance should be made for, say, 50 per cent. increase of colonies for the first season. This will apply to bottom-board, brood-chamber, food-chamber, cover and stand, including, of course, the necessary frames and foundation.

Without giving actual figures which can easily be counted by the individual, the list of equipment would be: Stands, reversible bottom-boards (which we never reverse), standard bodies (10-frame L or Jumbo), staple-spaced frames with wire and foundation, wire embedder, shallow supers if hives are L. wire queen excluders and covers. Bee-escapes are convenient for removing honey, but not absolutely necessary. A four-frame hand extractor will do the work at first and can be traded on a larger machine later. A capping-melter will be necessary if a crop is harvested and the Peterson is the simplest and, without doubt, the most satisfactory one on the market. A more complicated melter, with tubes, etc.,

quickly clogs with propolis, which is present in all cappings. A sandwich knife, with long, straight, stiff blade, is best for uncapping and later can have steam jacket applied by any good tinsmith. At first the steam knife and honey pump can be dispensed with. In the extracting room will also be a store tank and honey strainer, weigh scales and selling packages. For wintering, if a suitable cellar is not available, cases will have to be made up—and feeders.

That is about the whole list of essentials. Catalogs will give prices, and will also suggest a number of things which are valuable, but not really necessary at first.

New Apiary Building for O.A.C.

The Ontario Agricultural College is to have a new apiary building erected at a cost of \$40,000. It will be built of brick with stone foundation, two stories and basement and will be a modern building in every particular. It will be situated adjacent to the bee yard, and will be used for administrative, educative and practical apicultural work, and is based on classes of 150 students. The building will be equipped with the most modern appliances known to apiculture, and will easily be the most up-to-date building of its kind on the North American continent.

Our Correspondents

In this department of The Beekeeper we give a cordial welcome to all our readers to express their opinions on any subject of interest to beekeepers. The publication of a letter, of course, does not necessarily imply an agreement with the views expressed.

Consider Conditions

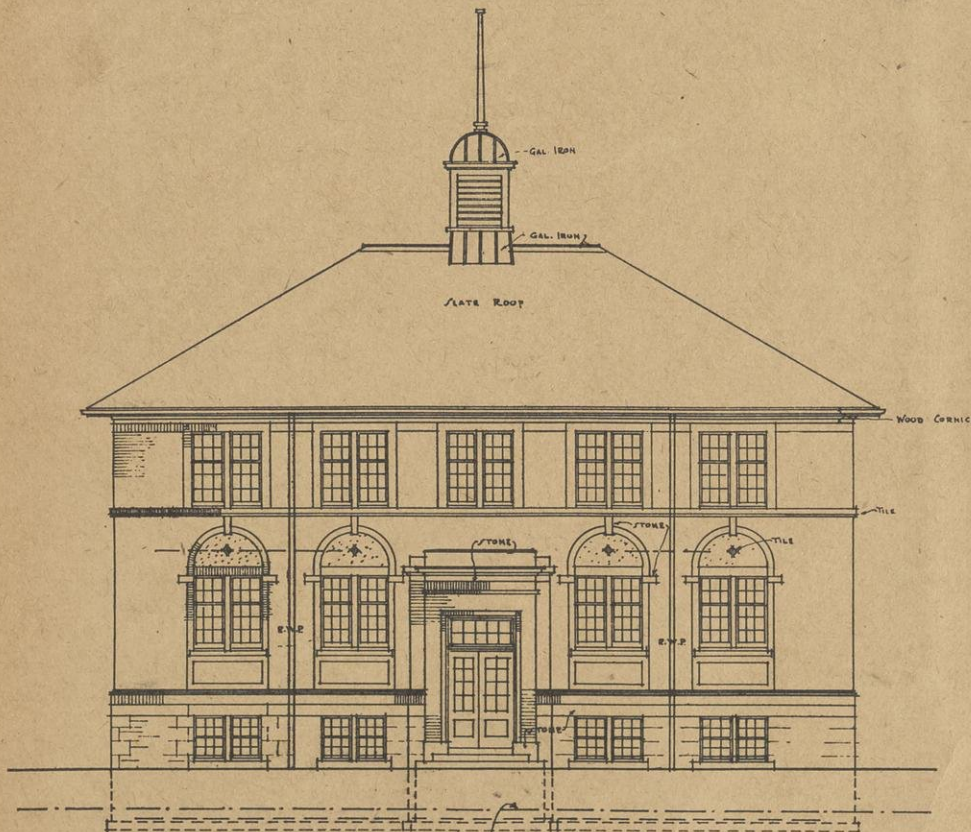
Editor The Beekeeper:

You have lately published a number of good articles on wintering bees, packing hives, construction of bee cellars, etc. May I make a suggestion that will perhaps make these articles more helpful to some of your readers scattered all over Canada? Many of these articles deal with practice rather than principles. Practice is controlled by local conditions and varies widely in different parts of this great country. To give an extreme example, double walled hives may be satisfactory for wintering outside on the Lake Erie shore, but are useless in Saskatchewan. Most of the articles treat of southern Ontario conditions, which differ in a number of details from those found in the rest of Canada which is further north. There is also much difference between conditions found in the interior and those on the coasts, especially the west coast which has cooler summers and milder winters than any other part of Canada.

No doubt, most of your readers note the locality from which a man is writing before reading his article. When this is done, one cannot fail to get a great deal of useful information from an article written under different conditions to one's own, if one makes allowance for these conditions, indeed it throws a valuable sidelight on one's work which cannot be obtained at home.

Yours truly,

F. W. L. SLADEN, Apiarist.



Front elevation of the new Apiary Building at the Ontario Agricultural College, Guelph.

The Late H. J. Simmers

FEW men have worked as long and faithfully to promote the horticultural interests of Canada as the late Hermann J. Simmers, of Toronto, whose sudden death was announced recently. Mr. Simmers' father came to Canada about 1862 from Germany, and secured a position as a first-class gardener. Some years later he started the firm which is now known as J. A. Simmers Ltd., and which soon became, as it is still, one of the leading seed firms of the Dominion. His son Hermann was the



The Late Herman J. Simmers.

youngest of the family. From his father he acquired the love for horticulture which abided with him through life. He loved to grow things and frequently his exhibits at conventions and exhibitions were admired by all who saw them.

In connection with his business Mr. Simmers found it necessary to familiarize himself with horticultural conditions in many lands. In due time he became a recognized authority on these subjects. This led to his being chosen as one of the speakers at the recent annual convention of the Canadian Horticultural Association at which a subject relating to foreign trade was considered. Mr. Simmers became a charter member of The Canadian Horticultural Association when it was formed some twenty years ago, and during the years that have since elapsed, has missed but one convention. For some years he was the treasurer of the Association. He was also the treasurer of the Ontario Horticultural Association, a position he held at the time of his death.

When the Horticultural Publishing Co., Ltd., was formed some fourteen years ago to undertake the publishing of The Canadian Horticulturist, Mr. Simmers became a shareholder and a director, a position he has held ever since. At the time of his death he was vice-president of the company. Those who knew Mr. Simmers best will appreciate most what his loss means to the cause of horticulture. It is made all the more sad because of the equally sudden death of his brother, his only partner in the business, but a few months ago. On the shoulders of a young son of this older brother has suddenly fallen the responsibility of directing the welfare of the big company that has been called upon to lose in such a short time, its two directing heads.

The Ontario Horticultural Exhibition

The Hall Committee of the Ontario Horticultural Exhibition has completed its plans for the show, November 11th to 15th. These call for some notable exhibits by the Retail Florists Club of Toronto, which will occupy the entire south end of the Transportation Building. The Beekeepers' Association have been allotted the centre for a special showing of comb and extracted honey.

The Chrysanthemum will be there in all its glory, and with the group of plants, ferns, palms, orchids, etc., will fill with their beauty the main part of the south end. At the other end will be large and attractive exhibits of fruits and vegetables in barrels, boxes, plates, cones, ropes, etc. As an added attraction, some 500 canaries will be scattered throughout the flowers and ferns and will furnish an orchestra such as is seldom heard in Toronto.

High Class Irish Cobblers

Marked success has attended the efforts of Mr. J. A. Williams of Peterboro, in the growing of potatoes, particularly Irish Cobblers. This year the Ontario Department of Agriculture selected two bushels of his product for display at the convention of The American Vegetable Growers' Association at Detroit. At the Peterboro Exhibition, where there was an excellent display of horticultural products, Mr. Williams' exhibit won first place. The potatoes were so large and uniform in character they attracted much attention.

Desiring to learn something about Mr. Williams' methods of cultivation, a representative of The Canadian Horticulturist visited his place early in September. Mr. Williams was busy harvesting his crop. During the visit a half bushel containing 34 potatoes was gathered which weighed 32 lbs. net. The indications were that the crop would run well over 400 bus. to the acre. Last year Mr. W. T. Macoun, of the Experimental Farm, Ottawa, made tests of some potatoes he had obtained from Mr. Williams and reported that they tested over 600 bus. to the acre.

In the spring of 1918 Mr. Williams brought in some Saskatchewan seed potatoes of the Irish Cobbler variety. This year these potatoes were planted in a black muck soil, one set of potatoes to the hill and with the rows 2½ ft. apart. Mr. Williams dropped his potatoes after the plough, June 9, cultivated six times during the season and hoed his crop once. In August his place was visited by Mr. T. G. Raynor, of the Seed Division, Department of Agriculture, Ottawa, who found it free from traces of any disease.

When asked for his views in reference to the grading of potatoes Mr. Williams replied that he believed the standard already set by the government was a good one. In the event of grading being made compulsory he believed that it should not be enforced with too much severity from July 1st to September 1st, when the Ontario early potatoes have to meet the competition of the fine stuff from Virginia.

The New York Agricultural Station, Geneva, N. Y., in Bulletin 451, deals with "Leaf Hoppers," and the University of Illinois, in Bulletin 217, gives a treatise on "Apple Canker."

The annual report of the British Columbia Fruit Growers' Association for the year 1918 is neatly bound and well printed.



BULBS

Now is the time to plant these beautiful spring flowering plants

Single Daffodils

BICOLOR EMPRESS—Yellow and White	.60c	\$4.00
EMPEROR—Yellow	.60c	\$4.00
GOLDEN SPUR—Yellow	.60c	\$4.00
SIR WATKIN—Yellow Short Trumpet	.60c	\$4.00
POETICUS—White	.35c	\$2.25

Double Daffodils

VON SION—Yellow	.70c	\$4.75
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Darwin or Late Flowering Tulips

BARONNE de la TONNAGE—Rosy Carmine	.55c	\$3.75
CLARA BUTT—Pink	.55c	\$3.75
MRS. FARNCOMBE SANDERS—Dark Rosy Red	.70c	\$4.75
GLOW—Scarlet Margined White	.70c	\$4.75
MARGARET—Pale Rose	.55c	\$3.50
LOUISLENGLART—Dark Purple	.55c	\$3.50
PAINTED LADY—Almost white	.55c	\$3.25
PRIDE OF HAARLEM—Claret color	.65c	\$4.25
REVEREND EWBANK—Heliotrope Lilac	.65c	\$4.25
THE SULTAN—Black Maroon	.55c	\$3.75
CHOICE MIXED COLORS	.40c	\$2.75

THE PRICES QUOTED ABOVE ARE POSTPAID

Geo. Keith & Sons

Seed Merchants since 1866

124 King Street East

TORONTO

Notice to Beekeepers

All previous prices on Beekeepers' Supplies cancelled November 1st. Send for new list, which will be subject to usual early cash order discounts.

The Ham & Nott Company, Limited

Manufacturers of Beekeepers' Supplies

Brantford - Ont.

PREPAREDNESS

Beekeepers prepare for next season's big crop. Order supplies now and obtain **EARLY ORDER DISCOUNT**. Everything for beekeeping. Write for catalogue before ordering.

The Canadian Bee Supply & Honey Co., Ltd.
73 Jarvis St., TORONTO, ONT. Factory: Stouffville, Ont.

HONEY WANTED

We are large buyers of light and dark honey in bulk and pay the highest cash price according to quality. Will be pleased to have samples stating quantity.

SMALL'S Limited

Montreal - Quebec

PRACTICAL QUEEN REARING

is the title of the new bee book, cloth bound, 110 pages, finely illustrated, which has just been written by Mr. Frank C. Pellett, former State Apiarist of Iowa and well known bee-keeping writer.

For many years there has been a demand for a book which would give in concise form the many different methods of queen rearing, as the Doolittle, Pratt, Alley, Miller, Dines and others with variations as practised by the large queen breeders.

You have this in this new bee book.

Send for your copy now and learn for yourself how to rear queens from your best colonies to advantage. Variations of plans may be of great value also to queen breeders.

Price postpaid, \$1.00, or with the American Bee Journal, one year only, \$1.75.

(Canadian postage 15 cents extra.)

AMERICAN BEE JOURNAL
HAMILTON, ILLINOIS

Improving the Pack of Canadian Fruit

C. W. Baxter, Dominion Fruit Commissioner, Ottawa

IN the early days of the enforcement of the Fruit Marks Act (now part 9 of the Inspection and Sales Act), practically all the inspection was done at the ports of export and in the larger consuming centres, and was confined principally to apples. As the advantages of the inspection service became apparent, growers, shippers, and dealers urged upon the department the necessity for extending it to include all commercial fruits and, during the past couple of years, certain vegetables have also received the attention of our inspectors.

Commencing in 1914 the system of inspection at point of shipment was inaugurated. Practically the whole staff of some sixty inspectors now work among the growers and packers in the producing districts, not only inspecting the fruit after it is packed, but giving instructions in the proper methods of picking, packing, grading, and shipping. Instead of waiting to detect false packing or improper grading after the fruit has reached the market, the inspectors devote their attention to preventing the evil, thus protecting the grower from commercial and financial troubles when he markets his fruit and, in addition, protecting the consumers, and establishing greater confidence in the trade.

During the past few years officers of this branch have been authorized to give any shipper desiring it, a copy of the report referring to his fruit, which is often attached to the bill of lading, by request of the consignee. Such a report does not vouch for the contents of the car but for those packages only which have been actually inspected and marked by the inspector, but dealers have demonstrated their willingness to purchase cars on the strength of these reports.

Special efforts have been made during the past year to assist in the settlement of disputes between shippers, and dealers. In the past, losses and waste of fruit and vegetables have occurred frequently through consignees refusing to accept cars. To facilitate prompt delivery, ensure fairness to both consignee and shippers and avoid unnecessary waste, our inspectors are authorized to make inspections of rejected cars or shipments upon request of either shipper or consignee, sending copies of their reports, showing the exact condition of the goods, to the applicant.

Packing.

In addition to the actual work of inspection, the inspectors are able to do a great deal of educational work, all of which tends towards better practices in marketing the Canadian fruit crop. Modern methods of packing and co-operative marketing have been encouraged. In connection with packing, we have co-operated directly with the provincial departments of agriculture, and officers of this branch have been loaned on many occasions to conduct packing schools or give assistance at short courses at the agricultural colleges. In addition, the branch has one officer who devotes practically all his time to giving instruction in barrel and box packing. The standardization of packages has also received the attention of this branch and in the amendments to the Inspection and Sales Act of 1918 all the fruit packages in common use are standardized.

Special Information.

The inspectors in the field, as well as the head office, are able to give authoritative home and in competing countries. Dealers can also obtain from this office and our

advice with respect to the varieties, packages, and methods of pack most popular in the various marketing centers, both at

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CLIPPINGS and
RENDERED WAX**

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Light : Amber : Dark
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60 Chester Ave.
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Why You Should Join the Ontario Beekeepers' Association

Because your \$1.50 membership entitles you to:

1. Membership in both the Provincial and County Beekeepers' Association.
2. THE BEEKEEPER for one year.
3. The Association's Annual Honey Crop Report
4. The Annual Provincial Convention and Report.
5. Italian Queens at Co-operative Prices.
6. Free Service and Advice on Any Matters Pertaining to Beekeeping.

F. ERIC MILLEN.

Send your \$1.50 dues to the Secretary-Treasurer of the Ontario Beekeepers' Association, O.A.C., Guelph, Ontario.

— MORE — Beeswax Wanted

We will pay the highest price.

Write, stating quantity and quality

F. W. JONES & SON

"JONES-WEED" Process Comb Foundation

BEEKEEPERS' SUPPLIES

BEDFORD - QUEBEC

staff, information as to where certain fruits or certain varieties may be best obtained at any particular season. Lists of growers and dealers in any particular section are furnished as required. Correspondence with growers, packers, shippers, and dealers is invited with respect to anything pertaining to the commercial fruit and vegetable industry.

Fruit and Vegetable Grades

J. A. Grant, Fruit Markets Commissioner, Calgary.

The time has arrived to establish grades for peaches, plums, tomatoes, potatoes, onions, for the Dominion of Canada. A full discussion should precede the adoption of the grades. Fruit growers should be asked to send authorized delegates to Ottawa for this purpose. Would the president and secretary of the old time Dominion Fruit Growers' convention take the initiative?

The following recommendations from the Western jobbers will show where they stand on these matters and it would be advisable to have these men present when fixing grades. It takes two to make a bargain and the experience of men who cater to the public would be valuable.

"The elimination of Orchard Run of B.C. apples in crates: This is not a grade sanctioned by the Fruit Markets Act and its use has been the cause of much dissatisfaction.

"That crab apples should be packed in standard pear boxes only.

"The Federal Government should be asked to enforce grading of potatoes along the lines suggested in the Fruit and Vegetable Inspection and Sales Act.

"It should be necessary for both onions and potatoes to be put up in even weight sacks so that those lines could be sold by

the sack without it being necessary to weigh each sack.

"It should be necessary for shippers; to put the net weight on all cases of cabbage and use only pony crates for cabbage up to October 1st each fall."

Whereas, the packages for the following lines: cherries, strawberries, raspberries, plums, peaches, apricots and tomatoes (all kinds) which are standardized by the

Dominion Inspection and Sales Act, have never been stated to contain any particular net weight, with the result that some shippers have been found to be giving light pack. Therefore, be it resolved that the Government be petitioned to legislate whereby all packages containing the aforementioned articles must be stamped on the end stating the least net weight such packages contain.

Tenth Annual Beekeepers' Short Course

at the.

Ontario Agricultural College, Guelph

January 13th to 24th, 1920

This course will be of special benefit to beekeepers who have kept bees and wish to learn the most profitable systems of management.

The lectures and demonstrations will include the season's management of the apiary and the diseases of bees.

There are no fees, the only cost will be personal expenses.

Mail applications to

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President

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KATAKILLA

NON-POISONOUS
THE PERFECT
INSECTICIDE
for
FRUIT, FLOWERS
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For Nurseries, Fruit Growers and Gardeners

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Makes poor land fertile and keeps
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Say you saw this ad. in "The Canadian Horticulturist."

Get More Eggs; Save Feed

Higher prices for eggs this winter will make big profits for those who know how and what grain mixtures to feed. Improper methods mean big loss. Prof. T. E. Quisenberry made a thousand hens in the American Egg Laying Contest lay 200 to 304 eggs each in a year. Another big flock cleared for him \$6.15 per hen in nine months. His methods are explained in a new bulletin, "How to Get More Eggs and Save Feed." Get this bulletin, free, by writing Quisenberry today, addressing care American Poultry School, Dept. 672, Kansas City, Mo. (Adv.)

Deafness



Perfect hearing is now being restored in every condition of deafness or defective hearing from causes such as Catarrhal Deafness, Relaxed or Sunken Drums, Thickened Drums, Roaring and Hissing Sounds, Perforated, Wholly or Partially Destroyed Drums, Discharge from Ears, etc.

Wilson Common-Sense Ear Drums

"Little Wireless Phones for the Ears" require no medicine but effectively replace what is lacking or defective in the natural ear drums. They are simple devices, which the wearer easily fits into the ears where they are invisible. Soft, safe and comfortable. Write today for our 168 page FREE book on DEAFNESS, giving you full particulars and testimonials.

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We have a large stock of all sizes

FLOWER POTS
FERN OR BULB PANS
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Orders Filled Promptly.

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THE FOSTER POTTERY CO., Ltd.
HAMILTON, 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

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VEGETABLES SOLICITED

Shipping stamps furnished on request
Canada Food Board License Nos. 3-043,
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DAWSON-ELLIOTT CO.

32 West Market St., Toronto, Ont.
Wholesale Fruit and Produce Consignments Solicited.

Canada Food Board License No. 3-045,
Class II., Div. B., and 3-046, Class II.,
Div. C.

PETERS, DUNCAN Limited

88 Front St E., Toronto, Ont.

See advertisement on page vi.

Canada Food Board License Nos. 3-007,
3-008 and 3-009.

POULTRY YARD

Start the Year Right

F. C. Elford, Dominion Poultry Husbandman, C.E.F., Ottawa.

The poultry year should begin November 1st. At that time the old stock should be culled out, the cockerels divided from the pullets and the pullets selected from the flock and put into winter quarters.

Don't keep old hens. Only the best of those hens that are one and a half years old should be kept. Most of them with all the older ones should have been disposed of last spring but in case this was not done do away with them now. Even if they were culled then, go over them again now and see that nothing that will not likely produce is retained.

Cull the early moulters. In selecting the hens that you intend to keep do not take those birds that are looking clean and well feathered but rather those that are more or less shaggy in appearance. The ones that are still moulting, they are the layers; those that have moulted and have a nice new coat of feathers were not persistent layers. They quit laying too soon and had nothing to do but grow feathers. This explains why they have their new coat before their more industrious sisters.

Early Pullets Best.

Select as winter layers, the early well-matured pullets. These should be carefully handled, put into their own house, fed well and given every opportunity to produce. Pullets that are but half grown or that will not be matured for months yet should be culled out with the cockerels, crate fed and marketed. Such pullets will be a bill of expense all winter and should not be kept on any excuse.

No matter what class of birds that are culled out for market, it will pay to finish them before killing. Even with the high prices of feed one cannot afford to market poor stuff. For particulars on crate feeding, write the Poultry Division, Experimental Farm, Ottawa.

We suggest that every person who wants to make his poultry pay begin at once to keep track of receipts and expenditure. To assist in this, blanks have been prepared by the Poultry Division, Experimental Farm, Ottawa, which will be sent on application to those who will promise to return each month a copy filled in. Those complying will receive suggestions on how to improve their results, based on the information given in their reports.

The Dust Bath

Folks of the old generation were more appreciative of the benefits of the dust bath than are the poultry keepers of today. I can remember when every farm woman, who had fowls for pin money, saw to it that a dust bath was provided in the poultry house. In this the old folks showed their wisdom. Fowls cleanse themselves of insects and dirt by dusting their feathers and then shaking off the dirt and the pests with the dust. The dust bath is, therefore, to the hen what the bathtub is to the individual. To say nothing of the fact that she gets good exercise in the

operation. Everyone who has ever set a hen knows that she comes off the nest regularly to dust, if she has an opportunity. Instinct teaches her that lice are the worst possible enemies of young chicks and in dusting she is taking the best method of getting rid of them.

We have found that sifted ashes, or clean road dust is just about the best thing possible for poultry to wallow in. The dust bath may be boxed off in a corner of the poultry house, but preferably it should be where the sun shines directly on it, thus making it an inviting spot for the hens in cold weather.—B. W. A.

Fattening Fowl

In fattening poultry they should be confined in a small pen or crate. Exercise produces hard muscles, which means tough meat, while non-exercise leads to a softness of the muscles which are tender when cooked. Soft feed should be fed, as a lack of exercise interferes with the proper digestion of whole grain. The feed should be finely ground and mixed with water, milk or buttermilk. The following proportions have been found very satisfactory: One-half finely ground corn, one-quarter shorts and one-quarter ground oats.

Use the foods that are reasonable in price. Corn is rich in fat forming elements, but barley and good plump oats can form a larger part of the ration where they can be secured cheaper. The fattening period should last not over two weeks. If continued longer there will be a loss of vigor in fowls without exercise. This fattening will increase the weight considerably, as well as improve the quality. Roosters not to be carried over and the poor layers should be culled out and fattened. Put them in the fattening pen.

Don't Crowd Poultry

Often times pullets are not moved into permanent winter laying quarters till late in the fall. One of our neighbors recently asked us to come and tell her what was wrong with her chickens. She had quartered them in a packing box in the yard when they were small chicks and there was lots of room for all in the box. They had been quartered in that packing box ever since. They were badly overcrowded and, as no roosts had been provided, they were huddled together on the floor. Closely packed, they got overheated and overheating inevitably leads to colds.

Roosts should have been provided in commodious quarters long before, and had this been done, a dozen or two fine pullets would have been saved. Where colds do break out from this or other causes, a little potassium permanganate in the drinking water is excellent.—C. G. P.

Destroy Red Mites

Red mites are one of the greatest enemies of poultry. These mites lodge in the cracks and crevices of the roosts and adjoining

woodwork and attack the poultry at night. They are not carried around on the bodies of the fowl during the day. Our method of combatting them is to paint the roosts and all adjoining woodwork with a strong solution of zenoleum. We do this once a month during the hot weather and less frequently during the fall. We have never been able to find any mites in the winter when summer treatment was persisted in. The nests are treated in the same manner.—C. G. P.

November Notes

The old hen that bags down badly behind is in no shape to lay, but is in prime condition to market.

Green cut bone should be fed in the mash. One ounce per head three or four times a week will help both growth and egg yield.

Heavy layers do not get enough phosphates from their feed. They will lay more and larger eggs which will hatch bigger, stronger chicks if some extra phosphates are supplied. Green cut or granulated bone is the best for this purpose. Feed it liberally.

Rutabagas cut in two and hung in the chicken house make good green feed for the chickens during the winter. Mangels, large beets and cabbage are also good.

November is a good month to start the incubators for broilers. This will bring birds to market just at the time when the prices are tempting.

Keep the pullets busy scratching, see that they are comfortably housed, do not expose them to bad weather, and they will keep up steady laying after they have fairly started.

International Apple Show

R. G. Phillips, Rochester, N.Y., Sec. I.A.S.A.

Canada did not exhibit at the tenth annual apple show of the International Apple Shippers' Association held in Milwaukee, Wis., about the middle of August, and has not for the last several years. There was a time when Canada took an active interest in the exhibit and was a persistent prize-winner. On one occasion at least, Ontario won the Sweepstakes Cup. This exhibit was made through the officials connected with the provincial government at Toronto. There were also individual exhibits. I hope that Canada will again enter the lists. Our exhibits are growing every year with apples from every portion of the United States and with people in attendance from every state as well as from England and Canada. It seems to me that it would be a decidedly good advertisement and a good business proposition for Canadian growers, horticultural societies, associations and even the Dominion Fruit Division to have exhibits from Ontario, Nova Scotia and British Columbia.

At a meeting on Oct. 17 of the committee of the Ont. Horticultural Exhibition, attended by representatives of the fruit and vegetable growers, florists and beekeepers, it was unanimously agreed to appoint Mr. P. W. Hodgetts, treasurer of the Horticultural Association, this position having been made vacant by the death of Mr. Simmers. Mr. Hodgetts will now act as secretary-treasurer. It was decided to ask the Premier of Ontario, assisted by the Dominion and Provincial Ministers of Agriculture, to open the Horticultural Exhibition this year.



Cromwell Pattern

Silverplate that lasts

This is no time to take chances with silverware. You must buy the best to get full value for your money.

For seventy years there has been one best silverplate. Users have asked for it by its FULL name, 1847 Rogers Bros. They found the many patterns attractive. They used it, told friends of its fine quality, handed it down to the next generation, firmly convinced that their money could have bought no better.

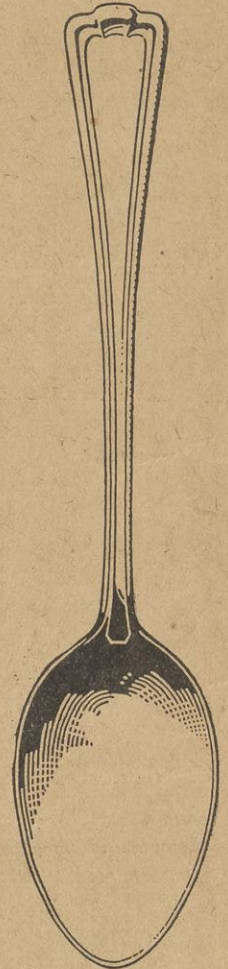
No other silverplate has had so long an opportunity to test its quality. Remember this and ask for it by its FULL name, 1847 Rogers Bros. Ask your dealer.

1847 ROGERS BROS.
SILVERWARE

The Family Plate for Seventy Years

MERIDEN BRITANNIA CO., Ltd.
Hamilton, Ontario

Made in Canada by Canadians and sold by leading Canadian dealers throughout the Dominion



Northern Ontario

A vast new land of promise and freedom now open for settlement in 160 acre blocks to returned soldiers and sailors free; to others 18 years and over 50 cents per acre.

Thousands of farmers are responding to the call. Here right at the door of Southern Ontario a home awaits you.

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

H. A. MACDONELL,
Director of Colonization,
Parliament Buildings, TORONTO, ONTARIO
G. H. FERGUSON,
Minister of Lands, Forests and Mines.

Douglas Gardens Bargain of Paeony Roots

A lot of large clumps of Paeonies and Iris will be offered for sale this fall. Roots that will give from 25 to 50 blooms next spring. Send your order early.

Many of my customers order in lots of from 10 to 50 roots.

Paeony roots from \$3.00 to \$5.00 per clump.

Iris roots from \$2.00 to \$2.50 per clump.

All kinds of perennial plants for sale at the catalogue price.

ERICK ERICKSON
Oakville, Ontario.

Niagara District Notes

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

THE past month has been exceedingly favorable for both fruit and vegetable growers in this district. Seldom has there been a fall more ideal for getting off the fruit crop. The late peaches turned out very well in the Beamsville-Hamilton district. Both size and quality were excellent, and there was a keen demand on the part of the public at remunerative prices. The rest of the district did not do so well, but in the neighborhood of Niagara-on-the-Lake and some other localities it turned out better than was anticipated, and the quality has been good. Grapes, however, have been the big crop of the season, and their quality has never been surpassed. The public has been pleasantly surprised this season at the delicious flavor of our grapes and, in spite of the excellent crop, there has been a steady, insistent demand for them at better prices than for many years. Considerable quantities of grapes have been shipped to the markets at Detroit, Buffalo, and other U. S. points, and have brought the shippers good returns, the buyers declaring the quality much superior to their own grapes. Although the newly formed Grape Growers' Association did not succeed in maintaining

the price at 40c per six-quart basket as they set out to do, yet the price never fell below 32c in large lots. Sales to the wine and grape-juice men ran from \$65 to \$75 per ton as an average, although a few sales were made as high as \$80 and even \$90. A very large quantity was disposed of in this way. On the Hamilton market prices stayed steady at from 40 to 45c per six-quart basket, and late in the season ranged from 45 to 50c. The grape growers have good reason to be pleased with these figures especially when they consider that only a few years ago 12½ cents per six-quart basket or \$30 per ton was considered a good price for large lots. Another unusual feature in the Niagara district was the early ripening of both peach and grape crops. They consequently came on the market during the warm weather, and there was little or no temptation to put unripe fruit on the market, which in past years has been the special curse of the grape crop.

Undoubtedly, however, the attempt to set a price of 40c per basket for grapes to some extent queered the Western trade, and fewer carloads of grapes went West than usual.

The apple crop in the district has only been at best a moderate one, and in some localities it is very light. Spys, Snows, and Russets seem to have turned out the best, with a sprinkling of Greenings and Baldwins. Most varieties of apples, except Spys and Russets, have been already packed by this time, October 21.

This has been the best season for tomatoes in the district for many years, both in quantity and quality. There has been practically no rot and the fruit has been unusually smooth and firm. Prices have been good, the canners paying 50 cents per bushel, and for a long time prices were high for basket tomatoes, but the bulk of the basket crop was disposed of at from 25 to 35c per 11-quart basket. For a while some of the canning factories had to ask the growers to stop bringing tomatoes in as they were coming too fast for their capacity. Towards the close of the season there was a shortage of cans owing to the strike in the United States Steel plant, but this was only temporary. Cans were procured from other sources and the loss in this way was, on the whole, small. Take it all and all the fruit and vegetable growers of this portion of the Niagara district can look back on a season considerably better than almost any season since the war broke out.

A representative of the Welch Company, of St. Catharines, makers of grape jam, has recently been in London, England, and has also been visiting Continental centres, enquiring into the possibilities of business in Europe. While conditions are not just at present favorable for the marketing of this firm's high-priced product in England, their representative is satisfied that a big business will be done under normal trade conditions, and the firm may open an establishment of their own in London. French soldiers had an opportunity of tasting Welch's grape jam during the war, which has led to numerous enquiries being received by the Welch Co. from French importers.

A report from Niagara Township says that the T. A. Lyttle Co., of Toronto, have erected a receiving station at the Griffith siding of the Lake Shore Division of the N., S. & T. Railway, and have been shipping several carloads of tomatoes and fruit per week to their branch in Toronto. This firm is reported to contemplate erecting a factory on the Lake Shore next season, where berries, peaches, and other fruits as well as tomatoes will be handled.

The Vineland Rural School Fair held at the Vineland School grounds, Sept. 30th, proved a marked success. The exhibits of fruits, flowers, vegetables, etc., were exceptionally good.

Mr. F. S. Lowrey, manager of the St. David's branch of the Dominion Canners, has purchased for the company 194 acres in the Township of Stamford. The company is buying this for the purpose of growing some lines such as asparagus, strawberries, and raspberries which are difficult to buy, especially asparagus. Mr. Lowrey intends planting 50 acres of asparagus, the balance of the farm will be used for small fruits.

One of the features of this season has been the almost entire absence of fall frosts; about the 10th we had one white frost, but it was not severe enough to do any serious damage, even to tomatoes, and grapes still retain most of their foliage. In the writer's garden nothing has been touched at all by frost, even cucumber and squash vines going unharmed. This condition of affairs greatly prolonged the tomato season and enabled all the townfolk who were willing, to put down a large stock of home-

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canned tomatoes at a very moderate price. Canning factories also have had an exceptionally long season, and have put up a larger pack of fruits and vegetables than for several years, and an exceptionally satisfactory one. Cannery opening prices on a number of lines are materially higher than was expected, but the scarcity of stocks in distributors' hands assures a ready market at good figures and a brisk export business has been developed that can take ample care of any residue. There is but little doubt that housekeepers did not put up as much home-canned fruit this year as usual, for various reasons. One was that it has been the custom of a large section of the housekeeping public to preserve their fruit after the summer holidays, but this year the fruit was from two to three weeks earlier than usual owing to the unusual heat in June, so when the holiday makers returned to their homes they found the bulk of the small fruits already gone. Another was the shortage of sugar just at the time it was needed most. There was also a decided shortage in plums and other lines of fruit. All these causes have combined to make housewives more dependent than usual on the jam and canning factories for their winter preserves and jams.

Okanagan Growers Aggressive

Okanagan growers are satisfied they can produce the finest quality of fruit and vegetables and are determined to leave no stone unturned in their efforts to put their product on the markets where it will command the highest price. The growth of trade has been phenomenal. This year one of the many shipping agencies in the valley will ship 780,000 packages of apples, whereas, in 1913, only 345,074 packages of all

kinds of fruit were shipped. Already this year there are orders at Vernon, B.C., for apples for New York and the Maritime Provinces of Canada and from a wholesale house in New Zealand, which has been buying in the Okanagan for several years.

Saskatchewan and Alberta took 51 per cent of the crop in 1918 and their demand will be heavy again this year. Hamilton, Ont., has orders in for plums and crabs this year and foreign trade on both the Pacific and Atlantic lines will be as heavy as the shipping will permit.

Okanagan growers are after a big share



of the Ontario market. Mr. C. L. Lowe, Sales Manager of the O.U.S., says that Ontario buyers are just beginning to appreciate the Okanagan apple and his association is preparing to cater to their demands. "We realize," he said, "that in the cities in Ontario there is a great market for stuff of the very finest quality. Eastern people want and are willing to pay for the very best, and the Ontario market for super-quality apples is even better than that on the prairie. In that respect it resembles the New York trade, which is the best in the world for the highest class product."

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Vegetable Experiments

At the convention of the American Vegetable Growers' Association held in Detroit recently and which many Ontario growers attended, there were two Canadian speakers, Messrs. A. H. McLennan, Vegetable Specialist of the Ontario Department of Agriculture, and Prof. J. W. Crow, of the Ontario Agricultural College, Guelph.

Mr. McLennan described the work being done by the Ontario Government in the interests of Ontario vegetable growers. The work, Mr. McLennan stated, might be divided into two classes. The preliminary work is done largely at the Ontario Agricultural College, Guelph, and the Horticultural Experiment Station, Vineland. At these two places the testing out is done largely in order to leave only the trying out on a large scale on the commercial fields to himself.

The Department last summer had one man engaged entirely on insect pests and their control. This man's headquarters were at Burlington, under Prof. Lawson Caesar of the O. A. College, Guelph.

The second section may be described as the field work and was carried on by himself and three assistants throughout the province. This consisted of certain fertilizer experiments and the methods of control in commercial fields of celery blight, celery heart rot, cabbage, onion and radish maggot,

onion thrip, cabbage worm and melon wilt.

In regard to celery heart rot which has been shown to be caused by the Tarnished Plant Bug Mr. MacLennan had found that Black Leaf "40," when applied once in the seed bed and at least once a week afterwards, would control this pest to a large extent. Last winter was so open and the summer so warm that it had been very hard to get absolute control of it. A great deal of rotting in celery in cold storage was really the result of these insects' work. He had proved conclusively that the root maggots on radish, cabbage and onions could be controlled by corrosive sublimate treatment. It had also been shown that crops treated with this substance grow faster and mature earlier than those that are not treated. This was especially shown with regard to radishes.

Onion thrip was troublesome last summer and great damage was done before it was noticed. However, spray with black leaf "40" with soap as an adhesive and the use of 100 lbs. of nitrate of soda to the acre helped bring through many areas which would otherwise have been a failure. The cabbage worm was held in control with the Keatings' Insect Powder. The aphids on cabbage and cauliflower were controlled by black leaf "40" and soap mixture. In the use of this remedy it was absolutely necessary that the spray hit the insect. One application carefully done is worth a dozen of the ordinary kind.

Tomato streak had been shown to be caused by lack of potash and phosphorus in the soil and the growing of the plants in temperature and moisture that forced too rapid growth. Where these factors were taken care of it had been found that the streak will not trouble even though the house were badly attacked last year. The control of the cucumber beetle gives control of the melon wilt which had been so prevalent last summer.



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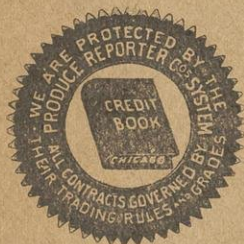
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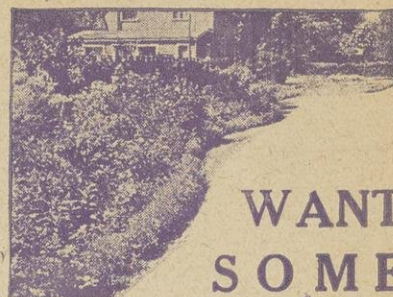
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